Shabica & Associates, Inc.

Mr. Soren G. Hall, Regulatory Branch
DEPARTMENT OF THE ARMY
CHICAGO DISTRICT, CORPS OF ENGINEERS
231 SOUTH LA SALLE STREET
CHICAGO, ILLINOIS 60604-1437

SUBJECT: LRC-2021-00454 Acknowledge Receipt of the Individual Permit Application for the Proposed Public Beach Expansion at Elder and Centennial Parks in Lake Michigan, Winnetka, Cook County, Illinois (Latitude 42.09897, Longitude -87.71538)

Dear Mr. Hall, April 7, 2022 and revised April 11, 2022

Our comments are below:

1. A revised project narrative that includes a description of the following:
    a. An overview of the entire site redevelopment and how the regulated work fits into the overall plan for the parks;

The purpose and intent of this site development is to implement a portion of the Winnetka Waterfront 2030: Lakefront Master Plan (LMP) - which can be found on the Winnetka Park District (WPD) website: https://www.winpark.org/park-district-info/plans-projects/waterfront-2030/.

A major objective of the LMP is the unification of Elder and Centennial Parks and Beaches into a contiguous and cohesive lakefront park and beach. As set forth in the LMP, "the District should strive to a long-term goal of bridging the gap between the two parks by purchasing the single-family home and property between the two." Realization of this objective is made possible through the property exchange agreement established between the WPD and Orchard 2020 Revocable Trust (Orchard).

In October of 2020, the WPD entered into an exchange agreement with Orchard, the owner of the home and lot that separates Elder and Centennial Parks (261 Sheridan Road). Upon closing, the agreement grants title of 261 Sheridan to the WPD in exchange for an equal width of property at the south end of Centennial Park granted to Orchard. While the property exchange has yet to occur, the WPD acknowledges that the permit requested in this application will not be released prior to closing on the exchange of property

Unification of Elder, Centennial and 261 Sheridan into a single parcel allows for the fulfillment of three other LMP goals, which are:

- ***"… to enhance Elder Lane Park and Beach into the 'Southern hub' of the waterfront trail system and a second non-motorized watercraft beach"***
- ***"… to explore reuse of Centennial Park and Beach or a portion thereof to a dedicated southern hub swimming beach."***

- ***"… to monitor community pet owner needs and trends and determine if future pet recreation needs are best met with a dedicated dog beach…***

Numerous other goals of the LMP are met by the creation of this lakefront park and beach, and become a reality through the performance of the regulated work submitted in this permit application - including but not limited to:

- ***Unification of two of Winnetka's southernmost beaches***
- ***Vastly expanded beach and shoreline access (for the last 27 years, Centennial Beach usage has been restricted to only dog beach pass holders)***
- ***Off-season usage by patrons and their off-leash dogs***
- ***New distinct swimming beach and non-motorized boat beach areas***
- ***Wave overtopping and energy dissipation structures which provide sand retention and shoreline protection***
- ***Improved natural habitat***
- ***Uninterrupted beachfront with nearly 1,000 feet of public access by people of all physical abilities***
- ***Two new 100-foot-long planting pockets with robust native plantings carefully selected for the lakefront environment***
- ***Dune landscape restoration at the beach and bluff***
- ***Approximately 800 feet of continuous boardwalk (Phase II)***
- ***Full ADA access from the parking lot, down the bluff, across the boardwalk, and down to the pier and beach (Access path Phase I, Boardwalk Phase II)***
- ***New 195-foot-wide sunbathing pier located nearly 300 feet into the water***
- ***New access route for emergency personnel, emergency vehicles, and maintenance workers to access the beach (this path is also a beach user access route and allows for beach users to carry their kayaks and paddleboards to the beach)***
- ***Relocated stormwater discharge including upstream water quality improvements***

Another important consideration of The E/C Plan is the durability of the proposed improvements and their ability to function across widely varying lake levels. The WPD crafted The E/C Plan to function in all lakefront weather conditions. The stone breakwater and steel baffle structures were designed and engineered to withstand the weather extremes of Lake Michigan. The engineering calculations in the application demonstrate the baffle structures have been designed to withstand wave attack from a 200-year recurrence interval wave storm.

b. Identify all needs (such as beach stabilization, improved access, etc.) and how the project will address these needs (Box 9 of application form). This is only required for those needs that partially or fully involve fill below the ordinary high-water mark (OHWM);

The abbreviated response provided in Box 9 of the Joint Application is reiterated and supported by the additional information below.

The subject properties need critical infrastructure repairs in areas that partially or fully involve fill below the OHWM, and the submitted application includes this necessary work. Included are remedies for:

- ***Stabilization of the public beach facility***
- ***Bluff toe protection***
- ***Removal of the damaged concrete pier***
- ***Stormwater management improvements***
- ***Emergency vehicle access to the beach level***

- ***Improved lakefront access***
- ***Increased public recreational activities***

The application addresses these needs in many ways:

- ***Stabilization of the beach facility and bluff toe protection will be provided by:***
  - ***Construction of two stone and steel breakwaters***
  - ***Installation of a new pier, with stone revetment around the outer pier section***
  - ***Repairs to the existing sheet pile walls***
  - ***Removal of existing steel groins and gabion baskets***
  - ***Installation of the proposed steel sheet pile walls***
- ***Elimination of the existing concrete pier will remove a known hazard and rapidly declining structure from the lakefront environment.***
- ***Removal and replacement of the existing stormwater discharge pipe will allow it to be rerouted through two-upstream pre-treatment baffle boxes, for discharge at a safer and more desirable location***
- ***New road for emergency personnel, emergency vehicles, and maintenance workers to access the bluff and beach***
- ***The beachfront environment created by the project will significantly improve lakefront access and provide spaces for increased public recreation in the lake via:***
  - ***Uninterrupted beachfront with nearly 1,000 feet of safe shoreline***
  - ***Off-season usage of portions of the beach for off-leash dogs***
  - ***Approximately 800 continuous feet of ADA accessible boardwalk (Phase II)***
  - ***New 195-foot-wide sunbathing pier located nearly 300 feet into the water***
  - ***Designated swimming and non-motorized water-craft areas***
  - ***Kayak and paddle board carrying route from tableland to beach***

c. Ensure that the Project Description included in the cover letter matches the plans and that all numbers are consistent. For example, the northern breakwater was identified as 265' in length with a description of the western 100' and eastern 155', which do not add up to 265';

Completed

d. In the Project Description included in the cover letter, describe and provide measurements for all proposed features to be located partially or entirely below the OHWM (such as sheet piling, pedestrian walkways, planting areas, louvered wall, storm sewer outfall, etc.);

Completed

e. Explain the purpose of the walkway/road to be constructed immediately south of the proposed storm sewer outfall;

The walkway/road will provide an access route for emergency vehicles and maintenance vehicles only. This access route will allow pedestrian beachgoers a safe and convenient path to carry paddle boards and kayaks from the tableland parking lot to the beach. In addition, the access drive will facilitate land-based construction of the improvements and subsequent sand nourishment.

f. Explain the purpose of the wall depicted in cross-section C, Figure 7;

This wall is a small retaining wall to assist in the grading of a small landscape planting area between the bluff, boardwalk, ramp and beach.

g. Explain the purpose of the louvered wall;

The louvers and associated steel elements are a creative design solution serving multiple purposes:

- ***Keeps off-leash dogs on the public beach and off adjacent private property***
- ***Reduces wave over-topping and dissipates wave energy***
- ***Improves sand retention and reduces erosion, including wind driven sand***
- ***Reduces stress on plants in planter pockets, serving in part as a water and wind break***
- ***Reduces crest elevation of stone break wall***

The durability of the proposed improvements and their ability to perform their intended functions throughout the varying extremes of Lake Michigan is paramount. The proposed louvers and other portions of the steel baffle structures are engineered to meet the harsh lakefront weather demands. The engineering calculations in the application demonstrate the baffle structures have been designed to withstand wave attack from a 200-year recurrence interval wave storm.

The louver design was inspired by similar public art features found around the country. The undulating height mimics the waves on the lake and the gradually diminishing height is a continuation of the bluff sloping to the water. The robust nature of the louvers will withstand harsh lake conditions while the orientation affords views through to the lake from the public beach.

h. Describe any areas where the existing shoreline will be moved lakeward below the OHWM, as applicable.

The existing shoreline will move lakeward - principally in the locations of these structures:

- ***North breakwater, planting pocket and emergency access route***
- ***Center ADA accessible pier and associated boardwalk and ramps***
- ***South breakwater and planting pocket***

2. Provide revised project plans that include the following:
   a. The resolution is poor in Figures 2, 3 and 6. Some text is difficult or impossible to read; ***Completed***
   b. Include the OHWM on all plan view figures; ***Completed***
   c. Figure 2 includes a note that all existing groins and the pier will be removed. If other structures will also be removed, such as the existing storm sewer or existing sheet piling, please also note these on Figure 2; ***Completed***
   d. Include dimensions for all proposed structures on Figure 3 including the louvered wall, pedestrian walkway, pier, etc.; ***Completed***
   e. Figure 3 labels some structures but does not specify whether the structures are existing or proposed; ***Completed***
   f. Provide cross-sections along the shoreline to depict each distinct area of work identified in Figure 3; ***Completed - Please see PDF titled "USACE Cross Section Request"***
   g. The proposed storm sewer outfall in Figure 3 terminates further west compared with Figure 6. Ensure that both figures match; ***Completed***
   h. Label the proposed louvered wall on Figure 3; ***Completed***
   i. Figure 6 only identifies the pier as being removed. Some structures are labeled as proposed, some as existing, and others are not specified. All structures should be labeled, including the

location of the proposed planting pockets; ***Completed - please also see Figure 3 for further clarity.***

j. Include a definition of "WF sheeting" on the plans in Figure 6. ***"WF Sheeting" stands for Linear "Wall Feet of Sheeting" and is noted in Figure 6 as requested.***

3. Figure 6 depicts what appears to be partial grading contours along the bluff south of the proposed northern breakwater. If this work is associated with a discharge below the OHWM, be sure to describe the proposed activity in response to item #1 above and fully depict the proposed work in the plans.

   The partial grading contours depict the existing grades along the bluff. These contours were inadvertently "bolded." The proposed pathway from the bluff to the beach has been properly engineered and will be reviewed and permitted by local authorities (Village of Winnetka).

4. Will the storm sewer outfall be visible or be fully enclosed with stone? A cross-section of the outfall may be useful for clarification. Also, although the discharge is on the outer edge of the structure, it is beyond the end of the steel sheeting. Will stormwater be able to migrate through the stone into the enclosed beach cell?

   The stormwater outfall pipe will discharge into the armor stone on the northwest side of the breakwater and be fully enclosed with stone. The stone positions around the discharge area will naturally generate irregular voids between the boulders, which will dissipate the water flow as it leaves the discharge pipe. The careful positioning of those stones will also lock them together to help reduce the possibility of dislodgement in high flow or lake storm events. The discharge system is designed to direct stormwater outflow to the northwest and into Lake Michigan currents and is not intended to discharge toward the beach. However, once the stormwater enters the Lake Michigan circulation, its path will be determined by the active lake forces.

5. Describe how the project will affect the ability for individuals to walk along the shoreline. Also explain if access to the public facility will be allowed from the adjacent shorelines;

   The project will dramatically improve beach access and shoreline walkability when compared to existing conditions.

   As proposed, the project removes four existing steel jetties, a derelict chain link fence, and a badly damaged pier - all of which have impeded traversing the shoreline for decades.

   The project generates shoreline access for thousands of people through the:

   - ***Elimination of the 27-year-old access restriction at the dog beach***
   - ***Creation of nearly 1,000 feet of uninterrupted public shoreline***
   - ***Installation of the ADA accessible path and boardwalk from bluff to beach***
   - ***Construction of the convenient path to carry paddle boards and kayaks to the beach***

   Public access to or from adjacent shorelines is not included because:

   - ***The beach will be used as an off-leash dog park between mid-September and mid-May each year, and dogs may not be allowed to stray to adjacent private properties***
   - ***The WPD needs to provide defined limits for their beach and lifeguard staff to manage***
   - ***Impassible conditions exist in close proximity to the boundaries of the park that inherently limit secure passage in both high and low water conditions***

6. Provide names and addresses of adjacent property owner on self-adhesive labels using capital letters only and with no punctuation added. ***Completed and mailed***

Additionally:

1. Explain the site characteristics that were used to identify the OHWM identified in the plans.

   The Visual OHWM was determined based on location of the debris line on the beach. This debris line generally followed the 583' contour. There was no vegetation on the beach at the time of the survey due to the high lake level eroding the sand in the area.

2. Any non-federal entity applying to the Corps for an Individual Permit or a Letter of Permission for a project located within the boundary of the Illinois Coastal Management Program, including waters of Lake Michigan, is required to submit a Federal Consistency Determination from the Illinois Coastal Management Program as part of the permit review process. ***Understood***

Sincerely,

Jon Shabica

Cc; Illinois Department of Natural Resources/OWR (James Casey)
Illinois Environmental Protection Agency
Winnetka Park District