Winnetka Park District

Elder and Centennial Park and Beach Project Presentation

October 13, 2021

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Table of Contents

Executive Summary...…….2

Project Statement……2

Existing Conditions…..……...……3

Proposed Overall Park Plan……..……..9

Proposed Shore Protection Structures……...…….13

Proposed Safety Structures…….17

USACE and IDNR Feedback and Responses…….....21

Existing Public Projects with Safety Structures……..37

Existing Impassable Lakefront Structures……..45

Safety Concerns Outside the Project……...57

Other Concerning Existing Lakefront Conditions……..65

Executive Summary

The Winnetka Park District ("Park District") prepared the following presentation to respectfully address the comments provided by the United States Army Corps of Engineers ("USACE") and the Illinois Department of Natural Resources ("IDNR") from the April 27, 2021, and June 2, 2021 meetings. The comments received from the USACE and IDNR were submitted in response to the Park District's proposed lakefront improvements at Elder Lane Beach and Centennial Beach in Winnetka, Illinois.

The Park District engaged professional consultants, staff, counsel and citizen input to prepare the following document, which includes graphic analysis and supporting commentary in response to the feedback.

Project Statement

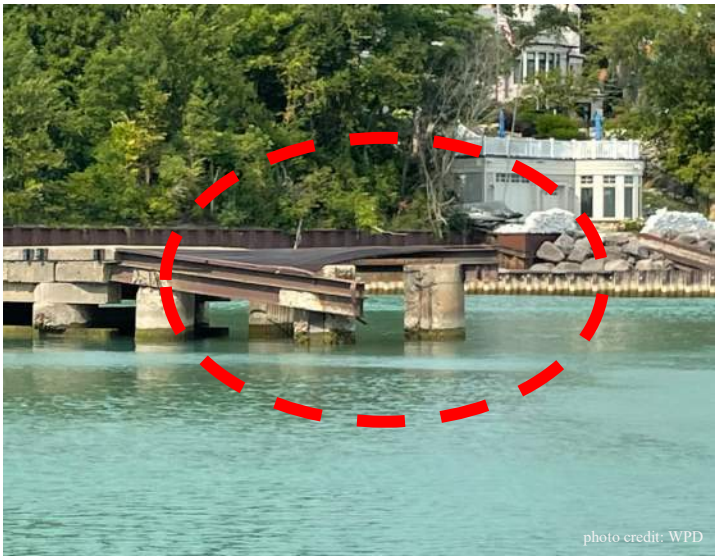
The Park District has prepared improvement plans for Elder and Centennial Parks as suggested by the Winnetka Lakefront Master Plan, which was adopted by the Park District Board in 2016. Since then, Elder Lane Beach and Centennial Beach have sustained substantial damage due to record high water levels - necessitating the closure of Elder Beach for the past two seasons and intermittent closure of Centennial Beach. Many of the existing shoreline improvements are beyond their useful lives and are in urgent need of replacement to avoid additional damage, resulting soil erosion, and/or destruction of existing structures.

The enhancements proposed in this project represent a substantial Park District investment to transform Elder Lane Park/Beach and Centennial Park/Beach into a single contiguous park, replace critical shoreline protection structures, provide greater public access to open space and beaches, and to meet increasing demands for recreational activities at the Lake Michigan shoreline.

The proposed project is the collaborative effort of coastal engineers, landscape architects/planners, and civil engineers, as guided by the elected Park District officials to embrace best management practices. All parties worked to develop a logical proposal to ensure long-term shoreline protection during varying water levels while maximizing public access to the lakefront and beaches. Accessibility and recreational opportunities are also optimized while addressing public safety and environmental stewardship with careful attention to aesthetic design.

EXISTING CONDITIONS

Elder Park and Beach and its 400 feet of shoreline have experienced water quality issues, erosion and soil breakaway, bluff management challenges, and sea wall damage through the years. The existing steel groins intended to help hold the beach are deteriorating and tipping. The public beach house is regularly flooded by lake water and runoff. The Village's pier and stormwater outfall pipe have suffered significant damage. This beach is currently closed because the existing lakefront structures are unsafe to use.



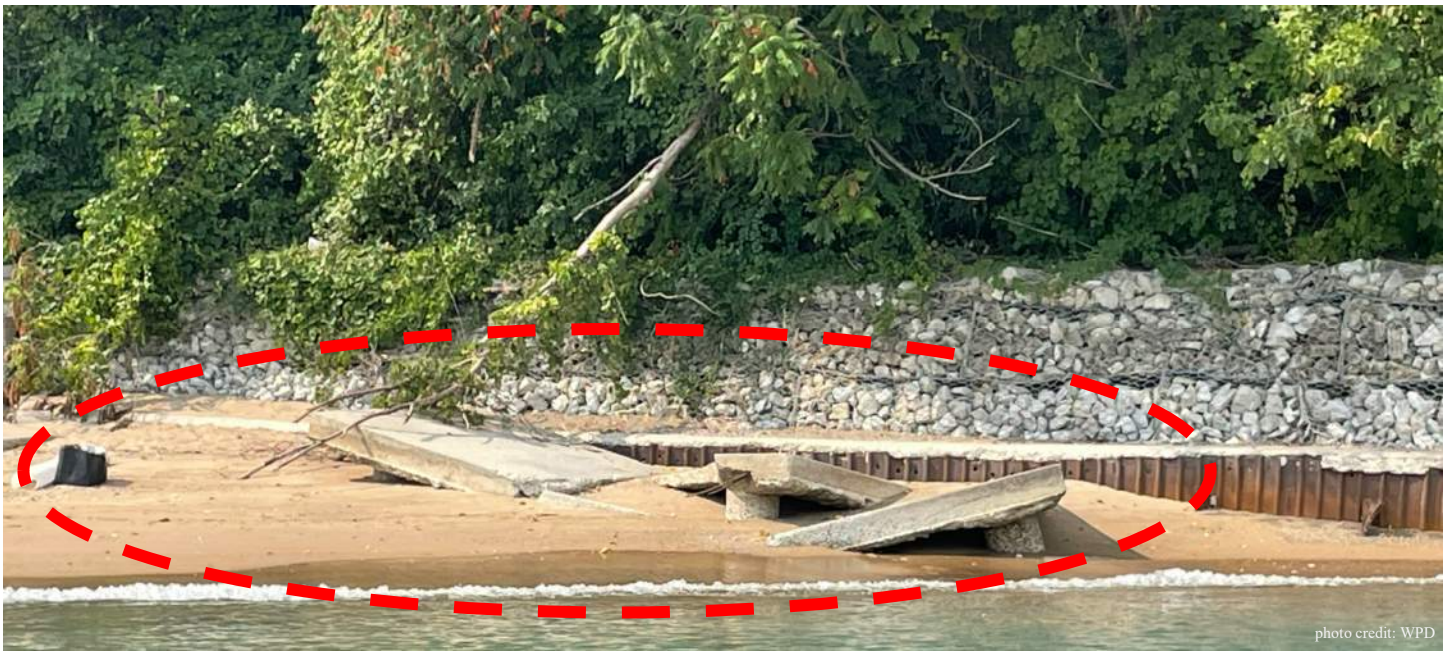
Damaged pier

Damaged pier

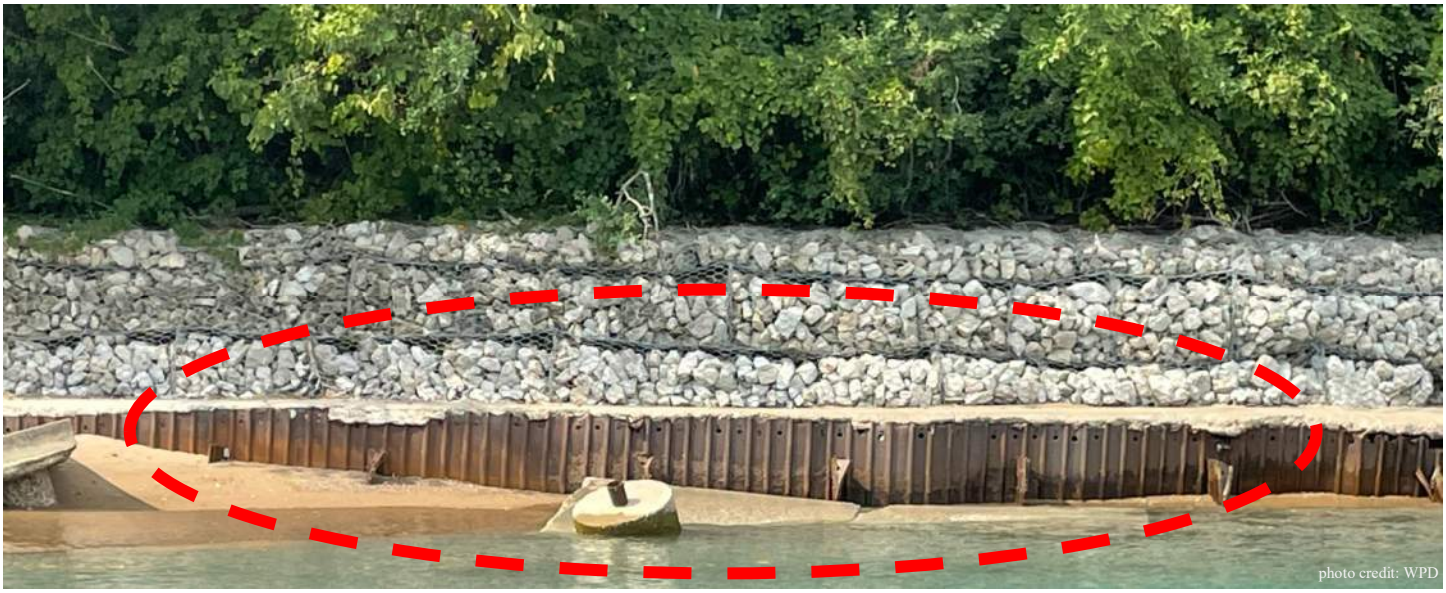
Damaged pier

Damaged gabion baskets

Elder Park and Beach (continued)

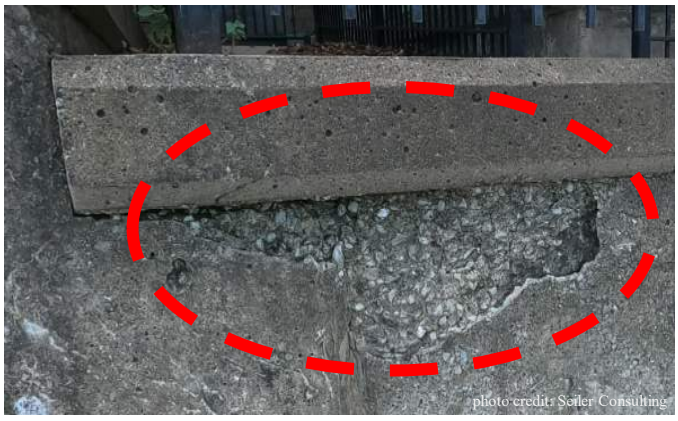


Damaged kayak storage rack foundations



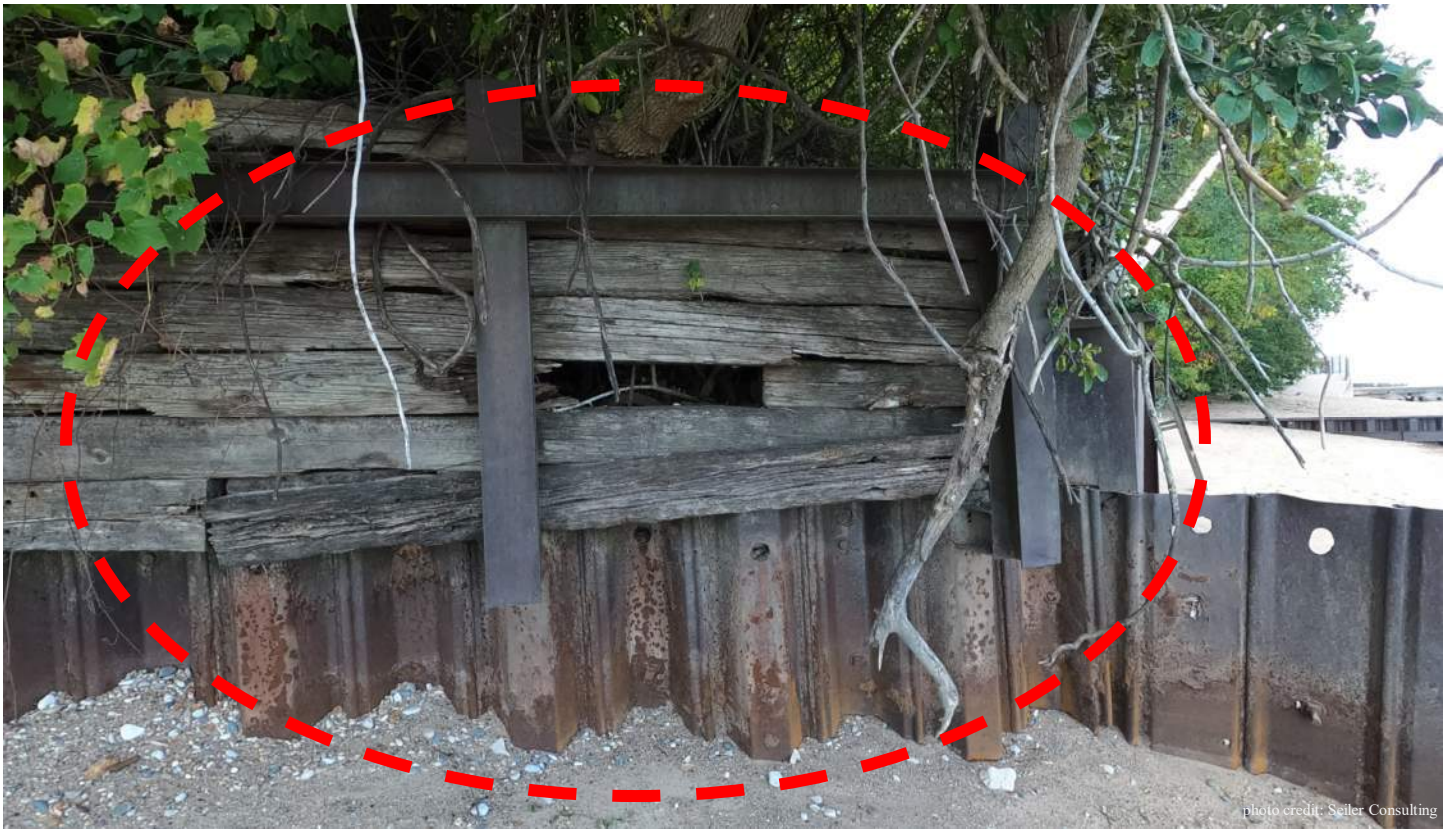
Damaged steel sea wall

Damaged gabion basket

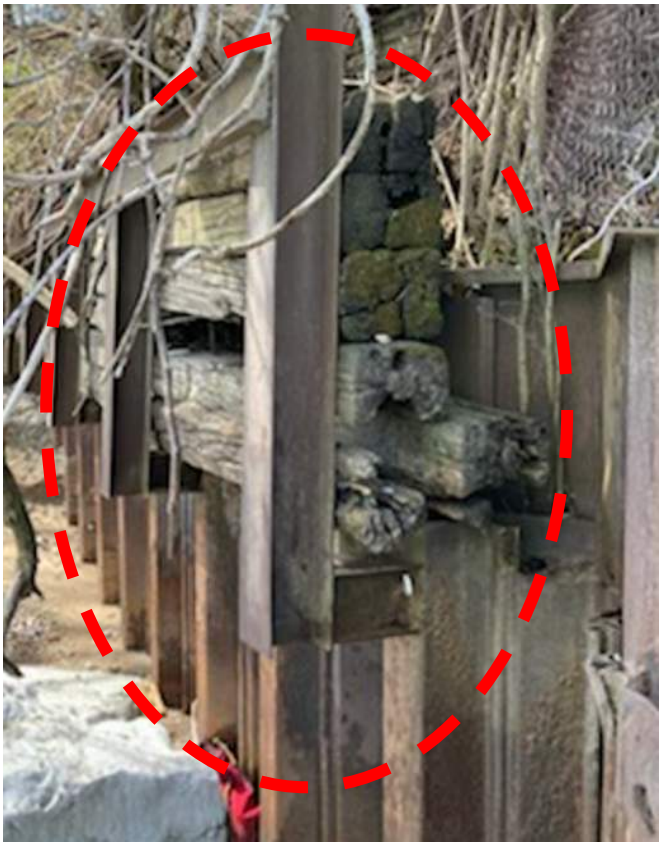


Spalling concrete sea wall

261 Sheridan Road is a 0.64-acre lakefront property with an existing 5,400 square foot home situated on the eastern portion of the lot. Its steel and timber groins are damaged and failing. The existing steel sheet pile structures on this property prohibit access from Elder to Centennial.



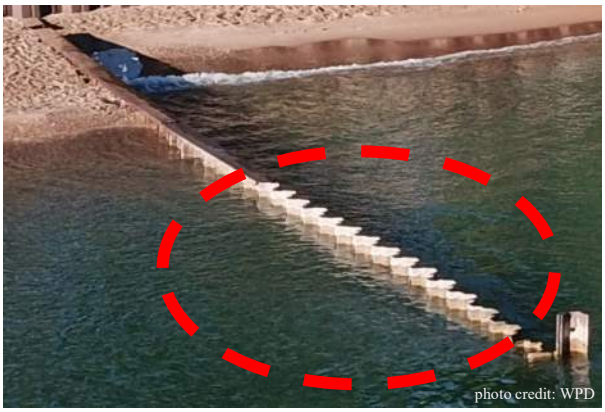
Damaged sea wall



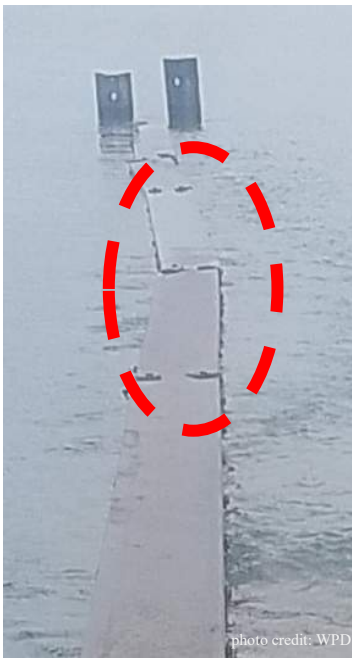
Damaged sea wall

Centennial Park and its 550 feet of shoreline represent the largest and highest quality beach in Winnetka, with a shallow lakebed profile and easy access. The existing steel groins that help hold the beach have deteriorated, are damaged, missing parts and need to be replaced. The beach needs protection against storm surges and high water to prevent future sand washout.

High water and extreme weather conditions have damaged existing infrastructure, causing beach and bluff erosion



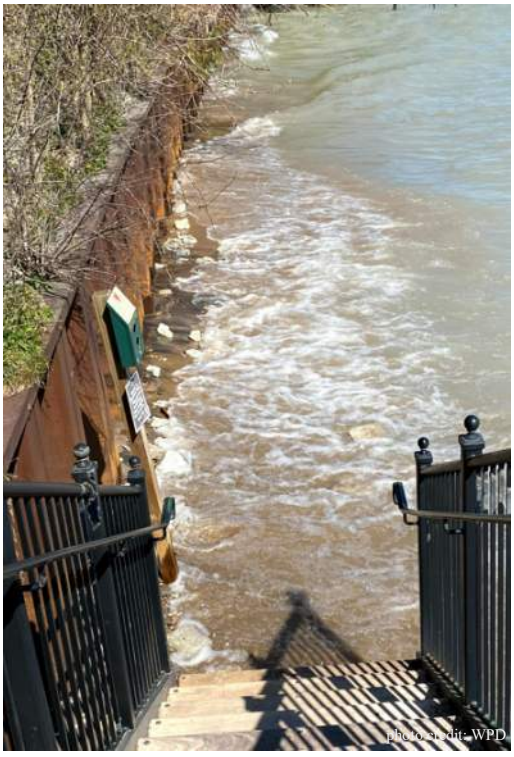
Damaged groin



Damaged groin

Centennial Park (continued)

Beach erosion in 2020 meant stairs ended 24” above the beach level



PROPOSED OVERALL PARK PLAN

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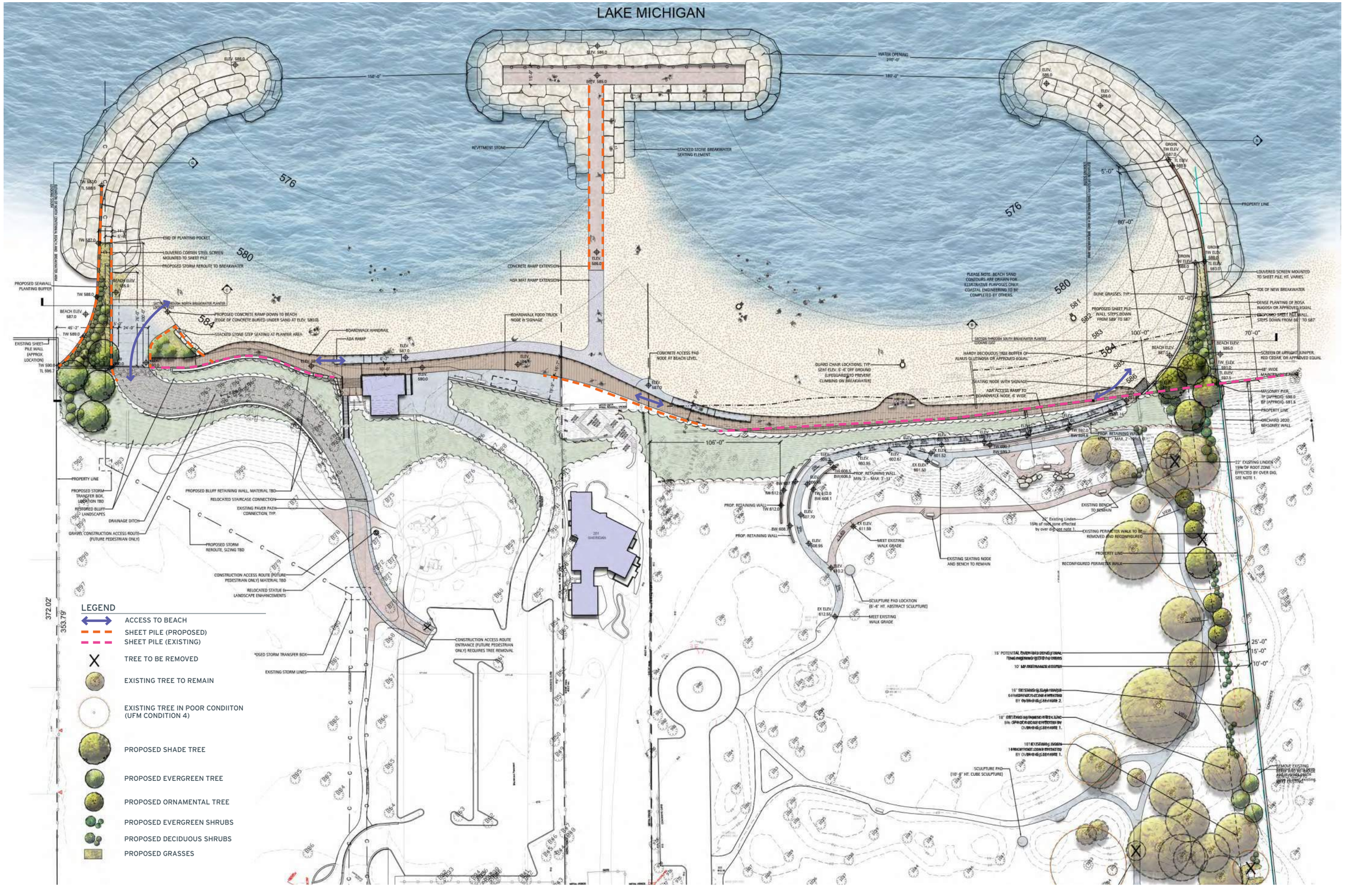

ELDER/CENTENNIAL BREAKWATER SCREEN

ELDER & CENTENNIAL DESIGN DEVELOPMENT | OVERALL PLAN

WINNETKA, ILLINOIS

SCALE: 1"=4 0 2' 4' 8' NORTH

SEPTEMBER 9, 2021

PREPARED FOR:
WINNETKA PARK DISTRICT

PROJECT TEAM:
SPACECO
CBBEL

THE LAKOTA GROUP.

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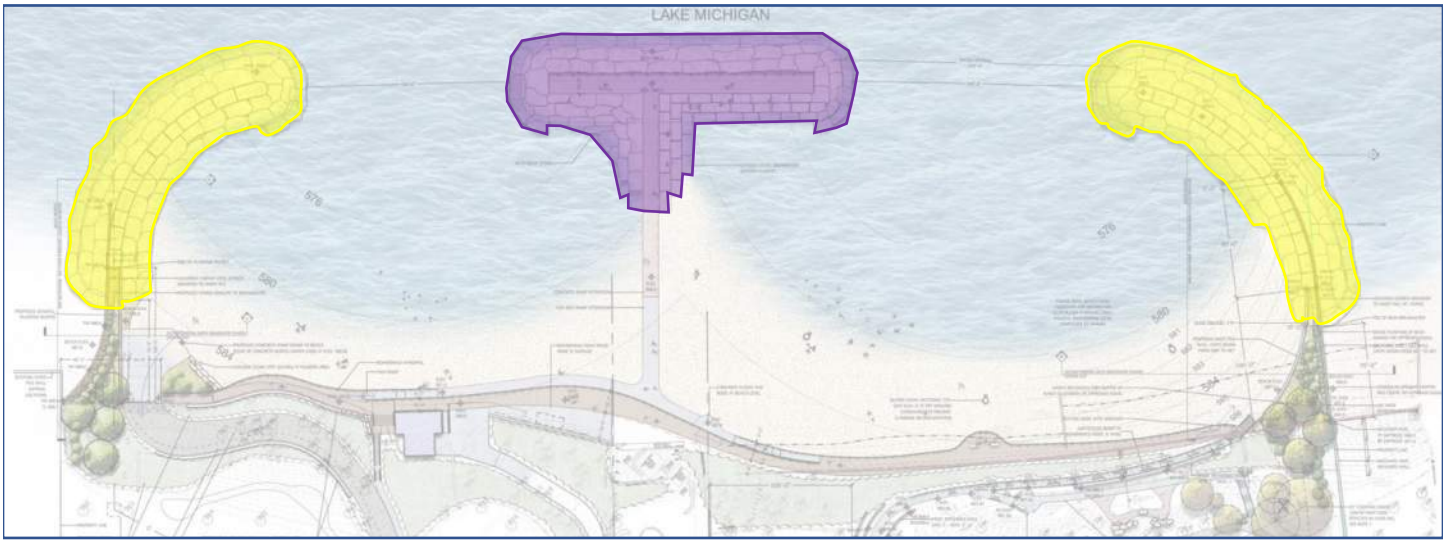
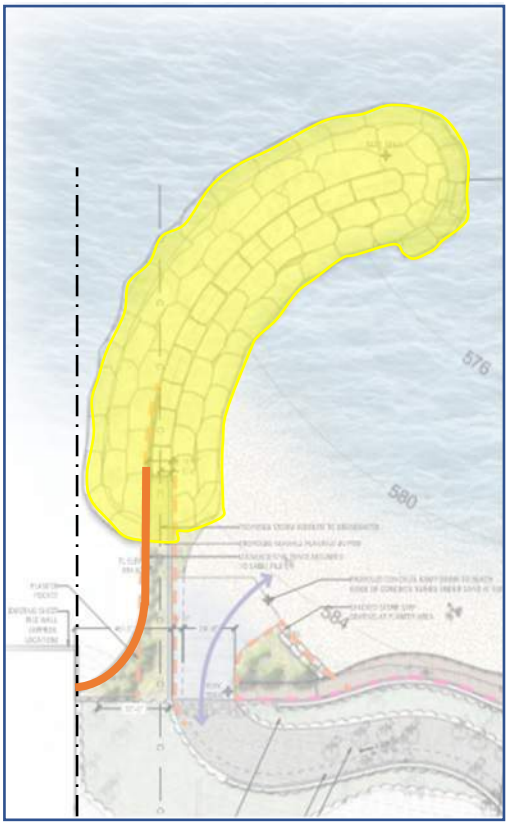
PROPOSED SHORE PROTECTION STRUCTURES

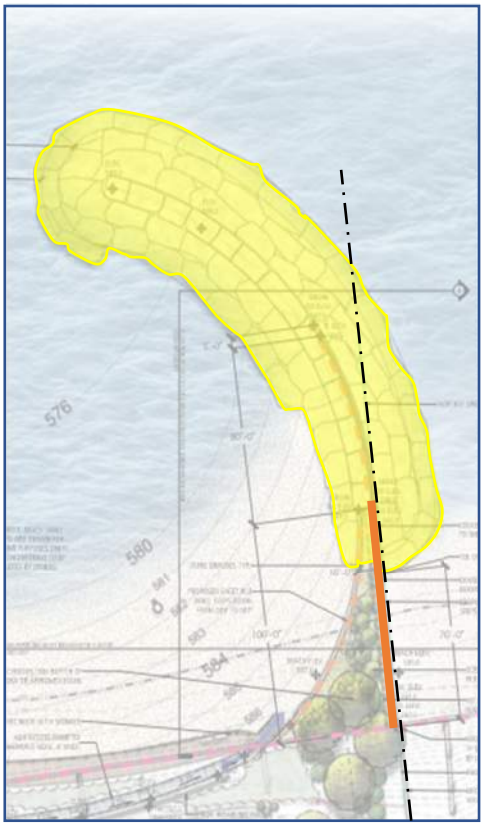
Breakwaters located in three locations of the New Beach are the primary structures designed to provide coastal resilience and protection against future damage and erosion. Made of stone and steel, these elements will dissipate wave energy far from the shoreline and guard the beach against sudden storm surges and rough water.



All breakwaters
(north and south breakwaters shown in yellow, center breakwater shown in purple)



North breakwater
(stone shown in yellow, steel shown in orange, property lines shown in black)



South breakwater

The Park District carefully designed the north and south breakwaters to maximize the beach area. As a result, the sections closest to the bluff will be constructed with steel sheet piles rather than stone to reduce the breakwater's footprint - resulting in a gain of approximately 8,800 square feet of additional beach area.

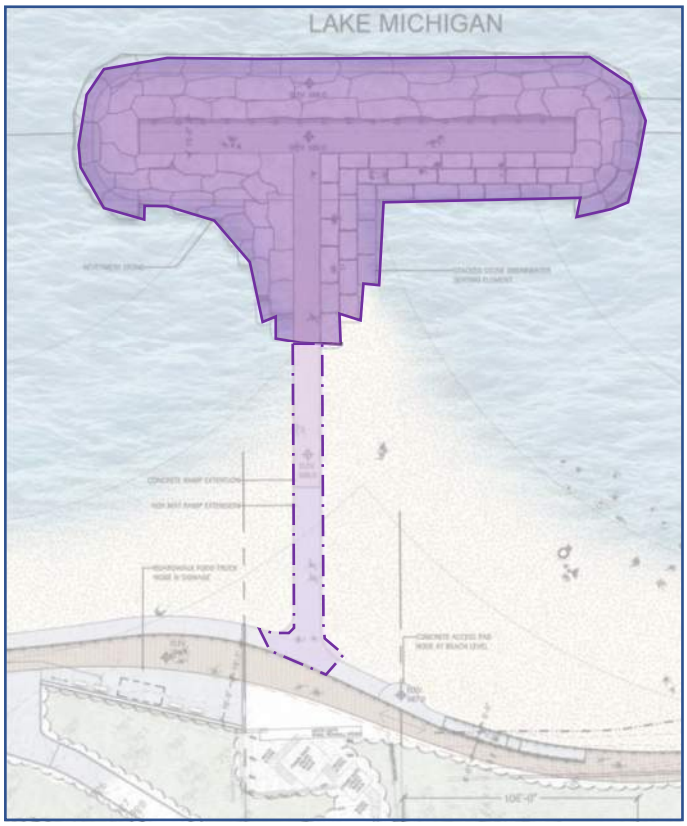
Breakwaters (continued)

Using steel in lieu of the stone for the breakwater consumes less overall material, is less expensive to build, and is faster to install.

Additionally, through a generous gesture by the southern neighbor, approximately 20% of the southern breakwater stone will be located on private property, which provides more sandy beach spaces for patrons of the new beach.

The additional beach area also allows space for secondary erosion protection structures and landscape planting areas. Please see the “Planting pockets” section for more information.

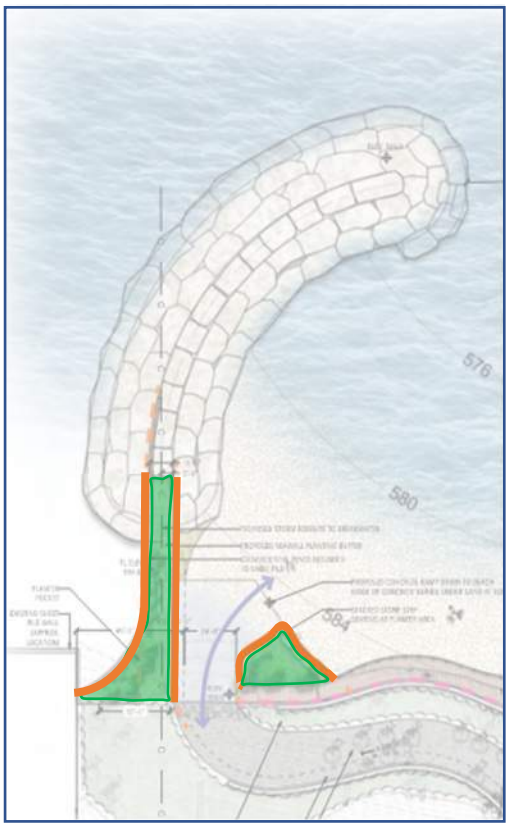
Although the breakwaters provide safter lakefront environments, help reduce public exposure to dangerous riptide currents, and increase recreational access to water, over time they naturally create a public safety issue. Sand accumulation on the northern breakwater face will exceed that of the south face, creating a vertical drop that could vary between 3 feet and 6 feet depending on lake levels. A vertical drop of this magnitude is a fall risk and therefore a public safety issue, which will be managed with guardrails in any location the fall risk exists. Please see the “Groin extension guardrails” section for more information.



Center breakwater
(stone shown in purple)

The center breakwater is connected to the shoreline by a concrete and steel walkway, which connects to the ADA ramp and boardwalk. This breakwater allows for sunbathing, socializing and other passive lake activities.

Planting pockets at each breakwater provide another layer of erosion protection for the toe of the bluff. Bordered by steel sheet pile walls which function as a secondary groin, the pockets will be filled with sand, soil, and plants. Using steel for the pocket borders is better than stone, as the stone would occupy a larger footprint, take up beach space, and the voids between stones would allow waves to enter the pocket and wash out the soil.



North planting pocket
(planting pocket shown in green, steel shown in orange)

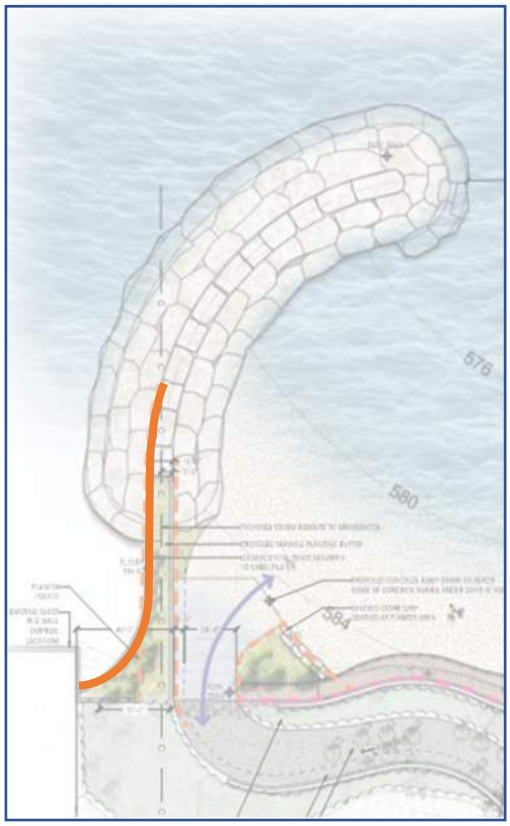
South planting pocket

The planting pockets will burst with robust vegetative materials that can withstand the lakefront environment. Plants and trees such as Rosa Rugosa, Amelachier x Graniflora, Picea Abies, and Ammophila Brevilgulata (shown below) will be densely planted in the pocket. Maintenance access paths also will be provided so Park District staff can appropriately care for this vegetation.

PROPOSED SAFETY STRUCTURES

Groin extension guardrails on top of each breakwater are intended to protect beach users from the inherent fall risk created by the breakwaters themselves, discourage climbing on the breakwater stones, and contain off-leash beach dogs from straying onto adjacent private property,

Located behind the planting pockets and partially shielded by plants and trees, steel plates of varying heights will artfully rise from the breakwaters to form a natural integrated guardrail.



North guardrail
(shown in solid orange)

South guardrail

The guardrail design was carefully considered to address aesthetic concerns and meet code requirements for fall protection and entrapment. Vertical steel plates of varying heights, measuring 3/8" thick by 8" wide, spaced at 6" on center, and oriented at a 40-degree angle, will be welded to the base steel breakwater structure. The spacing between the plates will be approximately 3 7/8", meeting the code requirements to prevent entrapment. This spacing and orientation will allow water and shoreline views through the plates.

The varied height of the plates is also a thoughtful design and form of public art. The tops the plates will steadily decrease in height as they go lakeward, resembling the shape of a wave running from the bluff out toward the water. The most westward members will be the tallest at 6.5 feet tall, and the most eastward members will be the shortest at 1.25 feet tall.

Groin extension guardrails (continued)

Finally, the structural integrity of the proposed design is far superior to less durable and/or desirable alternatives such as chain link, cables, or split wood rails.

Groin extension guardrail inspiration images

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USACE and IDNR FEEDBACK and RESPONSES

Feedback was given to the Park District after the initial plans were shared with the U.S. Army Corps of Engineers (USACE) and the Illinois Department of Natural Resources (IDNR). The Park District has reviewed these comments and provided responses on the following pages.

USACE Feedback

Item #1 – *"Provide surveyed OHWM based upon site characteristics."*

Response to #1 (OHWM):

In previous Park District submittals to the USACE and IDNR the OHWM from the 1985 IGLD Datum (581.5') was used. If a different OHWM is required, it will be measured and determined at the time of permit application.

Item #2 – *"Provide a detailed description of the project purposes (such as shoreline protection, providing a stable beach for recreation usage, accommodations for non-motorized boat usage, pier construction, etc.). What needs that are being addressed by each of the project purposes. This establishment of purpose and need will be the basis for your analysis of alternatives considered."*

Response to #2 (project purposes and needs):

The first project purpose is to make critical and necessary infrastructure repairs to Elder and Centennial Parks.

That purpose expanded when a generous benefactor graciously donated 261 Sheridan Road to the Park District. Therefore, the second project purpose is to unite Elder Lane Park and Beach and Centennial Park and Beach into a contiguous park for our lakefront system.

Performing critical infrastructure repairs will meet the project's first purpose. These include correction of erosion and soil breakaway issues, stabilization of the toe of the bluff, sea wall replacement, removal of existing damaged steel groins, removal of existing damaged gabion baskets, removal of a heavily damaged concrete pier, and re-routing of stormwater discharge piping.

Building the New Park and Beach will meet the project's second purpose. The Park District is excited to bring several safe, new amenities to this portion of Winnetka. New breakwaters will create safe public swimming and non-motorized beach environments. The groin extension guardrails will protect beach patrons from the fall risk that will develop on the south faces of the groins and shield patrons from off-site hazards. Because the Park District Board of Commissioners is developing plans to provide seasonal usage for off-leash dogs at the beach, the breakwaters and guardrails will keep off-leash dogs inside the park. Passive space for lake viewing, relaxing, picnicking, and other activities will be available. Thoughtful ADA accessways will be brought to the beach. An elevated boardwalk for lake viewing and social gathering will be created.

Response to #2 (project purposes and needs - continued):

The culmination of this project will result in a contiguous park and beach of more than 10 acres. This combined space will improve connectivity between core areas of natural lands, provide links to nearby land-based trails, increase recreational access to waterways and beaches, promote and improve diverse recreational opportunities, and improve beach health and reduce closures.

Construction of the new park will alleviate other lake front issues which the Park District has had no prior ability to remedy. For example, it will remove impassable and dangerous steel groins and structures at the north and south boundaries of 261 Sheridan Road.

Items #3 and #4 –*"We have substantial concerns with the proposed louvered wall with regard to blocking access along the shoreline and aesthetics. We have historically required reasonable accommodations for pedestrian movement along the shoreline and anticipate doing so on this project as well."*

Response to #3 (access):
The Park District appreciates the historical accommodation for pedestrian movement along the shoreline but must include groin extension guardrails on the breakwaters to protect park patrons from the inherent fall risk the breakwaters create.

First, no existing accommodation for pedestrian movement along the shoreline exists at these parks. There is currently very limited access to Centennial Park because it is exclusively a dog park - and available only to the 381 people who have dog park access cards. In addition, Elder Beach has been closed for the last two years due to unsafe conditions and damaged structures.

As presented in the section "Existing Public Projects with Safety Structures", there are many other Chicagoland municipalities that have installed public safety features on top of public shore protection structures that do not accommodate pedestrian movement along the shoreline.

Glencoe, Kenilworth, Evanston, and Lake Bluff have all weighed the choice of and made the decision to prioritize public safety over access, and therefore installed guardrails to protect their lakefront users. Inclusion of the groin extension guardrail on this project represents the Winnetka Park District's same prioritization of public safety.

The Park District is also developing plans to provide seasonal usage for off-leash dogs at the beach. This amenity creates a public safety issue, as dogs must not be allowed to wander onto adjacent private properties where they may not be welcome or could injure someone. This safety issue can be easily managed by the proposed groin extension guardrail.

Additionally, as shown in the section "Existing Impassable Lakefront Structures", there are many Chicagoland locations where accommodations for pedestrian movement along the shoreline are cut off and do not exist. Safe access is prohibited by stone breakwaters, steel groins, planting pockets, piers and fences.

Response to #4 (aesthetics):
Lastly, there are multiple safety hazards outside park edges as shown in the section "Safety Concerns Outside the Project", from which the Park District seeks to protect users. The groin extension guardrail does this.

The Park District shares the concern about aesthetics and learned much from the Lloyd Beach project. For the New Park and Beach project, the Park District board and staff, and the third-party experts hired by the Park District, are applying the lessons learned regarding stone elevation, planting materials and design.

While the Lloyd Beach improvements have been very well received and accomplish the intended objectives, there remains room for aesthetic improvement. Construction of a full stone breakwater, like Lloyd Beach, that slopes up from the water to the toe of the bluff is too harsh and would create a "fortress" like feeling. The breakwater stones at the New Park and Beach will be lower than those at Lloyd and set at a consistent height so lake horizon and shoreline views are preserved. The red dashed line in the following photo indicates the approximate height of the new breakwater in relationship to the one at Lloyd.

Lloyd Beach – existing breakwater (red line indicates approximate height of proposed Breakwater for comparison)

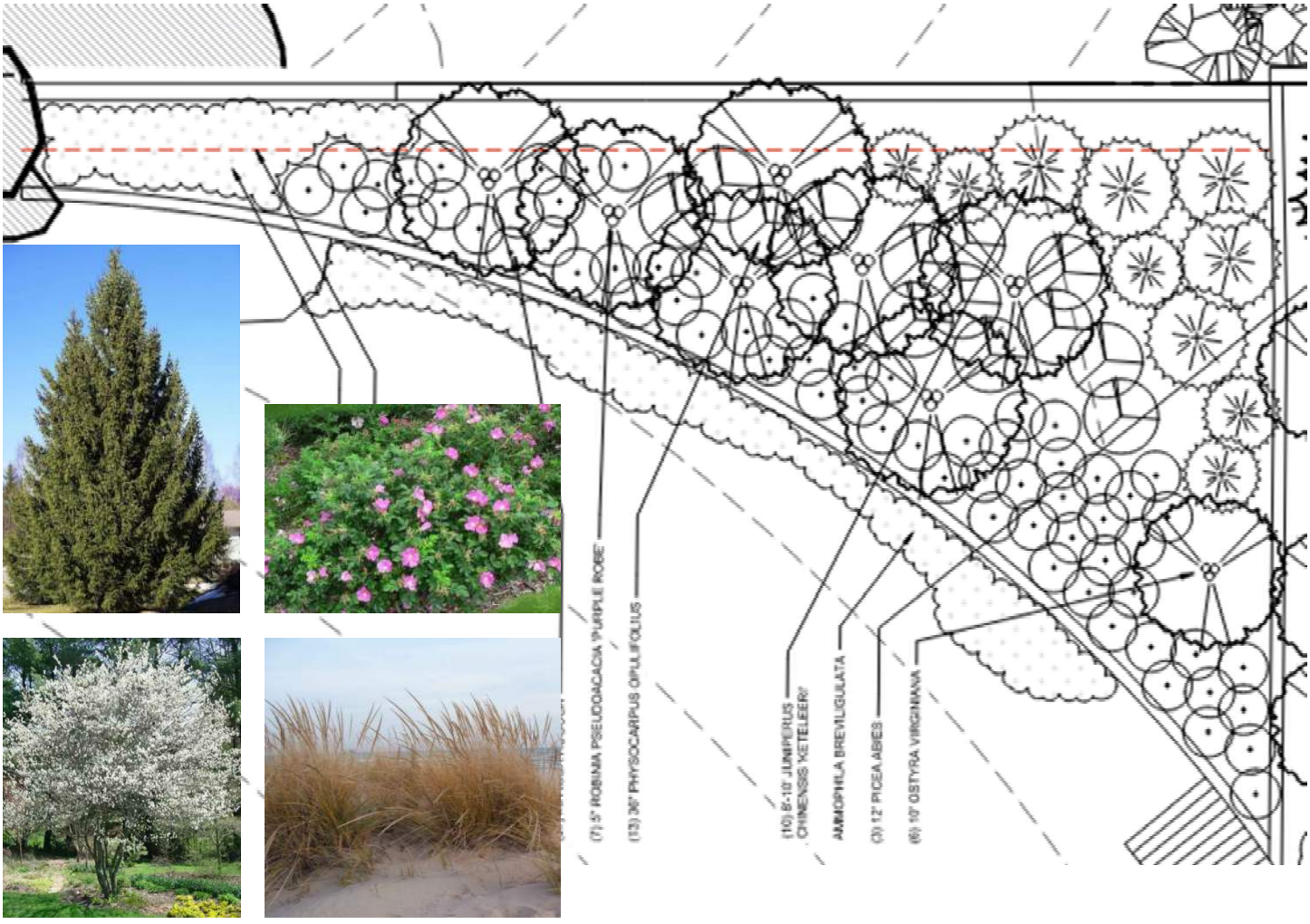
Lloyd Beach – existing breakwater blocks view to lake horizon from beach

Lloyd Beach – existing breakwater blocks shoreline views

Response to #4 (aesthetics - continued):

The proposed planting pockets will continue to lessen the “fortress” feeling and will bring vegetation and greenery down the bluff to the beach level to enhance the outdoor environment and beach experience. The pockets narrow as they extend lakeward and give way to the stone groin, thus creating a more aesthetically pleasing transition.

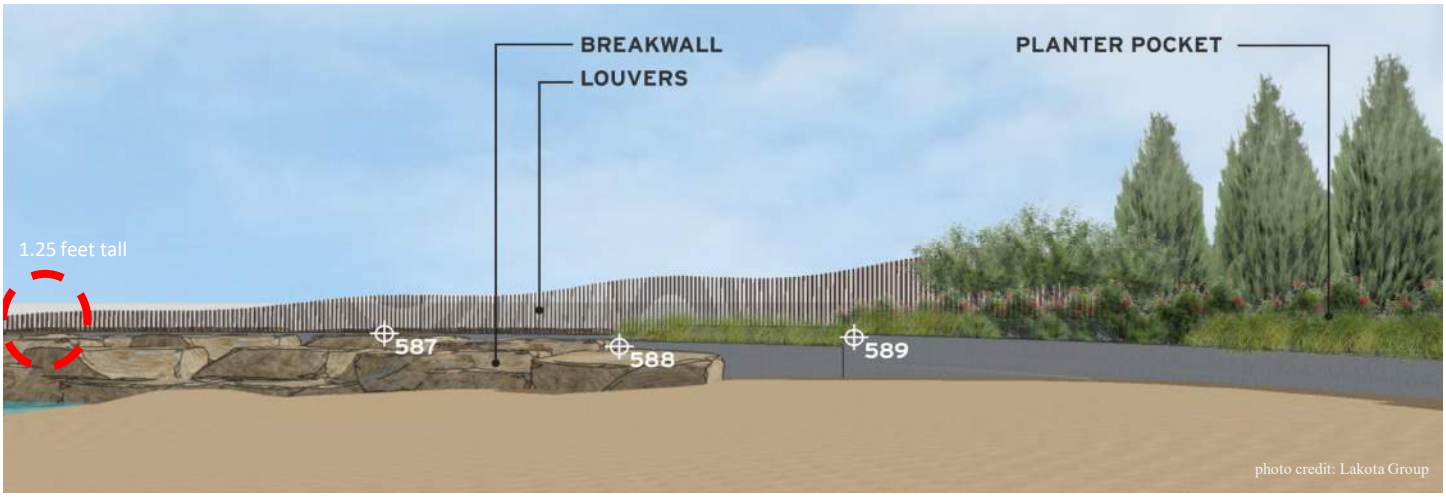
Planting Pocket imagery and drawings



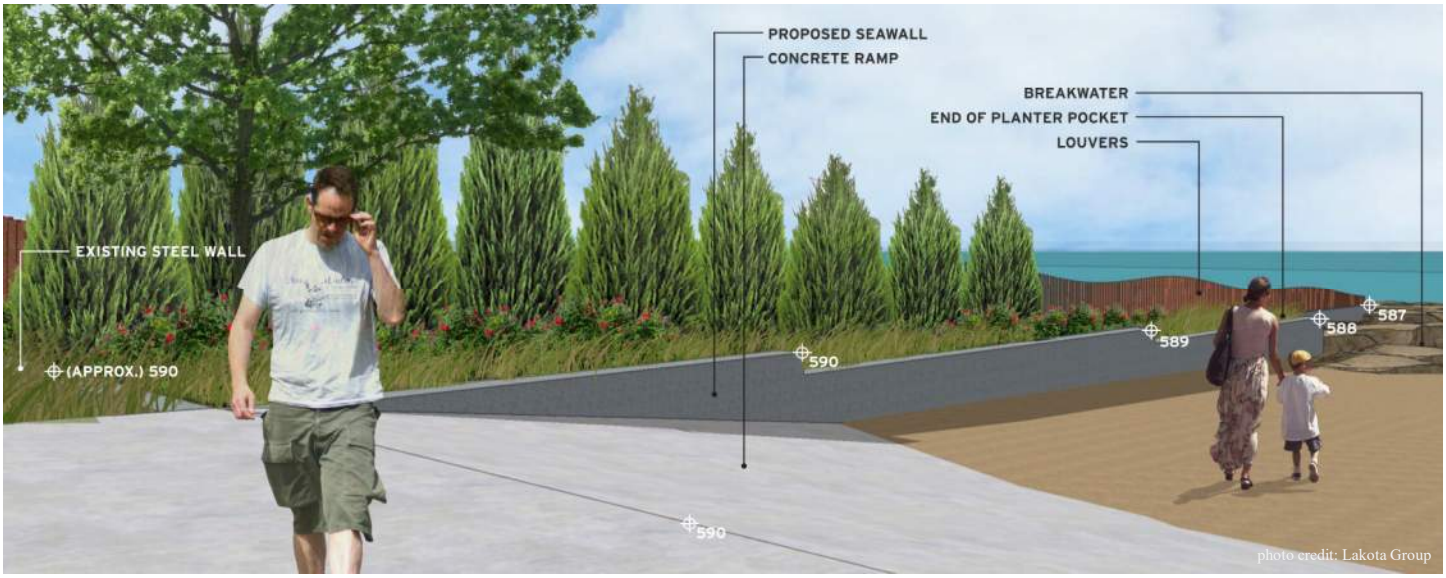
Response to #4 (aesthetics - continued):
The groin extension guardrail is planned to be an artistic element and public art, as demonstrated through the wave like design, choice of materials, and orientation to preserve views. The taller members nearer the bluff will be screened by the landscaping in the planter pocket.

Vertical steel plates of varying heights and measuring 3/8" thick by 8" wide, spaced at 6" on center, and oriented at a 40-degree angle will be welded to the base steel groin structure. This orientation will allow views through the plates to the lake. The spacing and orientation will make the space between the plates approximately 3 7/8", meeting the code requirements to prevent entrapment. The varying height of the plates is a thoughtful design and form of public art, while also serving a functional purpose. The top of the plates follow a sine wave shape with steadily decreasing height as they go eastward, to resemble the shape of a wave running from the bluff out toward the water.

The tops of the plates will descend in height as they go eastward from the bluff out toward the water. The most eastward member will be the shortest at 1.25 feet tall and discourage beach users from climbing the breakwater. The tallest member is most westward and is 6.5 feet tall.

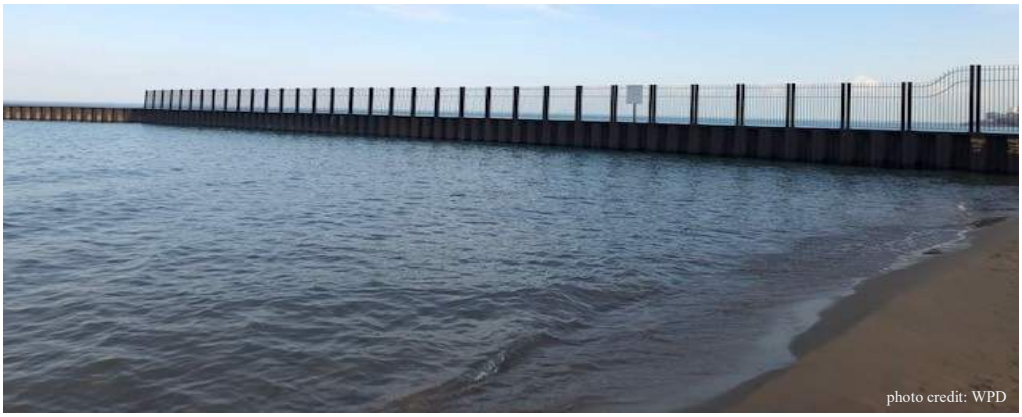


Preliminary rendering of groin extension guardrail



Preliminary rendering of groin extension guardrail

Response to #4 (aesthetics - continued):
Other municipalities have not been as thoughtful or considerate in their solutions to protect beach patrons - and the beach experience is negatively impacted as a result.



Safety measures by other municipalities that are not aesthetically considerate

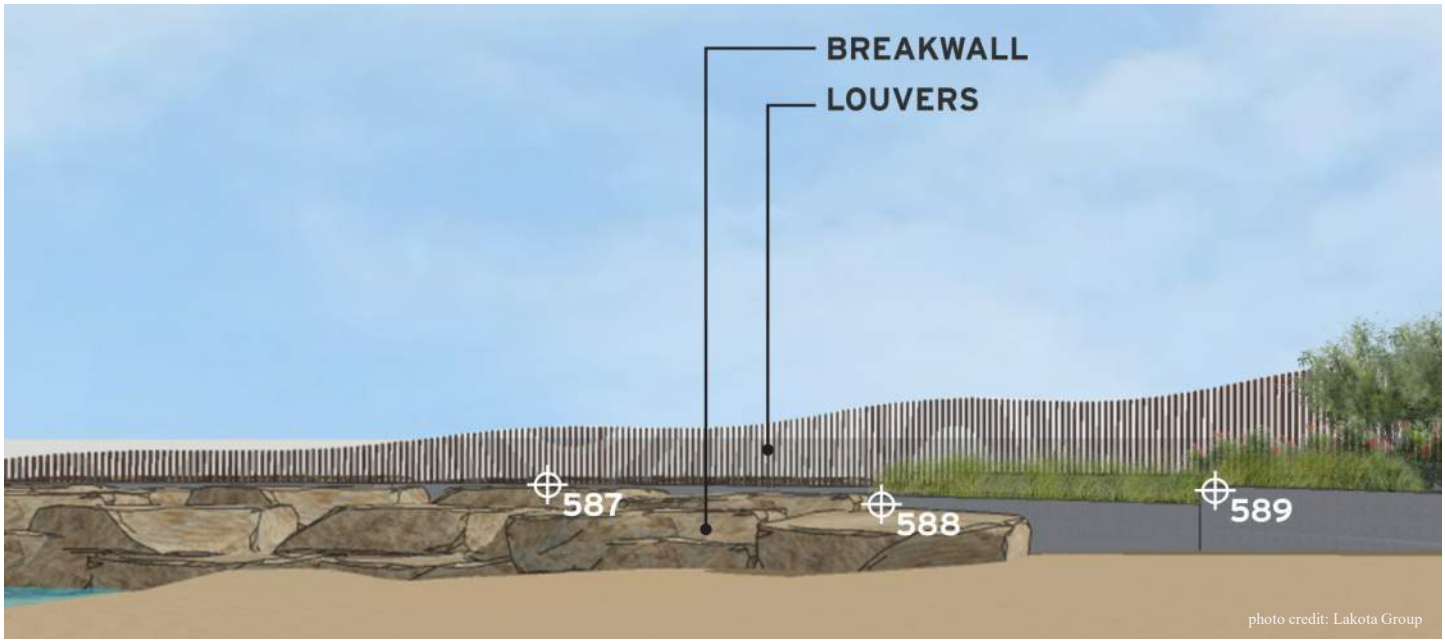
Item #5 – *"Although we acknowledge that efforts have been made to design the wall to limit visual obstructions, it could still potentially block views along the shoreline, particularly for individuals outside of the park boundaries. If the application includes a proposal for a louvered wall, the purposes of the wall must be explained as to how it satisfies defined needs."*

Response to #5 (views):
The Park District recognizes that shoreline vistas and water horizon line views are two key benefits of lake front environments and has taken steps to preserve them.

Multiple views along the shoreline, from both inside and outside park boundaries, are shown on the preliminary images below and on the following pages – and demonstrate how the groin extension guardrails do not block shoreline vistas and water horizon lines. The higher elevation bluff and tableland views are even less impacted than the beach views.

Furthermore, the residents most visually impacted by and who will most frequently see the groin extension guardrails are the north and south neighbors directly adjacent to the park. Both neighbors fully support the location, materials, heights, and overall design of the guardrail.

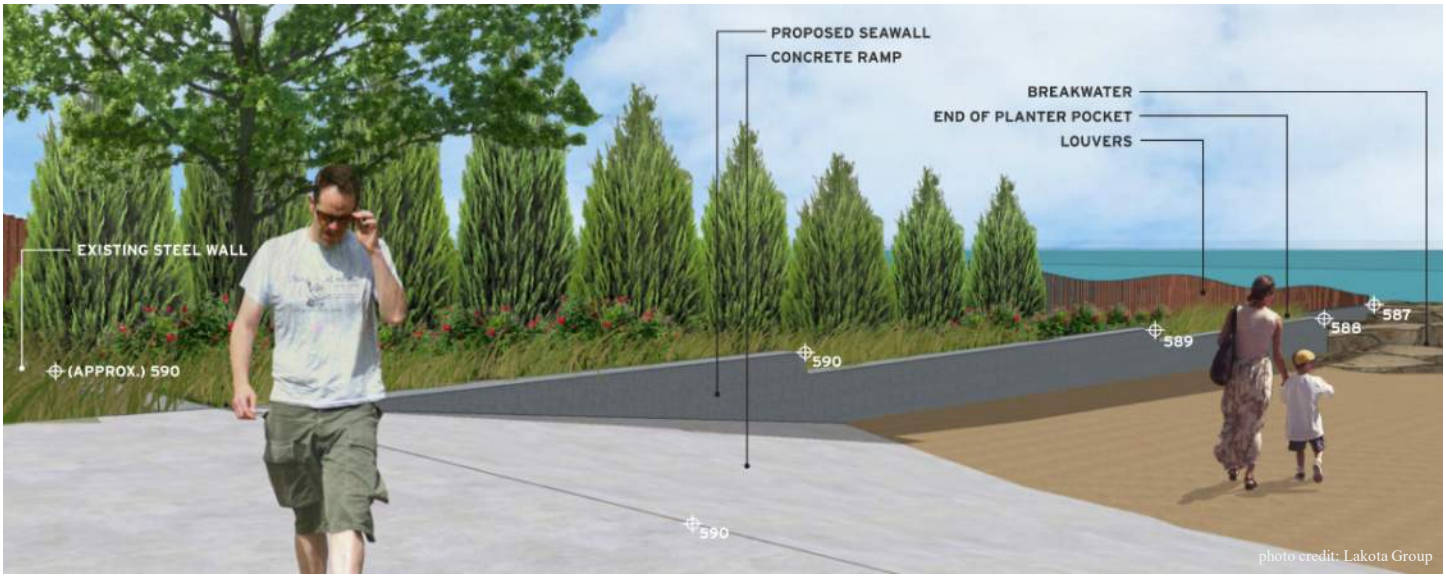
Please see "Response to #2 (project purposes and needs)" for the explanation of the purposes of the groin extensions and how they satisfy defined needs.



Preliminary rendering of the breakwater and groin extensions from inside the park showing waterline is visible

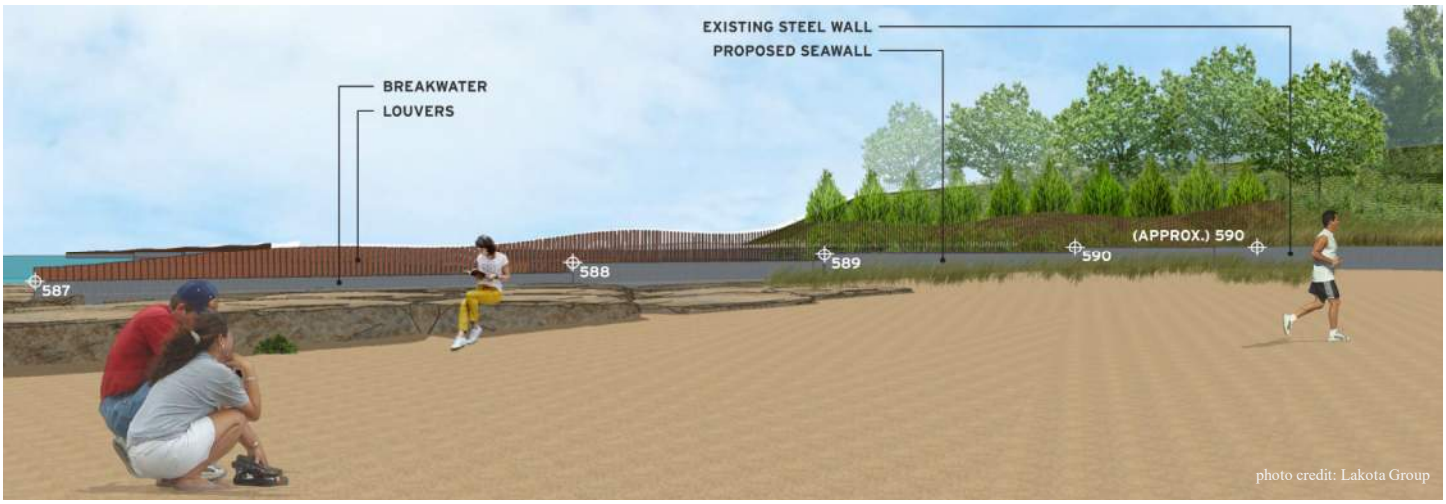
photo credit: Mariani

Response to #5 (views – continued):



Preliminary rendering of the breakwater and groin extensions from inside the park showing waterline is visible

Preliminary rendering of the breakwater and groin extensions from outside the park showing waterline is visible



Preliminary rendering of the breakwater and groin extensions from outside the park showing waterline is visible

Response to #5 (views – continued):

Preliminary rendering from inside the park showing unobstructed lake and shoreline views

Response to #5 (views – continued):

Preliminary rendering from the park tableland showing unobstructed lake and shoreline views

Item #6 – *"Alternative measures for meeting these needs must also be discussed and considered. For example, one of the stated needs was ensuring safety of beach patrons due to the elevation difference on either side of the wall. As part of the permit review, alternative measures for addressing this safety concern must be considered. A final determination on the wall cannot be made until after public comments have been addressed."*

Response to #6 (alternates):

Following are alternates and solutions considered for each of the project needs. The Park District has invested a significant amount of time considering alternative concepts that provide the highest degree of safety.

- Correction of erosion and soil breakaway issues – Grading changes, groundcover, and toe stabilization were all considered and will be used.
- Stabilization of the toe of the bluff – New gabion baskets, extension of the existing steel sea wall, timber and concrete retaining walls were all considered; steel will be used.
- Sea wall replacement – Steel, timber and concrete retaining walls were all considered; steel will be used.
- Removal of existing damaged steel groins, gabion baskets, and concrete pier – No alternatives were considered, these must be removed.
- Re-routing of stormwater discharge piping – Various locations for the discharge were examined, but it was determined to be the most environmentally safe north of the north breakwater.
- Breakwaters and groins – Stone, steel, concrete, and combinations thereof were considered. The stone and steel option will be used because the stone is mostly cost effective, but the steel takes up less space, allows more beach area, and installs faster.
- Groin extension guardrails – Chain link, cables, split wood rails, steel panels, wood panels, and perforated panels were considered. The chain link, cables, and split wood rails are not durable enough in the lakefront environment, and they also allow climbing on, around or through – thus failing to protect patrons from fall risk and off-site hazards and possibly allowing off-leash dogs outside of park boundaries. Steel panels, wood panels and perforated panels were rejected because they blocked too much of the lakeward view. The steel groin extension guardrails are the most durable and long lasting, provide the most robust fall protection, and will best blend with the aesthetics of the lakefront environment.
- Recreational beach usage, sun-bathing, and non-motorized boating – A single-cell breakwater system was initially studied, but when the middle breakwater and T were introduced, it allowed the swimming and non-motorized boating activities to be segregated for safety of the users.
- Passive space for lake viewing, picnicking, and relaxing – Beach, bluff and tableland locations were studied for these activities. As a result, these uses are sprinkled throughout the New Park and Beach.
- ADA accessways – Dedicated walkways, additional parking, and expanded parking lots were all considered to bring more ADA access to the park. The new vehicular path and ADA sloped ramps meet the need to bring easier access for users with differing abilities and ages.
- Boardwalk for lake viewing and social gathering – The boardwalk was studied both at the beach level and elevated level. To make the ADA ramp calculations work, the boardwalk will be elevated above the beach.

Item #7 – *"Noted is the potential for the fence to affect the littoral movement of sand, whether in the water or wind-blown. Although the proposed wall will have gaps, there still may be the potential that the movement of sand though the gaps would be reduced. This should also be assessed."*

Response to #7 (littoral movement):
Windblown sand migration has been assessed and will not be reduced because the groin extension members will be set approximately 4" apart – a typical spacing for railing components.

However, over time, the accumulation of sand on the northern face of the breakwaters will exceed that of the south face, inherently creating a vertical drop and fall risk that could vary between 3-feet and 6-feet depending on lake levels. The groin extension guardrails are included to address this inherent safety issue.

The Park District plans to support sustainable regional sand management plans that will reduce the negative consequences of shoreline erosion and sand accretion, as feasible.

IDNR Feedback
Item #8 – *"The proposed construction of the louvered fence/wall on the north and south sides of the proposed beach does cause some concern. The IDNR/OWR's Part 3704 Rules "REGULATION OF PUBLIC WATERS" allows for fill to be placed in Lake Michigan for the purpose of shore protection, it is unclear how the construction of the louvered fences are necessary to protect the existing shoreline."*

Response to #8 (necessity of Groin extension guardrail):
The Park District is not suggesting the groin extension guardrails are required to protect the existing shoreline. The breakwaters and planting pockets are the structures necessary to protect the existing shoreline. The groin extension guardrails are a critical public safety feature of the project, required to protect patrons from the fall risk the breakwaters unavoidably create, existing lakefront hazards, and attractive nuisances on adjacent properties.

As presented in the section "Existing Public Projects with Safety Structures", there are many other Chicagoland municipalities that have installed public safety features on top of public shore protection structures. Glencoe, Kenilworth, Evanston, and Lake Bluff have all prioritized public safety and installed guardrails to protect their lakefront users. Inclusion of the groin extension guardrail within this project represents the Winnetka Park District's prioritization of public safety for their beach users.

Item #9 – *"Also, it has long been the IDNR/OWR's policy that shore protection projects along Lake Michigan provide pedestrian access over and across any shore perpendicular structures. The proposed fences will clearly impede the public's access along this stretch of shoreline."*

Response to #9 (access):
As indicated in "Response #3 (access)", the Park District is respectful of the IDNR's policy that shore protection provide pedestrian access over and across any shore perpendicular structures but must include groin extension guardrails on the breakwaters to protect park patrons from the inherent fall risk the breakwaters create.

First, no existing accommodation for pedestrian movement along the shoreline exists at these parks. There is currently very limited access to Centennial Park because it is exclusively a dog park - and available only to the 381 people who have dog park access cards. In addition, Elder Beach has been closed for the last two years due to unsafe conditions and damaged structures.

Earlier portions of this document have demonstrated that breakwaters are the critical structures required to protect the bluff and shoreline from erosion and damage. However, over time, sand accumulation on the northern breakwater face will exceed that of the south face, creating a vertical drop that could vary between 3-feet and 6-feet depending on lake levels. A vertical drop of this magnitude is a fall risk and therefore a public safety issue. This safety issue can be easily managed by the proposed groin extension guardrail in any locations the fall risk exists.

The fall risk starts at the toe of the bluff and extends eastward, approximately 185 feet. Therefore, the guardrail will be installed in that same location, as the Park District must prioritize safety over access.

As presented in the section "Existing Public Projects with Safety Structures", there are many other Chicagoland municipalities that have installed public safety features on top of public shore protection structures that impede public access along the shoreline.

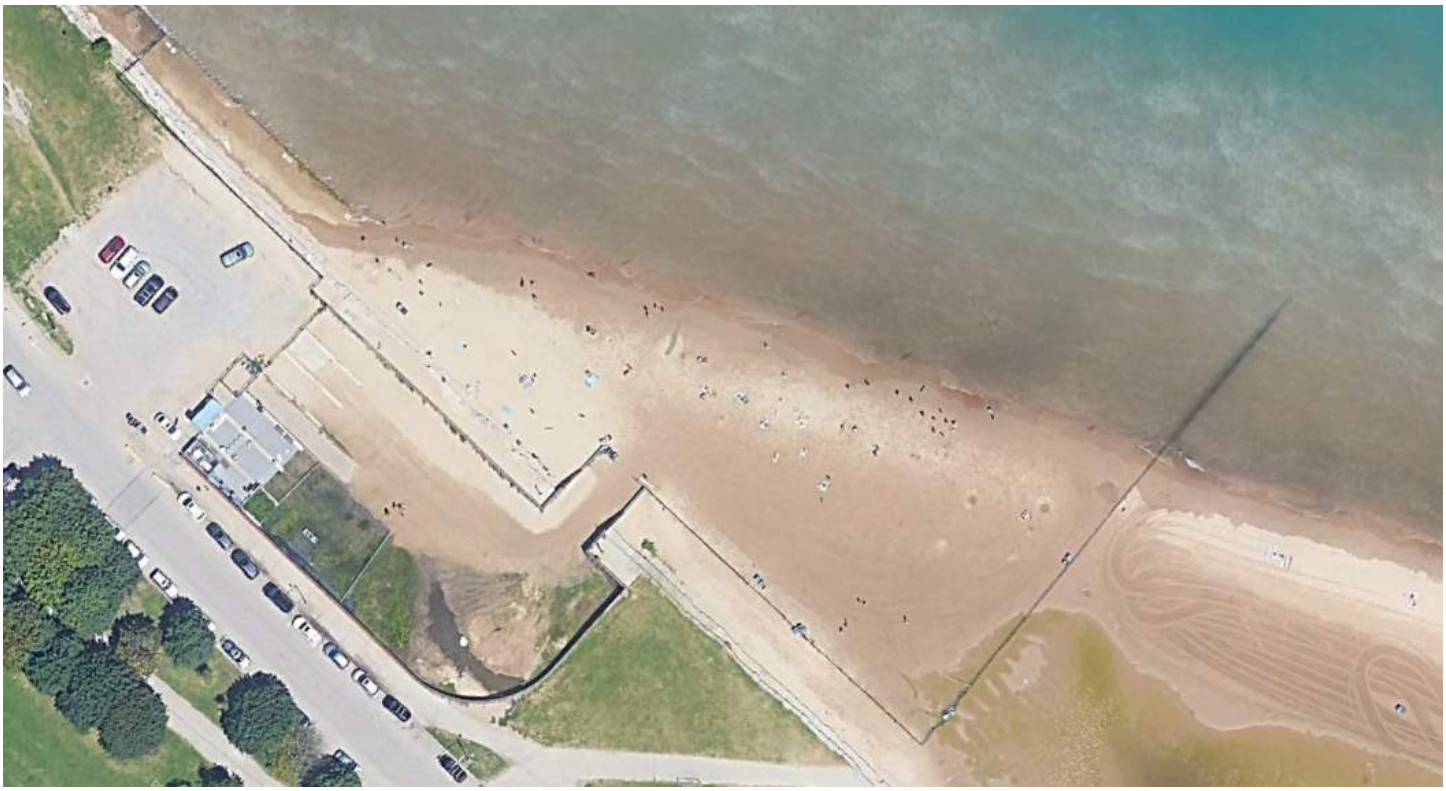
Glencoe, Kenilworth, Evanston, and Lake Bluff have all weighed the choice of and made the decision to prioritize public safety over access, and therefore installed guardrails to protect their lakefront users. Inclusion of the groin extension guardrail on this project represents the Winnetka Park District's same prioritization of public safety.

Important to point out is the nature of these conditions: they are public projects adjacent to a private property, just like the project proposed in this document, and conditions where public safety is paramount. This is not a condition between two private properties.

Additionally, as shown in the section "Existing Impassable Lakefront Structures", there are many Chicagoland locations where public access along the shoreline is impeded. Safe access is prohibited by stone breakwaters, planting pockets, piers and fences.

Lastly, the Park District is developing plans to provide seasonal usage for off-leash dogs at the beach. This amenity creates a public safety issue, as dogs must not be allowed to wander onto adjacent private properties where they may not be welcome or could injure someone. One example is Chicago's Montrose Beach dog park, which has a fence around it that extends into the lake and impedes public access along and intentionally segregates that portions of the shoreline. This safety issue easily can be managed with the proposed groin extension guardrail.

Response to #9 (access – continued):



Montrose Dog Beach, Chicago

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EXISTING PUBLIC PROJECTS with SAFETY STRUCTURES

Glencoe, Beach and Pier

This public beach has a 320’ long pier with a 4-foot-tall white metal safety guardrail along the lakeward sides. This public pier is a shore perpendicular structure that does not have pedestrian access over, across, around, or through it.

Glencoe Beach and Pier (continued)

Kenilworth, Kenilworth Beach

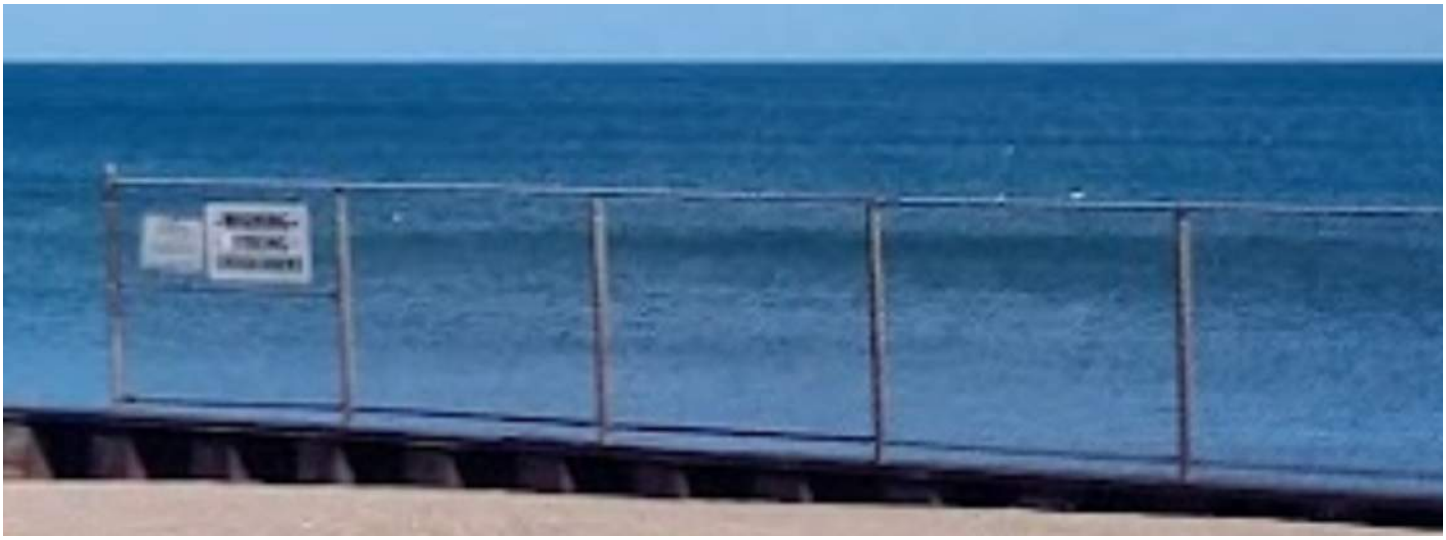
This public beach has a 75-foot-long steel groin with a 4-foot-tall metal chain link fence on top of it that functions as a guardrail. This guardrail protects beach patrons from the fall risk and vertical drop created by the inherent but uneven natural accumulation of sand on the northern and southern faces of a groin – the same safety issue the Park District will face at the New Park and Beach.

This public groin and fence are shore perpendicular structures that do not have pedestrian access over and across them.

Evanston, South Boulevard Beach

This public beach has a 420-foot-long steel groin with a 4-foot tall chain link fence on top of it that functions as a guardrail. This guardrail protects beach patrons from the fall risk and vertical drop created by the inherent but uneven natural accumulation of sand on the northern and southern faces of the groin – the same safety issue the Park District will face at the New Park and Beach.

This public groin and fence are shore perpendicular structures that do not have pedestrian access over and across them.



Evanston, Lee Street Beach

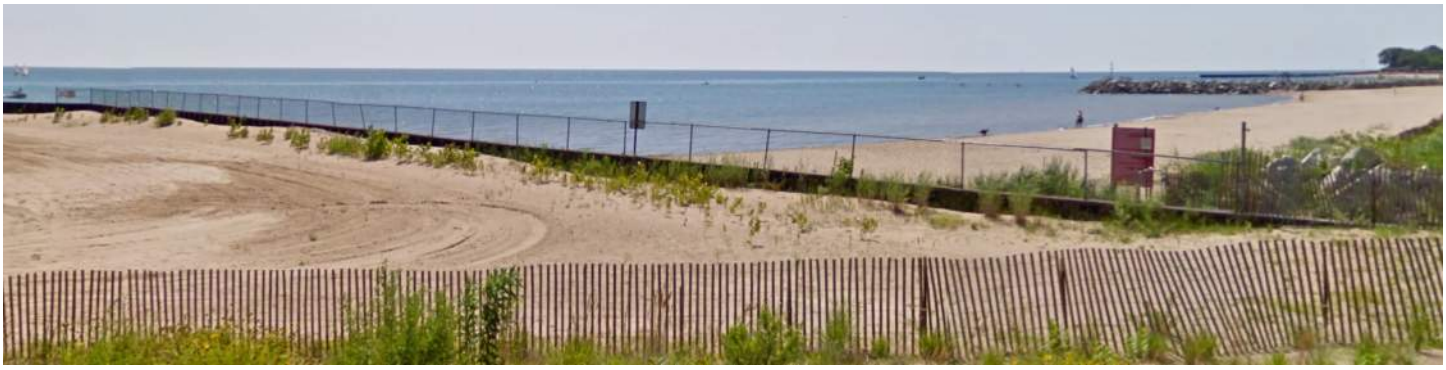
This public beach has a 260-foot-long steel groin with a combination of 6-foot and 8-foot tall metal fence on top of it that functions as a guardrail. This guardrail protects beach patrons from the fall risk and vertical drop created by the inherent but uneven natural accumulation of sand on the northern and southern faces of the groin – the same safety issue the Park District will face at the New Park and Beach.

This public groin and fence are shore perpendicular structures that do not have pedestrian access over and across them.

Evanston, Clark Street Beach

This public beach has a 585-foot-long steel groin with a 4-foot tall chain link fence on top of it that functions as a guardrail. This guardrail protects beach patrons from the fall risk and vertical drop created by the inherent but uneven natural accumulation of sand on the northern and southern faces of the groin – the same safety issue the Park District will face at the New Park and Beach.

This public groin and fence are shore perpendicular structures that do not have pedestrian access over and across them.



Lake Bluff, Sunrise Beach

This public beach has a 50-foot-long steel groin with a 4-foot-tall metal chain link fence on top of it that functions as a guardrail. This guardrail protects beach patrons from the fall risk and vertical drop created by the inherent but uneven natural accumulation of sand on the northern and southern faces of a groin – the same safety issue the Park District will face at the New Park and Beach.

This groin and fence are shore perpendicular structures that do not have pedestrian access over and across them.

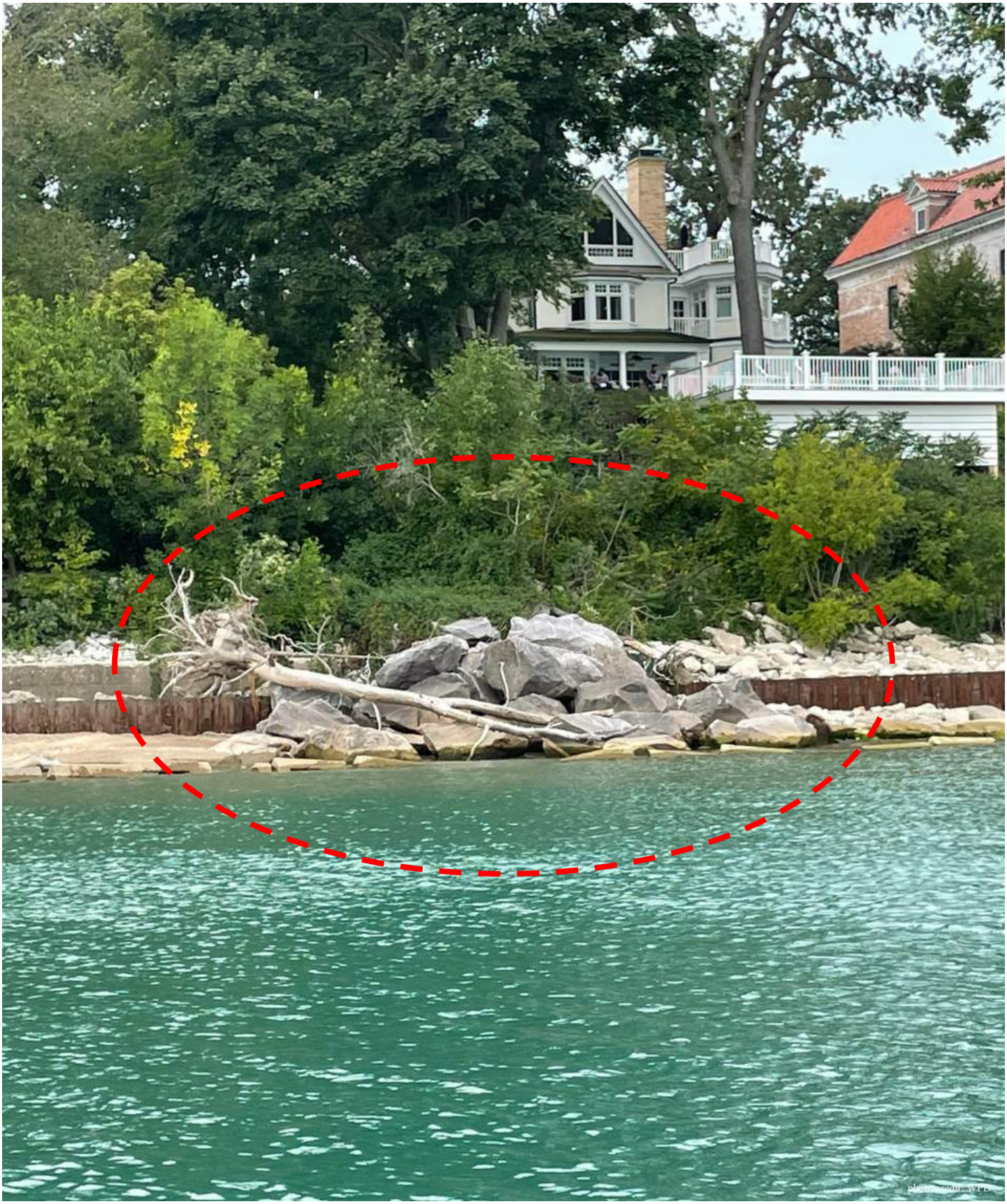
EXISTING IMPASSABLE LAKFRONT STRUCTURES

1077 Sheridan (1077 Outfall)

This Village of Winnetka stormwater outfall breakwater completely blocks pedestrian movement along the shoreline.

531 Sheridan Road to 525 Elm (Elm Street Outfall)

This Village of Winnetka stormwater outfall breakwater completely blocks pedestrian movement along the shoreline.



595 Sheridan (Spruce Street Outfall)

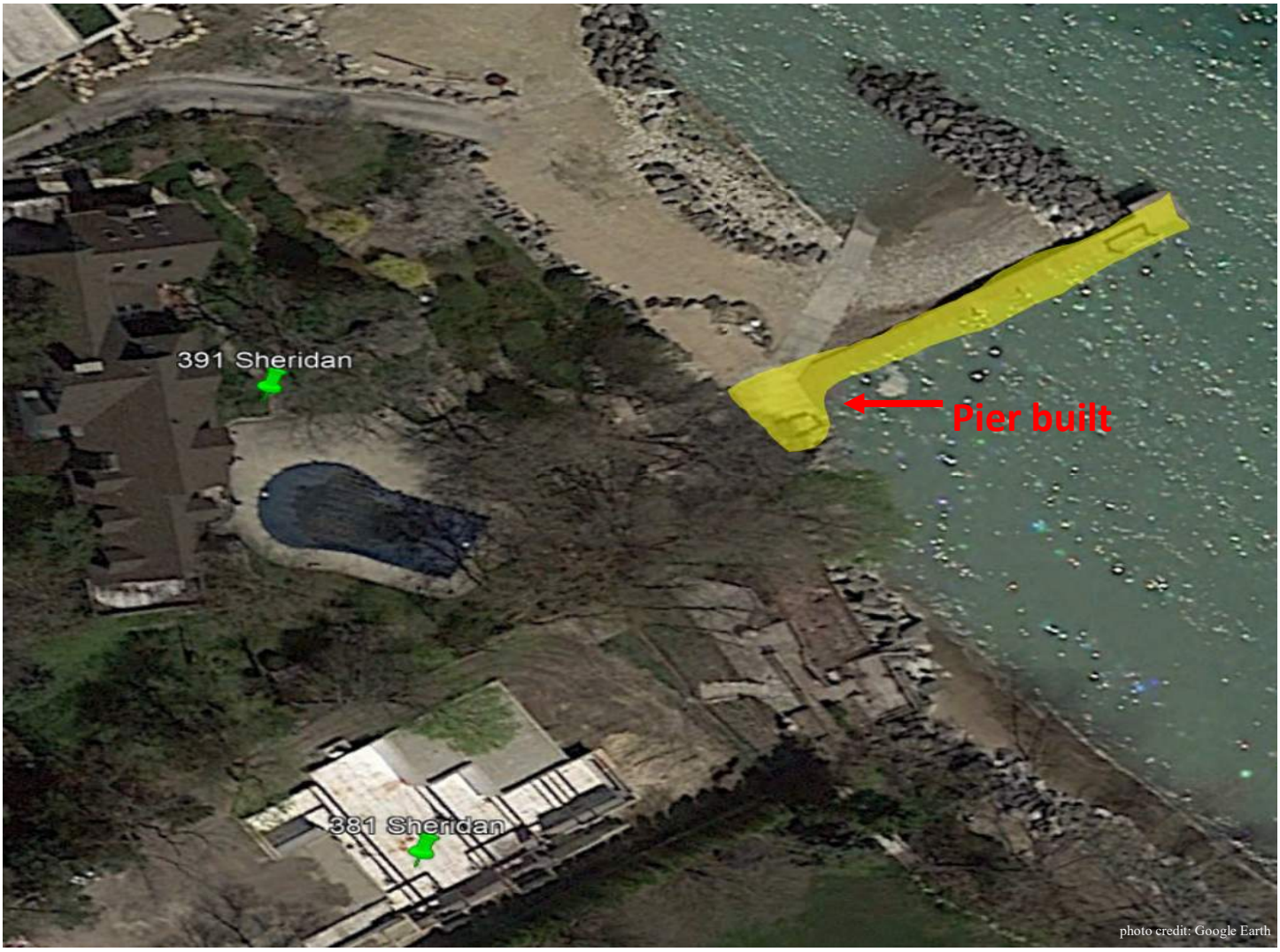
This Village of Winnetka stormwater outfall breakwater and planting pocket completely block pedestrian movement along the shoreline.

191 to 195 to 203 Sheridan Road

This section of shoreline has multiple structures that completely block pedestrian movement along the shoreline.

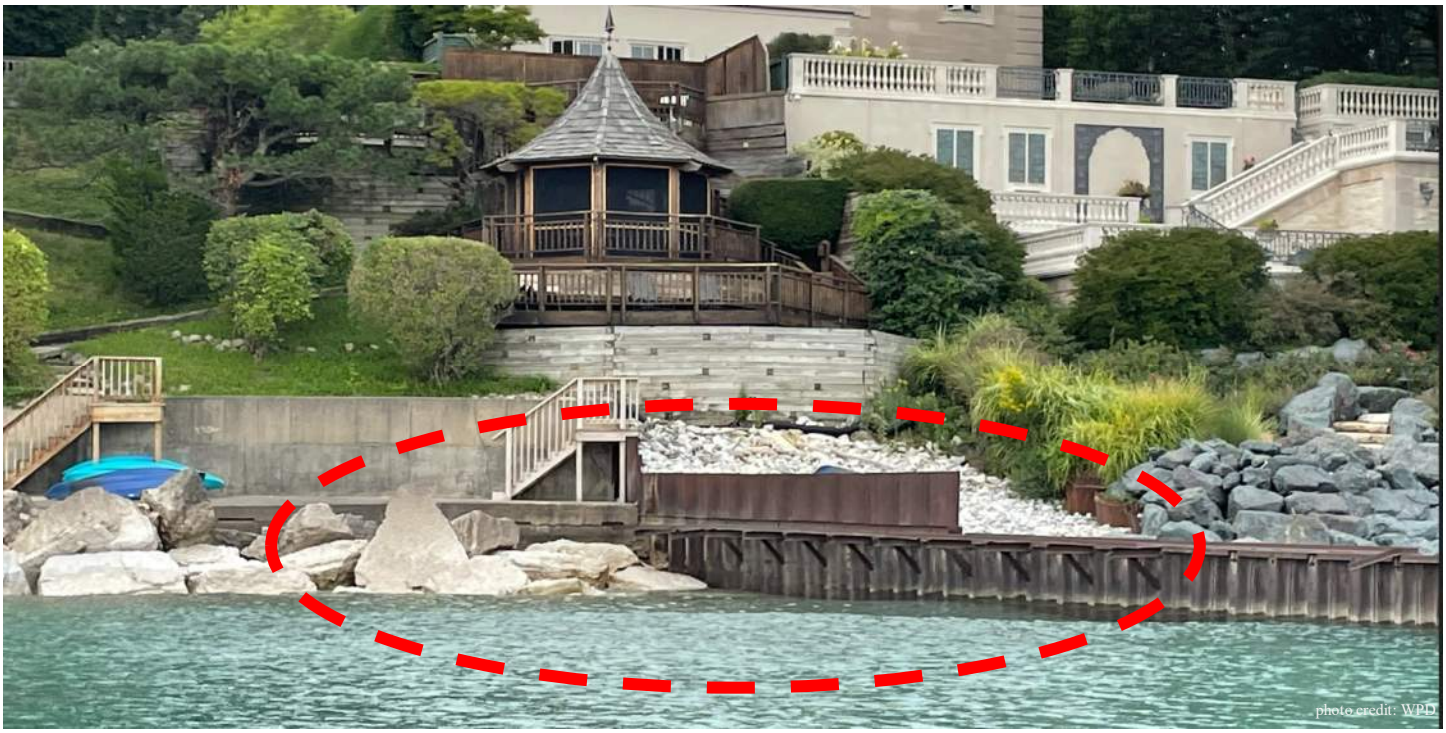
391 Sheridan Road

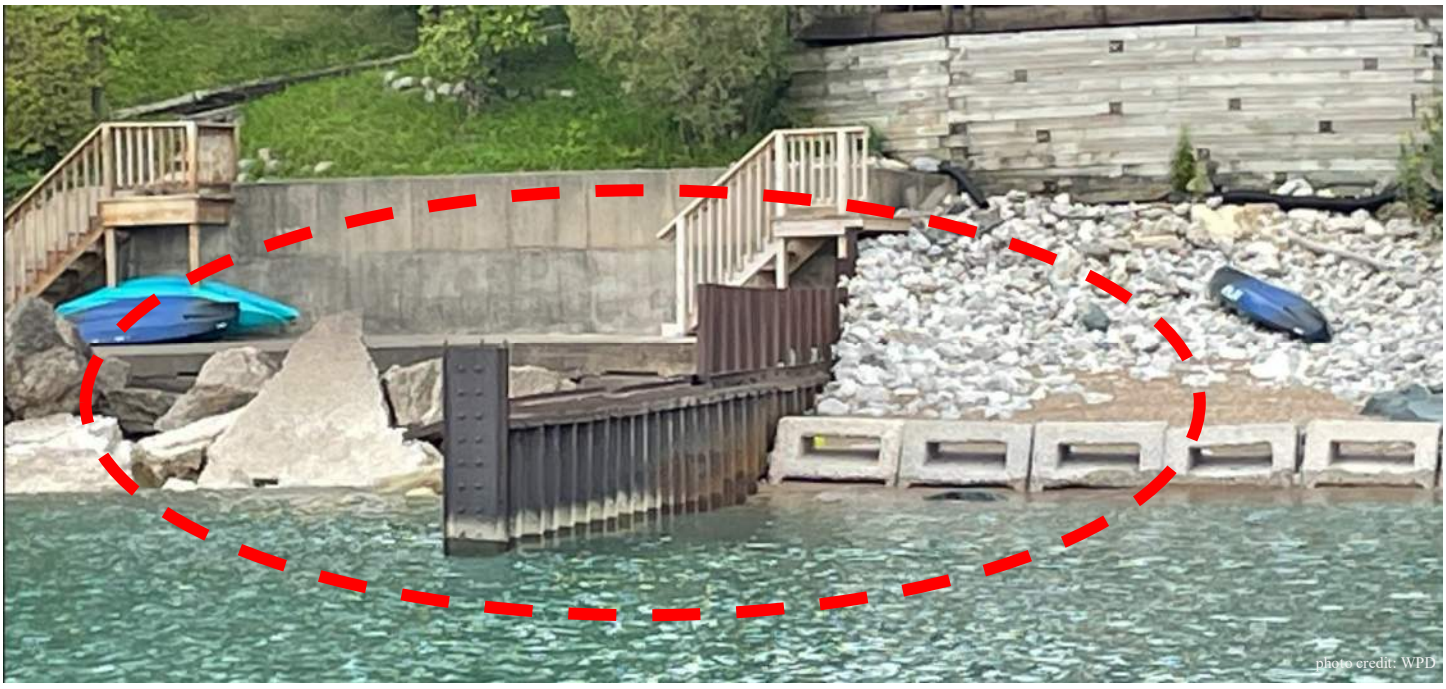
The private pier is approximately 54” above the current water line and completely blocks pedestrian movement along the shoreline.



480 Sheridan Road

This section of shoreline has multiple structures that completely blocks pedestrian movement along the shoreline.



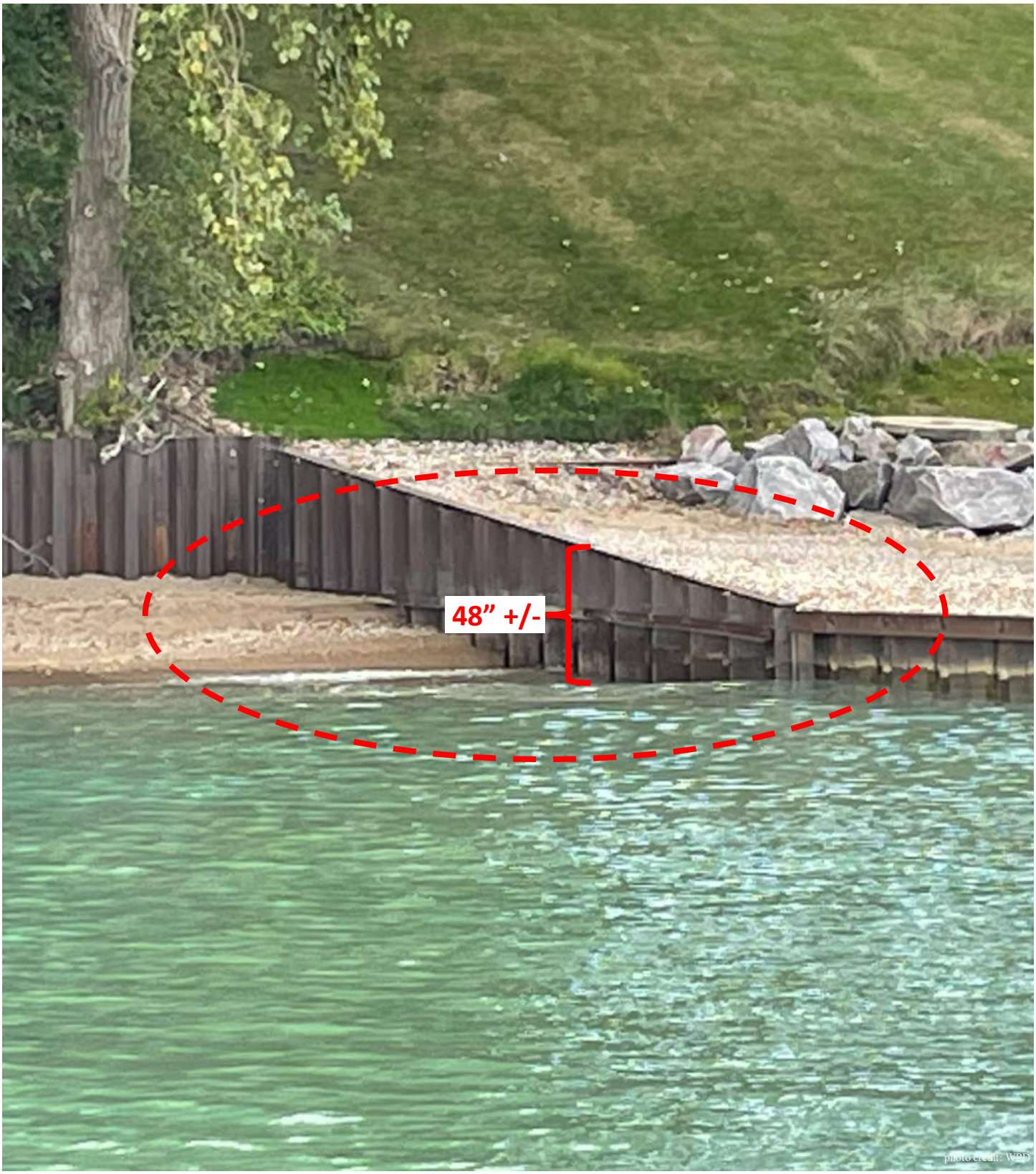


480 Sheridan Road (continued)

645 Sheridan

The top of the groin is approximately 48” above the water line on the south face. This structure blocks pedestrian movement along the shoreline. Furthermore, this structure presents a fall risk for any pedestrian who should attempt to move along the shoreline from north to south.

645 Sheridan (continued)



77 Stonegate, Lake Forest

Both breakwaters on this property completely block pedestrian movement along the shoreline.

505 Hoyt Lane

This breakwater and groin completely block pedestrian movement along the shoreline.

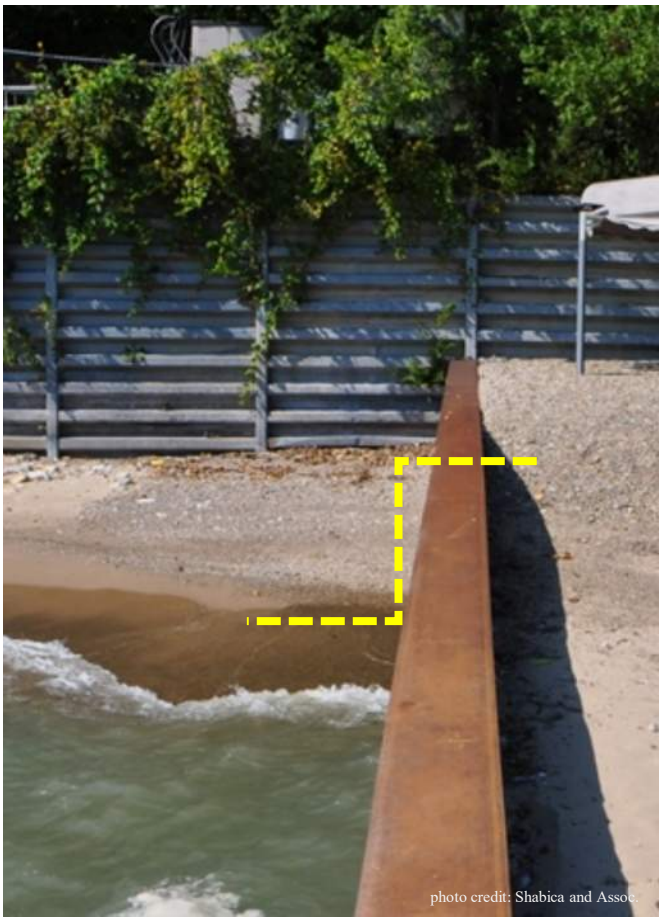
photo credit: WPD

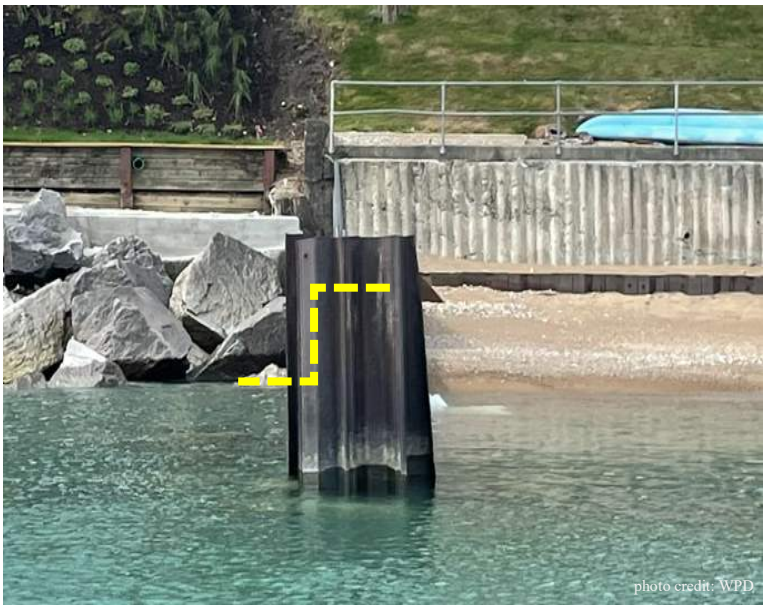
SAFETY CONCERNS OUTSIDE the PROJECT

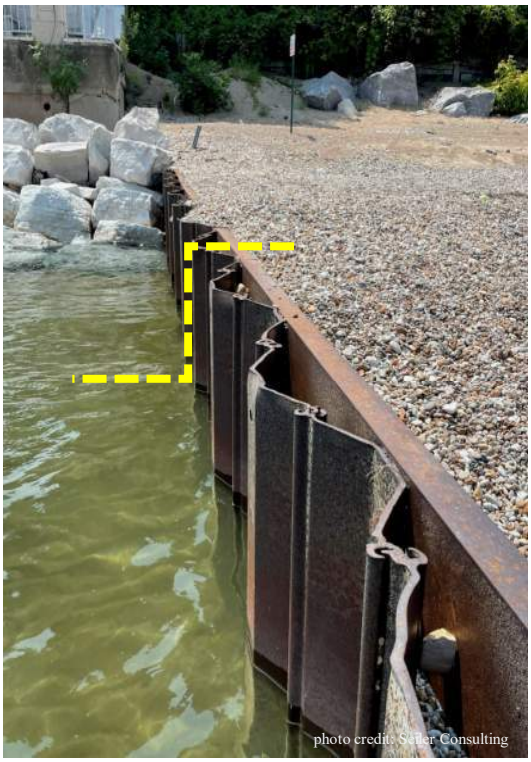
Safety for all patrons is paramount of importance in the project. The Park District wants all users to embrace the New Park and Beach and comfortably enjoy the improved facilities. Paramount to this effort is assuring all users they are safe and secure while on site, and clearly indicating the edges of the park. There are many safety concerns outside park boundaries - over which the Park District has no control.

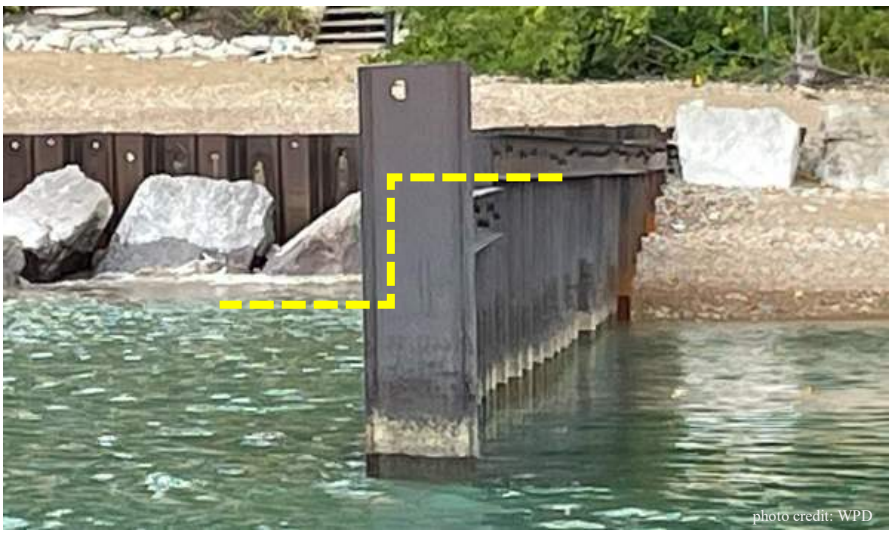
Concern #1 – Fall Risk

The Park District understands through time and because of storm events, large amounts of sand will move and create unsafe conditions (including substantial grade change) on opposite sides of groins which create fall hazards. The proposed groin extension guardrail will function as a safety railing, protecting users from falling over this edge.







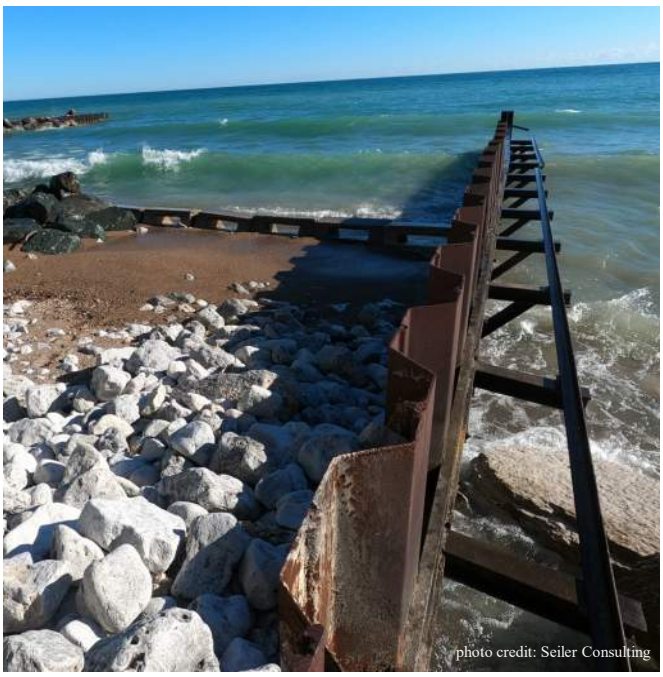


Concern #1 – Fall Risk (continued)

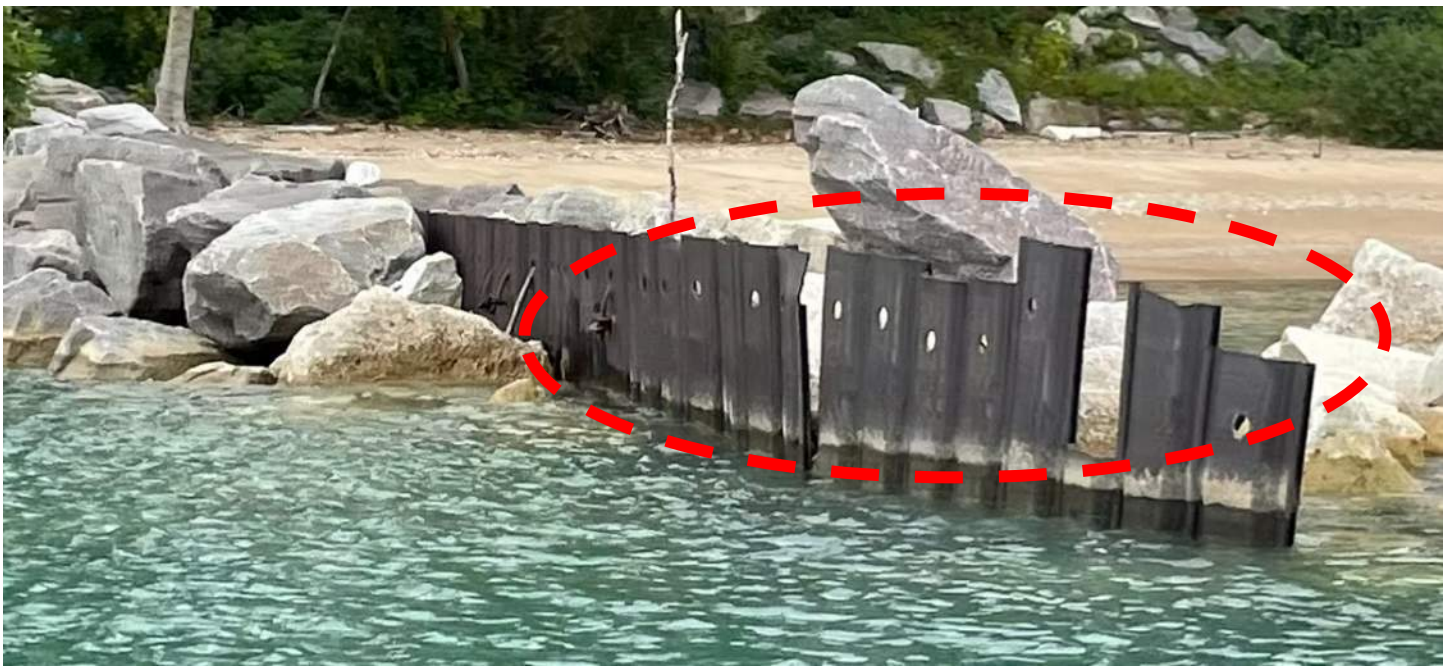
Concern #1 – Fall Risk (continued)

Concern #2 – Physical Hazards

The shoreline to the north and south has hazardous conditions from which the Park District must protect its patrons. Unsafe rock formations, damaged sharp steel groin sections and unmaintained major debris are present in both directions. The Park District seeks to avoid needing to defend themselves should a beach patron, wandering from the beach and encountering one of these items, get injured.



Concern #2 – Physical Hazards (continued)



Concern #3 – Dangerous pathways

In multiple locations up and down the shorelines, lakefront users are subject to significant obstacles and structures which significantly inhibit safe movement. Again, the Park District seeks to keep park patrons safe and free from injury. The planting pockets and groin extensions will encourage patrons to safely enjoy the beach and amenities the New Park and Beach offers.


photo credit: Seiler Consulting


photo credit: Seiler Consulting


photo credit: Shabica and Assoc.

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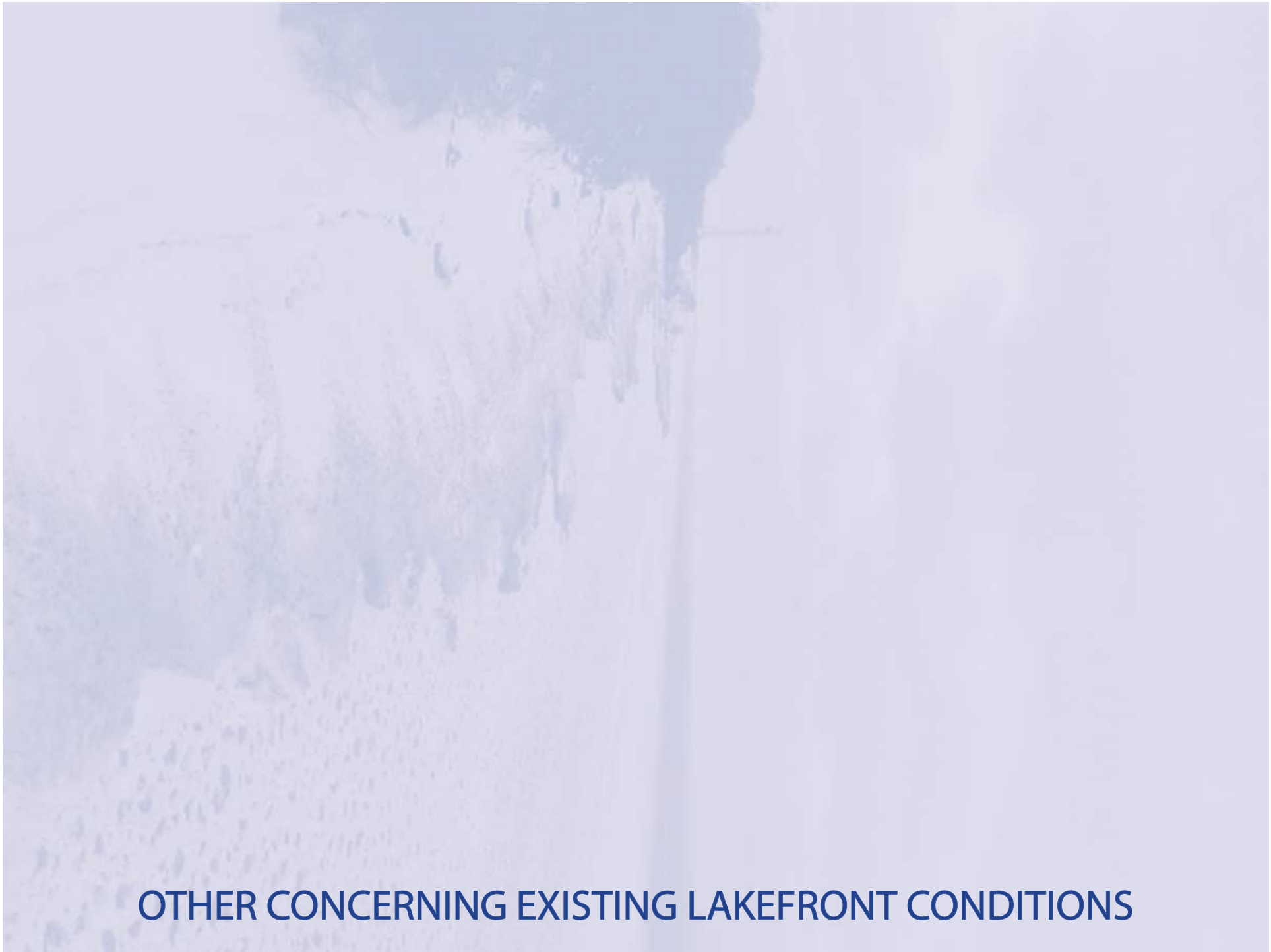


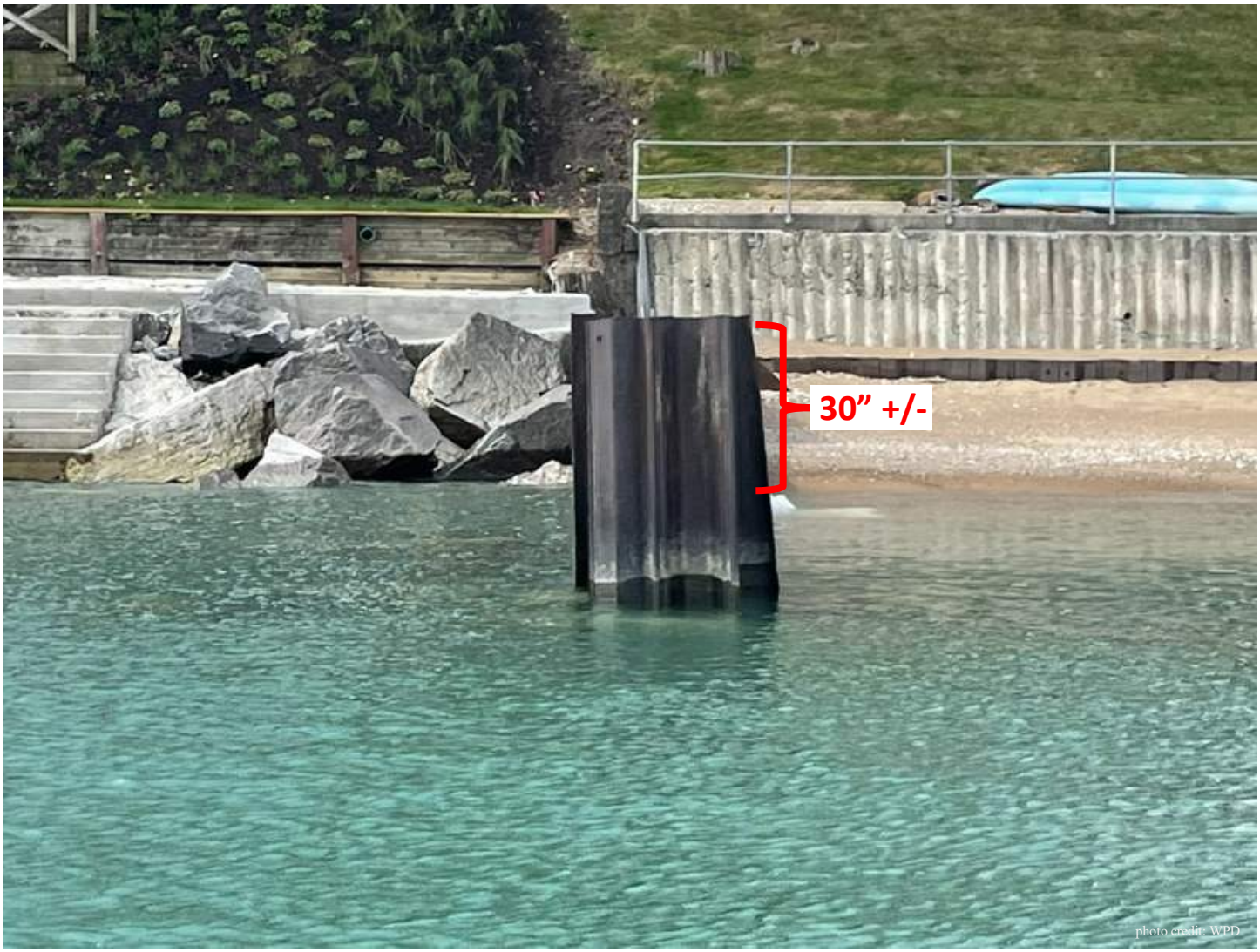
OTHER CONCERNING EXISTING LAKEFRONT CONDITIONS

519 to 523 Sheridan Road

A chain link fence is installed on the beach.

141 to 151 Sheridan Road

The top of the groin is approximately 30” above the water line on the north face. This structure blocks pedestrian movement along the shoreline. A pedestrian would need to scale this unsafe structure in order to safely walk the beach below the OHWM.



159 Sheridan Road

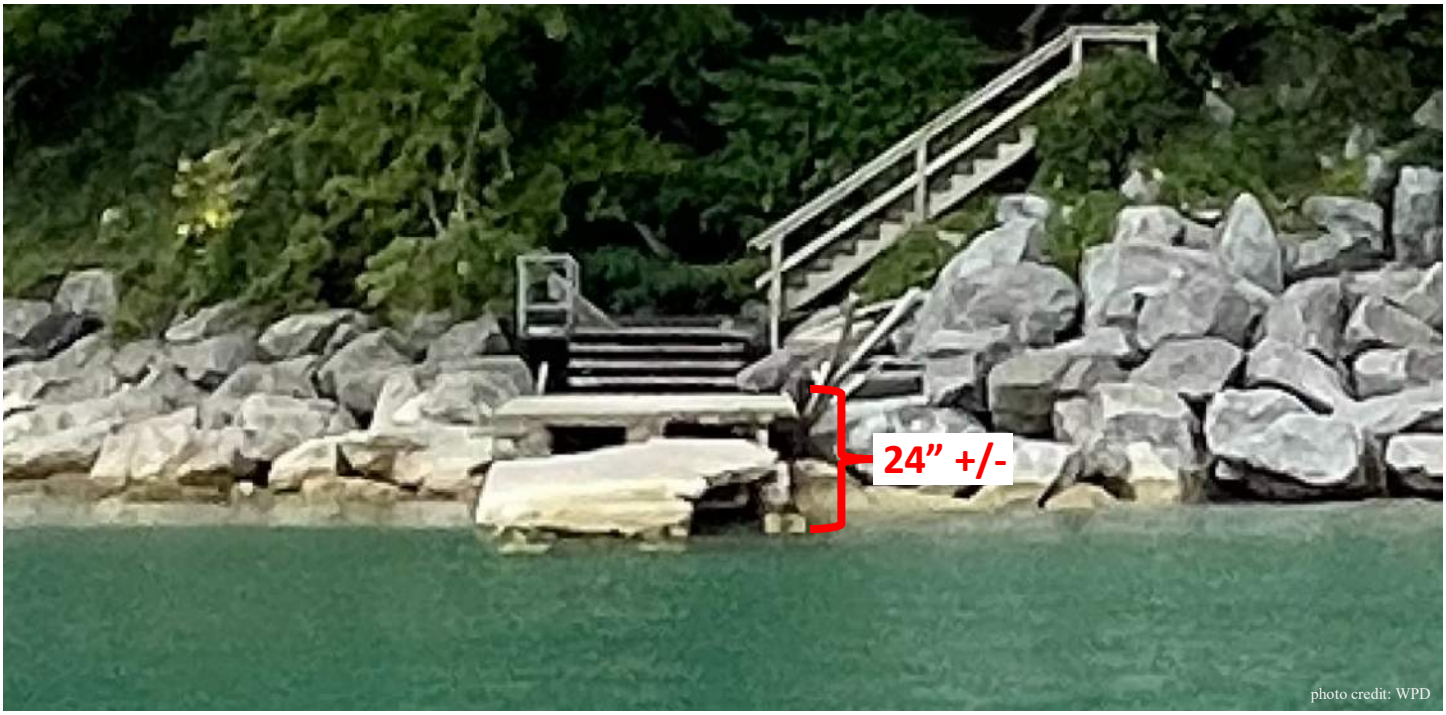
The top of the private pier is approximately 30” above the beach grade at the water line. This structure blocks pedestrian movement along the shoreline. A pedestrian would need to scale this structure in order to safely walk the beach below the OHWM. Furthermore, this structure presents a fall risk for any pedestrian who should attempt to scale it. Even when the lake level was low in 2013, the pier blocked pedestrian movement along the shoreline.

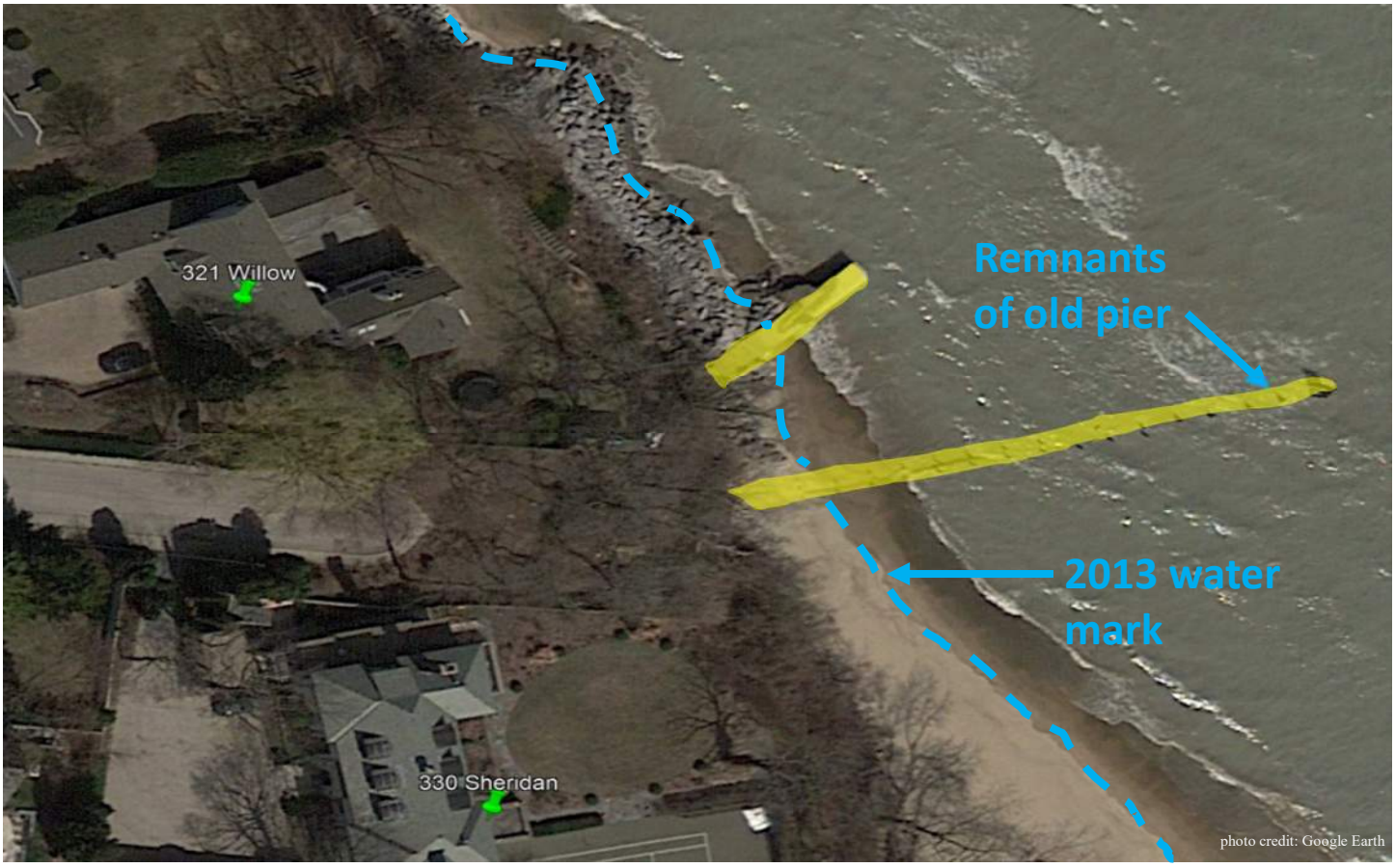
319 Sheridan Road

The top of the groin is approximately 30” above the water line on the south face. This structure blocks pedestrian movement along the shoreline. A pedestrian would need to scale this unsafe structure in order to safely walk the beach below the OHWM.

321 Willow Road

The top of this damaged private pier is approximately 24" above the beach grade at the water line. This structure blocks pedestrian movement along the shoreline. A pedestrian would need to scale this structure in order to safely walk the beach below the OHWM. Even when the lake level was low in 2013, the pier blocked pedestrian movement along the shoreline. In addition, there are scattered remnants of an old pier which are only visible during low lake levels – these are dangerous under foot.



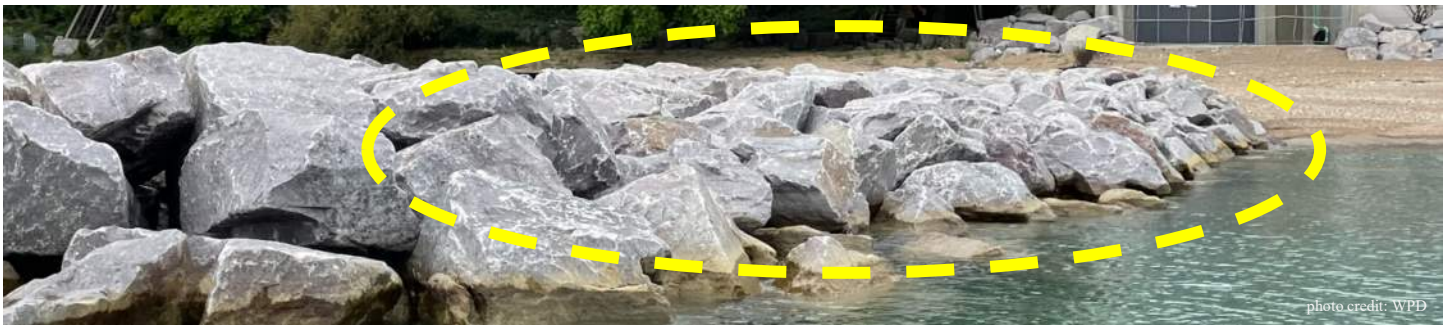


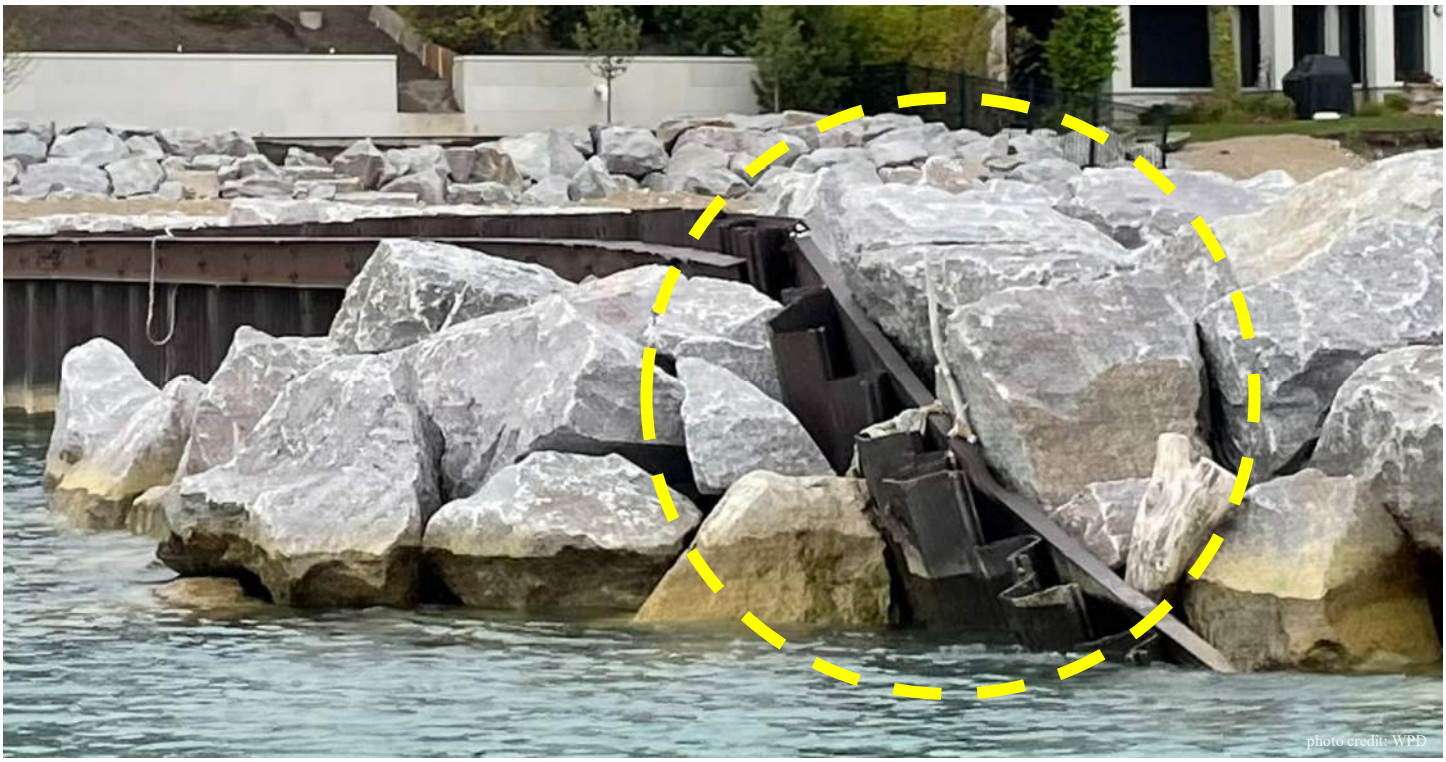
337 Sheridan Road

The top of the groin is approximately 24” above the water line on the south face. This structure blocks pedestrian movement along the shoreline. A pedestrian would need to scale this unsafe structure in order to safely walk the beach below the OHWM.

515 to 519 Sheridan

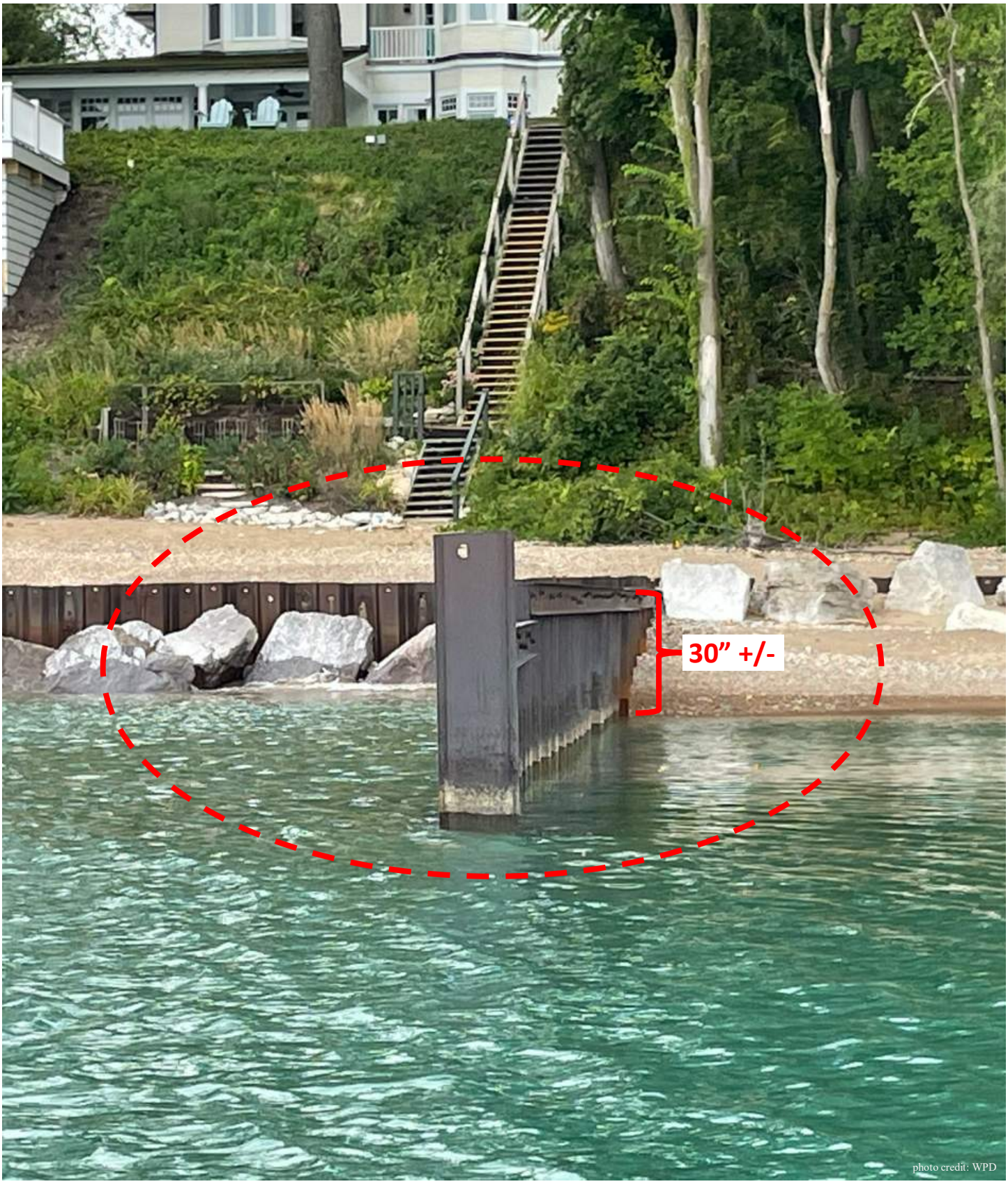
The top of the groin is approximately 36” above the waterline on the south face. This structure blocks pedestrian movement along the shoreline. A pedestrian would need to scale this unsafe structure in order to safely walk the beach below the OHWM. Additionally, there are stones on the north side of the groin, making climbing up and over even more treacherous. The steel groin is damaged and has been displaced by the stone revetment.





525 Elm to 555 Sheridan

The top of the groin is approximately 30” above the water line on the north face. This structure blocks pedestrian movement along the shoreline. A pedestrian would need to scale this unsafe structure in order to safely walk the beach below the OHWM.



667 Sheridan

The top of this pier is approximately 30” above the water line on the north face. This structure, in addition to the fence, blocks pedestrian movement along the shoreline. Furthermore, this structure presents a fall risk for any pedestrian who should attempt to move along the shoreline from north to south.