

APPENDIX E

REAL ESTATE PLAN DETROIT BEACH, FRENCHTOWN TOWNSHIP, MICHIGAN SECTION 205 FLOOD CONTROL AND PROTECTION PROJECT

AUTHORITY

Section 205 of the 1948 Flood Control Act, Public Law 80-858, as amended. Section 205 authorizes the USACE to develop and construct small flood control projects.

Previously, flood protection work had been most recently performed by USACE under the now-expired “Advanced Measures” authority. Advanced Measures was a Congressional Authorization under Public Law 84-99, Flood and Coastal Storm Emergencies (33 U.S.C. 701n, 69 Statute 186). This gave the USACE the ability to provide emergency or disaster assistance to communities along coastal shores which often experience flooding due to storms. Under this law, the Chief of Engineers (acting for the Secretary of the Army) was authorized to undertake activities including disaster preparedness, *advanced (flood protection) measures*, emergency operations, rehabilitation of flood control projects threatened or destroyed by floods, protection or repair of federally authorized shore protection works threatened or damaged by coastal storms, and provision of emergency water due to drought or a contaminated source. This authority expired in 1999 when Great Lakes water levels receded below what was considered emergency-threatening levels.

1. Purpose

This Real Estate Plan is being submitted IAW Chapter 12 of ER 405-1-12 for approval. This REP is to be considered tentative in nature and for planning purposes only. The REP describes the lands, easements, rights-of-way, relocations and disposals areas (LERRDs) required for the construction, operation and maintenance of the Project. The local sponsor for the project is Frenchtown Township. The Township has requested that Section 205 federal assistance be provided to evaluate the current flood protection and to provide additional protection in areas that have become vulnerable to flooding because of erosion of natural flood barriers.

Frenchtown Township is located in the northeast portion of Monroe County, on Brest Bay along the eastern shore of Lake Erie. The Township is approximately 32 miles south of Detroit, Michigan and 16 miles north of Toledo, Ohio. The township is bounded on the east by Lake Erie, on the south by the city of Monroe and Monroe Charter Township, on the west by Raisinville Township, on the north by Ash Township and on the northeast by Berlin Charter Township. A small discontinuous area in the Plum Creek Bay Wildlife Area on a peninsula southeast of Monroe is also part of the township. Sterling State Park is in the southeast part of the township adjacent to Monroe. Three highways traverse the township from southwest to northeast: I-75 is closest to Lake Erie, US 24 is furthest from the lake and M-125 is I-75 and in the south until its northern terminus at a junction with US 24 in the north of the township.

EXISTING SITE CONDITIONS:

Currently, the flood protection structure (SSP wall) bows outward at the toe and some of the tiebacks are tearing through the steel. The alignment of the wall is wavy. The land elevation directly behind the flood protection structure is approximately four feet below the top of the wall, with indications of settling and washout. The clay berms have been maintained to various degrees; encroachments will have to be remediated by Detroit Beach.

The Sandy Creek Pump Station is approximately 1500 feet from the mouth of Sandy Creek on Lake Erie. This facility, which came in service in 1987, automatically engages when stormwater fills float-monitored holding tanks and a series of four pumps alternate to empty the tanks. The station is capable of pumping 80,000 gallons per minute during a flood event. A back-up diesel generator protects against system failure during a power outage. The Pump Station is monitored continuously by the Monroe County Drain Commission and is rigorously maintained. Although the station is protected by rip-rap, additional stone may be needed to tie into upgraded shore protection downstream to Lake Erie.

Many of the approximately 758 structures in the Detroit Beach study area are single-family units with a mean depreciated value of \$83,300 in 2008. It is a mix of single and multiple story residential structures, and a combination of prefab and standard construction homes. Detroit Beach also maintains a community center and other common properties. Surveys of estimated future damages to residential and commercial properties are anticipated to be significant based on site visits and historic flood events that have occurred in the area. The needs of the study area related to flood protection have been estimated, and it is demonstrated that flood protection maintenance and improvements to protect the 758 structures would be justified as a National Federal interest. The average annual damages for the without project condition are estimated to be \$2,540,000 in the Detroit Beach area, based on current structures and existing content. Flood damages to any new development should be moderated by participation in the National Flood Insurance Program, which requires the construction of new structures above the 100-year base flood elevation.

PLAN SELECTION:

The recommended alternative consists of the construction of a Concrete Panel/H Pile wall to Optimal Elevation utilizing Alternative #5, under this alternative, the existing temporary SSP wall would be replaced with a permanent H-pile wall with concrete panels, and additional toe-protection riprap would be placed. Surface water profiles will be evaluated for 1, 2, 5, 10, 25, 50, 100 and 500-year events (elevations) to establish four design elevations. This elevation may be at or below the existing 100-year level of protection. The flap gates would be repositioned or redesigned to allow for the drainage of any overtopping water. .

This alternative is selected for several reasons beyond having the greatest net benefits. Primarily, the concrete panels may be tinted with color or painted, and will not rust like steel sheet pile will. Additionally, concrete panels may be replaced relatively easily and inexpensively. Another consideration is the geotechnical aspect. Bedrock depth is irregular along the Detroit Beach shoreline, which makes driving sheetpile of any substantial depth difficult. By driving pile posts,

the difficulty is less likely continuous, as trenches of only a few feet of depth would be dug to place the concrete panels between posts. This should make construction less difficult and faster than continuous vertical trenching or pile-driving. The overall benefit of this solution offers multiple advantages, such as providing a quick, effective, economical and aesthetic solution. Other benefits of these types of walls are that the walls reduces permanent easement requirements; the walls minimizes cuts and fills and the walls have better aesthetics that several of the alternatives.

DESCRIPTION OF THE WORK:

Steel H-Piles would be driven 10 feet apart, lakeward of the existing temporary SSP. A 2 to 3-foot deep trench would be excavated between the piles, which would be driven 25-30 feet deep, or until bedrock. 10 foot X 5 foot X 6 inch reinforced concrete panel\ would be placed vertically in the grooves of the H-pile, and stacked 2-3 panels high. Approximately 3000 linear feet of toe-protection riprap would be replenished. Backfill of clay and stone would be provided landward, and a reconfiguration of the bermed catchment area would be constructed to drain more efficiently. Larger direct-drain tubes would be installed that would drain to the side of the reconfigured catchment area. Any direct-drain system would be fitted with a new ice-resistant flapper gate design. Additional riprap protection may also be needed on the southwest shore of Detroit Beach, to protect the pumping station along Sandy Creek, which is 1500 feet from the mouth of the river on Lake Erie. The clay berms that were constructed in the 1950's would be rehabilitated to meet design function and elevation requirements.

2. LEERDs REQUIRED FOR CONSTRUCTION, OPERATION AND MAINTENANCE

Frenchtown Township will provide all easements and rights-of-way necessary for the construction, operation and maintenance of the new project. The project consists of the construction of shore protection for the community known as the Detroit Beach Association. The LEERDs consist of approximately 4.25 acre of flood protection levee easement and 3.29 acre of temporary work easement.

Flood Protection Levee Easement: The local sponsor must own a perpetual and assignable right and easement in (the land described in Exhibit "B") to construct, maintain, repair, operate, patrol and replace a flood protection (levee) including all appurtenances thereto; reserving, however, to the owners, their heirs and assigns, all such rights and privileges in the land as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, railroads and pipelines.

Temporary Work Area Easement: A temporary easement and right-of-way in, on, over and across the land described in Exhibit "B" for a period not to exceed the duration of construction, beginning with the date possession of the land is granted to the United States, for use by the United States, its representatives, agents and contractors as a work area, including the right to move, store and remove equipment and supplies, and erect and remove temporary structures on the land to perform any other work necessary and incident to the construction of the Detroit Beach, Frenchtown Township, Michigan Section 205 Flood Control and Protection Project, together with the right to trim, cut, fell and remove therefrom all trees, underbrush, obstructions, and any other vegetation, structures, or

obstacles within the limits of the right-of-way; reserving, however, to the landowners, their heirs and assigns all such rights and privileges as may be used without interfering with or abridging the rights and easement hereby acquired; subject, however, to existing easements for public roads and highways, public utilities, rail roads and pipelines.

3. LERRDs ALREADY OWNED

Frenchtown Township does not currently own the land. The land needed for the project is owned by the Detroit Beach Association in addition to land owned by approximately 30 property owners.

4. LERRDs ACQUIRED FOR, OR WITH THE USE OF FUNDS FROM, ANOTHER FEDERAL PROGRAMS OR PROJECT

Any temporary easements that were acquired for the previous Advance Measure Project have since expired and need to be acquired again. No other Federal funds have been expended in the project area.

5. NON-STANDARD ESTATES

The project does not include the requirement to acquire non-standard estates.

6. EXISTING FEDERAL PROJECTS

Other than the previous Advance Measures and Operations Foresight Projects, there are no current Federal projects which lie fully or partially within the LERRDs required for the project. The current degraded flood control project consisting of steel sheet piling (SSP) with riprap toe protection, flap gates and clay dikes 15 feet landward of the SSP wall does exist. A narrow steel sheet pile (SSP) flood protection seawall has existed at the DBA since installation by Monroe County, approximately in 1954. Also installed at the time was a set of flanking clay dikes beside the subdivision of approximately 760 homes; the clay dikes have been not been well maintained. In 1973, under Operation Foresight, the Corps of Engineers (COE) constructed supplementary emergency flood control structures, which consisted of additional SSP that was installed across the southern end of the area and up a short distance of Sandy Creek. Further, 50 feet of rock and sand cribs were placed on the northeast extent of the DBA. In 1986, under the Advanced Measures program, the COE provided additional protective works including, but not limited to, three-foot high clay secondary dikes approximately 15 feet landward of the SSP wall; new SSP walls; SSP wall extensions which raised the elevation of protection to 581 feet IGLD (1985). During the high water levels of 1998, residents of the western Lake Erie shoreline were repeatedly affected by storm-induced breaches of the aging seawalls and flood protection measures.

7. FEDERAL LAND

There is no federally owned land included within the LERRDs required for the project.

8. NAVIGATION SERVITUDE

Navigational servitude will apply to this project.

9. PROJECT MAP

Drawings depicting the project area are attached.

10. INDUCED FLOODING

It is not expected that flooding would occur as a result of the project.

11. BASELINE COST ESTIMATE

The estimated LEERDs for this project (including any contingencies) is \$682,340.00

REAL ESTATE COST ESTIMATE

Federal Administrative costs:	\$ 35,000.00
Non-Federal Sponsor costs:	
LERRDs value	\$ 682,340.00
Administrative	<u>35,000.00</u>
Total Non-Federal Sponsor	\$ 717,340.00
Grand Total (Federal and Non-Federal)	\$ <u>752,340.00</u>

This estimate is only for determining an estimated total project cost for planning purposes. It cannot be used in determining the amount of land, easements, and rights-of-way plus incidental costs for inclusion in the final total project costs.

12. RELOCATION ASSISTANCE

The project, as designed, will not require relocation of any residences or business.

13. MINERALS

No extractable minerals are known to exist within the Project lands. There is no standing timber or vegetation on the Project lands.

14. CAPABILITY ASSESSMENT

The sponsor has the full power, authority and capability to operate and maintain the finished project, and has the legal capability to provide its share of total project costs and comply with the other required assurances. In addition, the county has the capability to complete its portion of the project within the designated time frames. It is capable of providing all required LERRD's necessary for the construction, operation and maintenance of the project as the sponsor is a legally constituted public body with the full power, authority, and capability to perform of the terms of the PCA. Requirements of PL 91-646, acquisition policies and procedures, LERRD crediting procedures, and the requirements for land acquisition has been informally discussed with the sponsor as there will be land acquisition required for the project. See Exhibit A

15. ZONING

The enactment of zoning ordinances will not be required for this project.

16. SCHEDULE

A schedule of the land acquisition milestones and LERRDs certification will be completed after any issues involving real estate are resolved. The Non-Federal Sponsor has been given detailed information regarding the requirements for LERRDs necessary for completion of the Project and fully anticipates meeting the current District schedule. The Real Estate Division will monitor and assist the Sponsor with all acquisition activities which will assure that the acquisition process complies with Federal and State laws.

The schedule for land acquisition will be coordinated with the project PM and the non-federal sponsor. After the project has been authorized, and the PCA signed, the non-federal sponsor will be notified to acquire the LEERDs required for the project. At the conclusion of acquisition, the Non-Federal sponsor will certify in writing to the Government that all LERRDs have been acquired. Potential dates for Real Estate Certification is expected to be reasonable and conformable with project milestones and requirements.

17. FACILITY OR UTILITY RELOCATIONS

Plans and Specifications do not identify any utilities/facilities that will need to be relocated.

18. ENVIRONMENTAL

All environmental items associated with the project will be addressed by the Environmental Analysis Branch.

19. PROJECT SUPPORT

The Non-Federal Sponsor is a willing sponsor and fully supportive of this project. The public is also supportive and there is no anticipated opposition to the project.

20. RISK NOTIFICATION FOR ADVANCE NOTIFICATION

The non-Federal sponsor will be notified in writing about the risks associated with acquiring land before the execution of the PCA. Requirements of PL 91-646, acquisition policies and procedures, LERRDs crediting procedures, and the requirements for land acquisition have been discussed with the sponsor.

21. OTHER RELEVANT REAL ESTATE ISSUES

- a. There are no special aquatic sites, including wetlands impacted by the acquisition.
- b. There are no cemeteries or public facilities within the Project area requiring relocation.
- c. Plans and specifications do not identify any relocation of public utilities or roadways.

Real Estate Division will further assess real estate requirements for the recommended plan, as well as, provide detailed information regarding LERRDs identified as necessary for the Project. In addition, the Real Estate Division will coordinate, monitor, and assist with all acquisition activities undertaken by the Non-Federal Sponsor. This will assure that the acquisition process complies with Federal and State laws specifically the requirements under the Federal Uniform Relocation and Acquisition Act (P.L. 91-646). The Real Estate Division will also attend District team meetings, review and provide input into draft and final reports prepared by the team, and participate in the internal technical review.

EXHIBIT "A"

**DETROIT DISTRICT REAL ESTATE
ASSESSMENT OF NON-FEDERAL SPONSOR
REAL ESTATE ACQUISITION CAPABILITY**

PROJECT: Detroit Beach, Frenchtown Township, Section 205 Flood Control and Protection Project, Monroe County, Michigan

I. LEGAL AUTHORITY

a. Does the sponsor have legal authority to acquire and hold title to real property for project purposes?

Yes

No.

Initials RJ Date: 29 January 2009

b. Does the sponsor have the power of eminent domain for this project?

Yes

No.

Initials RJ Date: 29 January 2009

c. Does the sponsor have "quicktake" authority for this project?

Yes

No.

Initials RJ Date: 29 January 2009

d. Are any of the lands/interests in land required for the project located outside the sponsor's political boundary?

Yes

No

Initials RJ Date: 29 January 2009

e. Are any of the lands/interests in land required for the project owned by an entity whose property the sponsor cannot condemn?

Yes

No

Initials RJ Date: 29 January 2009

II. HUMAN RESOURCE REQUIREMENTS

a. Will the sponsor's in-house staff require training to become familiar with the real estate requirements of Federal projects including P.L. 91-646, as amended?

- Yes
 No

Initials RJ Date 29 January 2009

b. If the answer to II.a. is "yes", has a reasonable plan been developed to provide such training?

- N/A

Initials RJ Date: 29 January 2009

c. Does the sponsor's in-house staff have sufficient real estate acquisition experience to meet its responsibilities for the project?

- N/A.

Initials RJ Date: 29 January 2009

d. Is the sponsor's projected in-house staffing level sufficient considering its other workload, if any, and the project schedule?

- Yes See a. above.
 No

Initials RJ Date: 29 January 2009

e. Can the sponsor obtain contractor support, if required in a timely fashion?

- Yes
 No

Initials RJ Date: 29 January 2009

f. Will the sponsor likely request USACE assistance in acquiring real estate?

- Yes
 No

Initials RJ Date: 29 January 2009

III. OTHER PROJECT VARIABLES

a. Will the sponsor's staff be located within reasonable proximity to the project site?

- Yes
 No

Initials RJ Date: 29 January 2009

b. Has the sponsor approved the project/real estate schedule/milestones?

- Yes
 No

Initials RJ Date: 29 January 2009

c. Has the sponsor performed satisfactorily on other USACE projects?

- Yes
 No

Initials RJ Date : 29 January 2009

d. With regard to this project, the sponsor is anticipated to be: highly capable / capable/moderately capable/marginally capable/insufficiently capable

e. The sponsor has performed successfully on other Corps of Engineers projects and has a full Real Estate Staff from the City of Green Bay performing Real Estate functions.

- Yes
 No

Initials RJ Date: 29 January 2009

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/s/

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/s/

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