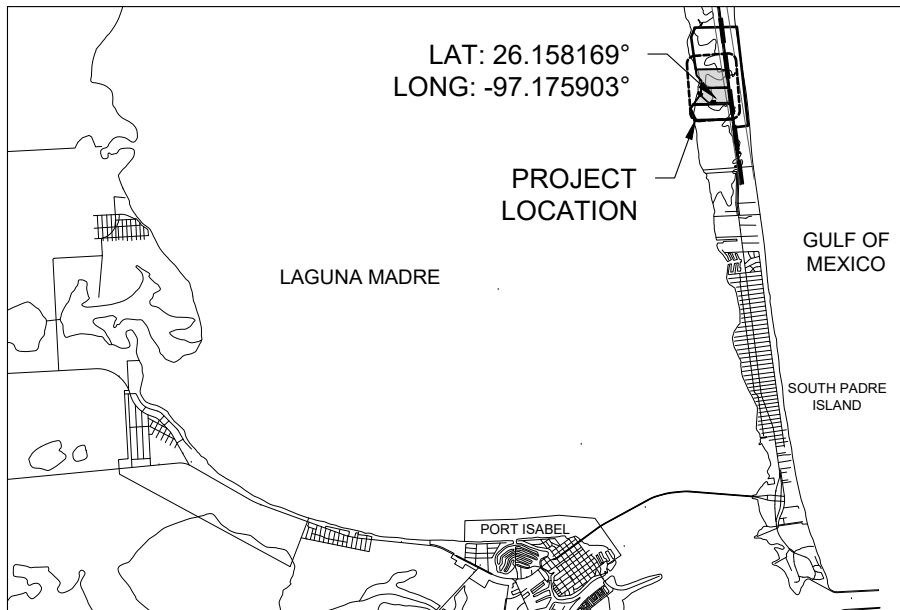
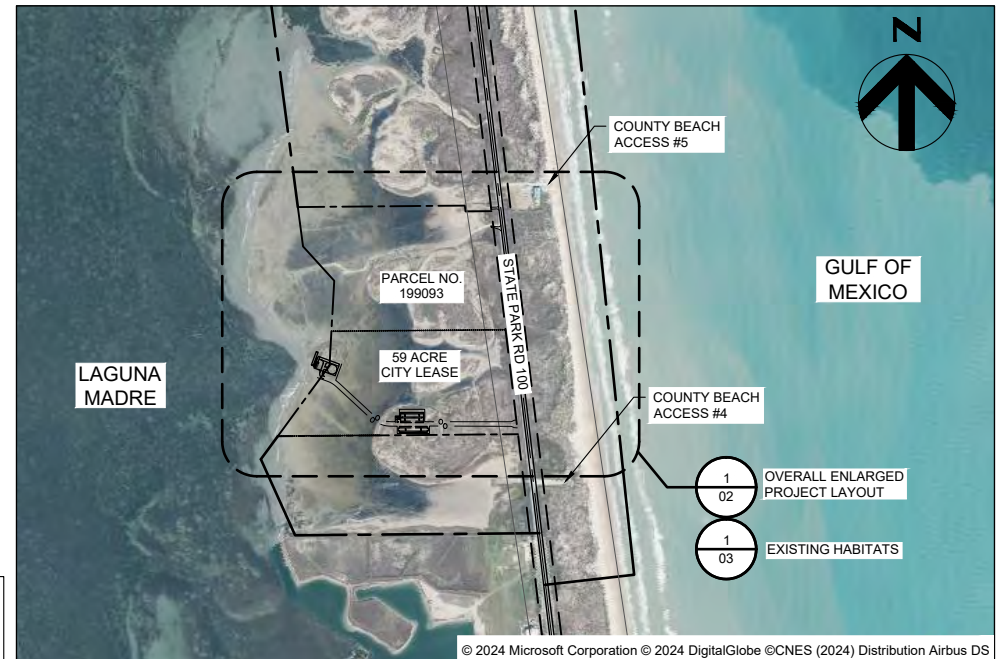


VICINITY MAP



LOCATION MAP
N.T.S.



OVERALL SITE PLAN
1" = 2000'



APPLICANT: CITY OF SOUTH PADRE ISLAND, TEXAS

ACTIVITY: SOUTH PADRE ISLAND WIND & WATER SPORTS PARK

WATERWAY: LAGUNA MADRE

LAT: 26.158169° LONG: -97.175903°

HDR PROJECT NO: 10411152

DATUM: NAVD'88

FILE NO.: SWG-2018-00232

REV. DATE: FEBRUARY 2025

SHEET 02 OF 12

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APPLICANT: CITY OF SOUTH PADRE ISLAND, TEXAS

ACTIVITY: SOUTH PADRE ISLAND WIND & WATER SPORTS PARK

WATERWAY: LAGUNA MADRE

LAT: 26.158169° LONG: -97.175903°

HDR PROJECT NO: 10411152

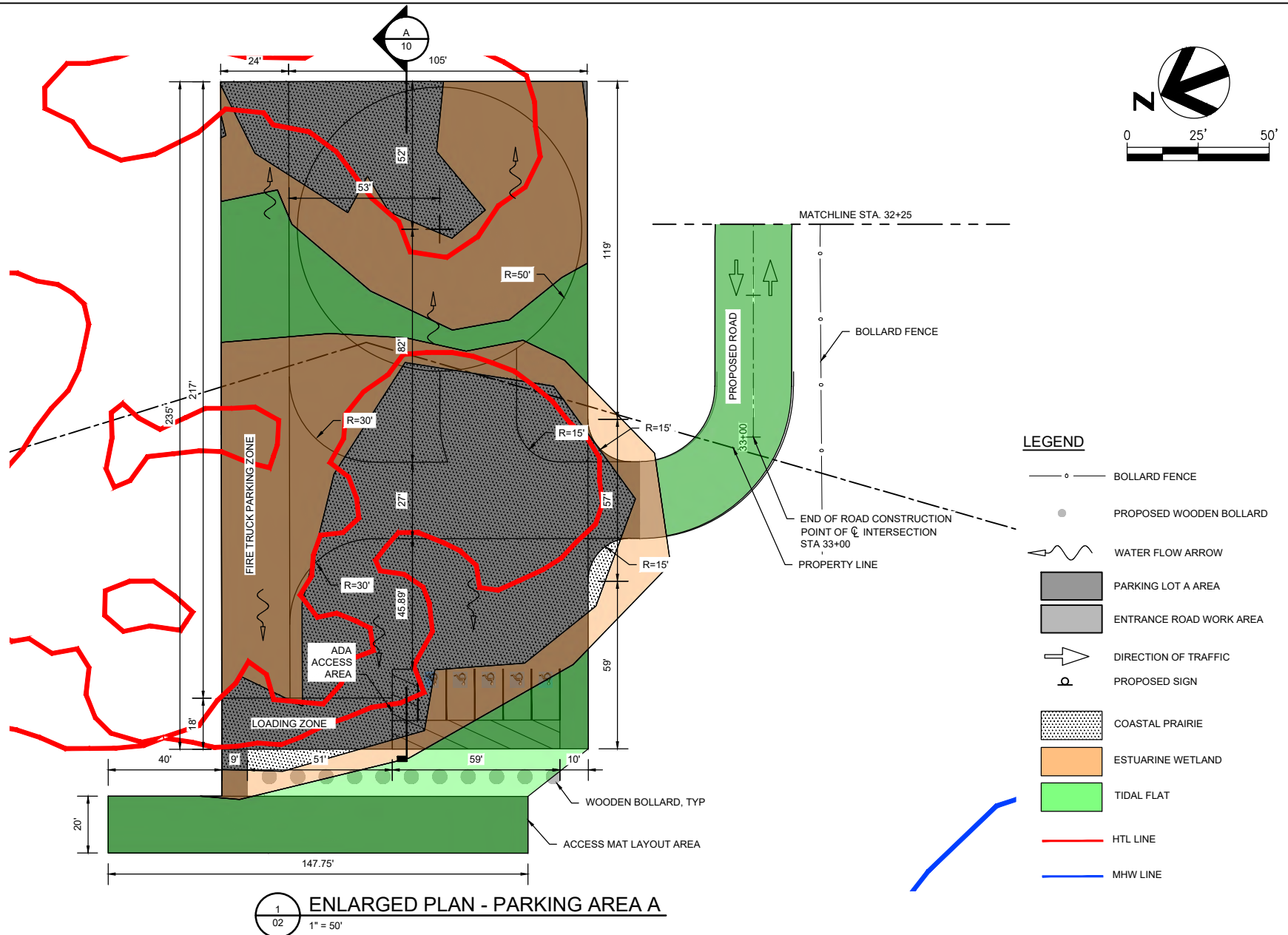
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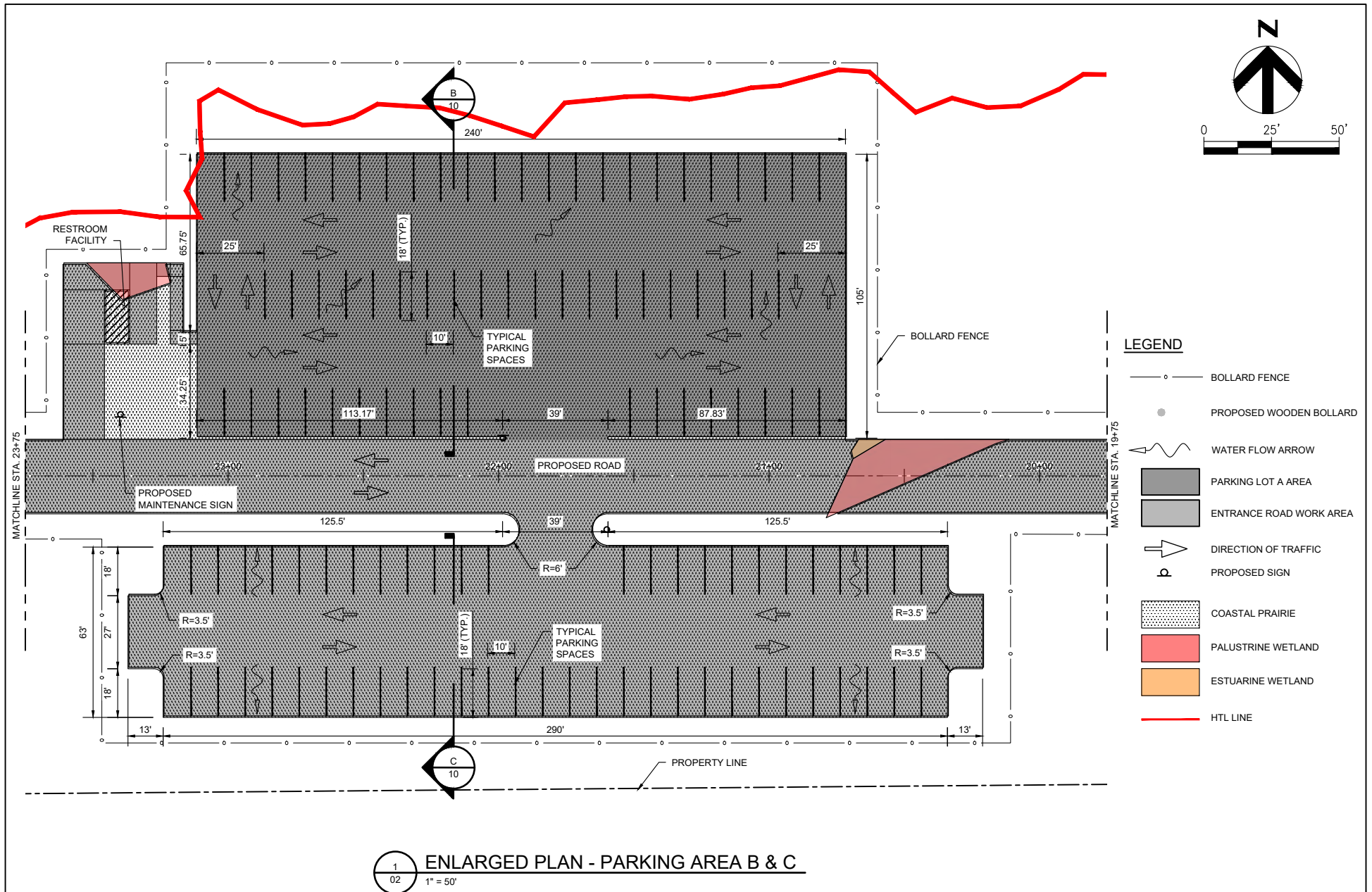
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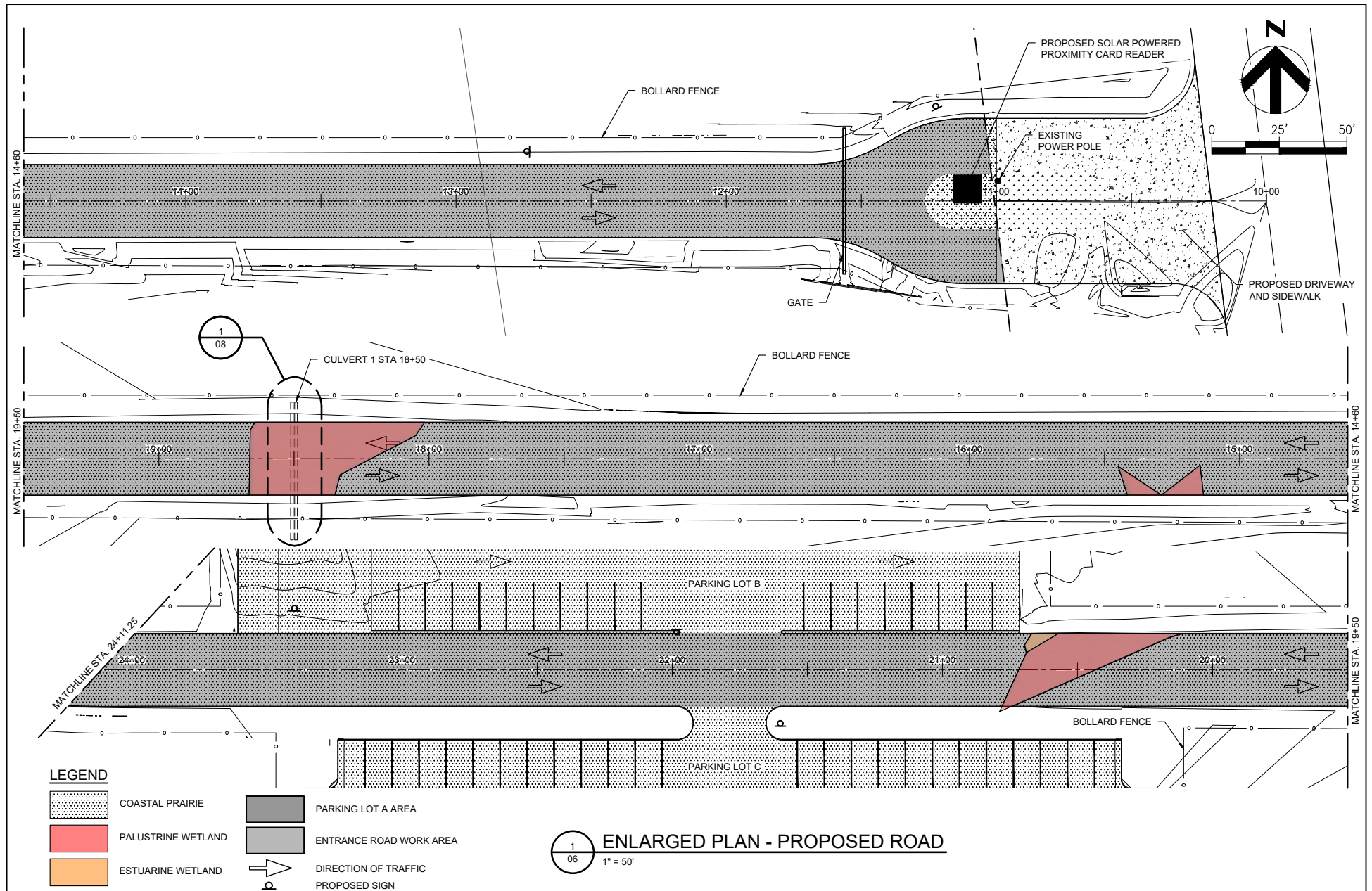
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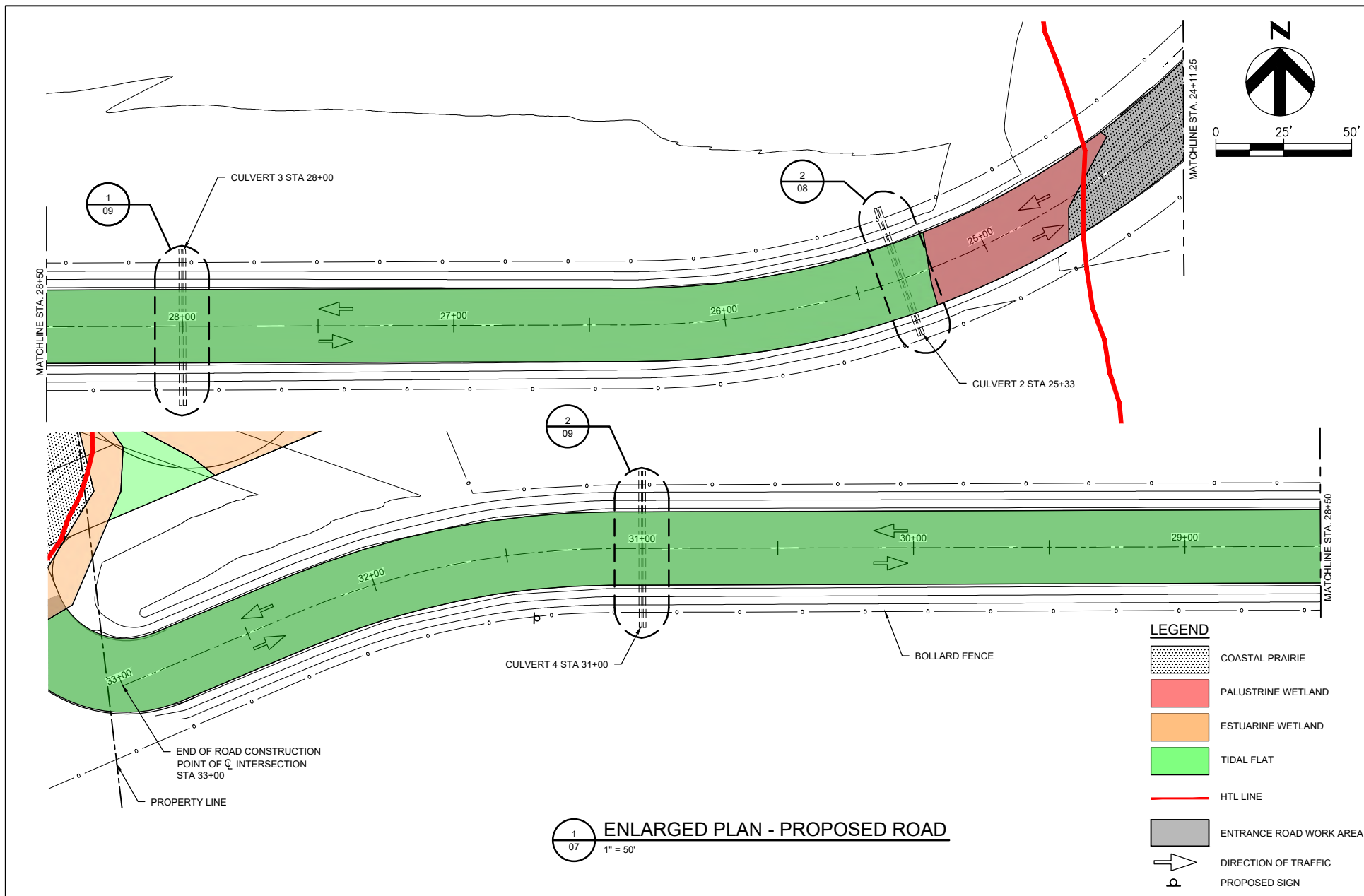
SHEET 03 OF 12

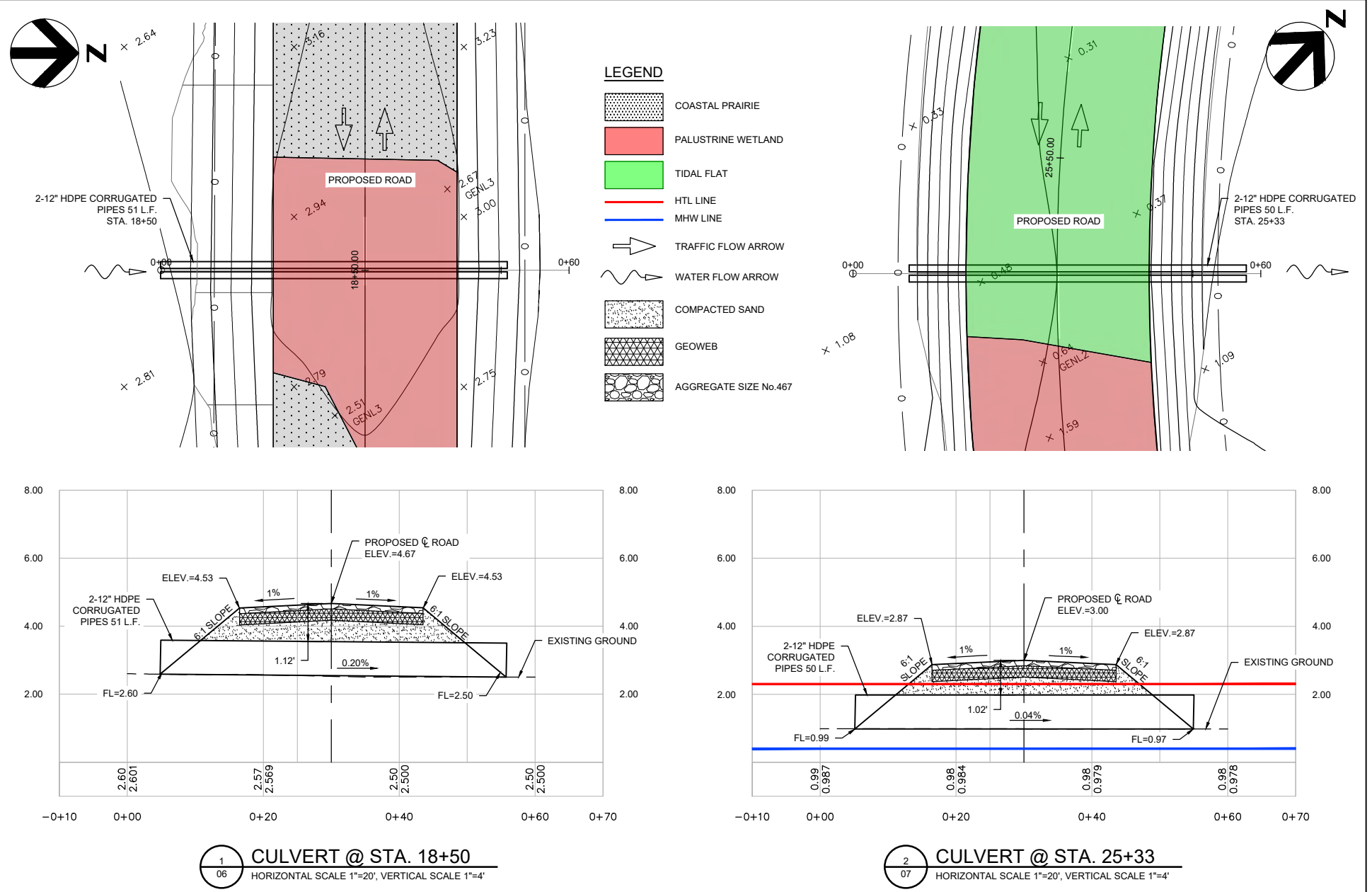
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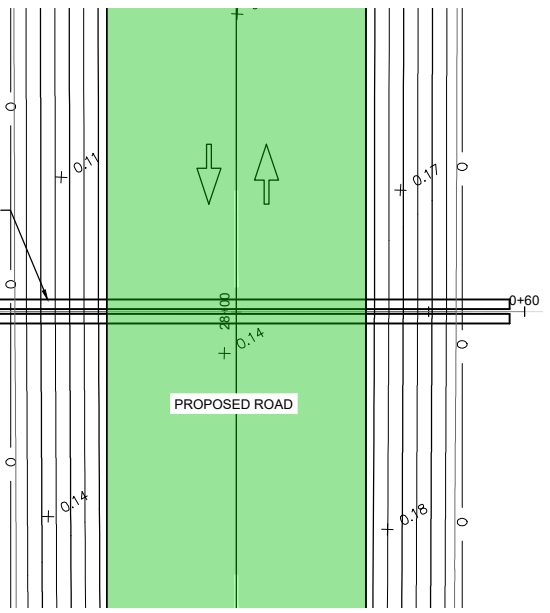




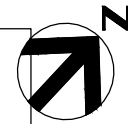




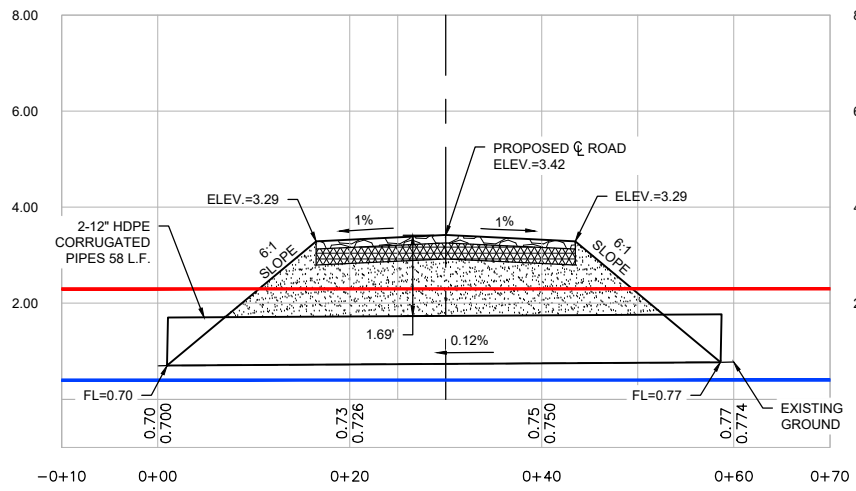
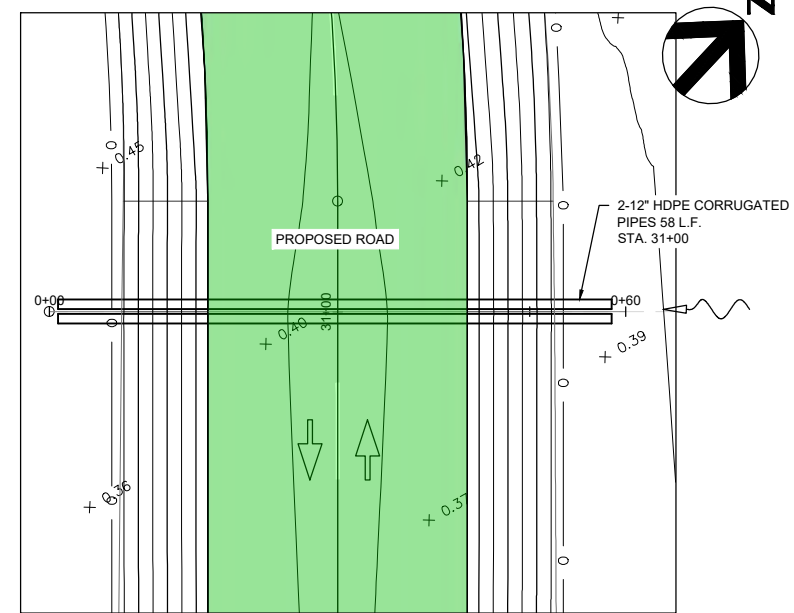
2-12" HDPE CORRUGATED
PIPES 58 L.F.
STA. 28+00



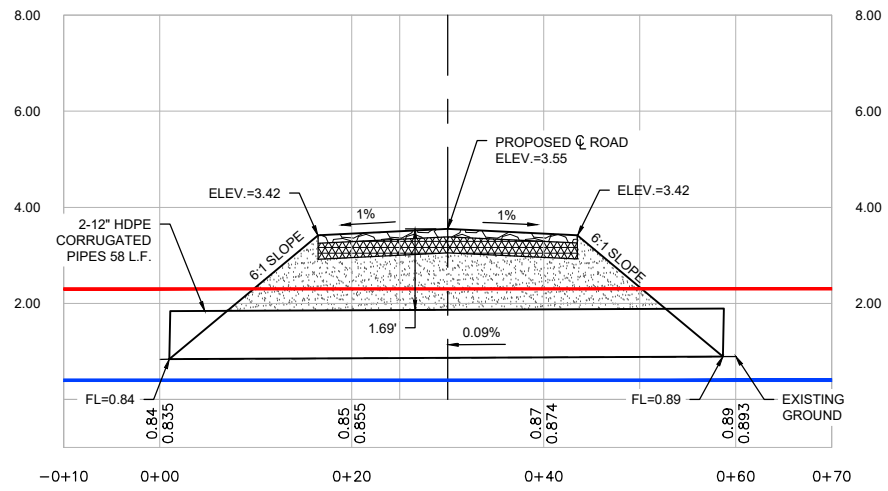
- LEGEND**
- TIDAL FLAT
 - HTL LINE
 - MHW LINE
 - TRAFFIC FLOW ARROW
 - WATER FLOW ARROW
 - COMPACTED SAND
 - GEOWEB
 - AGGREGATE SIZE No.467



2-12" HDPE CORRUGATED
PIPES 58 L.F.
STA. 31+00



CULVERT @ STA. 28+00
HORIZONTAL SCALE 1"=20', VERTICAL SCALE 1"=4'



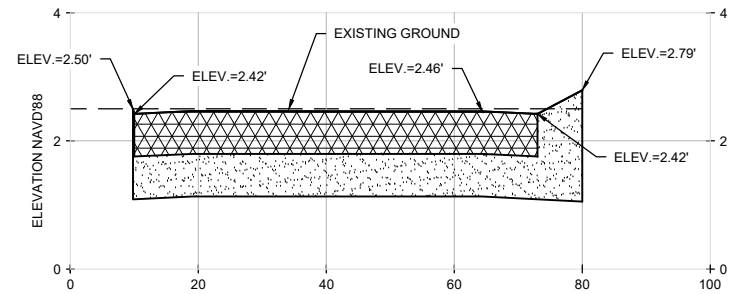
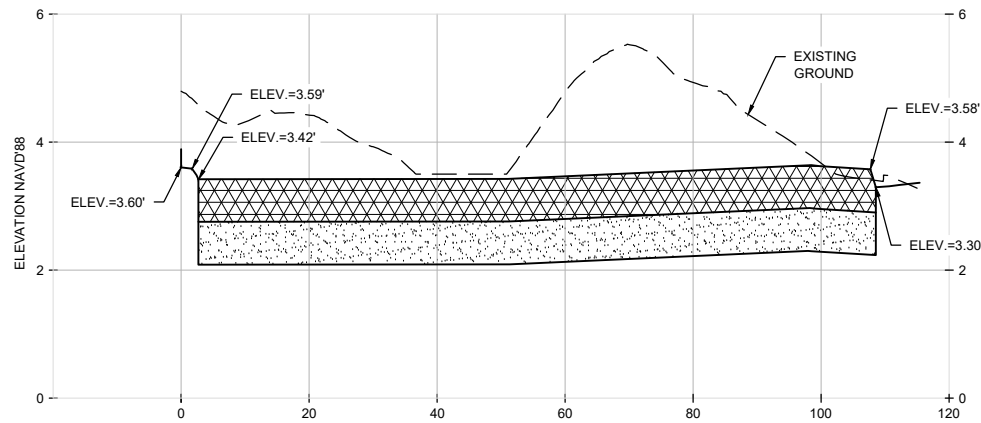
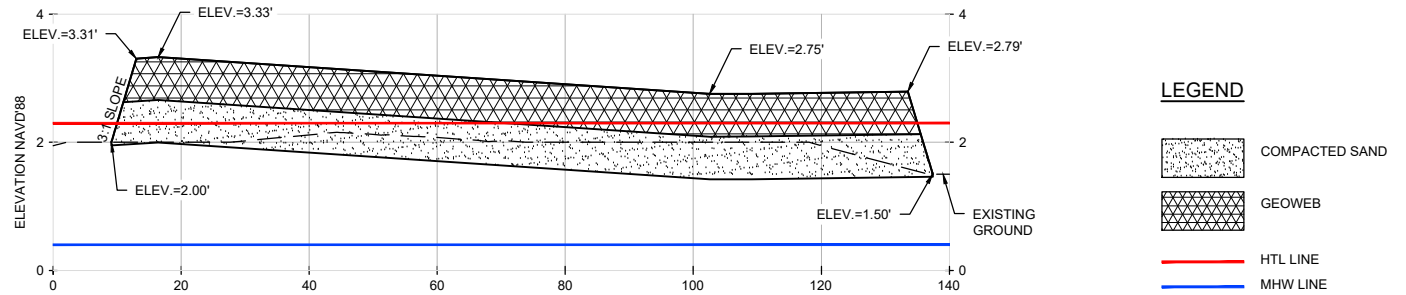
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HORIZONTAL SCALE 1"=20', VERTICAL SCALE 1"=4'

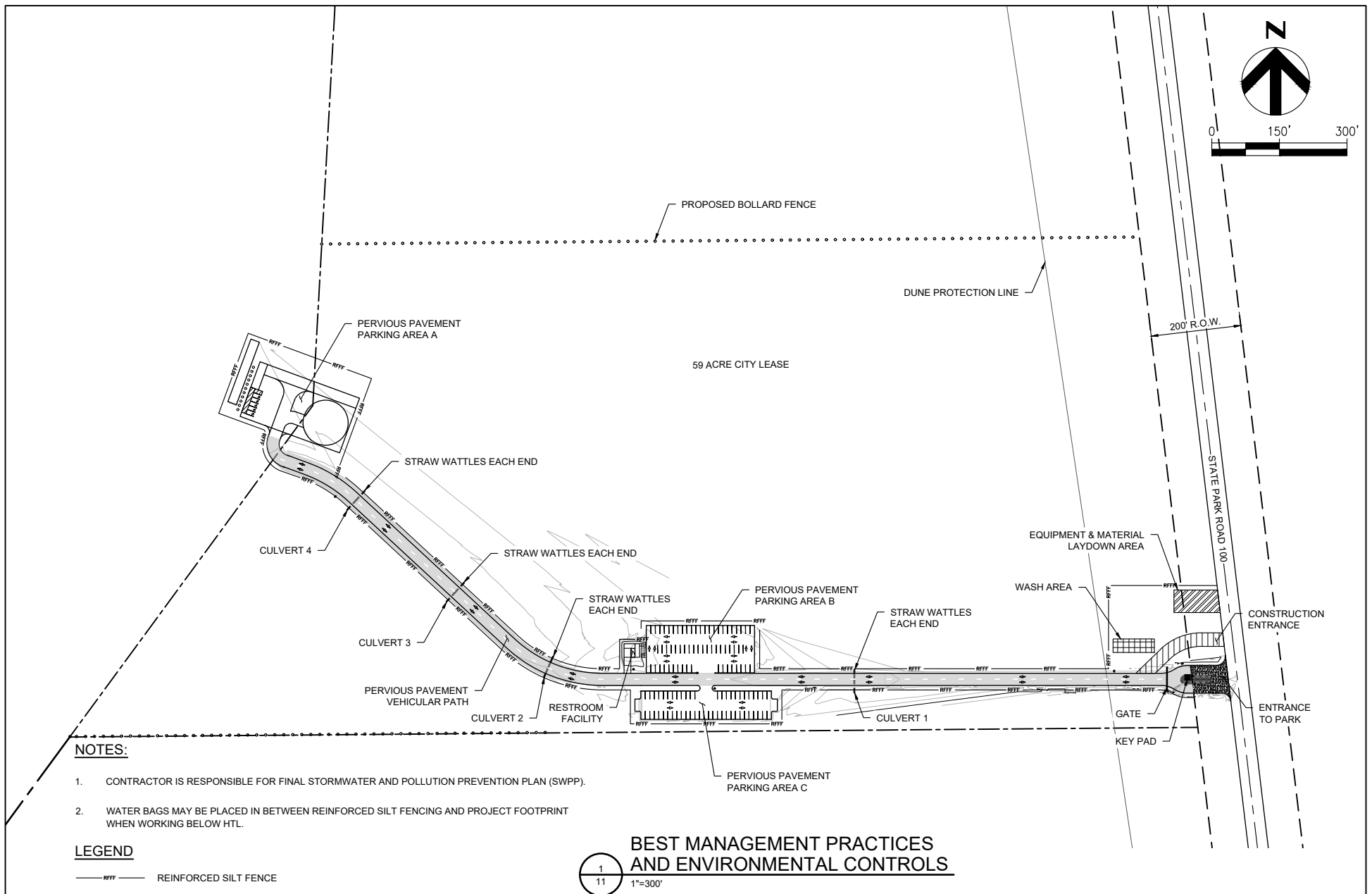


APPLICANT: CITY OF SOUTH PADRE ISLAND, TEXAS
 ACTIVITY: SOUTH PADRE ISLAND WIND & WATER SPORTS PARK
 WATERWAY: LAGUNA MADRE
 LAT: 26.158169° LONG: -97.175903°

HDR PROJECT NO: 10411152
 DATUM: NAVD'88
 FILE NO.: SWG-2018-00232
 REV. DATE: FEBRUARY 2025
 SHEET 09 OF 12

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NOTE:

1. THE CITY PROPOSES TO PRESERVE VIA DEED RESTRICTION A 12.42-ACRE TRACT TO PROVIDE, OFF-SITE, OUT-OF-KIND MITIGATION AT AN APPROXIMATE 11 TO 1 RATIO.





Permittee-Responsible Mitigation Plan

SWG-2018-00232

Wind and Water Sports Venue

South Padre Island, Texas

December 13, 2024





1.0 Objectives

The objective of this permittee-responsible mitigation plan is to offset the unavoidable wetland impacts resulting from the proposed South Padre Island Wind and Water Sports Venue (WWSV). The City of South Padre Island (City) proposes to preserve via deed restriction a recently purchased property with similarly situated special aquatic sites as the WWSV (see Figure 1). The City will preserve a 12.42-acre parcel of land, resulting in a 11 to 1 ratio of compensatory mitigation for unavoidable project impacts. This permittee-responsible mitigation plan (PMRP) supplements the inherent habitat mitigation provided by the WWSV, which, as a function of its design, will allow for the restoration and protection of over 35.22 acres of tidal flats. Per 33 [CFR 332\(h\)\(1\)](#), "Preservation may be used to provide compensatory mitigation for activities authorized by DA permits when all the following criteria are met:

- (i) The resources to be preserved provide important physical, chemical, or biological functions for the watershed;
- (ii) The resources to be preserved contribute significantly to the ecological sustainability of the watershed. In determining the contribution of those resources to the ecological sustainability of the watershed, the district engineer must use appropriate quantitative assessment tools, where available;
- (iii) Preservation is determined by the district engineer to be appropriate and practicable;
- (iv) The resources are under threat of destruction or adverse modifications; and
- (v) The preserved site will be permanently protected through an appropriate real estate or other legal instrument (e.g., easement, title transfer to state resource agency or land trust)."

Each of these criteria for use of preservation are met by the proposed mitigation as described below.



Figure 1. Project locations map.

This mitigation will preserve and allow for natural restoration of the physical, chemical, and biological function of wetlands and tidal flats within the mitigation and project (reference) sites. Tidal flats dominate the mitigation and project site. Tidal flats' physical, chemical, and biological functions are imperative to the continued existence of federally protected species like the piping plover and red knot. A natural hydrologic regime supports the growth of benthic invertebrates, which provide food for the plovers and red knots. The hydrologic regime further supports the tidal flats' chemical function, controlling the salinity and pH, which further control the benthic environment. Alterations that change the hydrologic regime of the flats can reduce the available food source for these species and create too much inundation, rendering the flats too deep.

North of the City limits, tidal flats and other wetland habitats are subject to continual anthropogenic impacts from illegal off-road vehicle access, dumping, and homesteading. Widespread impacts can be observed in these habitats, compromising their sustainability across the larger watershed. The City is limited in its ability to enforce trespassing and other citations outside its limits. In this mitigation plan and the WWSV project, the City aims to physically restrict access to these habitats and allow for natural restoration. Therefore, preservation of the aquatic resources at the proposed WWSV and mitigation sites is ecologically preferable and contributes to the ecological sustainability of the watershed.

Preservation may be appropriate when USACE determines it is a practicable solution. The City met with USACE on April 11, 2024, and June 5, 2024, to discuss the project in light of USACE's permit application withdrawal on March 5, 2024. On June 5, 2024, USACE stated preservation would be an acceptable form of mitigation for the WWSV's unavoidable project impacts.



Additionally, the City met with USACE on December 3, 2024, to discuss a draft of this mitigation plan; this plan incorporates USACE's comments from the meeting.

The resources proposed for preservation are under continual threat of development and other degradation. In addition to the anthropogenic degradation discussed throughout this document, hotel and other short-term rental developments pose a threat to aquatic resources on South Padre Island as tourism continues to grow in this region. This threat of development will be accelerated as the Texas Department of Transportation (TxDOT) progresses its design for a second causeway to the island. The second causeway will be routed to the island north of the proposed mitigation site and WWSV. TxDOT and the Cameron County Regional Mobility Authority anticipate additional commercial and residential development due to the causeway's construction. Many of the tracts of land in this area have been divided into individual parcels by land developers in anticipation of the second causeway. By preserving the mitigation site, the City will protect resources under current and an increasing threat of destruction.

The mitigation site and the WWSV will physically restrict access to areas with the highest anthropogenic impacts (by others), allowing the natural hydrologic exchange to restore these impacts. This PRMP will directly preserve 7.70 acres of aquatic resources and 4.72 acres other coastal habitat while supporting 35.22 acres of tidal flat restoration within the WWSV.

To codify the PRMP's intentions, the City will place a deed restriction the mitigation site to preserve the resources in perpetuity. Additional information on the deed restriction can be found in Section 3.0 Site Protection Instrument.

2.0 Site Selection

The City evaluated multiple mitigation sites, including an on-site alternative and a separate off-site alternative, before purchasing the property described in this PRMP. The City proposed on-site alternatives, but USACE rejected them due to the lack of a site protection instrument. Initially, the City proposed on-site establishment and restoration; however, since the City did not own this property, an effective site protection instrument could not be enacted. All on-site alternatives were eliminated from consideration since the City could not generate a site protection instrument on leased property. The City proposed an off-site alternative by preserving in-kind wetlands at an approximate 1-to-1 ratio. USACE ultimately eliminated this alternative for various reasons, as discussed in USACE's November 2023 letter (See Attachment A).

Ultimately, the City considered the watershed needs and the potential to mitigate with ecologically self-sustaining resources and determined that the most effective mitigation strategy would be the preservation and natural restoration of similarly situated aquatic resources as proposed in this PRMP.

The South Laguna Madre watershed is dominated by unique habitats such as segmented resacas, dense seagrass beds, and expansive tidal flats. Anthropogenic impacts threaten all these habitat types within the watershed, especially tidal flats. These tidal flats comprise the majority of the landmass of South Padre Island and serve as designated critical habitat for endangered species. Illegal offroad access continues to impact these tidal flats, altering the natural hydrology and biological function of these flats. Unauthorized vehicles create deep ruts

that destroy the benthic invertebrate communities and alter the hydrologic regime. These impacts limit the foraging capabilities for endangered and other tidal flat dependent species. Because of their ecological importance to endangered species, the City determined the protection of tidal flats to be a crucial need for the South Laguna Madre watershed.

While these habitats are significantly impacted, as evident on aerial imagery, the vegetative communities remain consistent with typical barrier island geomorphology (see Figure 2). The City believes that since these resources remain intact despite their apparent impacts, their preservation will allow natural restoration to practicably accomplish ecologically self-sustaining aquatic resource mitigation at the proposed site. Further, by preserving the site and allowing for natural restoration, the City would provide ecological uplift to these self-sustaining resources.

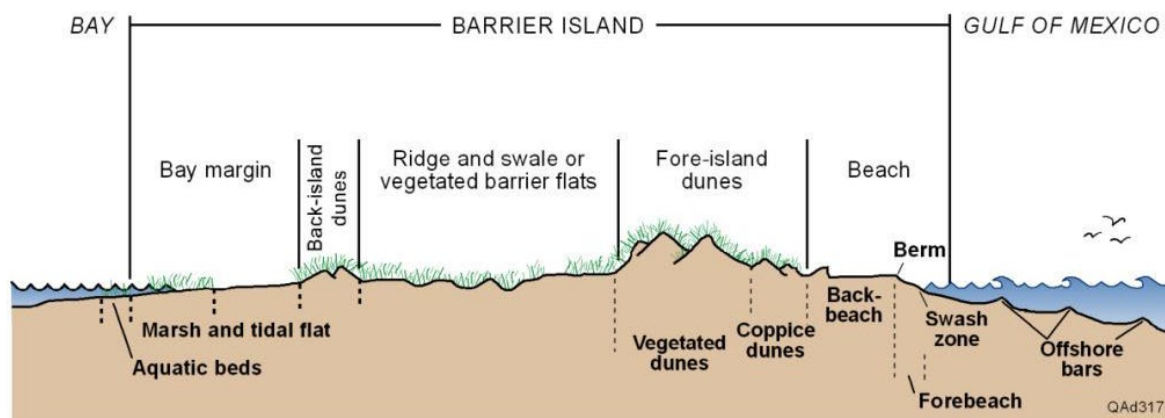


Figure 2. Texas Barrier Island ecological cross-section.

3.0 Site Protection Instrument

The City proposes to deed restrict the approximately 12.42-acre mitigation site property to ensure its preservation in perpetuity. The site protection instrument will prohibit vehicles from driving onto the site and require installing bollards along the north and south property lines. A draft of the deed restriction can be found in Attachment B. The City will file the deed restriction within 90 days of the start of construction on the WWSV.

4.0 Baseline Information

4.1 Mitigation Site

The mitigation site is an approximately 12.42-acre parcel of land that spans east to west from the Gulf of Mexico to the Laguna Madre, located in South Laguna Madre watershed HUC 12110208 (see Figure 3). HDR delineated the potential waters of the United States, including wetlands (WOTUS), within the parcel (see Attachment C). HDR observed evidence of expansive anthropogenic disturbance and habitat degradation both on-site and in the surrounding parcels. The mitigation site consists of four major habitat types:

- Tidal flats – 5.78 acres
- Estuarine wetlands – low density – 0.47 acre

- Palustrine emergent wetlands – 1.45 acre
- Coastal prairie and dunes (upland) – 4.72 acres



Figure 3. Mitigation Site

4.2 Reference Site

The WWSV is located on an approximate 137-acre parcel; the City proposes to use portions of this parcel, undeveloped by the WWSV, as a reference site (see Figure 4). The reference site is located in South Laguna Madre watershed HUC 12110208. Hanson Professional Services Inc. conducted a wetlands delineation of the reference site and documented five major habitat types:

- Algal [Tidal] flats – 82.2 acres
- Estuarine wetlands – low density – 9.05 acres
- Palustrine wetlands - 6.18 acres
- Coastal prairie and dunes (upland) – 38.22 acres
- Tidal pool – 1.40 acres

The proposed reference and mitigation sites demonstrate similar geomorphological positions on South Padre Island, contain the same habitat types, and have the same level of existing anthropogenic disturbances (mainly tire ruts from illegal off-road access). A cursory review of Google Earth indicates a reference site without readily apparent anthropogenic disturbances is located 8 miles north of the northern terminus of Park Road 100. Based on this review, any ecological reference site without readily apparent anthropogenic disturbances would be over 12 miles away from the project location. HDR believes using such a reference site without readily

apparent anthropogenic impacts would be too far from the project location and too remote to execute an effective monitoring plan.

In addition to the unsuitability of other reference sites, the proposed reference site was chosen because this portion of the WWSV parcel will continue to be susceptible to illegal off-road access. The City will use both the bollard-protected and unprotected portions of the 107-acre parcel to comprise the reference site. Using a reference site subject to ongoing anthropogenic impacts, the City will have a benchmark for documenting and quantifying natural restoration within the proposed mitigation site by comparing the degraded reference site to the restored mitigation site and the protected habitats within the WWSV. Especially within the tidal (algal) flats, the City will quantify anthropogenic impacts and resulting conditions within the reference site and compare those to the mitigation site. This plan aims to document the natural restoration of anthropogenic impacts through the preservation and physical restriction of access to the mitigation site.

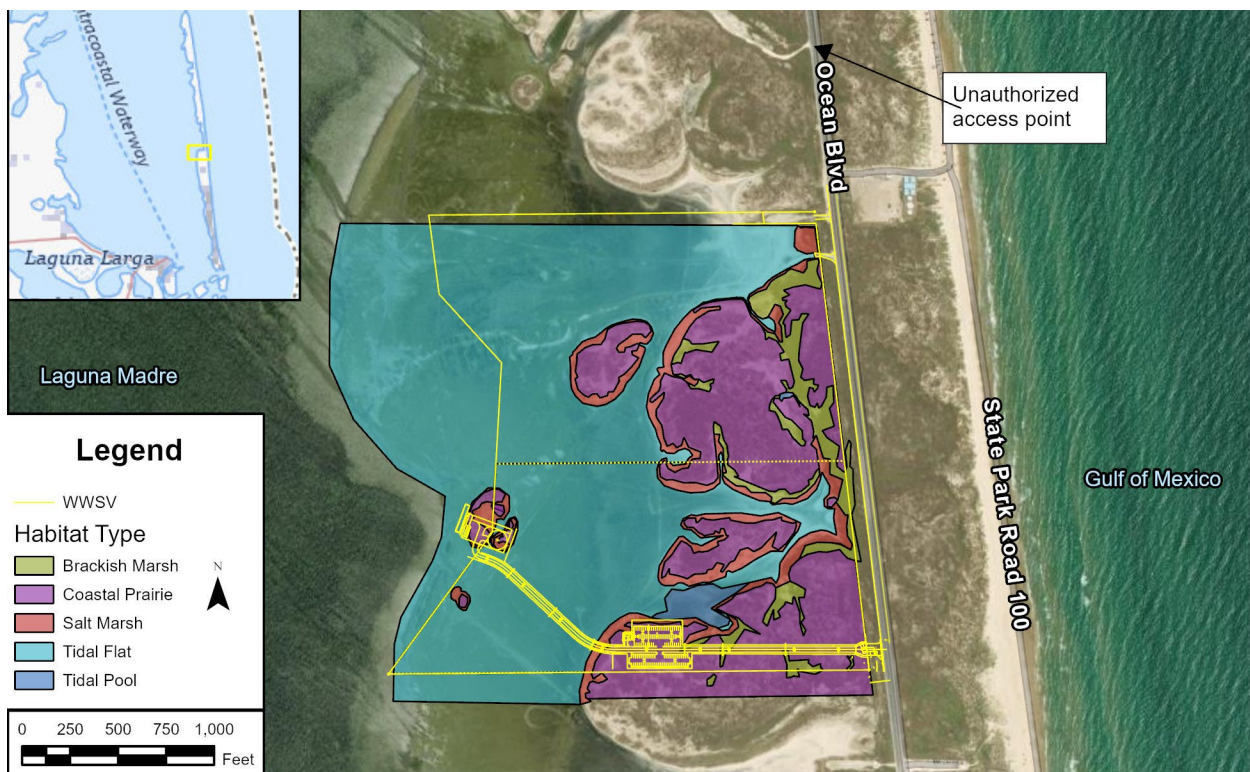


Figure 4. WWSV Site Plan

5.0 Determination of Credits

The City proposes off-site mitigation at an approximate 11 to 1 ratio by preserving in-kind and out-of-kind habitat. The City determined the credits by preserving the maximum acreage of all habitat types that could be preserved within the mitigation property. The Texas Department of Transportation (TxDOT) maintains a 200-foot right-of-way on State Park Road 100 (Ocean Boulevard). Additionally, the Texas General Land Office (GLO) manages beach access through the Texas Open Beaches Act. As a result, the City excluded land from the Gulf of Mexico to the western edge of the TxDOT right-of-way to avoid conflicts with the proposed deed restriction.



The City elected to purchase this mitigation site after USACE determined the two previous mitigation sites were unsuitable. This property was the only available property for purchase at the time the City evaluated potential mitigation sites. Since the City could not find any practicable alternatives, a 11 to 1 ratio was determined to be the highest number of available credits. The City will offset the off-site and out-of-kind aspects of this mitigation plan by preserving 9 times the coastal habitat of the WWSV's unavoidable impacts. A comparison of habitat types between the mitigation and project site can be seen in Table 1 below:

Table 1. Proposed Mitigation Ratio

Resource Type	Project Site Impacts *(acres)	Mitigation Site (acres)	In-Kind Ratio
Algal (tidal) flats	0.69	5.78	8.38 to 1
Estuarine	0.33	0.47	1.42 to 1
Palustrine	0.09	1.45	16.11 to 1
Coastal Prairie (Out of Kind)	-	4.72	-
Total	1.11	12.42	-
Ratio	11.20 to 1		

*Note: project impacts differ from the USACE letter due to a redesign to minimize impacts. These impacts reflect the most current representation of the project.

The proposed 11 to 1 ratio of offsite, out-of-kind preservation adequately mitigates unavoidable project impacts because the preservation will allow the natural restoration of in-kind resources. Additionally, though not reflected in the mitigation ratio, the project will further protect approximately 35.22 acres of tidal flats at the reference site, allowing for additional natural restoration.

6.0 Mitigation Work Plan

Bollards will be installed on the north and south property lines across the tidal flats and into the uplands to prevent vehicular access from outside the property. No bollards will be installed on the Gulf-facing beach. Bollards will be sized and spaced appropriately to prevent vehicles from passing through the system. The City will regularly inspect bollards on a monthly basis to determine whether the bollard system is intact. Bollards will be installed during a time of year to avoid the wintering season of the plovers and knots. Construction equipment will be limited to small vehicles like skid steers, mini excavators, and ½ ton work trucks. A work corridor will be established to define construction access points and limit the construction footprint. The ruts in the construction corridor from the equipment will be restored following the bollard installation with the equipment listed above. Vehicles for construction of the bollards will avoid work in flats when high water levels inundate the area. Invasive species were not documented in the mitigation site or reference site, so their removal is not included as a component of this plan. Existing ruts from illegal access are anticipated to be naturally restored via tidal exchange over the flats following the restriction of access to vehicles by this work plan. The City does not propose planting the wetlands within the proposed mitigation site since the vegetation appears relatively undisturbed. Signage will inform would-be trespassers that the site is associated with an ongoing mitigation plan and warn them of potential fines for damages to sensitive habitats. The City will also install bollards and signage on the north and south at the WWSV to afford the surrounding habitats the same level of protection as the mitigation site.



7.0 Maintenance Plan

While the resources within the mitigation site appear to be in a productive condition suitable for preservation, the apparent and ongoing vehicle impact on the tidal flats will be restricted to allow for natural restoration and, as a result, improve their overall function.

The City will inspect bollards on a monthly basis to determine whether the bollard system is intact. Inspections will continue for the life of the WWSV. If bollards are damaged or removed in a manner that allows vehicles to access the sites, the City will replace the bollards within 90 days of documenting the issue. The City may elect to postpone bollard repairs to avoid the wintering season of endangered species. If feasible, bollard replacement will be completed by hand to minimize on-site impacts from installation. The greater the number of bollards that must be replaced, the higher the likelihood the City will need to mobilize small construction equipment to complete the job efficiently. In this case, the same techniques and restoration will occur as described in the work plan.

8.0 Performance Plan

Since the City proposes to preserve the mitigation site in its current state, a performance plan is not included as part of this plan. As mentioned in the previous section, the city will maintain the bollards on the mitigation site to prevent further illegal off-road access.

9.0 Monitoring Requirements

Since the City proposes to preserve the mitigation site in its current state, a performance plan is not included as part of this plan. As mentioned in the previous section, the city will maintain the bollards on the mitigation site to prevent further illegal off-road access.

10.0 Long-Term Management

Following the completion of the monitoring period, the City will continue to manage the mitigation site and monitor the bollards as needed to ensure the system will continue to restrict vehicle access. The City may elect to develop a nature park on the mitigation site in compliance with the attached draft deed restriction. A park would include minimal amenities and avoid impacts to all special aquatic sites. Once a nature park is constructed, the City will continue to maintain the property in accordance with its other assets. Until the park is constructed, monthly bollard inspections will continue to document and replace any damage to the system that may hinder site preservation. As detailed in Section 12.0 Financial Assurances, the City possesses the funding mechanisms to maintain the property. City funds will be used to maintain the bollard system and develop and maintain potential future park amenities.

11.0 Adaptive Management

To keep the mitigation site in an acceptable condition, the City proposes the following actions as adaptive management that may be implemented if the mitigation site fails to meet its success criteria:

- Bollard conditions
 - Increase signage



- Increase police patrol
 - Deploy game cameras to document trespassers
 - Public awareness campaign
- Tidal flat tire ruts
 - Extension of the monitoring period
 - Mechanical regrading
 - Targeted restoration with hand tools (“grooming”)
 - Placing clean fill of a compatible grain size in ruts
- Wetland vegetative cover
 - Extension of the monitoring period
 - Wetland planting
 - Seeding/hydromulching
 - Installing temporary irrigation

Since this mitigation plan does not have performance standards that would trigger any adaptive management practices, USACE and USFWS will be contacted before enacting any of these practices that would directly affect wetlands or tidal flats.

12.0 Financial Assurances

The City implements a hotel occupancy tax (HOT funds) to generate revenue for the sole purpose of reinvesting into the City’s tourism-based assets. The HOT fund will be used to maintain the mitigation site perpetuity like other City recreational assets.



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