OXBOW ASSOCIATES, INC.

**PROJECT NARRATIVE**
**Lake Williams Boardwalk Installation**
**Marlborough, MA**

**September 22, 2022**

On behalf of the Applicant, the City of Marlborough, Oxbow Associates, Inc. (OA) is submitting this Notice of Intent for the proposed construction of an elevated boardwalk and stone dust trail along the edge of Lake Williams, located at 177-185 Williams Street (Parcel #80-124), in Marlborough, MA. This Notice of Intent is submitted in compliance with the Massachusetts Wetlands Protection Act, MGL, Ch. 131 §40 (the "Act") and its implementing Regulations at 310 CMR 10.00, *et seq*.

The Applicant requests that the Marlborough Conservation Commission (MCC) review the "Project" under the requirements and provisions of the Massachusetts Wetlands Protection Act and issue an Order of Conditions. The project complies with the requirements and performance standards of Act and its relevant Regulations.

Two sets of plans have been prepared by City of Marlborough's Department of Public Works Engineering Division and are appended herewith.

**General Project Summary**

Lake Williams is a 113-acre Great Pond located in Marlborough, that is designated as an emergency backup water supply for the City. Constructing additional trails to enhance recreation and public enjoyment throughout the community has been a long-stated goal of the City to with the objective to improve quality of life and provide safe and enjoyable places for citizens to exercise or walk. The City of Marlborough is seeking to install a series of boardwalks and stone dust paths around the north and east side of Lake Williams to connect with the existing foot path on the south side of the lake, forming a continuous loop trail, complimenting existing walking paths on the west and south sides of the Lake.

Additional details for these boardwalks will be provided by the selected contractor after the bidding process but will resemble typical elevated boardwalk structures assembled in analogous projects. The boardwalks will be elevated approximately three feet over water level using helical driven supports (maximum 4-inch diameter) and the walking surface will be constructed of composite boards, to increase weatherability. The boardwalk will be approximately eight feet wide to accommodate pedestrian access in both directions, with a steel mesh or slat handrails, and is approximately 2,847 feet long.

Construction of the boardwalk will be completed with a small excavator-like machine, with rubber tracks, fitted with a specialized drill bit for installing the helical piles. To

minimize disturbance to the bank, wetlands, and surrounding habitat the machine will remain on the boardwalk during the installation of the helical piles and flooring. After completion of a section of boardwalk the machine will continue forward on the newly finished surface and resume construction of the following section. This construction methodology avoids collateral disturbance that would result from conventional construction techniques. No manipulation of water levels or other special measures are required to implement the work.

**Wetland Delineations**

OA (specifically R. Strohsahl and D. Kemmett) completed all delineations of wetland resources in August of 2022. OA delineated the edge of relevant BVWs in multiple series (A, C-G, Z) with blue plastic flagging, and flagged the extent of LUW using estimated Mean Annual Low Water (MALW) with pink flagging (B-series). Methodology involved assessment of plant community characteristics, soils, and hydrology along with photographic documentation of site conditions. All evaluations were conducted in accordance with the standards of the Act. Delineations extend approximately 100 feet from any likely activity associated with boardwalk installation.

**Wetland Resource Area Impacts**

The proposed boardwalk replacement falls under the Limited Project provisions at 310 CMR 10.53(3)(j):

> *"(j) The **construction and maintenance of catwalks, footbridges,** wharves, docks, piers, boathouses, boat shelters, duck blinds, skeet and trap shooting decks and observation decks; so as **to permit the reasonably unobstructed flowage of water and adequate light to maintain vegetation.**"*

The majority of the boardwalk (approximately 2,547 linear feet of 2,847 total linear feet) will be installed over Land Under Waterbodies (LUW; 310 CMR 10.56). The proposed boardwalks over the water will allow unobstructed flow and movement of aquatic and terrestrial organisms, and thus no mitigation is required for any impacts to LUW. Such in-water structures actually diversify the sub-littoral pond environment and encourage use by finfishes and aquatic invertebrates as well as mammalian inhabitants of pond shores (Mustelids *et al.*).

Portions of the elevated boardwalk (approximately 300 linear feet, 2,130 square feet) will be constructed over Bordering Vegetated Wetland (BVW; 310 CMR 10.55) but will be considered permanent impact because it will not be elevated enough over grade to prevent shading of the existing vegetation. Along the north side of the Lake where the boardwalk passes through BVW or buffer zone the trail will be composed of compacted stone dust or pre-fabricated pedestrian bridge, to reduce overall costs. Total BVW disturbance for the entirety of the project is approximately 4,585 square feet (direct BVW impacts via stone dust trail, or indirect via elevated boardwalk/bridge).



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A wetland replication area has been proposed in the southeast corner of the property, adjacent to flags A4-A7, to mitigate for proposed permanent BVW impacts. The mitigation area will be approximately 5,200± square feet, more than the required 1:1 ratio.

Erosion control at the landward ends of the respective boardwalk sections is proposed, as necessary. If necessary for access, lightweight construction matting (not timber mats) will be employed with short-duration deployment. Matting will consist of materials such as 5/8" plywood or synthetic work mats. Mats will be placed directly on extant vegetation and removed immediately upon completion of the work within the immediate area.

No additional alteration of resource area beyond the extant boardwalk/pathway dimensions is anticipated.

**Avoidance, Minimization, and Mitigation of Impacts**

Contractors will employ best practices to avoid runoff/sedimentation, spread of invasive plant species, and other avoidable impacts to wetlands. Specifically, contractors will use temporary erosion control indicated on the design plans. These will be staked, 6" straw (seedless) wattles. Equipment will be inspected for the presence of seed-bearing soil residue material and will be cleaned as necessary prior to transport, to and within the property.

Excess soil, if any, will be exported from the work area and deposited in a designated, upland area within the property.

Boardwalks constructed on analogous projects do not show any indicators of deleterious impacts to the wetlands or waterbodies they traverse. If anything, they may provide unique cover for some wildlife species as well as migratory paths beneath. A review of the eight statutory interests protected by the WPA appear to be uniformly upheld, due in part to the largely proportional insignificance of the structures within the waterbody. While being a benign component of these systems they simultaneously provide for public appreciation and enjoyment of wetlands, allowing recreative activities that are not deleterious or consumptive of the resource areas.

***Vegetation Impacts and Compensation***

Mitigation in the form of wetland replication areas have been provided for alteration or loss of wetland resource areas. The wetland replication area will target a wet meadow successional stage wetland, complimentary to the adjacent BVW. This area will be over excavated to a depth equal to or greater than the presence of hydric soil indicators and re-graded with screened topsoil from the site, or clean topsoil with at least 30% organic content from an exogenous source. The finished replication area will be seeded with a native herbaceous wetland seed mix.



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The restoration area will be reseeded with a native seed mix such as the "Wet Mix" supplied by New England Wetland Plants. The mix will include a variety of suitable native sedges, rushes, and herbaceous species. If necessary, additional native restorative plantings can be placed in the restoration area. OA will oversee the installation to ensure that the species composition, quantity, and location of the plantings are suitable for the replication area.

If the schedule allows, local seed collection from the project area will be substituted for the commercial seed mix. Collected materials would include hydric graminoids and sedges/rushes, Joe-Pye weed, boneset, goldenrods and asters. The replication site will be monitored for two full growing seasons following its completion and brief reports of percent cover by hydrophytes and general success measures will be provided to MCC by December 31 of any monitoring season.

## Regulatory Compliance

The proposed project complies with all applicable performance standards under the Massachusetts Wetlands Protection Act, in particular those for alteration of Bordering Vegetated Wetland and Land Under Waterbodies and Waterways.

### Stormwater Management

The proposed work is not exempt from the Massachusetts Stormwater Standards. However, due to the nature of the project no stormwater management (excepting project erosion control) is proposed.

### *Marlborough Wetland Setback Policy*

The City requests a waiver in accordance with Wetland Setback Policy (adopted 2022) for any work within 30 feet of wetlands. This waiver is needed to accommodate an overriding public interest. No reasonable alternatives exist, as this project is the only feasible way to extend the trail system fully around the Lake. The project will employ avoidance, minimization, and mitigation to the maximum extent feasible, as described above to complete the boardwalk.

## Conclusion

The information contained in this NOI describes the site, proposed work, and the compliance of the work in protecting the statutory interests identified in the Act. The project meets or exceeds all applicable State and local performance standards.

## Representative Site Photographs

Photo 1: Analogous boardwalk project at Coes Pond, Worcester.
Source: Kiernan Dunlop/MassLive

Photo 2: Boardwalk Project at Middle River Park, Worcester. Helical piles with supporting crossbeams visible in background.
Source: Grant Welker/Worcester Business Journal

Photo 3: Helical piles being installed using machine on constructed boardwalk in wetland.
Source: Foundation Support Systems

Photo 4: Boardwalk constructed with small, tracked machine driving helical piles..
Source: TerraCana Foundation Solutions, Inc.