

**Mitigation Plan,  
Drawings and Photos**

## 1. Mitigation Goals and Objectives

The objective of this mitigation plan is to provide sufficient appropriate compensation for the unavoidable impacts to wetlands and to ensure no net loss of wetland function or value occurs as a result of the proposed project. The proposed project will construct a new bathroom facility including restrooms, showers, locker rooms, a storage room, lifeguard office building, parking facilities, utilities, and security fencing on an approximate 1.31-acre tract owned by the State of Texas and leased by the City of Corpus Christi. Mitigation will consist of the creation of approximately 1.4 acres of freshwater, emergent, low marsh complex within the same City leased tract of land. Two locations within the same tract have been identified as potential mitigation sites.

Per details in the enclosed Mitigation Exhibits, as compensatory mitigation (a total of 1.4 acres) for proposed impacts to approximately .71 acres of wetlands by the applicant:

- A. Mechanically lower uplands to create a total of 1.4 acres of wetland of freshwater, emergent, low marsh habitat.

All created and preserved habitat will be protected in perpetuity by a deed restriction, conservation easement, or an equivalent legal instrument.

## 2. Site Selection Information

The applicant identified two options as candidate locations for habitat creation within the same tract of the impacted wetlands selecting the proposed mitigation site options based on a high probability of success for natural recruitment of target species due to proximity to existing natural wetlands. In addition, the mitigation sites are also located within State of Texas owned land that is leased by the City of Corpus Christi.

## 3. Site Protection Instrument

The mitigation site is located within the same tract that the project is located which is owned by the State of Texas and leased by the City of Corpus Christi. In cooperation with the State of Texas, the City of Corpus Christi will implement a deed restriction, or similar protective instrument that limits uses of the mitigation site to those consistent with the mitigation plan.

## 4. Baseline Information

### Impact Site

The approximately .71 acres of identified wetlands within the approximately 1.31-acre development site occupies the back portion of the property that is proposed to be impacted by fill for the construction of construct a new bathroom facility including restrooms, showers, locker rooms, a storage room, lifeguard office building, parking facilities, utilities, and security fencing.

The project area is a portion of the property platted as BRYAN WM SUR ABS 45 & BALLI SUR ABS 1998, 39.819 ACS AKA TR according to the Nueces County Appraisal District. It is bordered to the north by Zahn Road, to the west by a wastewater lift station and to the south, east and west by undeveloped land. The project area lies eastward of J.P. Luby Beach, north of Packery Channel, South of Lively Beach

Resort Condominiums, and west of HWY 361. Approximate UTM NAD 83 (meters) coordinates for this site are Northing 3056206.60 Easting 677145.37.

The wetlands on the property were not identified or mapped according to the NWI mapper. However, field investigations revealed that there are likely freshwater emergent habitat PEM1A (Palustrine, Emergent, Persistent, Temporary Flooded).

The project area contains approximately .71 acres of wetlands and approximately .6 acres of coastal prairie uplands. The wetland area is mapped by the Ecological Mapping System of Texas (EMST) as coastal salt and brackish high tidal marsh which contains marshhay cordgrass (*Spartina patens*), salt grass (*Distichlis spicata*), shoregrass (*Distichlis littoralis*), three-square bulrush (*Schoenoplectus americanus*), and seashore paspalum (*Paspalum vaginatum*).

However, based on the February 13, 2024 site visit, the project area was entirely composed of undeveloped dune and tidal sand flat habitats. Species observed within the wetland Canada spikesedge (*Eleocharis geniculata*), gulfdune paspalum (*Paspalum monostachyum*), march fimbry (*Fimbristylis castanea*), narrowleaf marsh elder (*Iva angustifolia*), saltgrass (*Distichlis spicata*), saltmeadow cordgrass (*Spartina patens*), seaside brookweed (*Samolus valerandi*), shore little bluestem (*Schizachyrium littorale*), and wiry blue-eyed grass (*Sisyrinchium biforme*). Upland species included gulfdune paspalum (*Paspalum monostachyum*), camphor daisy (*Rayjacksonia phyllocephala*), and shore little bluestem (*Schizachyrium littorale*).

### Mitigation Site Options

There are 2 proposed locations for proposed mitigation sites for creation of approximately 1.4 acres of wetlands that are located within the same tract as the project location. A site visit was performed to verify upland areas on-site that were suitable for mitigation on March 28, 2024. The land is undeveloped and is currently leased by the State of Texas. The property consists primarily of coastal salt and brackish high tidal marsh with freshwater emergent wetlands interspersed throughout. Elevations at the project site range from three to seven feet above sea level. The property is bordered to the west by estuarine wetlands, flats, and marshes associated with Corpus Christi Bay. The site is not drained by any drainage features.

The proposed mitigation site presently contains a number of freshwater wetlands. The mitigation sites are mapped by the National Wetlands Inventory either as PEM1A and PEM1C wetlands (palustrine, emergent, persistent, and temporarily, seasonally flooded) and can be characterized as freshwater and brackish emergent with dominant vegetation consisting of coastal salt and brackish high tidal marsh which contains marshhay cordgrass (*Spartina patens*), salt grass (*Distichlis spicata*), shoregrass (*Distichlis littoralis*), three-square bulrush (*Schoenoplectus americanus*), and seashore paspalum (*Paspalum vaginatum*).

Freshwater wetlands on barrier islands provide valuable resources for a number of wildlife species, such as shelter, breeding grounds, or sources of food. In particular, barrier island shallow freshwater wetlands are essential to the life cycle of the mottled duck (*Anas fulvigula*) which is considered a species of conservation concern by the U.S. Fish and Wildlife Service and one of the few species of ducks that breed in southern Texas. These non-migratory ducks use these wetlands year-round, however, suitable wetlands in this area have been steadily decreasing due to development and habitat loss. Shallow freshwater wetlands (6-12" deep) which support approximately 50% emergent vegetative cover with nearby grassland

habitat have the potential to support this species. Wintering waterfowl, such as redhead ducks (*Aythya americana*), feed almost entirely on seagrass rhizomes, however, when salinities rise to near that of sea water or above they rely on coastal freshwater ponds for dietary water. Sources of freshwater near waterfowl feeding areas are not abundant along the central Texas coast. Research has shown that small coastal ponds with salinities of 15 ppt are essential for wintering waterfowl survival especially during periods of drought when salinities in the nearby bays are elevated.

The upland areas of the proposed mitigation sites consisted of seacoast bluestem (*Schizachyrium scoparium*), gulf dune paspalum (*Paspalum monostachyum*), camphor daisy (*Rayjacksonia phylocephala*), sea ox-eye daisy (*Borrchia frutescens*), and gulf dune cordgrass (*Spartina spartinae*) (U.S. Fish and Wildlife Service).

## 5. Determination of Credits

A permittee-responsible mitigation is proposed for this project through on-site creation of wetlands. The impacts and proposed compensatory mitigation are summarized below and further described in the next section, 6.0 Mitigation Work Plan. Compensatory on-site mitigation (a total of 1.4 +/- acres) for proposed impacts to approximately .71 acres of wetlands:

A. Constructing on-site mitigation by creating a 1.4 acre freshwater, emergent, low marsh habitat

## 6. Mitigation Work Plan

Construction of the mitigation will be completed within twelve (12) months of construction commencement. The applicant will be responsible for mitigation construction. The applicant will excavate the mitigation area to elevations conducive to recruitment and survival of target species (exact elevations will be identified prior to construction). Excavated material will be placed in uplands onsite. Revegetation of converted areas will be via natural recruitment.

## 7. Maintenance Plan

The applicant will provide maintenance of the mitigation site through continued evaluation, restoration, enhancement, and preservation. The applicant will enter into an agreement with the State of Texas for the City of Corpus Christi to create, monitor and maintain the proposed created 1.4-acre wetland area as this area is within State owned land that is leased by the City.

## 8. Monitoring Requirements

The applicant will conduct a post-construction survey of the mitigation areas within 60 days of completion of construction and will submit a report to the USACE that conforms to the USACE Regulatory Guidance Letter 08-03 and includes monitoring methodology and photographs documenting site conditions.

The sites will also be monitored annually for five years or until the USACE has determined that performance standards have been achieved. After each monitoring event, the City of Corpus Christi will

submit a report to USACE that conforms to the USACE Regulatory Guidance Letter 08-03, including a description of monitoring methodology, results, and photographic documentation of site conditions.

## 9. Ecological Performance Standards

- If 25% coverage of the target habitat is not achieved after one year, the USACE will determine if planting of the mitigation site is required.
- If 50% coverage of the target habitat is not achieved after three years, the USACE will determine if planting of the mitigation site is required.
- If 70% coverage of the target habitat is not achieved by the end of the fifth year, the USACE will determine if planting of the mitigation site is required.
- The USACE may waive the requirement for monitoring at any point during the five-year period if the USACE deems that there is sufficient evidence that re-vegetation of the mitigation area meets the success criteria.

## 10. Long-Term Management Plan

Sufficient financial resources will be allocated to perform long-term monitoring activities within the deed-restricted compensatory mitigation areas. Long-term management may include removal of trash and/or replacement of bollards as well as measures agreed upon by the applicant and the USACE if the site does not meet ecological performance standards defined in Section 9.

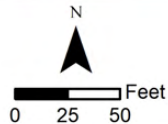
The proposed on-site created wetland locations are located within State of Texas owned land that is leased by the City of Corpus Christi and will be protected in perpetuity by such and will prohibit development and other activities from occurring within the created wetlands. If necessary, a conservation easement can also be implemented to ensure protection. Site construction shall follow all applicable state and federal regulations, as well as best management practices.


## 11. Adaptive Management Plan

If results of the monitoring indicate that the mitigation is not successful, the applicant will coordinate with USACE in an attempt to agree upon the appropriate course of action. Potential remedies may include but are not limited to supplemental monitoring, planting efforts, identification of alternative sites, etc.

## 12. Financial Assurances

The City of Corpus Christi will enter into an agreement with the State of Texas to construct, the 1.4-acre created wetland mitigation area and will be responsible for administering funds to for the creation of the mitigation area and for subsequent maintenance required during the monitoring period to achieve the performance standards.



 Mitigation Area A (1.62 ac)

**POTENTIAL MITIGATION AREAS  
NUECES COUNTY, TEXAS**

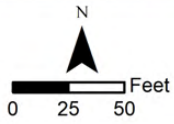
LOCATION:  
COUNTY: NUECES  
APPLICATION BY:  
MAP DATE: APRIL 18, 2024

SOURCE: CEI FIELD SURVEY MARCH 28, 2024  
BASE: WORLD IMAGERY, ESRI  
DATUM: NAD 83



SWG-

FIGURE 5



 Mitigation Area B (2.29 ac)

**POTENTIAL MITIGATION AREAS  
NUECES COUNTY, TEXAS**

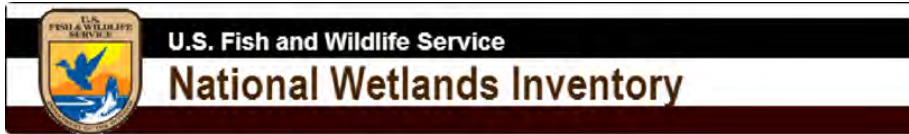
LOCATION:  
COUNTY: NUECES  
APPLICATION BY:  
MAP DATE: APRIL 18, 2024

SOURCE: CEI FIELD SURVEY MARCH 28, 2024  
BASE: WORLD IMAGERY, ESRI  
DATUM: NAD 83



SWG-

FIGURE 6



# Potential Mitigation Areas 224008



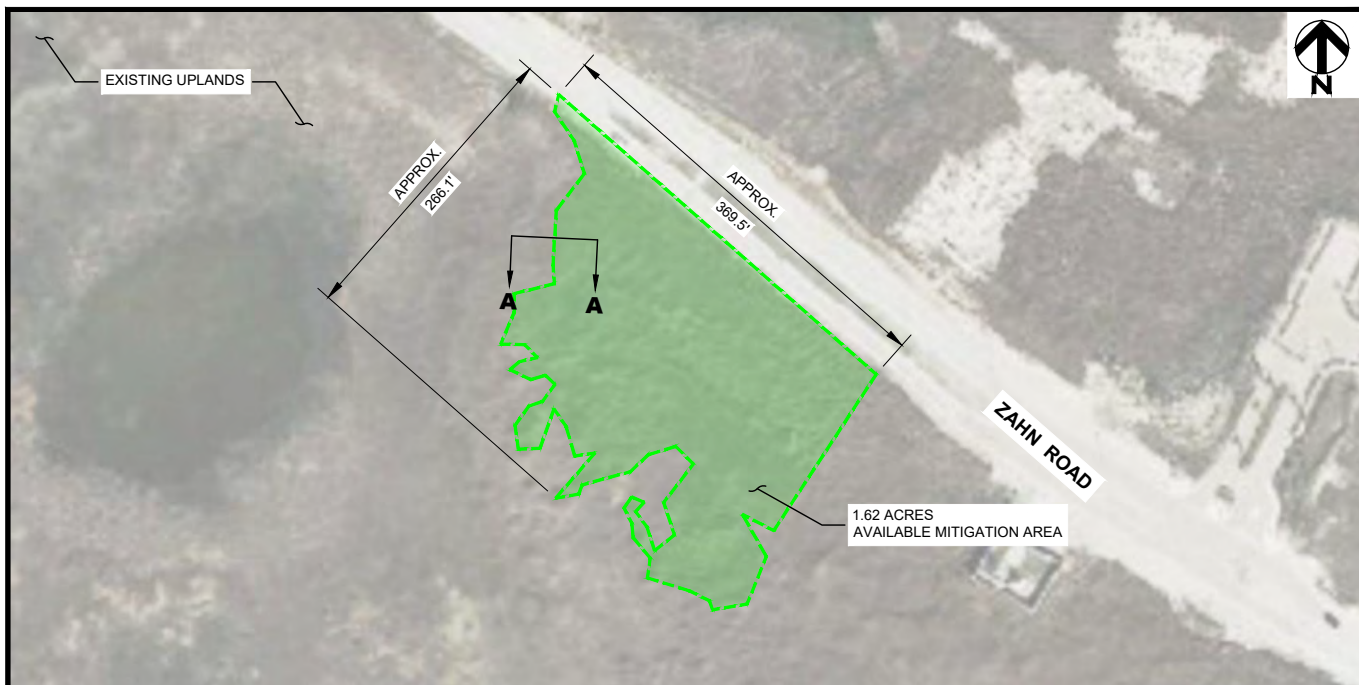
March 27, 2024

**Wetlands**

- |  |                                |  |                                   |  |       |
|--|--------------------------------|--|-----------------------------------|--|-------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland       |  | Lake  |
|  | Estuarine and Marine Wetland   |  | Freshwater Forested/Shrub Wetland |  | Other |
|  | Freshwater Pond                |  | Riverine                          |  |       |

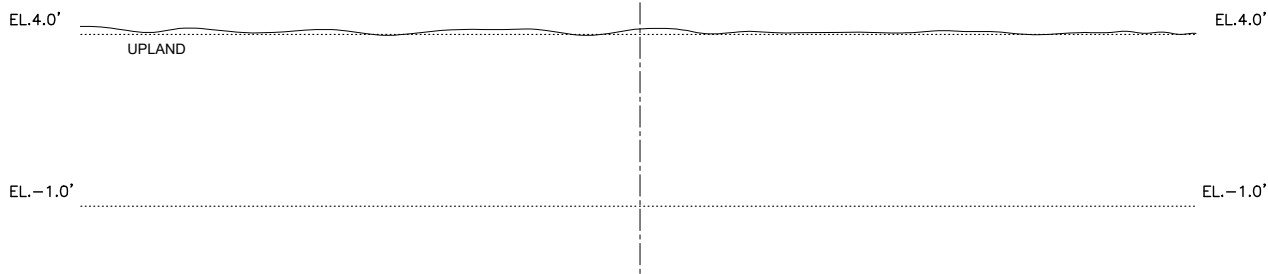
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.





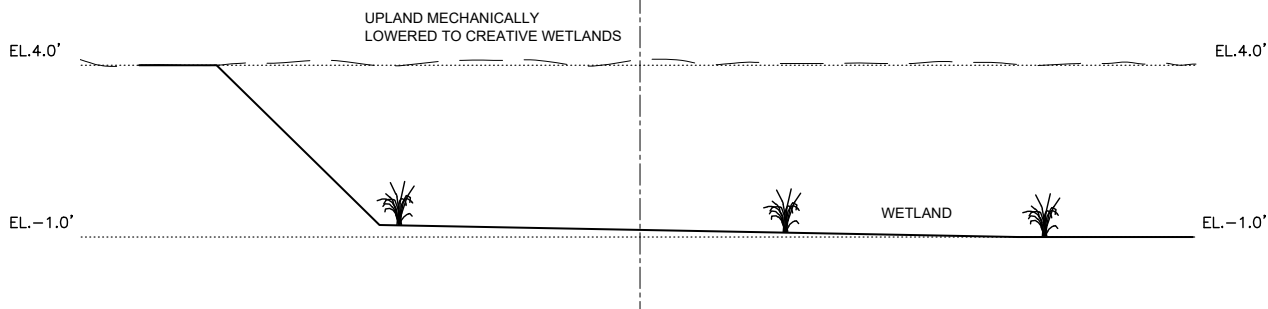
**PLAN OF EXISTING UPLAND AREA TO BE CONVERTED TO NEW WETLAND**

SCALE: NTS



**CROSS SECTION OF EXISTING UPLAND AREA TO BE CONVERTED TO NEW WETLANDS A-A**

SCALE: NTS



**CROSS SECTION OF PROPOSED WETLAND MITIGATION A-A**

SCALE: NTS

**ZAHN RESTROOM FACILITY  
MITIGATION PLAN  
AVAILABLE AREA A**

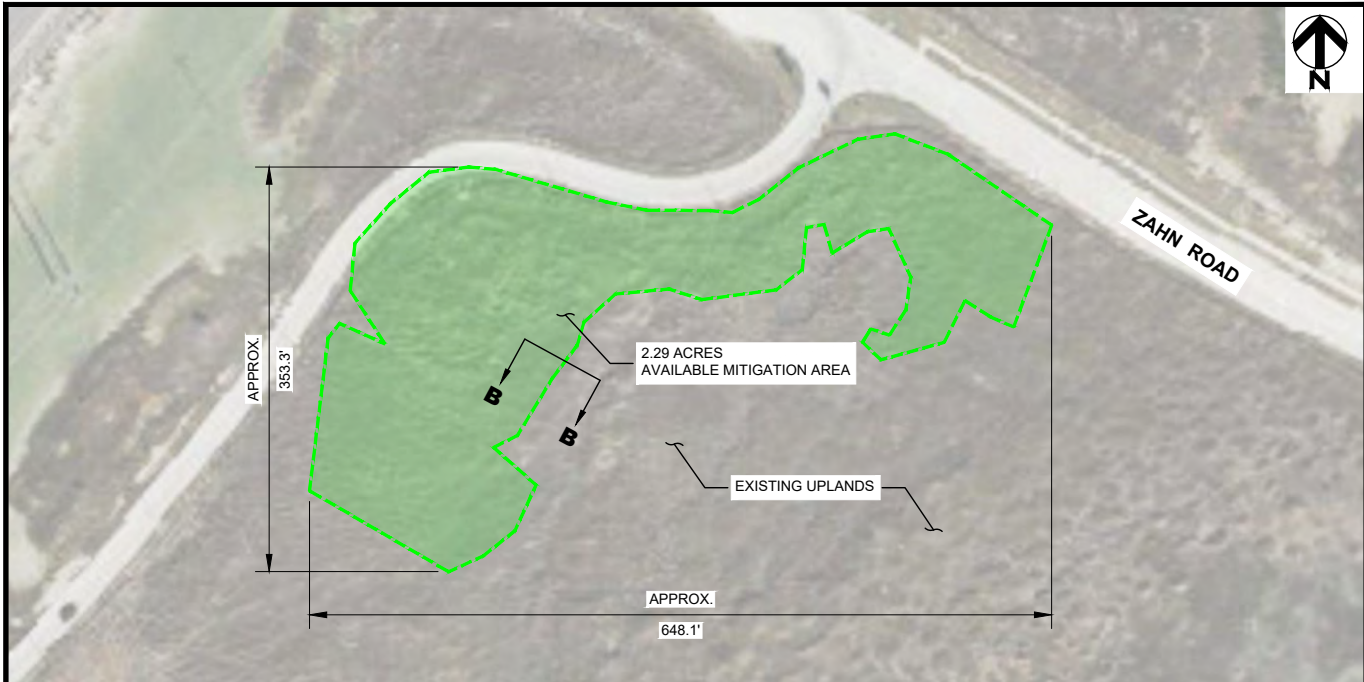


| DRAWN BY: RR     |     | REVISIONS   |    |      |      |
|------------------|-----|-------------|----|------|------|
| CHK BY: RA       | NO. | DESCRIPTION | BY | CHKD | DATE |
| APP BY: RR       |     |             |    |      |      |
| SCALE: AS NOTED  |     |             |    |      |      |
| DATE: APRIL 2024 |     |             |    |      |      |

PROJ. NO.-230120

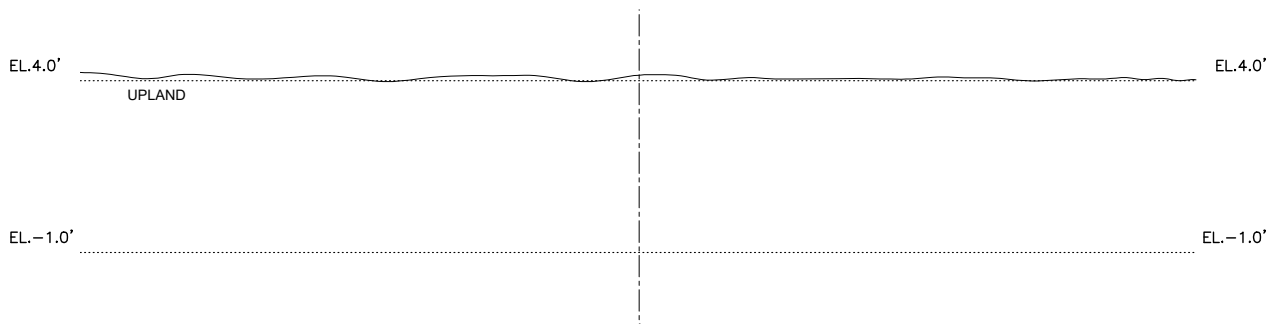
SHEET NO.

**EXHIBIT  
1**



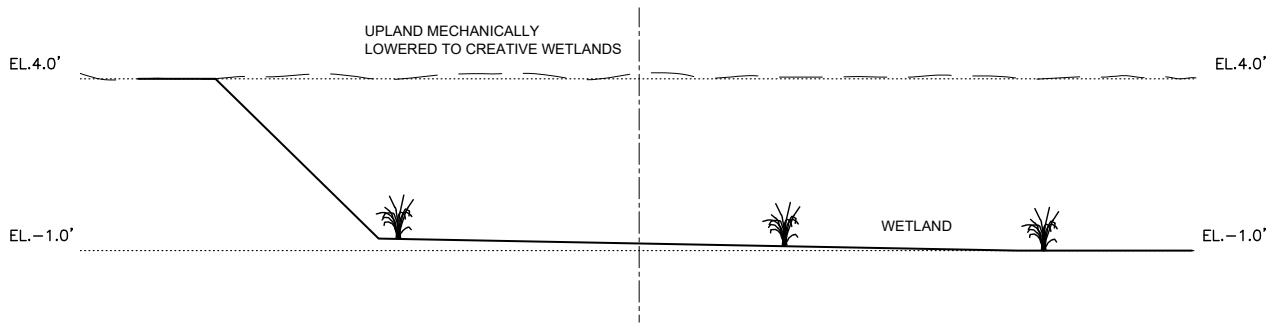
**PLAN OF EXISTING UPLAND AREA TO BE CONVERTED TO NEW WETLAND**

SCALE: NTS



**CROSS SECTION OF EXISTING UPLAND AREA TO BE CONVERTED TO NEW WETLANDS B-B**

SCALE: NTS



**CROSS SECTION OF PROPOSED WETLAND MITIGATION B-B**

SCALE: NTS

**ZAHN RESTROOM FACILITY  
MITIGATION PLAN  
AVAILABLE AREA B**



| DRAWN BY: RR     |     | REVISIONS   |    |      |      |
|------------------|-----|-------------|----|------|------|
| CHK BY: RA       | NO. | DESCRIPTION | BY | CHKD | DATE |
| APP BY: RMH      |     |             |    |      |      |
| SCALE: AS NOTED  |     |             |    |      |      |
| DATE: APRIL 2024 |     |             |    |      |      |

PROJ. NO.-230120

SHEET NO.

**EXHIBIT  
2**



**Figure 1. View of Mitigation Area A, facing north (CEI 3/28/2024).**



**Figure 2. View of Mitigation Area A, facing west (CEI 3/28/2024).**



**Figure 3. View of Mitigation Area A, facing south (CEI 3/28/2024).**



**Figure 4. View of Mitigation Area A, facing east (CEI 3/28/2024).**



**Figure 5.** View of wetlands associated with Mitigation A from Zahn Rd., facing southwest (CEI 3/28/2024).



**Figure 6.** View from within Mitigation Area B looking north towards Zahn Rd. (CEI 3/28/2024).



**Figure 7. View from within Mitigation Area B looking southwest (CEI 3/28/2024).**



**Figure 8. View of Mitigation Area B facing southwest (CEI 3/28/2024).**



**Figure 9. View of Mitigation Area B facing southeast (CEI 3/28/2024).**



**Figure 10. View of Mitigation Area B facing northeast (CEI 3/28/2024).**