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Riverfront Area Waiver Justification and Net Benefits Memorandum

Marshall Simonds Middle School – Athletic Fields
114 Winn Street, Burlington, Massachusetts

To: Burlington Conservation Commission
Attn: Eileen Coleman, Conservation Administrator
From: NESRA Engineering, LLC (Arsen Hambardzumian, P.E.)
Date: 1/2/25
Re: Request for Riverfront Area / Inner Riparian Zone Disturbance Waiver and Net Benefit Justification (Burlington Wetlands Bylaw)

1. Purpose and Regulatory Basis

This memorandum is submitted in support of the Applicant's request for a Riverfront Area waiver under the Burlington Wetlands Bylaw, as discussed with the Commission, for work that exceeds the Commission's stated preference of ≤10% disturbance within the Inner Riparian Zone (0–100 feet) for this site.

Under the Massachusetts Wetlands Protection Act (WPA), work in Riverfront Area is subject to the Riverfront Area performance standard at 310 CMR 10.58, including the requirement to avoid and minimize impacts, provide mitigation, and demonstrate that the work will have no significant adverse impact to Riverfront Area interests when properly conditioned. Burlington's local regulations similarly tie Riverfront Area review and waiver findings to compliance with the WPA Riverfront Area performance standard (310 CMR 10.58), and require the Applicant to demonstrate that the proposed approach is the least damaging practicable approach given site constraints, with strong restoration/mitigation and long-term protection measures.

2. Project Overview and Why a Waiver Is Needed

The project renovates the existing school athletic facilities to provide safe, code-compliant and accessible athletic and spectator improvements, including ADA/AAB accessible walkways and related site elements. The project area is within the Riverfront Area associated with the onsite/downgradient resource corridor.

The Commission requested a clear justification for why Riverfront Area disturbance above the Commission's preferred threshold is unavoidable given the school's layout and the need for athletic facilities to remain adjacent to the existing school and infrastructure, and also requested that the Applicant demonstrate that the proposal provides substantial mitigation

and restoration enhancements such that the net outcome is improved Riverfront function and protection.

Relationship to Alternatives Analysis (310 CMR 10.58 Framework). A detailed Alternatives Analysis dated 12/28/2025 was prepared consistent with the Riverfront Area performance standard at 310 CMR 10.58 and Burlington requirements. That analysis documents the project's avoidance and minimization process (including reduction of the athletic footprint and associated access improvements, refinement of walkway alignments, and elimination/reduction of non-essential hardscape) and concludes that there is no practicable and substantially equivalent economic alternative that would meet the project purpose with less adverse effect on the Riverfront Area and adjacent resource interests. The Riverfront disturbance quantified in this memorandum therefore represents the least damaging practicable configuration that still meets the project purpose, with compensatory mitigation and restoration measures described herein.

3. Existing Riverfront Conditions (Baseline)

The Riverfront Area in the vicinity of the athletic facilities is already highly altered. Based on site observations and existing conditions, the Riverfront corridor includes:

- Large areas maintained as mowed grass (limited structural diversity / limited habitat value).
- Existing utilities crossing and occupying the corridor (including sewer, drainage, and electrical).
- Existing fencing and encroachments associated with athletic use.
- Debris/rubbish and other deleterious materials present in portions of the corridor.
- Existing maintained athletic use and management close to the resource corridor, including mowing and human activity.

In short: this portion of Riverfront Area is not functioning as a naturally vegetated buffer today, and it presents an opportunity for meaningful restoration and long-term protection as part of this project.

4. Riverfront Area Disturbance Summary (Quantified)

The Total Riverfront Area evaluated for this project is: 152,995 square feet (SF).

A. Temporary Disturbance (to be restored / converted to planted buffer features)

- Inner Riparian Zone (0–100 ft): 27,093 SF
- Outer Riparian Zone (100–200 ft): 3,059 SF
- Total Temporary Riverfront Disturbance: 30,152 SF (19.7% of total Riverfront Area)

B. Permanent Disturbance (includes impervious, where applicable)

- Inner Riparian Zone (0–100 ft): 12,047 SF
- Outer Riparian Zone (100–200 ft): 36,115 SF
- Total Permanent Riverfront Disturbance: 48,162 SF (31.5% of total Riverfront Area)

C. Impervious Area (called out separately; included within permanent disturbance totals above)

- Inner: 2,858 SF
- Outer: 1,672 SF
- Total Impervious in Riverfront: 4,530 SF

Important clarification for the Commission: A significant portion of the Inner Riparian "temporary disturbance" is proposed to be converted to Riverfront restoration plantings and a rain garden/bioretention feature, resulting in improved long-term function relative to existing mowed lawn conditions.

5. Avoidance and Minimization (Why the Disturbance Cannot Be Reduced Further)

The project team evaluated layout alternatives and minimized Riverfront disturbance to the maximum extent practicable while still meeting the core purpose of the project. The following constraints drive why further reductions are not practicable:

1. School adjacency requirement: Athletic fields and related improvements must remain adjacent to the existing school for safety, supervision, program function, and to avoid creating new offsite impacts and infrastructure needs.
2. Existing infrastructure constraints: Existing utilities and stormwater infrastructure traverse the corridor; moving the athletic program away from these constraints is not feasible without major offsite impacts, new disturbance areas, and substantially greater cost and constructability challenges.
3. Site geometry and available upland: The site's developable upland area is limited by existing resource areas and built features; relocating improvements to entirely avoid

the Inner Riparian Zone would shift disturbance elsewhere, increase clearing, and create additional impacts.

4. Reduced athletic footprint already incorporated: The athletic program has been modified to reduce overall footprint (one full-size field and one half-size field rather than two full-size fields), which reduces overall disturbance and limits additional Riverfront encroachment.

For these reasons, the remaining disturbance level represents the least damaging practicable configuration that still meets the fundamental project purpose.

6. Net Benefits and Compensatory Mitigation (What Improves Because of This Project)

The Commission emphasized that compensatory mitigation must outweigh the increased disturbance. The project's Riverfront and wetland enhancements are therefore a core component of the design, not an afterthought. Key net benefits include:

A. Creation of an Undisturbed / No-Mow Riverfront Corridor

- A minimum 20-foot "no-disturb / no-mow" buffer will be established and maintained as a protected vegetated corridor.
- Long-term management will shift from mowed lawn to a functioning buffer with improved habitat value and pollutant uptake.

B. Riverfront Restoration Plantings (Inner Riparian Zone)

- The project includes Riverfront restoration plantings in areas that are currently maintained lawn.
- Restoration is intended to increase native vegetation structure, improve shading and temperature moderation, and improve interception/filtration of stormwater.

C. Bioretention / Rain Garden within the Inner Riparian Zone (Water Quality and Buffer Function)

- A rain garden/bioretention feature is proposed within the Inner Riparian Zone to provide additional treatment, infiltration, and pollutant reduction prior to any discharge leaving the treatment train.
- This feature converts previously mowed/managed area into a protected, vegetated treatment and infiltration system.

D. Wetland Buffer Improvements and Long-Term Protection

- 11,371 SF of existing grass soccer field area will be allowed to return to a planted wetland buffer zone (improved structure and habitat compared to turf).
- 12,549 SF of existing grass soccer field will be allowed to return to wetlands through cessation of active field management; no work is proposed within that area to avoid wetland disturbance in a potentially sensitive receiving watershed context.

E. Site Clean-Up and Removal of Deleterious Materials

- As part of the project, rubbish/debris and deleterious materials within the Riverfront corridor will be removed to improve baseline conditions and reduce long-term risk to resource areas.

Collectively, these measures convert a corridor that is currently largely managed as lawn with encroachments into a corridor with expanded native vegetation, reduced mowing/management, enhanced infiltration and water-quality treatment, and long-term enforceable protection measures.

7. Stormwater/Wetland Protection Measures Supporting the Waiver

The Commission requested that the Riverfront waiver package clearly connect Riverfront disturbance to stormwater performance and protection of receiving waters. In support:

- A substantial portion of runoff is managed via infiltration and treatment, with water quality BMPs and a treatment train that includes infiltration through engineered media and bioretention prior to any discharge leaving the system.
- The project's long-term protection is supported by enforceable Operations & Maintenance provisions, including vegetation management (no-mow corridor), invasive control, inspection schedules, and restoration success monitoring/reporting.

8. Long-Term Stewardship, Monitoring, and Maintenance

The Commission stressed that long-term maintenance and monitoring are critical. The Applicant will implement:

- No-mow / limited disturbance management in the Riverfront corridor.
- Invasive species control as needed.
- Maintenance and monitoring of restoration plantings to confirm establishment and success.

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- Periodic reporting consistent with the project's O&M and restoration commitments.

9. Conclusion and Request

The project necessarily disturbs portions of the Riverfront Area to achieve the essential purpose of improving school athletic facilities in the only practicable location adjacent to the school and existing infrastructure. However, the project also provides substantial restoration and long-term protection measures that improve Riverfront function compared to existing degraded conditions, including establishment of a protected corridor, conversion of managed lawn to native buffer plantings, wetland buffer restoration, debris removal, and enhanced stormwater treatment.

Accordingly, NESRA Engineering respectfully requests that the Conservation Commission grant the requested Riverfront Area / Inner Riparian Zone disturbance waiver under the Burlington Wetlands Bylaw, with conditions as appropriate, based on:

- The lack of a practicable alternative that meets the project purpose with less Riverfront impact, and
- The strong avoidance/minimization measures and substantial compensatory mitigation that result in a net improvement to Riverfront functions and resource protection, consistent with the WPA Riverfront Area performance standard (310 CMR 10.58) and Burlington's implementing regulations.