

Alternatives Analysis
Marina del Mar
Travis Land Materials Port O'Connor, Ltd.
Port O'Connor, Calhoun County, Texas
September 17, 2020

Background. U.S. Army Corps of Engineers (USACE) Permit SWG-2006-01273 was issued May 13, 2015 to Third Coast Concepts, Inc. to construct a 40-acre canal subdivision, with 14.58 acres of canals that would connect to the Gulf Intracoastal Waterway (GIWW), 9,700 linear ft of concrete bulkhead along the interior shoreline, a marina with associated boat slips, a recreational deck, and a boat ramp. The main marina pier (4 ft x 64 ft) includes finger piers that create multiple boat slips, and extends no more than 200 ft into the canal. Additionally, 8 T-head piers, of varying lengths, were authorized to be constructed into the GIWW. The project as authorized involves impacts to 0.16 acres of wetlands and 0.87 acre of shallow waters and onsite compensatory mitigation.

USACE Permit SWG-2006-01273 was transferred from Third Coast Concepts, Inc. to Travis Material Land Port O'Connor, Ltd. (TMLP) via a December 23, 2019 letter to the USACE. At this time, extensive earthwork has been conducted to excavate the canal areas, but no impacts to jurisdictional areas have taken place. On February 13, 2020, TMLP's agent, Belaire Environmental, Inc. (BEI) met with Ms. Kristi McMillan at the USACE Galveston Headquarters in order to review proposed minor changes to the site plan to improve the marine services provided by the project and to discuss obtaining an extension of time to provide for completion of the project construction without any increase in jurisdictional impacts. Ms. McMillan recommended that TMLP request an administrative amendment to SWG-2006-01273 in order to accomplish these items. An administrative amendment request was submitted to the USACE on May 13, 2020. Mr. Brian Bader, USACE project manager, contacted BEI and requested an updated alternatives analysis including the proposed modifications to the project. These modifications include: not constructing the 8 piers at the GIWW, a smaller dredging footprint, not utilizing the authorized offsite dredged material placement area, and expanding the commercial components of the project, and represent a decrease in environmental impacts and therefore represent a less environmentally damaging practicable alternative than the permitted plans. Following is an alternatives analysis that examines the proposed modifications and presents the least environmentally damaging practicable alternative (LEDPA).

Purpose and Need for the Work. The overall purpose of the proposed project is to provide single family housing, with waterfront access and dry boat storage, a marine convenience store, and a fuel facility, with access to Espiritu Santo Bay, Matagorda Bay, GIWW, and the Gulf of Mexico to the Port O'Connor area.

Alternatives. A key provision of the 404(b)(1) guidelines is the "practicable alternative test" which requires that "no discharge of fill material shall be permitted if there is a practicable alternative to the proposed fill which would have a less adverse impact on the aquatic ecosystem." This is especially true when the proposed project is not water dependent. TMLP must demonstrate that there are no less damaging sites available and that all on site impacts to waters of the United States have been avoided to the maximum practicable extent possible. For an alternative to be considered "practicable", it must be available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose.

In coordination with Belaire Environmental, Inc. (BEI), G&W Engineering, Inc., and TMLP prepared an analysis of alternatives TMLP considered for the proposed water-oriented project. TMLP evaluated the No Action Alternative, Off-site Alternatives, and On-site Alternatives. TMLP attempted to find alternative sites and alternative designs which met all of the above criteria and which would result in less wetland impact than the proposed project. Below is a summary of TMLP's evaluation process with regards to each of these three basic alternatives.

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TMLP proposes to dredge, place fill, install a breakwater, shoreline stabilization mats, and bulkhead to construct a waterfront single family residential development and dry stack boat storage with a fuel dock and marine convenience store at Port O'Connor, Texas. TMLP considered the No-Action alternative as well as off-site and on-site alternatives. TMLP's criteria and goals for the project are as follows:

TMLP proposes to construct a 40-acre canal subdivision with waterfront lots, boat access, piers, and marina facilities. Sixteen alternatives were considered based on the following siting criteria:

- Reasonable proximity (less than a 3-hour drive) from major markets including Houston, San Antonio, and Austin,
- Non-industrial setting with an ongoing focus on tourism,
- Rapid deep water boat access (at least -9 ft below NGVD 29) less than 10 miles from the Gulf of Mexico,
- Rapid boat access to shallow bay fishing (less than 5 miles),
- GIWW frontage,
- Minimum 40-acre site with the potential to develop a minimum of 63 waterfront or waterview lots and 4 commercial lots to accommodate a fuel dock, marine convenience store, and dry boat storage facility,
- Reasonable proximity to existing roads and utilities (water, sewer, electric, etc.),
- Minimal wetland impacts, and
- Minimal dredging requirements.

(1) No Action Alternative. This alternative involves not constructing the proposed project. This alternative is not practicable because it would not satisfy the demand for GIWW waterfront residential property on the Texas Gulf Coast, it would not satisfy the demand for dry storage of boats, would not satisfy the demand for a fuel dock and marine convenience store, would not contribute to creation of new jobs in Calhoun County, and would not increase the tax base and local sales tax revenue in Calhoun County. Also, as TMLP owns the subject property and has performed extensive work authorized by USACE permit SWG-2006-01273, it is not a financially feasible alternative to abandon the project under the no action alternative.

(2) Offsite Alternatives. Although offsite alternatives are not financially feasible, for reasons listed above, TMLP considered four alternative locations along the Texas Gulf Coast.

- (a) Offsite Alternative 1: Matagorda Peninsula, in Matagorda, County, Texas was considered as an alternative, but was rejected because development on available sites would have resulted in greater impacts to wetlands. In addition, Gulf access from Matagorda requires a travel distance of more than 35 miles. At 10 knots, the travel time from Matagorda to the Gulf would be approximately 3.5 to 4 hours. This alternative was rejected due to its extremely long travel time to the Gulf of Mexico and due to a higher concentration of wetlands than the proposed project site.
- (b) Offsite Alternative 2: Freeport, in Brazoria, County, Texas was considered, but was rejected because development on available sites would have resulted in greater impacts to wetlands. In addition, GIWW frontage in this area is highly industrialized and, therefore, did not meet the siting criteria.

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- (c) Offsite Alternative 3: West Galveston Island, in Galveston County, Texas was considered as an alternative but was rejected because of the need for extensive dredging to create deep water access and Gulf access would require 30-40 miles of travel over water.
- (d) Offsite Alternative 4: Palacios, in Calhoun County, Texas was considered as an alternative, but was rejected because no property of appropriate size was identified as available for sale adjacent to deep water channels, within a reasonable distance to the Gulf. Palacios was rejected as an alternative due to the lack of ready Gulf access and deepwater channel access.

In summary, in TMLP's target market area (i.e., within three hours of Houston, San Antonio, and Austin), Port O'Connor, is unique. It offers ready access to the shallow fishing grounds of Espiritu Santo (1 mile) and Matagorda Bays (5 miles), as well as rapid access (approximately 10 miles) to the Gulf of Mexico. The project site and plan also minimize impacts to wetlands.

(3) Port O'Connor Site Alternatives. The Port O'Connor area was determined to be the best suited to meet the siting criteria and the overall project purpose because it is within a three-hour drive of Houston, San Antonio, and Austin. It has ready access to the shallow fishing grounds in Espiritu Santo Bay (1 mile) and Matagorda Bay (5 miles). It has rapid access to the Gulf of Mexico (10 miles). In addition, the project site could be designed to minimize impacts to wetlands. Although offsite alternatives are not financially feasible, for reasons listed above, below is an analysis of Port O'Connor area property alternatives. TMLP considered four locations in the Port O'Connor area.

- (a) Port O'Connor Site Alternative 1. This alternative site is located at the existing Caracol gated community near the eastern tip of Port O'Connor adjacent to the GIWW. The existing development is approximately 34 acres in size and contains approximately 70 residential lots with excavated canals. According to the Caracol website, 54 of the 70 lots have been sold. A 7.5-acre undeveloped parcel adjacent to the GIWW consists of approximately 6 acres of estuarine wetlands and 1.5 acre of open water. As the site would not accommodate the proposed commercial lots, fuel dock, marine convenience store and dry boat storage facility, and considering that the site is not available, this alternative was rejected. In addition, should the dry boat storage or other not existing project components be constructed within the 6-acre estuarine wetland, wetland impacts at this site would be substantially greater compared to the preferred site. For all these reasons this alternative site was rejected.
- (b) Port O'Connor Site Alternative 2. This alternative involves the existing Sanctuary at Costa Grande canal subdivision. This property is comprised of approximately 700 acres and includes residential lots, excavated canals, a large clubhouse and pool, recreational parks, various sports courts, boat and RV storage, and a deep-water marina with a boat ramp and slips. This existing development is far too large for the applicant's purposes. Additionally, the development is built out, has many different owners, and is restricted by deed restrictions. Because this site is not available, is far too large for the applicant's needs, has a highly fragmented ownership, and contains features not wanted for project inclusion by the applicant, it was rejected.
- (c) Port O'Connor Site Alternative 3. The Welder Estate property was considered as an alternative site. However, this site was rejected because the site is within critical habitat of the endangered

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whooping crane, development on site would have resulted in greater impacts to wetlands, it is far removed from utilities, and it is approximately 25 miles from the Gulf of Mexico.

(d) Port O'Connor Site Alternative 4, Preferred Site. This alternative site is located on the Fisher Tract, along the GIWW directly across from Espiritu Santo Bay, approximately 1 mile west of Port O'Connor, Texas. This site meets all of TMLP's criteria, is practicable, and will satisfy the overall project purpose. It is, therefore, TMLP's preferred site.

(4) Onsite Alternatives: Seven alternatives were considered on the preferred site.

- (a) Onsite Alternative 1. This alternative involved placing a high bulkhead along TMLP's entire GIWW frontage. The bulkhead would be at the edge of the GIWW with back fill behind the bulkhead to maximize the waterfront acreage of TMLP's property. This alternative would maximize potential revenues because it would increase the number of lots and offer actual waterfront lots. This alternative would accommodate the dry boat storage and fuel dock, increase the number of lots available for sale and would create traditional waterfront lots, in addition to canal lots, which would maximize potential profit to TMLP. However, this alternative was rejected because it would result in higher impacts to aquatic resources. Therefore, this is not the least environmentally damaging practicable alternative.
- (b) Onsite Alternative 2. This alternative involves orienting the west side of the development to the GIWW. The bulkhead on the portion of property west of the proposed entrance channel would be constructed adjacent to the GIWW with back fill behind the bulkhead to maximize the waterfront acreage of TMLP's property. This alternative would maximize potential profit. However, this alternative was rejected because it would result in greater impacts to wetlands, seagrass, and oyster beds. Therefore, this is not the least environmentally damaging practicable alternative.
- (c) Onsite Alternative 3. This alternative involved widening the entrance channel to 200 feet to promote increased water circulation within the canals. This alternative would further promote water quality within the canals by increasing circulation within the canals and increasing the surface area for aeration. Espey Consultants, Inc. performed a hydrologic study of the proposed project and concluded that dissolved oxygen (DO) levels in the proposed canals should be sufficient to support aquatic life. This alternative would result in increased wetland, seagrass and oyster bed impacts. Increasing the width of the entrance channel was rejected due to the increased impacts to aquatic resources. Therefore, this is not the least environmentally damaging practicable alternative.
- (d) Onsite Alternative 4. This alternative involved no use of shoreline stabilization measures. This alternative was rejected because it would result in erosion of the adjacent marsh. Therefore, this is not the least environmentally damaging practicable alternative.
- (e) Onsite Alternative 5. A vertical wall with shelves was considered for shoreline stabilization along the entrance channel but was rejected because the wall would increase impacts to marsh habitat to install required tie-backs. In addition, reflective wave action from the vertical wall could increase the erosion rates in nearby wetlands. Therefore, this is not the least environmentally damaging practicable alternative.

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- (f) Onsite Alternative 6. This alternative involves constructing a 151-foot-wide entrance channel, with 110-foot-wide canals. Mechanical excavation of approximately 14.6 acres would occur to create the proposed canals. Approximately 9,700 linear feet of bulkheads would be constructed behind aquatic resources. A total of 78 residential waterfront/waterview lots would be created, with eight piers along the GIWW. A marina with a T-head pier and a boat launch would be constructed near the entrance to the property from Highway 185. Canal excavation would take place from the GIWW westward to Highway 185, a distance of approximately 2,000 ft. Concrete mat would be used for side slope stabilization along the entrance channel. Although this alternative minimizes impacts to aquatic resources and protects the proposed entrance channel, mitigation site and adjacent wetlands from erosion, it does not meet TMLP's criteria for commercial lot space. Also, this is not the least environmentally damaging practicable alternative.
- (g) Onsite Alternative 7 (Applicant's Preferred Alternative). This option is TMLP's preferred alternative. This alternative involves constructing a 151-foot-wide entrance channel, with 110-foot-wide canals. Mechanical excavation of approximately 11.4 acres would occur to create the proposed canals. Approximately 7,300 linear feet of bulkheads would be constructed behind aquatic resources, at a minimum height necessary for shoreline stabilization. The canals would be connected with culverts to promote circulation. Lots would be sloped to drain away from the canals, and outfall baffles would be installed to dissipate effluent energy and direct drainage away from internal canals. A total of 63 residential waterfront/waterview lots would be created. This alternative does not involve construction of eight piers along the GIWW. No T-head pier or boat launch would be constructed near the entrance to the property from Highway 185. Piers for temporary mooring of boats at residential lots and commercial lots would be constructed. Canal excavation would take place from the GIWW westward to Highway 185, a distance of approximately 1,500 ft. Concrete mats would be used for side slope stabilization along east side of the entrance channel, adjacent to the onsite preservation and mitigation area. This alternative was chosen because it minimizes impacts to aquatic resources and protects the proposed entrance channel, mitigation site and adjacent wetlands from erosion by boat wakes, as well as tide and wave action, while still providing intertidal circulation to marsh habitat. This option meets all overall project objectives, including the required commercial lot space, and minimizes impacts to aquatic resources. It is, therefore, the least environmentally damaging practicable alternative.