



TOWN
OF WELLESLEY
Pickleball Court Study Phase II | Morse's Pond
2024

Phase I Study locations

Existing Site Photos

Phase II

Overall Existing Conditions & Site Analysis

Proposed Pickleball Courts

Vegetation Management

Stormwater Improvements

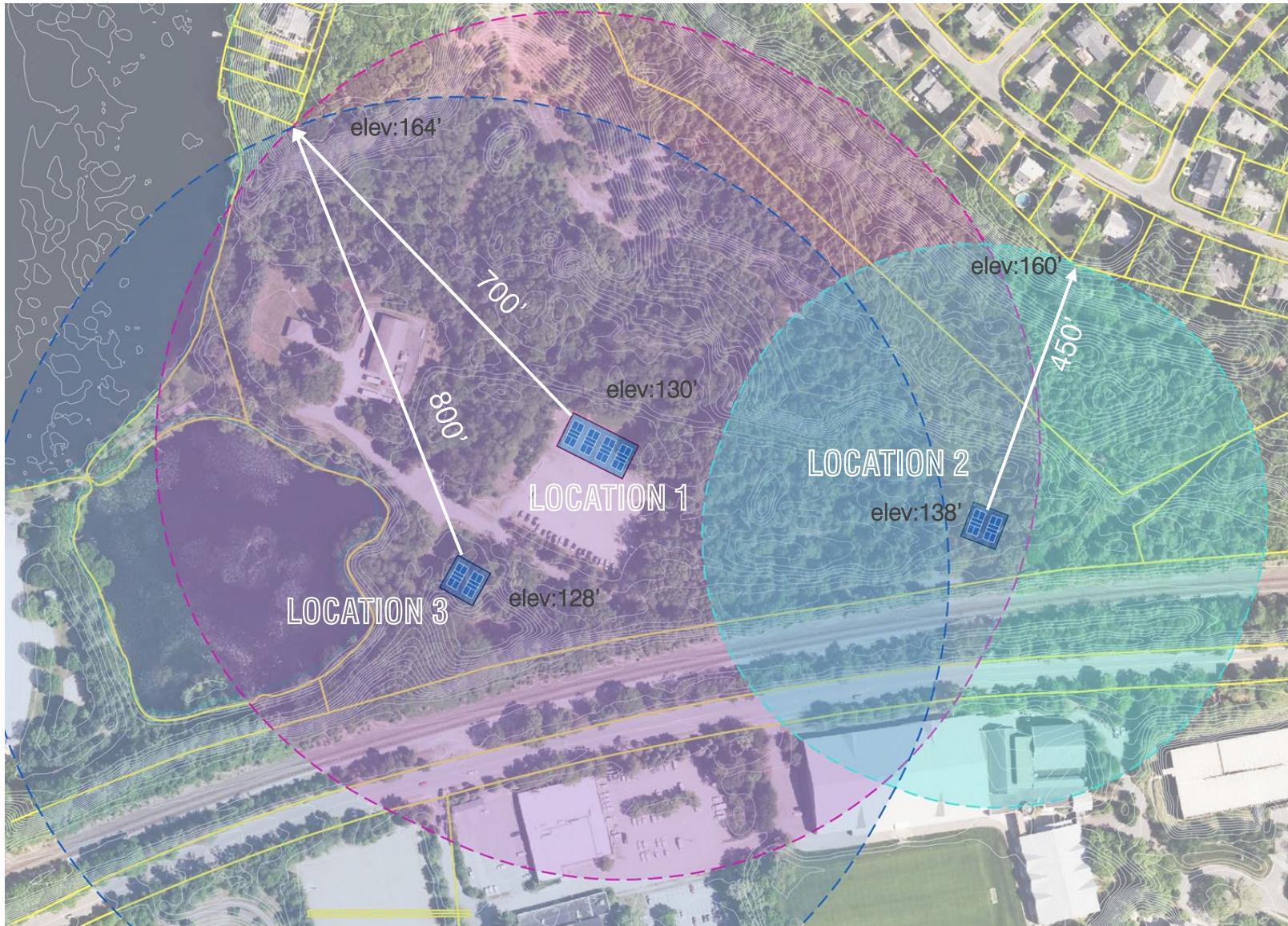
Environmental & Site Considerations

Cost Considerations

Conclusions



PHASE I STUDY LOCATIONS



MORSE'S POND

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LOCATION 1 | OPTIMAL

location 1 has been identified as the best location for proposed pickleball courts for the following reasons,

- distance from passive recreational amenities
- general flat nature of the existing topography
- minimal tree clearing
- access to parking and adjacent sidewalks

LOCATION 2 & 3

location 2 and 3 have been removed as a possible location for pickleball courts because of the environmental impacts including tree removal, grading, low existing recreational activity in the area and lack of parking.



TOWN OF WELLESLEY PICKLEBALL COURT STUDY

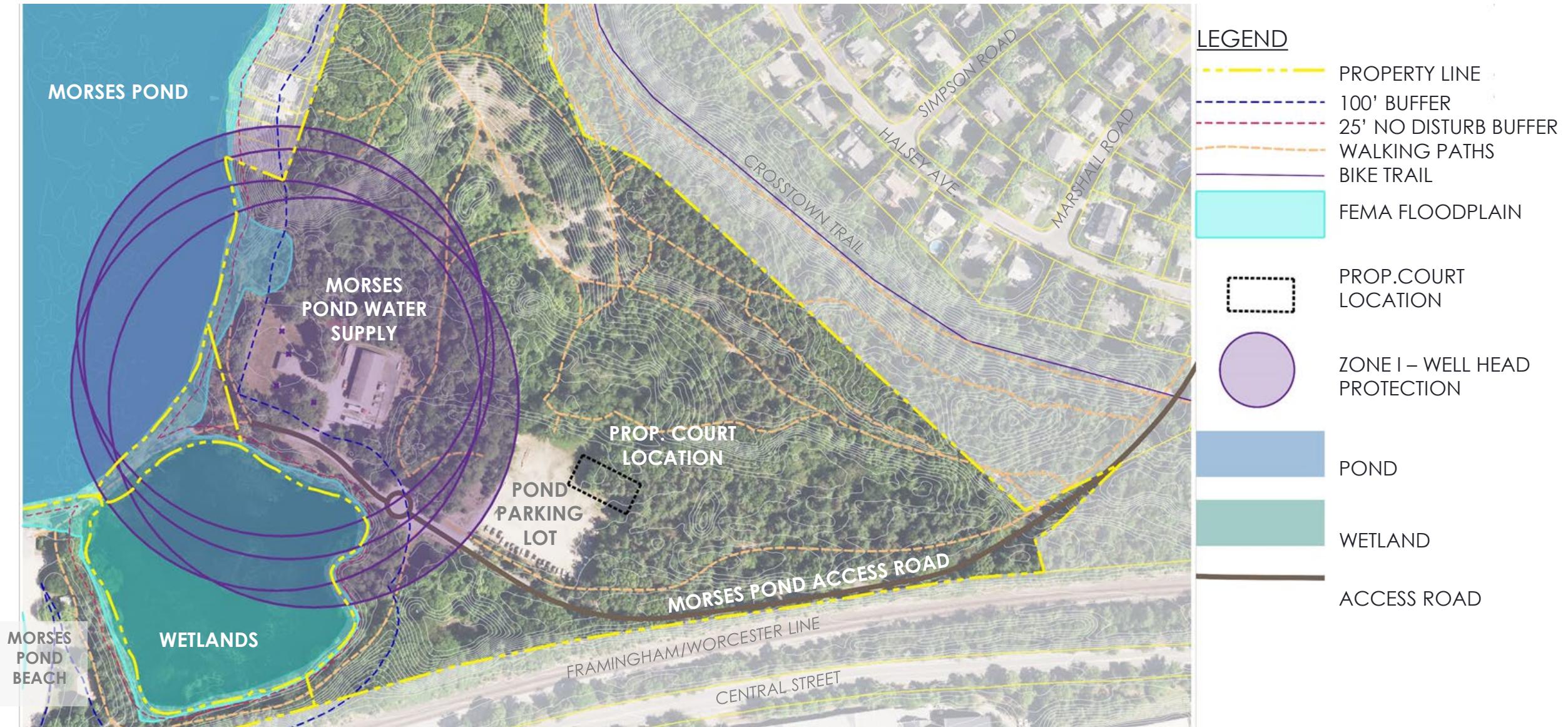
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EXISTING SITE PHOTOS

PHASE II

OVERALL EXISTING CONDITIONS & SITE ANALYSIS



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PHASE II

PROPOSED PICKLEBALL COURTS

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PHASE II

TREE MANAGEMENT

Vegetation Removals:

approximately 9,050 square feet (0.2 acres) of existing vegetated area will be demoed to accommodate the space for the pickleball courts.

Landscape Improvements:

Although vegetation will be removed as part of the court project, the addition of a 1,630 sf raingarden and improvements to the surrounding landscaping including the planting of 11 trees, minimum, and establishment of a low mow seed mix in an area approximately 7,700 sf will supplement the habitat value lost from the tree removal areas.

Optional Planted Islands

The conceptual plan includes the option to install planted islands within the parking lot (each approx. 500sf). This not only converts gravel surfacing to vegetated areas but will also help indicate parking aisles and provide shade relief.

VEGETATION MANAGEMENT



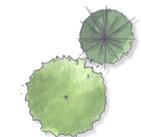
LEGEND



TREE REMOVAL AREA



OPTIONAL PLANTED ISLANDS (500 sf each)



PROPOSED TREES (11 not including the parking lot islands)



RAIN GARDEN (1,630 sf)



EXISTING TREES TO REMAIN



TOWN OF WELLESLEY PICKLEBALL COURT STUDY

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PHASE II

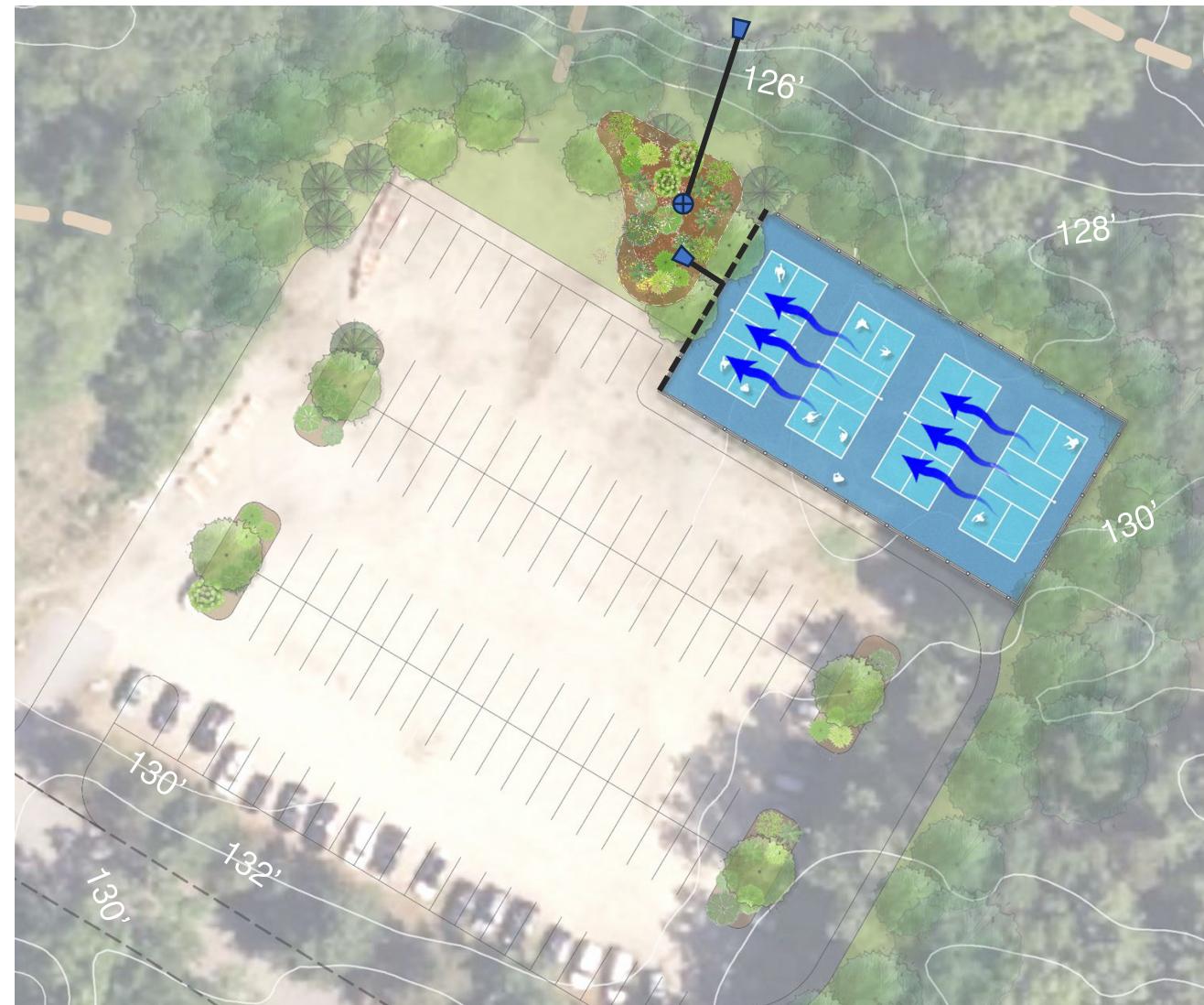
STORMWATER IMPROVEMENTS

STORMWATER CALCS

The stormwater retention area (indicated as "Rain Garden") is designed with a basin volume equal to 1-inch of rainfall over the impervious areas of the project limits. The basin volume is defined as the volume below the lowest outlet structure rim elevation. The minimum required volume is calculated as follows:

New courts=8,500 SQ. FT.
1-inch X 8,500 SQ. FT. = 709 CU. FT.
minimum required volume

The proposed volume provided in the rain garden below the lowest outlet structure is 1,830 CU. FT. (at elevation 129.50) Which is over **2.5 times greater than the minimum required volume.**



LEGEND

-----	TRENCH DRAIN
=====	SOLID DRAIN PIPE
▲	FLARED END STRUCTURE
●	RAISE AREA DRAIN W/ BEEHIVE GRATE (RIM ELEV.=129.50)
↔↔↔	STORMWATER SURFACE FLOW
	RAIN GARDEN (BOTTOM ELEVATION OF 127.50)



PHASE II

ENVIRONMENTAL & SITE CONSIDERATIONS

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STORMWATER APPROACH

Highlight:



Stormwater infiltration

The stormwater from the pickleball courts and the pond parking lot will be absorbed and filtered naturally in the rain garden, which ensures that stormwater is captured and naturally filtered before discharges.



Supporting biodiversity

The use of native plants in the raingarden can attract birds, amphibians and insects from the surrounding biodiversity rich areas. This could support local biodiversity and provides aesthetic value.



LEGEND



RAIN GARDEN



POTENTIAL BIODIVERSITY HOT SPOT



STORMWATER SURFACE FLOW



LOW POINT



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PHASE II

ENVIRONMENTAL & SITE CONSIDERATIONS

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SOUND STUDY

The pickleball noise propagation is determined by four factors:

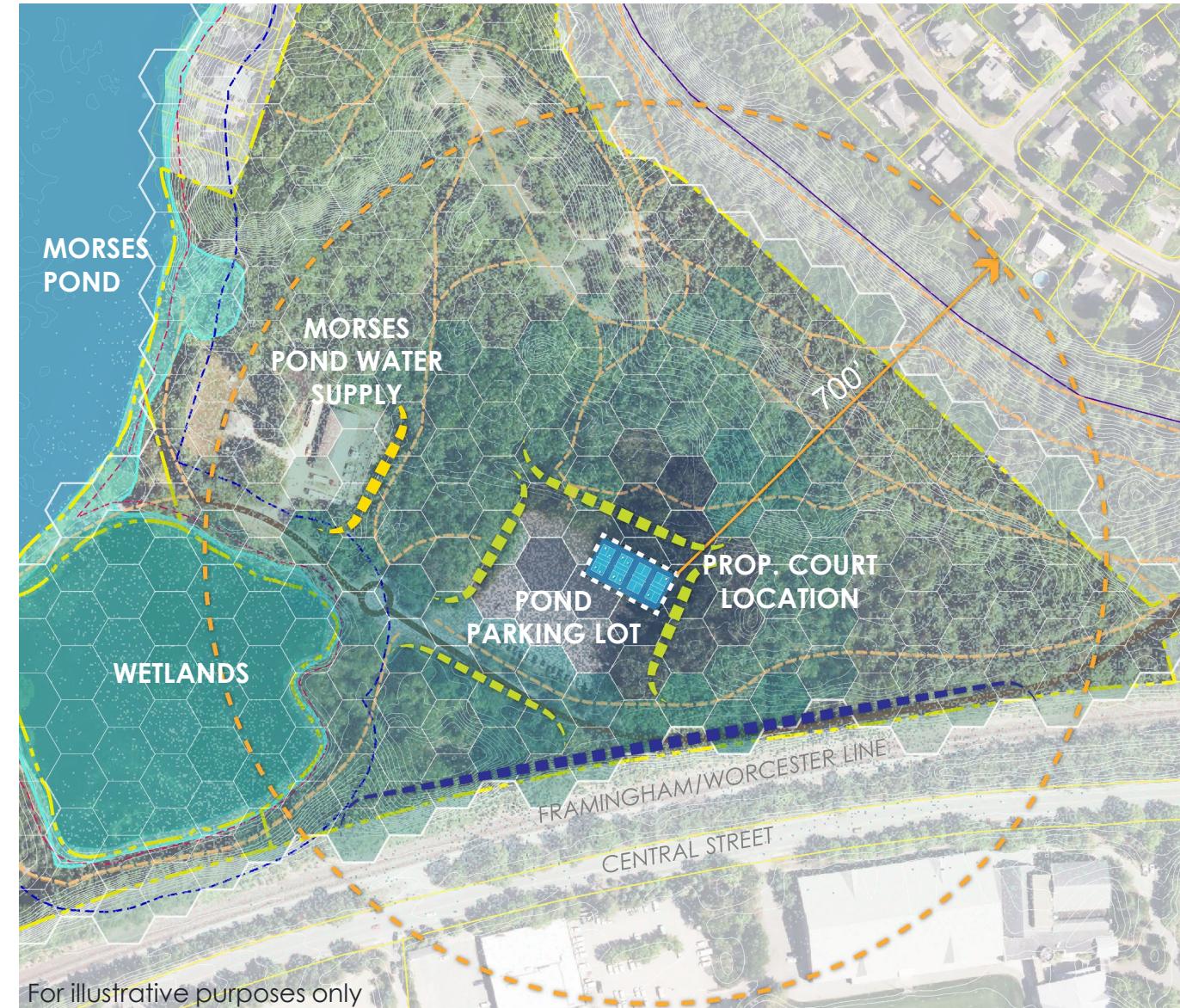
Distance, Relative Topography, Number of Courts, and Lights/Night Playing.

Per the acoustics study done in Phase I, 4 courts would require a 15' height sound barrier.

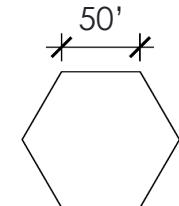
Highlight:

The proposed location is surrounded by trees and shrubs which act as natural sound barriers by absorbing and deflecting sound. The Morses Pond Water Supply Building also serves as a substantial physical barrier that blocks noise pollution. Additionally, the ex. MBTA tracks and Central Street activity mitigate sound travel to the south of the site.

These natural and structural elements can buffer sounds from permeating into the communities, enhancing overall noise mitigation efforts.



LEGEND



HIGH NOISE
LEVEL

MEDIUM NOISE
LEVEL

LOW NOISE
LEVEL

EX. SOUND BARRIER
- VEGETATION

EX. SOUND BARRIER
- BUILDING

EX. SOUND BARRIER
- ROAD

DISTANCE TO
CLOSEST
RESIDENTIAL
PROPERTY



TOWN OF WELLESLEY PICKLEBALL COURT STUDY

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ITEM	Bituminous Courts	Post Tension Concrete Courts
Site Preparation/Demolition - includes tree clearing & grubbing, grinding stumps and disposals, E&S controls, construction fencing , construction entrance	\$37,000	\$37,000
Earthwork - includes excavation, hauling, fine grading & compaction (Bit - 18" depth, PT Concrete = 13" depth)	\$19,000	\$15,000
Stormwater Drainage - includes stormwater requirements for the 100-year storm	\$125,000	\$125,000
Site Improvements - includes loam and seed of disturbed area	\$9,000	\$9,000
4 Courts - includes (Bit or PT Concrete)tennis court cross section, nets, posts, tiedowns, line striping, and color seal/coat.	\$98,000	\$159,000
Fencing - includes 12' high perimeter fencing, single and double gates, 15' ht. sound barrier	\$110,000	\$110,000
Subtotal:	\$398,000	\$455,000
Mobilization, Overhead & Profit 15%	\$60,000	\$68,000
Contingency 25%	\$100,000	\$114,000
Construction Subtotal:	\$558,000	\$637,000

Opinion of Probable Cost Disclaimer:

1. Estimated totals includes contractor mobilization, overhead & profit (15%), contingency (25%)
2. This opinion of cost does not include design or permitting.
3. For planning purposes only. Pricing is in no way a guarantee.
4. Assumes no hazardous material and no rock removal.
5. Prices may vary significantly due to recent volatility of inflation and escalation of construction prices



CONCLUSIONS

Based on the feedback we received through public survey and town-wide inventory, it is recommended that 4 dedicated pickleball courts be located at Morses Pond to alleviate the growing demand and needs of the community. The addition of these 4 court will provide,

- up to approximately 4800 daylight hours (sunrise to dusk) of available play annually per court (does not account for weather)*
- reduce the use pickleball play on shared tennis/pickleball courts in town
- Provide the users a dedicated multicourt facility away from neighboring residential properties

Morses Pond location 1 has been identified as the prime location because of the distance to neighboring residential properties, access to existing parking, and minimal impacts to existing conditions.

Key Factors

- Location 1 remains outside of any key environmental regulation zones and utilizes existing flat topography with minimal earthwork required.
- The proposed location of the pickleball courts should not displace existing available parking. Further exploration of defining the existing lot would benefit the overall parking capacity.
 - The courts have a capacity of +/-16 players at any given time, resulting in the loss of equal spaces from the existing lot during peak hours of play, leaving up to 93 potential spaces remaining for beach goers.
- According to the acoustics study done in Phase I, 15' height barriers would be recommended for the location (for 4 courts).
- A large raingarden is recommended to offset the impacts on stormwater. The benefits from the raingarden provide Stormwater retention and filtration, as well as supports native biodiversity.

Additional Considerations

Space is available to split the four courts into (2) 2 court areas to include a waiting area with seating and a shade canopy between. This would provide a space for players on deck as well as provide additional sound mitigation by deflecting sound vertically.

* National Oceanic and Atmospheric Administration (NOAA) Solar Calculation Chart

