September 24, 2025

Ms. Breeka Li Goodlander, Agent
Town of Franklin Conservation Commission
355 East Central Street
Franklin, MA 02038

Re: Franklin Country Club
Notice of Intent
Response to Comments
DEP File No. CE 159-1319
Project No. 25-001

Dear Ms. Goodlander and Commissioners:

On behalf of our client, Franklin Country Club, Avalon Consulting Group, LLC (Avalon) is pleased to provide this response to comments from BETA Group Inc. (BETA) And DEP CERO Wetlands issued on September 17, 2025 and September 19, 2025. Attached to this letter are:

- Notice of Intent Project Narrative, Franklin Country Club, prepared by Avalon Consulting Group LLC.; dated August 2025 and revised through September 24, 2025 (Appendix A);
- Plans (10 Sheets) entitled Clubhouse Renovations, Franklin Country Club; prepared by Graves Engineering, Inc.; dated August 18, 2025; revised through September 24, 2025; stamped and signed by Michael Andrade, MA P.E. No. 45689 (reduced copies Appendix B, full-sized copies attached);
- Plans (2 Sheets) entitled Franklin Country Club; prepared by Gardner+Gerrish Landscape Architects LLC.; dated August 2, 2025 and revised through September 24, 2025; stamped and signed by Timothy D. Gerrish, MA RLA No. 4245 (reduced copies Appendix C, full-sized copies attached);
- Supplement #1 to Stormwater Report for Clubhouse Renovations; prepared by Graves Engineering, Inc.; dated September 24, 2025; signed and stamped by Michael Andrade, MA P.E. No. 45689 (Appendix D);
- Exhibit A – Resource Area Impact Plan – BVW & Bank, Clubhouse Renovations, Franklin Country Club; prepared by Graves Engineering, Inc.; dated September 24, 2025; (Appendix E);

- Exhibit B – Resource Area Impact Plan – RA & BLSF, Clubhouse Renovations, Franklin Country Club; prepared by Graves Engineering, Inc.; dated September 24, 2025 (Appendix E); and
- WPA Form 3 – Notice of Intent signed September 24, 2025 (Appendix F).

PART I: RESPONSE TO BETA COMMENTS:

The peer review was for work proposed under a Notice of Intent at Franklin Country Club located at 672 East Central Street in Franklin, Massachusetts (the Site) as identified in:

- Town of Franklin Notice of Intent; prepared by Avalon Consulting Group LLC.; dated August 2025.
- Plans (10 Sheets) entitled Clubhouse Renovations Franklin Country Club; prepared by Graves Engineering, Inc.; dated August 18, 2025; revised through September 8, 2025; stamped and signed by Michael Andrade, MA P.E. No. 45689. NOTE: DEP did not review the revised plans.
- Plans (2 Sheets) entitled Franklin Country Club; prepared by Gardner+Gerrish Landscape Architects LLC.; dated August 2, 2025; unstamped and unsigned.
- Stormwater Management Report entitled Stormwater Report for Clubhouse Renovations; prepared by Graves Engineering, Inc.; dated August 18, 2025; signed and stamped by Michael Andrade, MA P.E. No. 45689.

BETA comments are reproduced below in italics with responses in bold.

1.0 PLAN AND GENERAL COMMENTS

A1. The Massachusetts Department of Environmental Protection (MassDEP) has not issued a DEP file number as of this writing.

Response: MassDEP issued file number CE 159-1319 on September 19, 2025.

A2. *The following Plan elements are required:*

a. A Registered MA PLS Stamp on the existing conditions plan.

Response: The detail/topographic survey was conducted by a Registered MA Professional Engineer (PE) as allowed by MA State Law. No work abutting, within close proximity to, or certifying property lines is proposed; thus a PLS survey is not required.

b. The Assessor's Reference for the parcel where work is proposed.

Response: The parcel Assessor's reference is noted on Sheet C101 under "General Notes"

c. The Assessor's Reference for the abutting properties.

Response: Assessor's references for the immediately abutting properties are shown on the Index Plan, Sheet C101.

2.0 RESOURCE AREA BOUNDARY COMMENTS

W1. BETA completed a review of the onsite Bank/MAHW and BVW delineation. Bank/MAHW is apparent based on topographic relief and has been accurately delineated. In addition, BETA concurs with the BVW delineation depicted on the plans. BVW at the Site exists within disturbed/maintained areas and was therefore assessed based on soils. Generally, the boundary of BVW at the Site follows the transition from a sandy loam with high organic content and apparent depletions/redoximorphic concentrations to a fine sandy loam with a brighter matrix color.

Response: No Response required.

3.0 CONSTRUCTION COMMENTS

W2. Material stockpiles and laydown areas should be depicted on the Project plans.

Response: Material stockpiles (soil, sod, etc.) will be stored on site at the maintenance facility outside areas subject to jurisdiction of the Conservation Commission as noted on Sheet C101, Plan Notes: Coordination, Site Demo, Sediment and Erosion Control and Restoration #10.

The laydown area for construction is within the temporary construction fence shown in red on sheet C107, Phase II, designated as "LAYDOWN AREA."

W3. Resource Area impacts (both permanent and temporary) should be clearly labeled on the Project plans.

Response: Resource Area impacts are summarized in a table and called out graphically on exhibits A and B, (Appendix E).

W4. Proposed catch basins should be fitted with inlet protection until full Site stabilization is achieved.

Response: See Sheet C101, Plan Notes: Coordination, Site Demo, Sediment and Erosion Control and Restoration # 11, which has been revised to add "until full site stabilization is achieved."

4.0 MITIGATION COMMENTS

W5. Areas proposed to be vegetated with native plantings and seeding should be monitored for at least two (2) growing seasons to demonstrate successful establishment. This could be included as a Special Condition in the Order of Conditions.

Response: The Landscape Plan and the Project Narrative specify that areas proposed to be vegetated with native plantings and seeding shall be monitored for at least two (2) growing seasons by a qualified wetland scientist to demonstrate successful establishment. Reports, including photographs will be issued annually.

W6. While invasive species pressure along Uncas Brook appears to be relatively limited, BETA observed some occurrences of purple loosestrife (Lythrum salicaria). It is recommended that the Applicant include hand-removal of these species as a part of the monitoring period referenced above, and that this monitoring period also include a review of any additional invasive species that are established along proposed planting areas and require management.

Response: The Landscape Plan and the Project Narrative specify for a period of at least two (2) growing seasons, purple loosestrife (*Lythrum salicaria*) and any other invasive plants observed in the planting areas will be removed by hand. The presence of invasive species within the planting areas will be noted in the reports referenced above.

5.0 WPA PERFORMANCE STANDARDS COMMENTS

W7. The Applicant should provide information on how the Project complies with the Performance Standards set forth in the Act for Bank (310 CMR 10.54) and BVW (310 CMR 10.55). The Applicant has stated the planting of native vegetation is exempt under 310 CMR 10.02(2)(b)(2)d; however, this provision is only applicable for work within the Buffer Zone, not within BVW.

Response: The work proposed in Bank and BVW is limited to planting of native plants, which we consider to be an improvement over existing conditions. Statements regarding compliance with Performance Standards for work in Bank and BVW are included in Section 4 of the revised Project Narrative.

BORDERING LAND SUBJECT TO FLOODING (310 CMR 10.57)

W8. Impacts to BLSF for the planting of native vegetation, installation of the drain outfall apron, and removal of existing bituminous pavement should be quantified and details regarding how the Project complies with the Performance Standards set forth in the Act should be provided.

Response: The work proposed in BLSF includes planting of native vegetation, and removal and replacement (at the same location and elevation) of existing bituminous pavement. The drain outfall is not within BLSF based on the July 8, 2025 FEMA revisions. Statements regarding compliance with Performance Standards for work in BLSF are included in Section 4 of the revised Project Narrative.

W9. The 100-year floodplain at the Site is identified as a FEMA Zone A and therefore does not have a published base flood elevation (BFE). While development projects proposing significant grading may warrant a hydraulic study to determine the BFE, no fill is proposed as a part of this Project. Although the work proposed as part of the Project does not warrant further floodplain analysis, it is recommended that the Commission include a finding in the Order of Conditions stating that the BLSF boundary at the Site is approved for this filing only.

Response: No response required.

RIVERFRONT AREA (310 CMR 10.58)

W10. The Applicant has provided an alternatives analysis in accordance with 310 CMR 10.58(4). The Applicant states that there is no alternative with less adverse impact; however, specific alternatives are not provided. At a minimum, the Applicant should identify specific constraints at the Site that preclude work from being sited outside of RA. For example, the increase in impervious area may be warranted as part of overall Project goals.

Response: Specific constraints that preclude work from being sited outside of RFA are provided in section 3.4 of the revised Project Narrative.

BYLAW REGULATORY COMMENTS

W11. The Applicant has provided a Variance request for work within the 0-25' Buffer Zone in accordance with Bylaw Regulation Section 5. The alternatives analysis should be revised to provide more detail; for example, the constraints that may exist at the Site which require the installation of the stormwater discharge at its proposed location near Uncas Brook rather than a further upgradient location.

Response: Based on existing drainage, the proposed subsurface infiltration system has been designed as shallow as possible. Therefore, the elevation of the overflow structure cannot be raised. Given the existing slope of the bank, the overflow structure cannot be moved outside the 0-25' Buffer Zone.

W12. Impacts to the 0-25', 25'-50', and 50'-100' Buffer Zones should be quantified individually.

Response: Impacts to the 0-25', 25-50' and 50-100' Buffer Zone Resource areas are described in section 3.3, of the revised Project Narrative, and tabulated and graphically displayed on Exhibit A (Appendix E).

6.0 STORMWATER MANAGEMENT REVIEW

SW1. Clarify the proposed treatment of the existing subsurface infiltration system. The stormwater report indicates this system will be expanded, but this work is not represented on the plans.

Response: The existing system and discharge discussed in the Stormwater Report is located in Wrentham and is proposed to be expanded with two additional rows of chambers.

SW2. Provide calculations/supporting documentation to demonstrate that the naturalized apron can effectively mitigate erosive velocities for protective of Uncas Brook and the bordering vegetated wetlands.

Response: As identified in the Stormwater Report Narrative, the peak 100-year storm discharge velocity at the outfall is 10.9 feet per second, and the erosive velocity protection provided by the proposed erosion control matting is 15 feet per second, thus, the selected matting will protect against erosion for all design storms.

SW3. Recommend a condition that an agent of the town observe native soils after excavation for basins to confirm design assumptions.

Response: Agreed.

SW4. Provide a soil test within the footprint of the subsurface infiltration system to confirm seasonal high groundwater elevation and soil texture.

Response: The subsurface infiltration system is proposed within the footprint of the existing 5th tee and soil testing has not been completed so as not to disturb the golf course operations. As identified in the system detail on Sheet C502, and as discussed with the Commission on September 18, 2025, confirmatory soil testing for estimated seasonal high groundwater table (ESHGWT) and soil texture will be witnessed by the Design Engineer prior to system installation. Should there not be a minimum 2' separation from the ESHGWT, or if less than 4 ft to the ESHGWT, additional analysis and modified plans will be submitted.

SW5. Provide TSS removal calculations for all watersheds.

Response: Water Quality Calculations (Stormwater Management Standard 4) are provided in the revised Stormwater Narrative. The new impervious surfaces created by the project include roof area and cart paths. Many jurisdictions consider cart paths used by pedestrian and electric-only carts and that are seasonal is use (not in winter), to produce "clean" runoff that does not require treatment of total suspended solids (TSS) or total Phosphorus (TP) (TP removal as required by the Town of Franklin Bylaws Chapter 153-Stormwater Management). As there is not yet published documentation to support this, the proposed stormwater system has been redesigned to treat TSS and includes the addition of a proprietary stormwater treatment unit ("Isolator Row Plus") and subsurface infiltration system with an anticipated TSS removal rate in excess of 80%.

SW6. Provide required 44% pretreatment, such as an isolator row (with maintenance access) in the proposed subsurface infiltration system.

Response: The "Isolator Row Plus" treatment device is proposed due to the presence of a critical area and soils with rapid infiltration rates. This system will remove 80% of TSS prior to discharge to the subsurface infiltration system, in excess of the 44% required.

SW7. Provide inspection and maintenance requirements for construction-period erosion controls.

Response: A Construction-Period Operation and Maintenance Plan has been provided on Sheet C101, Plan Notes: Coordination, Site Demo, Sediment and Erosion Control and Restoration #12.

SW8. Provide anti-tracking measures at construction site entrance(s).

Response: A stabilized construction entrance is provided on Sheet C107 with a detail on Sheet C501.

SW9. BETA defers to the Commission to permit the use of silt fence barrier.

Response: The addition of silt fence to the filter sock is proposed to separate golfers and construction activities. At the public hearing on September 18, 2025, the Commission agreed that silt fence is acceptable in this instance, with the understanding that the Franklin Country Club proposes to remove the silt fence as soon as the individual work area is stabilized.

SW10. Indicate how future property owners will be notified of the presence of the stormwater management system and the requirement for proper operation and maintenance.

Response: As identified in the Long-Term Drainage System Operation & Maintenance Plan, revised 9/24/25, "in the event of a change in property ownership, the new owner shall be provided with a copy of this Plan and be responsible for performing the required duties herein."

Franklin Country Club is financially stable and is unlikely to be sold. In the unlikely event that this did occur, it would likely be sold for continued use as a golf course. Franklin Country Club, through their professional staff, maintains records regarding the clubhouse, pool, maintenance facility, irrigation wells, turf, and the existing stormwater management system located in Wrentham, and completes the required maintenance to maintain the overall asset. The Operation and Maintenance of, and notification of the presence of, the stormwater management system beneath the 5th tee would be conveyed as part of an entire package of information to a new owner.

SW11. Provide map, drawn to scale, that shows the location of all stormwater SCMs in each treatment train.

Response: A map has been added as an appendix to the Long Term Operation and Maintenance Plan (Appendix D).

SW12. Provide signature of owner on the O&M Plan.

Response: The owner's signature has been added to the Long Term Operation and Maintenance Plan (Appendix D).

SW13. Recommend including cut sheet from subsurface infiltration system manufacturer detailing inspection and maintenance requirements, where provided, as an attachment to the O&M Plan.

Response: Cut sheet from the subsurface infiltration system manufacturer detailing inspection and maintenance requirements, where provided, have been added to the Long Term Operation and Maintenance Plan in Appendix D.

SW14. Provide signed illicit discharge compliance statement.

Response: A signed illicit discharge compliance statement has been added to the Long Term Operation and Maintenance Plan (Appendix D).

PART II: RESPONSE TO DEP COMMENTS:

1. *The proposed areas of alteration located within Bordering Land Subject to Flooding must be quantified in Section B of the NOI even if considered temporary in nature. The applicant should demonstrate how the project complies with 310 CMR 10.57(4).*

Response: See revised WPA Form 3 in Appendix F.

2. *… The applicant should demonstrate how the project complies with 310 CMR 10.55(4), as appropriate.*

Response: See Section 4.1 of revised Project Narrative.

3. *The Applicant should quantify degraded RA and redemonstrate how the project meets the provisions of 310 CMR 10.58(5)(a)-(e), with particular detail to (a) and (e) as proposed work appears to expand beyond existing degraded areas and is proposed closer to the river. Per 310 CMR 10.58(5)(e), work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58(5)(f) or (g)". How much alteration to the site has occurred since 1996 and does it exceed 10%? Mitigation/restoration, currently proposed to satisfy the 1999 OOC, would not appear appropriate to meet either (f) or (g) for any new alterations.*

Response: See Section 3.4 of revised Project Narrative.

4. *The site plan notes that test pits will be conducted prior to construction and shows a requirement for the 2 ft separation to SHGW. The Applicant should provide test pit information at the location and confirm the depth is at least 2 ft to SHGW and/or bedrock. If less than 4 ft to SHGW, a mounding analysis is required. See V2, Ch2, p88 of the MA Stormwater Handbook.*

Response: See response in Part I, Section 6.0, SW4.

5. *The Applicant states that under the local stormwater bylaw that runoff is considered clean and is not required to meet TTS and TP removal requirements. Does the Applicant intend to apply for LID credits to meet TSS removal Standard 4 under the MA Stormwater Standards? Low impact development ("LID") credits allow applicants to reduce or eliminate structural stormwater BMPs required to meet Standards 3 and 4. Should a project not qualify for LID credit, then an Applicant would be required to demonstrate compliance with St. 3 and 4.*

Response: See response in Part I, Section 6.0, SW5.

6. *The site contains soil class A/rapid infiltrating soils and is within a Zone II, which requires 44% TSS pre-treatment to meet Standard 4 (see Vol.1, Ch 1, pg. 8) which is not noted on the Stormwater Checklist.*

Response: See response in Part I, Section 6.0, SW6.

7. In a Zone II, a proposed building's roof composition should be specified on the site plan. If metal roofs are proposed, appropriate pre-treatment BMPs for metals must be designed and installed prior to any infiltration of roof runoff. See V1, Ch1 of the MA Stormwater Handbook.

Response: The roof composition is Standing Seam Kynar finished Galvalume Steel material and is not considered a traditional galvanized steel or copper "metal roof" as defined in the Mass Stormwater Handbook and does not require additional treatment prior to infiltration. However, it is noted that the proposed stormwater treatment system (Isolator Row Plus) provides up to 81% metal (zinc) removal. See Sheet C101, Plan Notes: Paving, Layout, Grading and Drainage #7.

8. To ensure the long-term functionality of the subsurface infiltration system, the Commission may want to consider that the O&M Plan includes provisions for the inspection and removal of accumulated sediment based on manufacturer recommendations.

Response: The Long Term Drainage System Operation & Maintenance Plan includes a requirement for inspection and maintenance per the manufacturers recommendations, which are attached to the O&M plan (Appendix D).

9. If the Commission finds the project approvable, MassDEP recommends:

1) conditions and a deed restriction that memorializes the limit of alteration to Riverfront Area;

Response: The limits of the alteration are memorialized in Orders of Conditions issued under DEP File numbers 159-664 and 351-604 (1999 Clubhouse), 351-999 (2013 Pool Redevelopment) and 159-1041 (2013 Function Deck), thus a deed restriction is not necessary.

2) a condition for the submission of a signed Illicit Discharge Statement prior to the start of work;

Response: A signed Illicit Discharge Statement is included in the Long Term Drainage System Operation & Maintenance Plan (Appendix D).

3) perpetual conditions for O&M Plan activities; and

Response: Agreed.

4) conditions for monitoring the planting areas, which are proposed to satisfy requirements under the expired OOC, and conditions should they fail, that may include the Commission requiring additional measures [to] that ensure the function and value of the restoration areas prior to the issuance of a Certificate of Compliance.

Response: Monitoring and reporting of the conditions of the planting areas are included in the revised Project Narrative.

Please do not hesitate to contact me should you have any questions regarding this submittal.

Sincerely,

Avalon Consulting Group

Kelly Durfee Cardoza

Kelly Durfee Cardoza
Principal

cc: Steve Brennan, Franklin Country Club, Inc.
Paul McManus, PWS, EcoTec, Inc
Mike Andrade, PE, Graves Engineering
Rebecca Gendreau, DEP CERO Wetlands

Appendix A

Notice of Intent Project Narrative
dated August 2025 and revised through September 24, 2025

Notice of Intent Project Narrative
Franklin Country Club
August 20, 2025, Revised September 24, 2025

1.0 Project Description:

Franklin Country Club (FCC) is located in the towns of Franklin and Wrentham. The original golf course was built in 1899 and expanded to its current 18-hole layout in 1972. The clubhouse was constructed in 1999 (Order of Conditions 159-664), with a function room deck added in 2013 (Order 159-1041). Portions of the front exterior of the clubhouse underwent renovations in 2023.

FCC now proposes to renovate the rear of the clubhouse and modify portions of the 5th hole, which has remained largely unchanged since 1899. Planned work includes enclosing the existing decks and adding outdoor stairs to the rear of the clubhouse; reshaping the existing tees and adding a forward tee; relocating, resurfacing, and expanding the existing cart paths; installing related stormwater improvements; and vista pruning to improve views of the pond on the 5th hole.

The golf course is bordered to the northeast by residential properties along Route 140, known locally as Franklin Street in Franklin and East Central Street in Wrentham. To the east, it is adjacent to rural residential land; to the south, a quarry; and to the west, residential properties and wooded land surrounding Uncas Pond and Uncas Brook. Uncas Brook and its associated wetlands bisect the property, flowing west to east and eventually discharging offsite into Lake Pearl (Figure 1).

1.1 Existing Conditions

Existing conditions are shown in a recent aerial photo in Figure 2. The rear of the clubhouse overlooks the fifth tee complex and Uncas Brook. A paved cart path provides the travel route to and from golf cart storage and access to the 5th tee complex and passes under a portion of the function deck. Canvas awnings are present over the existing elevated decks.

The multi-level 5th tee complex consists of 4 discreet rectangular tees with stairs and a paved walking path to a wooden pedestrian bridge over Uncas Brook. Paved cart paths are present adjacent to and within the tee complex. The path and bridge are used by golfers who prefer to walk over taking a golf cart. The 5th hole plays over Uncas Brook, with the fairway southwest of the brook.

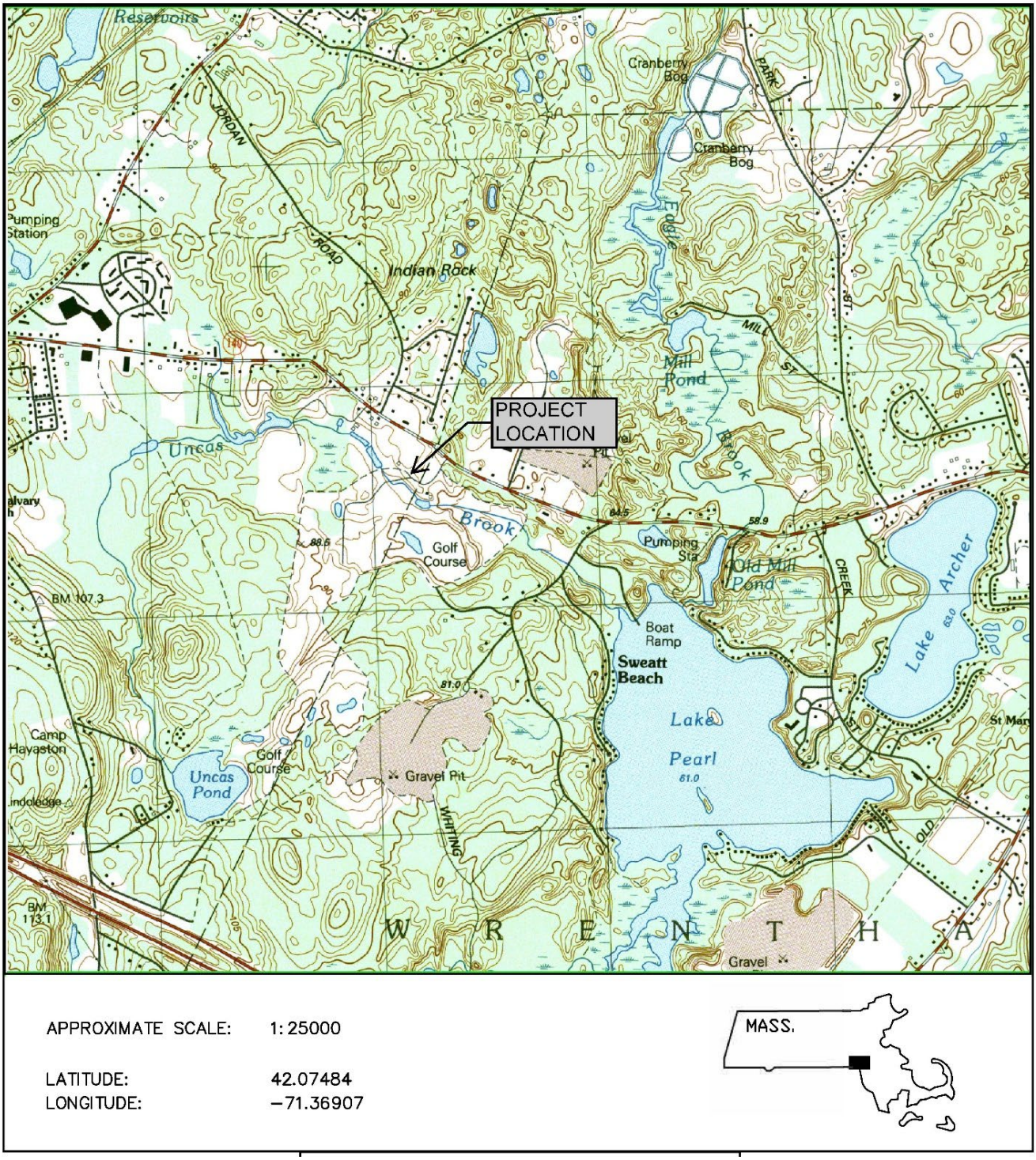


Figure 1: Project Locus

Figure 2: Clubhouse and 5th Tee Complex, April 2025

The 5th fairway, bunkers and green are shown in the photo below (Figure 3). The 5th hole pond is northwest of 5 green. The understory of the primarily pine trees west of the pond (shown with red outline) has been routinely cleared out and the leaves are blown out of this area regularly.

1.2 Proposed Project

Oversight and Schedule:

The proposed project will be conducted over a ±12-18 month period. The work on the building will be completed by a general contractor and overseen by Jeff Clark, building architect and John Sabbag, Owners Project Manager. Work on the golf course and cart paths will be completed by Matthew Staffieri, MAS Golf Construction, and overseen by the golf course architect, Jim Nagle of Nagle Design Works. Vista pruning in the vicinity of the 5th hole pond will be completed by Tree Tech, a licensed arborist and overseen by Michael Luccini, Franklin Country Club Golf Course Superintendent.

Figure 3: 5th Hole Fairway and Pond and Proposed Vista Pruning Location

Project Description:

FCC proposes to renovate and expand the rear of the clubhouse and modify portions of the 5th hole, which has remained largely unchanged since construction in 1899. Proposed work on the clubhouse includes enclosing the existing decks, replacing canvas roofs with permanent roofs, redesigning the outdoor stairs, and expanding the kitchen (all of which is over existing impervious area); moving existing cart path out from under the existing decks, reshaping the existing tees and adding a forward tee on the 5th hole (all within the footprint of existing turf); relocating, resurfacing, and expanding the existing cart paths (in place or over existing turf); installing related stormwater improvements to address the increase in total impervious area of 1,351 square feet (sf); and vista pruning to improve views of the pond on the 5th hole.

With the exception of the cart path moving out from under the deck, the cart paths will remain generally in their current alignment and width and widened slightly near tees to allow two carts to pass. Walking path stairs will be replaced to reflect grade changes. The three existing bridges will remain. Tree pruning will raise lower branches of 36 trees up to 25–35 feet above ground surface (from the current 10–20 feet above ground surface), creating a view corridor while maintaining at least 90% of existing canopy cover. All tree work will be conducted by a certified

arborist, with no changes to the management of vegetation below the canopy.

At the same time as filing the Notice of Intent, FCC filed a Request for Certificate of Compliance to close Order of Conditions #159-644, which was issued on July 29, 1999, and permitted the existing clubhouse construction, restoration of a stream channel, and restoration of the vegetative community along Uncas Brook. Review of historic plans, files available at the Franklin Conservation Commission, and current as-builts, indicates the construction project was completed substantially per plan, but the required plantings were not installed. In 1999, the planting plan included relocation of arborvitaes, and planting of Japanese yew and privet in the vicinity of the clubhouse and installation of upland shrubs and herbaceous plantings in a zone generally within the 0-25 Foot Buffer Zone Resource Area north and east of Uncas Brook and a 5 Foot native grass buffer, south and west of Uncas Brook.

The planting plan proposed within this Notice of Intent is intended to replace and improve upon the 1999 plan, to allow the work to integrate with the changes proposed in this Notice of Intent. It preserves existing vegetation where possible, includes transplantation of the club's existing perennial beds and includes the planting of native or naturalized species selected from the town's approved list, both around the clubhouse and within the Shrub A and Shrub B zones, Herbaceous Plantings, and Native Grass Buffer Zones.

- Clubhouse plantings will be mulched to retain moisture and limit weed growth.
- The upland shrub (Shrub A), wetland shrub area (Shrub B), Herbaceous Planting and Native Grass Buffer areas, "the Uncas Brook Corridor" as identified in the 1999 Order, will not be irrigated, or treated with pesticides or fertilizer. The herbaceous plantings and native grass buffer areas will be mowed annually in the fall to prohibit the growth of woody vegetation, and the Shrub A and B areas will be maintained to a height of 4 feet to prevent the growth of trees.

2.0 Wetland Delineation and Regulatory Jurisdiction:

Wetlands on the golf course were delineated by EcoTec, Inc. in April of 2025. Wetland flags were located by Graves Engineering, Inc. immediately following the flagging event. A wetland resource evaluation prepared by EcoTec has been provided and wetland flags are shown on the Notice of Intent Plans prepared by Graves Engineering.

During April 2025 EcoTec inspected the golf courses for the presence of wetland resources as defined by: (l) the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, 40; the "Act") and its implementing regulations (310 CMR 10.00 et seq.; (2) the "Regulations"); the Franklin Wetlands Protection Bylaws; and (3) the U.S. Clean Water Act (i.e., Section 404 and 401 wetlands).

The site was inspected, and areas suspected to qualify as wetland resources were identified. The boundary of Bordering Vegetated Wetlands (BVW) or, in the absence of BVW, Bank was delineated in the field in accordance with the definitions set forth in the regulations at 310 CMR 10.55(2)(c). Section 10.55(2)(c) states that "The boundary of Bordering Vegetated Wetlands is the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist." The methodology used to delineate BVW is further described in: the Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands, Second Edition, produced by the Massachusetts Department of Environmental Protection (the Department), dated September 2022. As recommended by the Department, the plant taxonomy used in this letter is based on the National List of Plant Species that Occur in Wetlands: Massachusetts (Fish and Wildlife Service, U.S. Dept of the Interior, 1988). Federal wetlands were presumed to have boundaries conterminous with the delineated Bordering Vegetated Wetlands. Two sets of Bordering Vegetated Wetland Determination Forms completed for observation plots located in the wetlands and uplands near flags AA-2 and CF-4 are provided in the EcoTec Wetlands Report. The table below provides the Flag Numbers, Flag Type, and Wetland Types and Locations for the delineated wetland resources within the study area.

Findings:

Wetlands CA, CB, CC, CD, CE & CF consist of mowed turf with wet meadow conditions located in the northeasterly portion of the site that is associated with a perennial stream. Plant species observed include sedges (*Carex spp.*) and soft rush (*Juncus effusus*) mixed with upland turf grasses. Evidence of wetland hydrology, including hydric soils, high groundwater, saturated soils and pore linings, was observed within the delineated wetland. These vegetated wetlands border a perennial stream; accordingly, the vegetated wetlands would be regulated as Bordering Vegetated Wetlands and the perennial stream would be regulated as Bank and Land Under Water Bodies and Waterways under the Act. A 100-foot Buffer Zone extends horizontally outward from the edge of Bordering Vegetated Wetlands and Bank under the Act.

Wetland BB consists of a shrub swamp and wet meadow located in the central portion of the site that is associated with a pond. Plant species observed include sedges (*Carex spp.*) mixed with turf grasses and buttonbush (*Cephalanthus occidentalis*) growing within the littoral fringe of the pond. Evidence of wetland hydrology, including hydric soils, high groundwater, saturated soils, pore linings and evidence of flooding, was observed within the delineated wetland. This vegetated wetland borders a pond; accordingly, the vegetated wetlands would be regulated as Bordering Vegetated Wetlands and the pond would be regulated as Bank and Land Under Water Bodies and Waterways under the Act. A 100-foot Buffer Zone extends horizontally outward from the edge of Bordering Vegetated Wetlands under the Act.

Table 1: Wetland Delineation Flags in Study Area		
Flag Numbers	**Flag Type**	**Wetland Types and Locations**
A-1 to A-45	Pink Flags	MAHWL on the south side of Uncas Brook.
B-1 to B-53	Pink Flags	MAHWL on the north side of Uncas Brook.
BB1 – BB14	Blue Flags	Boundary of BVW associated with a Pond in the westerly portion of site locus.
CA-1 to CA-5 (CA-1 connects to B-52 & CA-5 connects to B-48)	Blue Flags	Boundary of BVW located in the north-central portion of the site locus, bordering on Uncas Brook.
CB-1 to CB-9 (CB-1 connects to CB-9)	Blue Flags	Boundary of Isolated Vegetated Wetland under the Bylaw located in mowed turf in the north-central portion of the site.
CC-1 to CC-18 (CC-1 connects to B-39 & CC-18 connects to B-33)	Blue Flags	Boundary of BVW located in the central portion of the site locus, bordering on Uncas Brook.
CD-1 to CD-13 (CD-1 connects to B-27 & CD-13 connects to B-17)	Blue Flags	Boundary of BVW located in the southeasterly portion of the site locus, associated with a Pond which is fed by Uncas Brook.
CE-1 to CE-7 (CE-1 connects to B-16 & CE-7 connects to A-27)	Blue Flags	Boundary of BVW located in the southeasterly portion of the site locus, associated with a Pond which is fed by Uncas Brook.
CF-1 to CF-5 (CF-1 connects to A-12 & CF-5 connects to A-16)	Blue Flags	Boundary of BVW located in the central portion of the site locus, bordering on Uncas Brook.
CG-1 to CG-6 (CG-1 connects to A-6 & CG-6 connects to A-3)	Blue Flags	Boundary of BVW located in the north-central portion of the site locus, bordering on Uncas Brook.
Notes: MAHW – Mean Annual High-Water Line BVW - Bordering Vegetated Wetlands		

Riverfront

The Massachusetts Rivers Protection Act amended the Act to establish an additional wetland resource area: Riverfront Area. Based upon a review of the current USGS Map, a stream (i.e., Uncas Brook) that is shown as perennial is located in the northeasterly portion of the site. Streams that are shown as perennial on the current USGS map are designated perennial under the Massachusetts Wetlands Protection Act regulations. Unless this perennial designation is overcome, Riverfront Area is presumed to extend 200 feet horizontally upgradient from the mean annual high-water line of the stream. Section 10.58(2)(a)2. states that the "Mean annual high-water line of a river is the line that is apparent from visible markings or changes in the character of soils or vegetation due to prolonged presence of water and that distinguishes between predominantly aquatic and predominantly terrestrial land. Field indicators of bankfull conditions shall be used to determine the mean annual high-water line. Bankfull field indicators include but are not limited to: changes in slope, changes in vegetation, stain lines, top of pointbars, changes in bank materials, or bank undercuts." Section 10.58(2)(a)2.a. states that "In most rivers, the first observable break in slope is coincident with bankfull conditions and the mean annual high-water line." The mean annual high-water line of the stream was delineated in the field with the A and B flag series based upon the above-referenced regulation. Furthermore, based upon a review of the current USGS Map and observations made during the site inspection, there are no other mapped streams located within 200 feet of the site. An unmapped, intermittent stream drains the AA/BA wetland to Uncas Brook (out of study area, see EcoTec Report for delineation details). The attached USGS StreamStats report indicates that the watershed area for the unmapped stream is 0.15 square miles. This is less than the 0.5 square miles required for an unmapped stream to qualify as perennial. Accordingly, except as noted above, Riverfront Area would not occur on the site. Riverfront Area does not have a Buffer Zone under the Act but may overlap other wetland resources and their Buffer Zones.

Endangered Species Habitat and Vernal Pools:

The Regulations require that no project may be permitted that will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures set forth at 310 CMR 10.59. Based upon a review of the Massachusetts Natural Heritage Atlas, 15th edition, Priority Habitats and Estimated Habitats from the NHESP Interactive Viewer, valid from August 1, 2021, and Certified Vernal Pools from MassGIS, there are no Estimated Habitats [for use with the Act and Regulations (310 CMR 10.00 et seq.)], Priority Habitats [for use with Massachusetts Endangered Species Act (M.G.L. Ch. 131A; "MESA") and MESA Regulations (321 CMR 10.00 et seq.)], or Certified Vernal Pools on or in the immediate vicinity of the site. A copy of this map is attached in the EcoTec Report.

3.0 Proposed Work Areas:

A discussion of Resource Areas where work is proposed is included below.

3.1 Bordering Land Subject to Flooding

Review of the current FEMA flood map for the area identifies the 100-year floodplain and Bordering Land Subject to Flooding (BLSF) boundary along Uncas Brook.

No grading is proposed in BLSF. Work is proposed within ±4,906 sf of BLSF and includes:

- Planting of native vegetation (Shrub A, Shrub B, Native Grass, and Herbaceous Plantings (see Planting Plan, sheet C106) and Landscape Plan for species and numbers of individuals proposed to be planted;
- Removal and replacement at existing grade and location of existing bituminous paved cart paths and walk path; and
- Removal and replacement of existing bituminous pavement over concrete cart bridge. This is replacement of the surface only, no changes are proposed to the concrete bridge.

3.2 Bordering Vegetated Wetlands (BVW)

The proposed work in BVW includes:

- Planting of native vegetation within an area mapped as BVW. See Planting Plan sheet C106 and Landscape Plan for species and numbers of individuals proposed to be planted.
    - Plant a minimum of 9 native woody shrubs (wetland hydrology) in Shrub A area (±312 sf).
    - Allow the existing maintained herbaceous area located on either side of the walk path (±312 sf) area to naturalize based on a reduction in mowing and overseed with New England Wetland Plants New England Wet Mix *as needed* to increase diversity.
    - Establish/re-establish a 5’ wide native grass planting area (±1,253 sf) along Uncas Brook, generally south of the brook. Plant with New England Wetland Plants Native Warm Season Grass Mix.

3.3 Buffer Zone: Franklin 100’ Buffer Zone Resource Area

The Town of Franklin Wetlands Protection Bylaw considers 100 feet from a defined/delineated resource area as the buffer zone and consequently an additional protected resource. These

regulations characterize and provide regulatory guidance through evaluation of three buffer zones: 0–25 Foot Buffer Zone Resource Area; 25-50 Foot Buffer Zone Resource Area; and 50-100 Foot Buffer Zone Resource Area. Work within the 0-25 foot, 25-50 foot, and 50-100 foot buffer zones is proposed within areas currently actively maintained as a golf course.

0 - 25 FOOT BUFFER ZONE RESOURCE AREA

Existing Condition:

The 5th hole tees are located northeast of Uncas Brook and golfers hit over the brook to the fairway, which is located southwest of Uncas Brook. Three bituminous paved paths, two for golf carts and one for walking, provide access from the 5th tees to the fairway. Much of the 0-25 Foot Buffer Zone Resource on the northeast side of Uncas Brook is an active portion of the golf course and is mowed or weed-wacked regularly. A 5' wide area parallel to and south of the bank of Uncas Brook is mowed/weed-wacked several times throughout the year. These areas contain both a combination of turf grass and native grasses and are not irrigated.

A 0-25 Fo0t Buffer Zone Resource Area near the pond on Hole #5 is an active portion of the golf course and the understory is cut and blown out approximately 1-2 times annually.

Work is proposed within ±9,795 sf of area in the 0-25 Foot Buffer Zone Resource area. This area is within the actively maintained golf course (see table and work in red on Exhibit A, Appendix E). Proposed work includes:

- Removal of existing bituminous paths and replacement in kind. The location of the two cart paths will not change. The location of the central walking path has been moved approximately 7 feet to the west to better align with the center of the expanded tee.
- Installation of a 6-foot-wide naturalized drain outfall apron within the existing maintained turf area. Stormwater will be conveyed to this outfall from a subsurface infiltration system constructed beneath the rebuilt 5th tee.
- Limited grading is proposed associated with the drain line and the outfall on the westerly side of the 0-25 foot zone northeast of Uncas Brook, and limited grading on the easterly side of the 0-25 foot zone is associated with evening out the slope of the existing cart path.
- Vista Pruning at the 5th Hole Pond Area, northwest of 5th green. No changes are proposed to management of understory or grading in this area. Vista pruning is proposed for 7 trees located west of the pond in the 0-25 Foot Buffer Zone Resource Area (Table 2). These trees are currently limbed up to a height of ±10-20 feet above ground surface and the proposal is to limb them up to a height of ±35 feet above ground surface, while not reducing the canopy to less than 90% of the existing crown cover.

- Install plantings:
    - Plant a minimum of 93 native woody shrubs (upland hydrology) in Shrub A area (±3,342 sf).
    - Allow the existing maintained herbaceous area located on either side of the walk path (±2,624 sf) area to naturalize based on a reduction in mowing and overseed *as needed* to increase diversity, all located in the 0-25 Foot Buffer Zone Resource Area.
    - Establish/re-establish a 5' wide native grass planting area along Uncas Brook, generally south of the brook.

Herbaceous Plantings - The lower portion of this area will be seeded with New England Wetland Plants (NEWP) – Wet Mix. The upper portion of the slope has been more heavily managed and will be overseeded with NEWP - New England Showy Wildflower Mix and NEWP - New England Native Warm Season Grass Mix. The herbaceous area will be mowed annually in the fall, to keep woody vegetation from becoming established.

Native Grasses – This area will be overseeded with NEWP - New England Native Warm Season Grass Mix. The native grass area will be mowed annually in the fall, to keep woody vegetation from becoming established.

Woody Shrubs - Shrubs have been selected and will be planted based on the hydrology of the area.

Shrub Group A - Planting Area Woody Planting Plan - Upper Portion (upland hydrology)

93 Shrubs; min 1 gal container; ±6' on-center average spacing or less (i.e., more dense)

- Meadowsweet (*Spirea latifolia*)
- Lowbush blueberry (V*accinium angustifolium*)
- Maple Leaf Viburnum (*Viburnum acerifolium*)
- Bearberry (*Arctostaphylos uva-ursi)*
- Sweet Fern (*Comptonia peregrina*)
- New Jersey Tea (*Ceanothus americanus*)
- Northern Bush Honeysuckle (*Diervilla lonicera*)

Depending upon availability from local nursery stock, at least five (5) of the listed shrub species will be selected, with at least ten (18) specimens of each selected species planted, for a total of 93 shrubs (minimum).

This area is intended to be naturalized and is not to be maintained as a garden with mulch. The height of the shrubs will be maintained to a management height of 4 feet to provide a clear view from the golf course and patio.

Shrub Group B - Planting Area Woody Planting Plan - Lower Portion (wetland hydrology)

30 Shrubs; min 1 gal container; +/- 4' on-center average spacing or less (i.e., more dense)

- Buttonbush (*Cephalanthus occidentalis*)
- Leatherleaf (*Chamaedaphne calyculata*)
- Water Willow (*Decodon verticillatus*)
- Maleberry (Lyonia ligustrina)
- Sweetgale (*Myrica gale)*
- Steeplebush (*Spirea tomentosa)*

Depending upon availability from local nursery stock, at least two (2) of the listed shrub species will be selected, with at least 5 specimens of each selected species for a total of 30 shrubs (minimum).

Table 2: Proposed Vista Pruning at 5th Hole Pond				
Tree #	**Size (inch dbh)**	**Type**	**Jurisdictional Location**	**Proposed Pruning**
1	24	deciduous	50’-100’ buffer zone	from 5' to 30'
2	18	deciduous	50’-100’ buffer zone	from 10' to 25'
3	10	conifer	50’-100’ buffer zone	from 15' to 25'
4	13	conifer	50’-100’ buffer zone	from 15' to 25'
5	20	conifer	50’-100’ buffer zone	from 15' to 25'
9	26	conifer	50’-100’ buffer zone	from 10' to 30'
10	30	conifer	50’-100’ buffer zone	from 20' to 30'
11	24	conifer	50’-100’ buffer zone	from 20' to 30'
12	16	conifer	50’-100’ buffer zone	from 20' to 30'
13	18	conifer	50’-100’ buffer zone	from 20' to 30'
14	30	conifer	50’-100’ buffer zone	from 15' to 25'
15	15	conifer	50’-100’ buffer zone	from 10' to 30'
16	24	conifer	50’-100’ buffer zone	from 10' to 30'
17	28	conifer	50’-100’ buffer zone	from 15' to 25'
18	16	conifer	50’-100’ buffer zone	from 15' to 25'
19	20	conifer	50’-100’ buffer zone	from 15' to 25'
21	24	conifer	50’-100’ buffer zone	from 10' to 25'
23	30	conifer	50’-100’ buffer zone	from 15' to 25'
24	24	conifer	50’-100’ buffer zone	from 15' to 25'
25	16	conifer	50’-100’ buffer zone	from 5' to 30'
27	20	conifer	50’-100’ buffer zone	from 15' to 30'
28	10	conifer	25’-50’ buffer zone	from 20' to 35'
30	16	conifer	25’-50’ buffer zone	from 10' to 35'
31	28	conifer	25’-50’ buffer zone	from 10' to 35'
32	18	conifer	25’-50’ buffer zone	from 10' to 35'
33	14	conifer	25’-50’ buffer zone	from 10' to 30'
34	8	conifer	25’-50’ buffer zone	from 10' to 30'
35	20	conifer	25’-50’ buffer zone	from 10' to 35'
36	13	conifer	0’-25’ buffer zone	from 20' to 35'
37	12	conifer	0’-25’ buffer zone	from 10' to 35'
38	24	conifer	0’-25’ buffer zone	from 10' to 35'
39	20	conifer	0’-25’ buffer zone	from 10' to 35'
40	30	conifer	0’-25’ buffer zone	from 10' to 35'
41	24	conifer	0’-25’ buffer zone	from 10' to 35'
42	24	conifer	0’-25’ buffer zone	from 10' to 35'
44	14	deciduous	50’-100’ buffer zone	from 15' to 35'

Request for Variance for Work in 0-25 Foot Buffer Zone Resource Area

The applicant requests a variance to allow the aforementioned work to be conducted within the 0-25 Foot Buffer Zone Resource Area. The variance is to allow grading within the existing active golf course, which has been constructed and operated at this location since 1899.

Alternatives Analysis:

The grading is proposed to support the location and elevation of the 5th tee complex and the relocation of the existing cart path is proposed to align it with the center of the rear stairs of the clubhouse.

The construction of the 6-foot-wide naturalized drain outfall will facilitate stormwater to get to Uncas Brook without causing erosion. This drain outfall will be constructed within the upland woody shrub planting area (Shrub A). It is not feasible to move the drain outfall out of the 0-25 Foot Buffer Resource area because the elevation of the outfall is dictated by the elevation of the existing drainage that is being connected to the subsurface infiltration system, which has been designed as shallow as possible. Given the existing slope of the bank, the overflow structure cannot be moved outside the 0-25 Foot Buffer Resource Area.

Functions & Characteristics Statement to Support Request for Variance

The work within the 0-25 Foot Buffer Zone Resource Area can be completed without significant impacts on the functions and characteristics of the resource area:

Protection of public and private water supplies: The proposed work within the 0-25 Foot Buffer Resource area will not affect public or private water supply by maintaining the hydrology of the area.

Protection of groundwater: By maintaining the hydrology of the area, the proposed work within the 0-25 Foot Buffer Resource area will not impact aquifers or groundwater.

Flood control: The proposed work within the 0-25 Foot Buffer Resource area includes installation of a subsurface infiltration system, 6-foot-wide naturalized drain outfall apron, and revised grading, which will maintain flood control.

Prevention of erosion and sedimentation: During construction, sediment and erosion controls will be in place to prevent erosion and sedimentation within the 0-25 Foot Buffer Resource area. The proposed project will not have impacts on erosion and sedimentation post construction.

Prevention of storm damage: The proposed work within the 0-25 Foot Buffer Resource area project will maintain the uses of the property, preventing storm damage.

Protection of water quality: The proposed work within the 0-25 Foot Buffer Resource area project will not impact water quality during construction or post construction.

Water pollution control: During construction within the 0-25 Foot Buffer Zone Resource area, sediment and erosion controls will be in place to prevent water pollution.

Protection of fisheries: The proposed work within the 0-25 Foot Buffer Zone Resource area project will not impact fish populations during construction or post construction. By creating a naturalized buffer along Uncas Brook, habitat for fish populations (if present) will be improved.

Protection of wildlife habitat: The proposed work within the 0-25 Foot Buffer Zone Resource area includes the installation of plantings along Uncas Brook, which will benefit the interest of wildlife habitat.

Protection of rare species habitat (including rare plant species): The proposed project is not located in an area mapped as rare species habitat.

Protection of agriculture: The proposed project site does not consist of any agriculture.

Protection of recreation: The proposed work within the 0-25 Foot Buffer Zone Resource area enables construction of a larger teeing space and installation of drainage, which provides improvements to the existing golf course, which will benefit both passive and active recreational uses.

It is the project team's opinion that the project work within the 0-25 Foot Buffer Zone Resource Area will not have any adverse effect upon any of the interests protected in Chapter 181 of the Town of Franklin Wetlands Protection Bylaw. Creating a naturalized shrub and herbaceous area topographically below the reshaped 5th tee complex and re-establishing native grasses on the fairway side of Uncas Brook, will improve the habitat upgradient of and along Uncas Brook.

25 - 50 FOOT ZONE RESOURCE AREA

Existing Condition:

The 25-50 Foot Buffer Zone Resource Area on the northeast side of Uncas Brook includes portions of the golf course and is an actively maintained area that is regularly mowed, irrigated, and maintained. This area has been planted with a combination of turf grasses. Three bituminous paved paths, two for golf carts and one for walking, provide access from the 5th tees to the fairway. Existing wooden steps provide access and egress from the existing golf tee.

This portion of the golf course has been disturbed since approximately 1899 and Order of Conditions DEP #159-664, and its associated plans, issued in 1999, describe the area as an active golf course. The proposed work is located entirely within this previously disturbed area.

Work is proposed within ±10,455 sf of the 25-50 Foot Buffer Resource Area (see table and work in orange on Exhibit A) and includes:

- Removal of existing bituminous paths and replacement in kind. The location of the two cart paths will not change. The location of the central walking path and stairs has been moved

approximately 10 feet to the west to better align with the center of the expanded tee. Due to the increase in elevation of the golf tee, the path has been extended and additional steps will be added;

- Installation of a subsurface drainpipe. This pipe will convey stormwater to the outfall near Uncas Brook;
- Grading associated with the drain line and tee complex; planting of fescue rough turf (non-irrigated) and a small area of irrigated tee. Fescue Rough will be mowed 3-4 times annually and is maintained at a higher height than the irrigated grass on the tee area; and
- Vista Pruning at the 5th Hole Pond Area, northwest of 5th green. The understory of the grove of primarily pine trees west of the pond has been routinely cleared out and maintained. Vista pruning is proposed for 7 existing trees located west of the pond in the 25-50 foot Buffer Zone Resource Area. The trees will be limbed to a height of ±30-35 feet; see Table 2 for individual tree details in all buffer zones.

50 - 100 FOOT BUFFER ZONE RESOURCE AREA

Existing Condition:

The 50-100 Foot Buffer Zone Resource Area on the northeast side of the Uncas Brook is an active portion of the golf course, including portions of the 5th tee complex, which are regularly mowed, irrigated, and maintained; paved cart paths, pavers and stamped concrete patios; and portions of the clubhouse. The pervious areas within this zone are planted with a combination of turf grasses and perennial gardens.

Work is proposed within ±20,473 sf of the 50-100 Foot Buffer Resource Area (see table and work in yellow on Exhibit A, Appendix E):

- Relocation of the cart path beneath the deck and realignment of other existing cart paths (generally 8 feet wide), widening of the cart path near tees to allow two carts to pass;
- Expansion of the clubhouse (over existing impervious decks and patios) and replacement of patios;
- Re-routing of the roof drains around the new foundation area, addition of drainage structures and installation of a subsurface infiltration system;
- Grading of the existing 5th tee complex, removal of existing landscape stairs and replacement of stairs to reflect new tee elevations, realignment of irrigation and sodding of turf areas;
- Relocation of perennial beds and planting of clubhouse area shrubs (see Landscape Plan); and
- Vista Pruning at the 5th Hole Pond Area, northwest of 5th green. The understory of the grove of primarily pine trees west of pond has been routinely cleared out and maintained. Vista pruning is proposed for 22 existing trees located west of pond in the 50-100 Foot Buffer Zone

Resource Area. The trees will be limbed to a height of ±25-30 feet; see Table 2 for individual tree details in all buffer zones.

3.4 Riverfront

Based upon a review of the current USGS Map, Uncas Brook is shown as perennial and is located in the northeasterly portion of the site.

INNER RIPARIAN AREA 0-100 FEET

Existing Condition

The Inner Riparian Area (R100 on the plan set) extends from the bank of Uncas Brook to approximately the southerly portion of the existing building. This area is part of the active golf course and includes the paved bituminous cart paths and walking path and associated bridges, both irrigated and non-irrigated turf areas, perennial beds, the 5th tee complex, and a small portion of the clubhouse.

This portion of the golf course has been disturbed since approximately 1899 and Order of Conditions DEP #159-664, and its associated plans, issued in 1999, describe the area as an active golf course and clubhouse. The proposed work is located entirely within this previously disturbed area.

The following work is proposed:

- Removal of existing bituminous paths and replacement in kind. The location of the two cart paths will not change. The location of the central walking path and stairs has been moved slightly to better align with the center of the expanded tee. Due to the increase in elevation of the golf tee, the path has been extended, and additional steps will be added;
- Installation of catch basins, associated piping, a subsurface infiltration system, subsurface drainpipe, and naturalized drain outfall; and
- Grading associated with the drain line and tee complex; planting of fescue rough turf (non-irrigated) and resurfacing of the existing irrigated tee areas. Fescue Rough will be mowed 3-4 times annually and is maintained higher than the grass on the irrigated tee area.

OUTER RIPARIAN AREA 100-200 FEET

Existing Condition

The Outer Riparian Area (R200 on the plan set) extends from the R100 line marking the extent of the Inner Riparian Area to approximately the northerly boundary of the clubhouse. This area is part of the active golf course and includes the paved bituminous cart paths, irrigated turf areas, perennial beds, the northerly portion of the 5th tee complex and the clubhouse.

This portion of the golf course has been disturbed since approximately 1899 and Order of Conditions DEP #159-664, and its associated plans, issued in 1999, describe the area as an active golf course and clubhouse. The proposed work is located entirely within this previously disturbed area.

The following work is proposed:

- Clubhouse expansion, including enclosing of upper-level decks and replacement of existing canvas roofs with permanent roofs, small kitchen expansion, and addition of exterior stairs;
- Removal of existing bituminous paths and replacement in kind. The location of the two cart paths will not change;
- Installation of catch basins, and associated piping to the subsurface infiltration system;
- Grading associated with the cart paths and tee complex; planting of fescue rough turf (non-irrigated) and resurfacing of the existing irrigated tee areas. Fescue Rough will be mowed 3-4 times annually and is maintained at a higher height than the grass on the irrigated tee area;
- Removal of the propane storage area and fencing; addition of lattice screening fence;
- Clubhouse plantings (see Landscape Plans); and
- Modification of existing 5th fairway to include forward tee. This area will be raised approximately 10"- see sheet C104.

Alternatives Analysis for work in Riverfront Area:

Work is proposed within approximately 10,200 sf of the Outer Riparian Zone (100-200 feet) of the Riverfront Area (RFA) and 28,735 sf of the Inner Riparian Zone (0-100 feet) associated with the presumed perennial portion of Uncas Brook. All proposed work in RFA is within Previously Developed RFA. With limited exception, the developed RFA where work is proposed is degraded RFA, consisting of existing building and paved areas, including cart paths and hardscape associated with the swimming pool and other patio areas. The exception is an area of approximately 1,351 sf where the paved cart path is proposed to be moved to an area of existing turf, immediately west of the clubhouse building.

Erosion control will be installed prior to conducting work. Removal and replacement of existing bituminous asphalt from the easterly concrete deck will be conducted under low-flow conditions.

<u>Redevelopment in Riverfront Area:</u>

The standard of review at 310 CMR 10.58(5) within Previously Developed RFA is that:

a) At a minimum, proposed work shall result in an improvement over existing conditions of the capacity of the riverfront area to protect interests identified in

M.G.L. c. 131 § 40. When a lot is previously developed but no portion of the riverfront area is degraded, the requirements of 310 CMR 10.58(4) shall be met.

By planting naturalized areas along Uncas Brook and upgrading the stormwater management system, the project enhances wetland interests. Limited work in developed but-not degraded RFA is proposed, therefore the requirements of 310 CMR 10.58(4) are met for the majority of the proposed work (see item (e) below).

b) Stormwater management is provided according to standards established by the Department of Environmental Protection.

The project complies with this requirement.

c) Within 200 foot riverfront areas, proposed work shall not be located closer to the river than existing conditions or 100 feet, whichever is less, or not closer than existing conditions within 25 foot riverfront areas, except in accordance with 310 CMR 10.58(5)(f) or (g)

Work proposed within 100 foot riverfront areas consists of grading existing tees and removal, replacement, and realignment of existing cart paths, which will not be closer to the brook than existing similar features. Work proposed within the 100-200 foot RFA consists of removal, replacement, and realignment of existing cart paths. No naturalized areas are proposed to be impacted.

d) Proposed work, including expansion of existing structures, shall be located outside the riverfront area or toward the riverfront area boundary and away from the river, except in accordance with 310 CMR 10.58(5)(f) or (g).

The proposed project will maintain existing offsets from developed areas to the brook (river) and complies with this provision.

e) The area of proposed work shall not exceed the amount of degraded area, provided that the proposed work may alter up to 10% if the degraded area is less than 10% of the riverfront area, except in accordance with 310 CMR 10.58(5)(f) or (g).

The site contains approximately ±575,200 sf of RFA. Review of plans for work completed at the site subsequent to August 1996, memorialized in DEP File numbers 159-664 and 351-604 (1999 Clubhouse), 351-999 (2013 Pool Redevelopment) and 159-1041 (2013 Function Deck), indicates that since that date, a total of ±4,000 sf of degraded area has been added, within the previously developed golf course which has been in place for approximately 100 years. This post-1996 degraded area represents approximately 0.7% of the total ±575,200 sf of RFA on the site.

The current project proposes the addition of ±1,351 sf of new degraded area

associated with the reshaped and relocated cart path. This new degraded area represents approximately 0.23% of the total RFA on the site. Therefore, the total degraded RFA on the site (post-1996 + currently proposed) equals ±0.9%, well below the 10% RFA threshold.

f) When an applicant proposes restoration on-site of degraded riverfront area, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), and (e) at a ratio in square feet of at least 1:1 of restored area to area of alteration not conforming to the criteria…

No new work in the undeveloped or degraded RFA is proposed under 10.58(f).

g) When an applicant proposes mitigation either on-site or in the riverfront area within the same general area of the river basin, alteration may be allowed notwithstanding the criteria of 310 CMR 10.58(5)(c), (d), or (e) at a ratio in square feet of at least 2:1…

No new work in the undeveloped or degraded RFA is proposed under 10.58(g).

Based upon the above, in consultation with EcoTec Inc., it is Avalon's opinion that the proposed project satisfies the RFA redevelopment provisions.

Notwithstanding the above, an RFA Alternatives Analysis was also conducted in accordance with 310 CMR 10.58(4).

No Build Alternative: The existing golf course was constructed in 1899 and the 5th hole has not been substantially reconstructed since then. Asphalt cart paths are in disrepair, potentially causing erosion and sedimentation.

Alternative Locations: The proposed project consists of modifications to the existing clubhouse and the rehabilitation of the existing golf course, therefore, alternative locations are not feasible.

The vast majority of the clubhouse is located in RFA. The existing decks and kitchen expansion are located at the rear of the clubhouse over existing impervious area, all of which is located in RFA. It is not possible to relocate this work outside of RFA.

The additional impervious area is due to relocating an existing paved cart path out from under the open deck to create an indoor storage area. Since the existing deck that is being enclosed is fully located within RFA, it is not possible to relocate this work outside RFA.

The 5th tee modifications are within the existing footprint of maintained turf. By regrading the different portions of the tee, the amount of tee area that can be used is increased, reducing the overall wear on the turf. The golf course, including the 5th hole, was originally laid out to include Uncas Brook as an aesthetic and golf challenge feature and the entire existing 5th hole

tee complex is located in RFA. Thus, the proposed tee modification work cannot be relocated outside of RFA. It is not possible to work on much of the 5th hole without working in RFA.

Alternative Methods: The proposed work consists of changes to grading and vegetation management along Uncas Brook that protects the brook and related wetland resources during construction, and also results in an increase in the extent of naturalized areas in the long term. These changes have been maximized to the extent feasible, while maintaining the high caliber of the golf course.

Based upon the above, in consultation with EcoTec, Inc., it is our opinion that the proposed project represents a net increase in the protection of wetland interests in the RFA and overall, and that there is therefore no alternative with less adverse impact.

It is our opinion that this proposed work will not have a significant adverse impact on the Riverfront Area.

4.0 Wetland Resource Area Performance Standards and Functions & Characteristics Statement:

4.1 Compliance with Bank, BVW and BLSF

Analysis of how the proposed work complies with the regulatory performance standards for Bank, Bordering vegetated Wetland, and Bordering Land Subject to Flooding is presented below:

Bank: Bank regulations [310 CMR 10.54(4)(a)] require that work in Bank must not impair the following:

1. *Physical stability of the Bank;*
2. *Water carrying capacity with a defined channel;*
3. *Ground and surface water quality;*
4. *Capacity of said land to provide breeding habitat, escape cover, and food for fisheries;*
5. *Important wildlife habitat functions (however projects that alter less than 10% or 50 linear feet of this Resource Area, whichever is less, found to be significant to wildlife habitat are deemed to have no adverse impact on wildlife habitat functions*;

Analysis: Work in Bank is limited to planting of native vegetation. The work will be done by workers on foot, using hand tools. Soil disturbance will be highly localized, and consist only of the shovel holes required for shrub planting. The small amount of excavated soil will be removed in a wheelbarrow.

The proposed work on Bank is on the upper portions of this resource area, and will not affect the stability, carrying capacity or water quality attributes of the bank. The additional plantings will provide a modest enhancement (cover/shade) to the fisheries habitat (if present) and will enhance wildlife habitat (cover and food) of the Bank.

Therefore, the proposed work complies with the regulatory performance standards for Bank.

Bordering Vegetated Wetland (BVW): The General Performance Standard for BVW [310 CMR 10.55(4)(a)] requires that, unless the presumption of significance is overcome, work in a BVW shall not destroy or otherwise impair any portion of the BVW. The BVW performance standards also include the following provisions (paraphrased):

(b): BVW filling/loss of to 5,000 sf may be permitted, with replication;

(c): BVW filling/loss of up to 500-sf of a finger-like projection may be permitted without replication;

(d): no impacts to habitat of state-listed species in BVW is permitted; and

(e): no loss or impairment of BVW in an Area of Critical Environmental Concern ("ACEC") is permitted.

We note also that the "limited project" provisions of 310 CMR 10.53 allow for possible BVW alterations beyond those outlined above.

Analysis: Work in BVW is limited to the planting of native vegetation, which will enhance the ability of the BVW to protect wetland interests. No filling or loss of BVW is proposed; there is no mapped habitat of state-listed species on the site; and the site is not within an ACEC. Therefore, the General Performance Standard for BVW (no destruction or impairment) is satisfied.

Bordering Land Subject To Flooding (BLSF): The regulatory performance standards of the regulations for BLSF require the following:

(a) 1. Compensatory storage shall be provided for all flood storage volume that will be lost as the result of a proposed project within Bordering Land Subject to Flooding, when in the judgment of the issuing authority said loss will cause an increase or will contribute incrementally to an increase in the horizontal extent and level of flood waters during peak flows…..

Analysis: The proposed project includes ±4,906 sf of work in BLSF, but surface topography in BLSF will remain the same, and no flood storage volume will be lost.

2. Work within Bordering Land Subject to Flooding, including that work required to provide the above-specified compensatory storage, shall not restrict flows so as to cause an increase in flood stage or velocity.

Analysis: No filling or other alteration of topography is proposed in BLSF. Therefore, there will be no restriction of flow or other change resulting in an increase in flood stage or velocity as part of the proposed project.

3. Work in those portions of bordering land subject to flooding found to be significant to the protection of wildlife habitat shall not impair its capacity to provide important wildlife habitat functions. Except for work which would adversely affect vernal pool habitat, a project or projects on a single lot, for which Notice(s) of Intent is filed on or after November 1, 1987, that (cumulatively) alter(s) up to 10% or 5,000 square feet (whichever is less) of land in this resource area found to be significant to the protection of wildlife habitat, shall not be deemed to impair its capacity to provide important wildlife habitat functions. Additional alterations beyond the above threshold, or altering vernal pool habitat, may be permitted if they will have no adverse effects on wildlife habitat, as determined by procedures contained in 310 CMR 10.60.

Analysis: The work proposed in BLSF has a footprint of ±4,906 sf and consists of planting of native shrubs, herbaceous plants, and replacement of existing bituminous pavement at the same grades and locations. The site contains approximately 250,000 sf (estimate on MassGIS) of BLSF, therefore 10% of the BLSF on the site is approximately 25,000 sf, and the proposed work represents approximately 2% of the BLSF on the site. As such, the proposed work in BLSF is below the 10% or the 5,000 sf threshold that potentially triggers a wildlife habitat evaluation, and will not affect any vernal pool.

Analysis - BLSF: As detailed above, the proposed work complies with the BLSF regulatory performance standards, and does not trigger a wetland wildlife habitat analysis.

4.2 Compliance with Wetlands Protection Bylaw

The interests of the Town of Franklin Wetlands Protection Bylaw and Regulations and measures taken to protect the interests are detailed below:

Protection of public and private water supplies: The proposed project will not affect public or private water supply by maintaining the hydrology of the area.

Protection of groundwater: By maintaining the hydrology of the area, the proposed construction and operations will not impact aquifers or groundwater.

Flood control: The proposed project includes installation of a subsurface infiltration system, 6' wide naturalized drain outfall apron, and revised grading which has been designed to maintain flood control.

Prevention of erosion and sedimentation: During construction, sediment and erosion controls will be in place to prevent erosion and sedimentation. The proposed project will not have impacts on erosion and sedimentation post-construction.

Prevention of storm damage: The proposed project will maintain the use of the property, preventing storm damage.

Protection of water quality: The proposed project will not impact water quality during construction or post-construction.

Water pollution control: During construction, sediment and erosion controls will be in place to prevent water pollution.

Protection of fisheries: The proposed project will not impact fish populations during construction or post construction.

Protection of wildlife habitat: The project proposes to install plantings along Uncas Brook, which will benefit the interest of wildlife habitat.

Protection of rare species habitat (including rare plant species): The proposed project is not located in an area mapped as rare species habitat.

Protection of agriculture: The proposed project site does not include any agriculture.

Protection of recreation: The proposed project includes improvements to an existing golf course which will benefit both passive and active recreational uses.

5.0 Mitigation Plan:

The work within this Notice of Intent is proposed within areas actively maintained as a golf course. The project has been designed to avoid impacts to the Franklin 0-25 Foot Buffer Zone Resource Area where possible, to minimize the proposed work to be a repair and replacement of existing conditions where possible, and to include plantings of native or naturalized species as listed in the town's approved list as identified in the Town of Franklin Best Development Practices Guidebook.

As part of Order of Conditions #159-644, which was issued on July 29, 1999 plantings were required. This work was not completed. In 1999, the planting plan included relocation of arborvitaes, and planting of Japanese yew and privet in the vicinity of the clubhouse (non-

natives) and installation of upland shrubs and herbaceous plantings in a zone generally within the 0-25 Foot Buffer Resource Area north and east of Uncas Brook and a 5 Foot Native Grass Buffer, south and west of Uncas Brook.

Planting: The planting plan proposed within this Notice of Intent is intended to improve upon and replace the 1999 plan, to allow the work to integrate with the changes proposed in this Notice of Intent and to modify the plant selection to include primarily native or naturalized species currently approved by the town, rather than the species that were previously approved. This planting plan preserves existing vegetation where possible, includes transplantation of the club's existing perennial beds and includes the planting of native or naturalized species selected from the town's approved list, both around the clubhouse and within the Shrub A and Shrub B zones, Herbaceous Plantings, and Native Grass Buffer Zones.

Monitoring: areas proposed to be vegetated with native plantings and seeding shall be monitored for at least two (2) growing seasons by a qualified wetland scientist to demonstrate successful establishment. Reports, including photographs will be issued annually.

Invasive Management: for a period of at least two (2) growing seasons, purple loosestrife *(Lythrum salicaria*) and any other invasive plants observed in the planting areas will be removed by hand. The presence of invasive species within the planting areas will be noted in the reports referenced above.

6.0 Erosion & Sedimentation Plan:

The erosion and sedimentation plan for the proposed project is as follows:

1. Work shall be coordinated with the owner and conducted in a manner to minimize disruption and provide safe, accessible routes during construction.
2. All existing pavement abutting new pavement shall be neatly sawcut.
3. All items noted to be removed and disposed of shall be properly disposed of offsite.
4. In areas of proposed work, all existing features shall be removed and disposed of offsite to allow the new work as shown on the drawings.
5. Stockpile locations (fill materials, etc.) shall be coordinated with the owner and the engineer and shall be ringed with silt fence or compost socks if located on impervious surfaces. All disturbed areas, including stockpiles, which will not be re-disturbed within 14 days shall be stabilized by the 14th day after the last disturbance.
6. The contractor shall employ any and all sediment and erosion control measures to prevent the release of sediment from the site.

7. Sediment and erosion controls shall be installed prior to the start of any site work.
8. Sediment tracked onto roadways adjacent to the site shall be swept clean and removed each day.
9. The contractor shall restore all disturbed areas with 6 inches of screened loam and seed (lawn mix) unless specified otherwise on the site plans. Disturbed areas that are otherwise existing landscaped, etc. shall be restored to existing conditions or better. Damaged plantings shall be replaced at no additional cost to the owner.
10. The general contractor, under supervision of the general manager Steve Brennan, will be responsible for erosion control maintenance. Weekly inspections and reports will be conducted by the environmental monitor, EcoTec, Inc. The environmental monitor will keep a log of the inspections and maintenance and the report shall be submitted to the conservation commission on a weekly basis detailing the state of the erosion control and any steps taken to address any issues with failure of the barriers.
11. All erosion control barriers are biodegradable.
12. Responsible parties for inspection and maintenance:
    - General Contractor: Clubhouse - To Be Determined,
    - Golf Course and site work, MAS Golf Construction and Renovation, Matt Staffieri, Phone: (508) 625-1154
    - General Manager: Steve Brennan, Phone: (508) 528-6110 x237
    - Environmental Monitor: Paul McManus, EcoTec, Inc.: (508) 752-9666

7.0 Construction Sequence and Schedule:

Portions of the 5th Hole will be closed during clubhouse construction. The project will be phased to allow portions of the 5th tee complex to be used throughout the construction period:

- **Phase IA: Westerly Tee – Expand the tee, approximately 3 weeks, Fall 2025**
    - Install erosion control (silt fence and filter sock) to isolate the work area and keep sediment off adjacent cart paths
    - Install tree protection
    - Install stabilized construction entrance
    - Remove propane storage and fencing to a location outside jurisdiction of the Conservation Commission

- Remove existing stairs
- Strip sod and compost/dispose of outside jurisdiction of the Conservation Commission
- Grading to rebuild tee
- Sod the area for stabilization
- Remove erosion control after sodding
- Remove tree protection
- Remove stabilized construction entrance and sod

- **Phase IB: Vista Pruning at 5th Hole Pond, Fall 2025**
- **Phase IC: First Phase of Planting, Fall 2025**
  - Native grass overseeding (full)
  - Shrub B (full)
  - Shrub A (partial):
    - Lower Portion (wetland hydrology)
    - Easterly Portion (upland hydrology)
  - Herbaceous (partial): plant with New England Wetmix in Wetland Hydrology Areas
- **Phase II: Central Tee Complex – Bring to Rough Grade, Install stone pad and fence to create materials storage area; demo and construction of clubhouse, Fall 2025**

  (During this time, access to the single fifth tee will be from the paved cart path at the fourth hole, across the fairway and up the westerly cart path)
  - Install erosion control (silt fence and filter sock) to isolate the work area and keep sediment off adjacent cart paths
  - Install stabilized construction entrance
  - Excavate and save perennials for future transplantation
  - Strip sod and compost/dispose of outside jurisdiction of the Conservation Commission
  - Remove existing stairs

- Bring tee area to rough grade, install crushed stone to create materials storage pad. Note: refueling of equipment to be completed at the maintenance area on a paved surface outside jurisdiction of the Conservation Commission
- Install temporary construction fencing
- Demolition of existing clubhouse decking. Overnight vehicular storage on paved surface at maintenance facility outside jurisdiction of the Conservation Commission
- Construction of exterior of clubhouse to watertight, replacement and addition of HVAC

- **Phase III: Shape Tee, Install Drainage and Construct Cart Paths – Spring 2026**

  (During this time, access to the single fifth tee will be from the paved cart path at the fourth hole, across the fairway and up the westerly cart path)

  Once the materials storage area is no longer needed, remove gravel and install drainage. Fine grade tee. Construct cart path with asphalt; The perimeter will be stabilized with sod and the top layer will be seeded.

  - Remove construction fencing
  - Relocate erosion control (silt fence and filter sock) to the outside of the proposed cart path locations
  - Remove existing stairs
  - Excavate gravel, fine grade tee and install drainage
  - Remove existing cart paths and recycle asphalt off site
  - Strip sod and compost/dispose of outside jurisdiction of the Conservation Commission
  - Construct cart paths and pave
  - Construct stairs
  - Stabilize with sod or seed and hydro mulch
  - Remove erosion control after area stabilized
  - Remove stabilized construction entrance and sod

- **Phase IV: Second Phase of Planting – Fall 2026**

  Shrub A (partial):

  - Upper Portion (upland hydrology)

  - Herbaceous (partial): plant with New England Showy Wildflower Mix and New England Native Warm Season Grass Mix in Upland Areas

8.0 Drainage Calculations

A Stormwater Report, and Supplement #1 to Stormwater Report including a Mass DEP Stormwater Report Checklist, HydroCAD reports, soils mapping and a Long Term Operation and Maintenance Plan has been prepared by Graves Engineering, Inc.

The proposed project consists of an addition to the existing Clubhouse building, reconfiguration of Hole #5 tee boxes, re-paving of cart paths adjacent to site improvements, and the installation of related stormwater improvements on the site. The project will increase impervious surfaces in the study area by 1,351 sq. ft.

A drainage and stormwater management system will recharge and attenuate runoff from the building in full compliance with MassDEP Stormwater Management Standards and applicable Town of Franklin Bylaws and Regulations pertaining to stormwater management.

9.0 Summary

Proposed work will be conducted within the existing disturbed areas of BVW, BLSF, Riverfront, and the Town of Franklin Buffer Zone Resource Areas. No new areas of disturbance are proposed. Improvements include planting of native or naturalized species in the vicinity of the rear of the clubhouse and native shrubs (Shrub A and Shrub B), herbaceous planting, and grasses. The Shrub A and B, herbaceous plantings and native grass areas will not be irrigated and mowing of herbaceous plantings and native grass will be annually. The Shrub A and Shrub B areas will be managed by manual cutting to a height of 4 feet to allow views of the golf course from the tee and patios.

To the extent possible, redevelopment was avoided or minimized within the Town of Franklin 0-25 Foot Buffer Resource Area and a Request for Waiver is included for such redevelopment.

The project includes renovation of the rear of the clubhouse, including enclosing the existing decks and adding outdoor stairs to the rear of the clubhouse; reshaping the existing tees and adding a forward tee; relocating, resurfacing, and expanding the existing cart paths; installing related stormwater improvements; and vista pruning to improve views of the pond on the 5th

hole. The project will increase impervious surfaces in the study area by 1,351 sq. ft. and a drainage and stormwater management system is proposed to provide treatment, and recharge and attenuate runoff from the building, in full compliance with MassDEP Stormwater Management Standards and applicable Town of Franklin Bylaws and Regulations pertaining to stormwater management.

Appendix B

Notice of Intent Plan, Franklin Country Club
Prepared by Graves Engineering, Inc.,
dated August 18, 2025 and revised through September 24, 2025

CLUBHOUSE RENOVATIONS

FRANKLIN COUNTRY CLUB

672 EAST CENTRAL STREET

FRANKLIN, MA 02038

GEI Project No.: 25109

SHEET INDEX

No.	Title	Issue Date
C001	Cover Sheet	September 24, 2025
C101	Notes	September 24, 2025
C102	Existing Conditions Plan - Clubhouse	September 24, 2025
C103	Site Improvements Plan - Clubhouse	September 24, 2025
C104	Site Improvements Plan - Hole #5 New Forward Tee	September 24, 2025
C105	Vista Pruning Plan - Hole # 5 Pond	September 24, 2025
C106	Planting Plan	September 24, 2025
C107	Phasing Plan	September 24, 2025
C501	Site Details-1	September 24, 2025
C502	Site Details-2	September 24, 2025

REFERENCE PLAN INDEX

No.	Title	Issue Date

REVISIONS/ISSUES

No.	Note	Date
1	Issued for Permitting	August 18, 2025
2	Scrivener's Corrections	August 28, 2025
3	Revised for Wrentham RDA Permitting	September 8, 2025
4	Revised per Franklin CC Peer Review	September 24, 2025

LOCUS PLAN - AERIAL

SCALE: 1"=1,000'

SOURCE: MassMapper

N

LOCUS PLAN - GIS

SCALE: 1"=1,000'

SOURCE: MassMapper

N

OWNER

Franklin Country Club

Steven Brennan, General Manager

672 East Central Street

Franklin, MA 02038

PROJECT MANAGER

Avalon Consulting Group, LLC

41 Cals Court

Taunton, MA 02780

ARCHITECT

Arcadia Design, Inc.

330 Bear Hill Road., Suite 202

Waltham, MA 02451

ENVIRONMENTAL CONSULTANT

EcoTec, Inc.

100 Grove Street, Suite 203

Worcester, MA 01605

GOLF COURSE ARCHITECT

Nagle Design Works, LLC

P.O. Box 114

Hopwood, PA 15445

LANDSCAPE ARCHITECT

Gardner+Gerrish Landscape Architects, LLC

151 Broadway, Suite 245

Providence, RI 02903

GRAVES ENGINEERING, Inc.

100 GROVE STREET, SUITE 219, WORCESTER MA 01605

T 508-856-0321

gravesengineering.com

COMMONWEALTH OF MASSACHUSETTS
MICHAEL R. ANDRADE
CIVIL
No. 45899
REGISTERED PROFESSIONAL ENGINEER

ELECTRONICALLY STAMPED BY MICHAEL ANDRADE, P.E.

GENERAL NOTES

SITE DATA:
LOCATION:

672 EAST CENTRAL STREET, FRANKLIN, MA 02038 (GOLF COURSE)

NOTES:
1) THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO ANY FINDINGS SUCH A REPORT MIGHT DISCLOSE.

2) LOCATION OF UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED ON THE FIELD LOCATION OF VISIBLE STRUCTURES SUCH AS CATCH BASINS, MANHOLES, WATER GATES, ETC. AND COMPILED INFORMATION. IN ACCORDANCE WITH CHAPTER 82 SECTION 40 INCLUDING AMENDMENTS, ALL CONTRACTORS SHOULD NOTIFY IN WRITING ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG-SAFE AT 811. THE TOWNS OF FRANKLIN & WRENTHAM SHALL ALSO BE CONTACTED FOR UTILITY MARKOUTS AS AVAILABLE.

3) PROPERTY LINE DATA, TOPOGRAPHIC FEATURES, AND UTILITIES SHOWN ON THESE PLANS ARE COMPILED FROM PREVIOUS PLANS BY OTHERS AND SUPPLEMENTED BY NOAA LIDAR AND IN AREAS BY INSTRUMENT SURVEY PERFORMED BY GRAVES ENGINEERING, INC. IN APRIL 2025.

4) THE HORIZONTAL DATUM FOR THIS SURVEY IS THE MASSACHUSETTS STATE PLANE COORDINATE SYSTEM (NAD83), AND THE VERTICAL DATUM IS NAVD 88.

5) A PORTION OF THE SITE IS LOCATED WITHIN A SPECIAL HAZARD 100-YEAR FLOOD ZONE (ZONE A) AS SHOWN ON FIRM NUMBER 25021C0323F, DATED JULY 8, 2025. THE 100-YEAR FLOODPLAIN BOUNDARY SHOWN ON THESE PLANS IS TAKEN DIRECTLY FROM THE CITED PUBLISHED FIRM MAP.

6) WETLAND RESOURCE AREAS SHOWN ON THIS PLAN ARE BASED ON A WETLAND RESOURCE EVALUATION REPORT PREPARED BY ECOTEC, INC., DATED JUNE 6, 2025.

7) ABUTTERS NAME SHOWN ON THIS PLAN ARE DERIVED FROM FRANKLIN AND WRENTHAM ASSESSORS RECORDS.

8) SITE SOILS PER USDA-NRCS USED SOIL SURVEY ARE HINKLEY LOAMY-SAND (MAP UNIT 245C), HYDROLOGIC SOIL GROUP 'A'. NO ON-SITE SOIL TESTING HAS BEEN CONDUCTED.

9) THE PROJECT AREA (AND SITE) IS LOCATED WITHIN A ZONE II WELLHEAD PROTECTION ZONE (PWS ID 4350000, OWNER-WRENTHAM WATER DIVISION).

10) PER MASSMAPPER, THERE ARE NO NHESP CERTIFIED VERNAL POOLS ON THE PROJECT SITE OR ON ABUTTING PROPERTIES.

REFERENCES:
BOOK: 38500 PAGE: 201
ASSESSORS REFERENCE: 300-002-000-000 (PARCEL ID)

PLAN REFERENCES:
G&H ENGINEERING "EXISTING CONDITIONS PLAN" DATED: 02/01/2023
DANIEL ARCHITECTS, INC. "1999 DESIGN PLANS" DATED: 12/10/1999

PLAN NOTES

COORDINATION, SITE DEMO, SEDIMENT AND EROSION CONTROL AND RESTORATION:

1) WORK SHALL BE COORDINATED WITH THE OWNER AND CONDUCTED IN A MANNER TO MINIMIZE DISRUPTION AND PROVIDE SAFE, ACCESSIBLE ROUTES DURING CONSTRUCTION.

2) ALL EXISTING PAVEMENT ABUTTING NEW PAVEMENT SHALL BE NEATLY SAWCUT.

3) ALL ITEMS NOTED TO BE REMOVED AND DISPOSED SHALL BE PROPERLY DISPOSED OF OFFSITE.

4) IN AREAS OF PROPOSED WORK, ALL EXISTING FEATURES SHALL BE REMOVED AND DISPOSED OF OFFSITE TO ALLOW THE NEW WORK AS SHOWN ON THE DRAWINGS.

5) STOCKPILE LOCATIONS (FILL MATERIALS, ETC.) SHALL BE COORDINATED WITH THE OWNER AND THE ENGINEER AND SHALL BE RINGED WITH SILT FENCE OR COMPOST SOCKS IF LOCATED ON IMPERVIOUS SURFACES. ALL DISTURBED AREAS INCLUDING STOCKPILES, THAT WILL NOT BE RE-DISTURBED WITHIN 14 DAYS SHALL BE STABILIZED BY THE 14TH DAY AFTER THE LAST DISTURBANCE. ALL STOCKPILE LOCATIONS SHALL BE LOCATED OUTSIDE OF CONSERVATION COMMISSION JURISDICTIONAL AREAS.

6) THE CONTRACTOR SHALL EMPLOY ANY AND ALL SEDIMENT AND EROSION CONTROL MEASURES TO PREVENT A RELEASE OF SEDIMENT FROM THE SITE.

7) SEDIMENT AND EROSION CONTROLS SHALL BE INSTALLED PRIOR TO THE START OF ANY SITE WORK.

8) SEDIMENT TRACKED ONTO ROADWAYS ADJACENT TO THE SITE SHALL BE SWEPT CLEAN AND REMOVED EACH DAY.

9) THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS AS DIRECTED BY THE GOLF COURSE ARCHITECT.

10) WITHIN CONSERVATION COMMISSION JURISDICTIONAL AREAS THERE SHALL BE NO STOCKPILING, STORAGE, OR DISPOSAL OF SOILS, NO REFUELING OF EQUIPMENT, TRUCKS, ETC., AND NO OVERNIGHT STORAGE OF EQUIPMENT.

11) ALL DRAIN INLETS WITHIN AND IMMEDIATELY DOWNGRADIENT OF THE PROJECT AREA SHALL BE FITTED WITH SEDIMENT PROTECTION MEASURES SUCH AS A CATCH BASIN SEDIMENT BAG (FOR TRADITIONAL CATCH BASIN GRATES); "SLOTGUARD" BY ERTEC ENVIRONMENTAL SOLUTIONS FOR TRENCH DRAINS; AND "FLEXSTORM CATCH-IT" BY ADS NYLOPLAST FOR PVC AREA DRAINS (DRAIN BASINS), OR ENGINEER-APPROVED EQUALS. INLET PROTECTION SHALL REMAIN IN PLACE UNTIL FULL SITE STABILIZATION IS ACHIEVED.

12) CONSTRUCTION PERIOD SEDIMENT AND EROSION CONTROLS INCLUDING BUT NOT LIMITED TO PERIMETER SEDIMENT CONTROLS, TRACKING PAD, INLET PROTECTION DEVICES, ETC. SHALL BE INSPECTED AND MAINTAINED REGULARLY UNTIL COMPLETION OF CONSTRUCTION AT WHICH TIME THE PROJECT'S LONG-TERM OPERATION AND MAINTENANCE PLAN BEGINS. INSPECTIONS SHALL OCCUR WEEKLY OR PRIOR TO AND FOLLOWING ANY STORM EVENTS WITH OVER 0.25 INCHES OF PRECIPITATION. MAINTENANCE SHALL BE CONDUCTED IMMEDIATELY IF FOUND TO BE REQUIRED DURING THE INSPECTION OR AT ANY OTHER TIME.

PAVING, LAYOUT, GRADING AND DRAINAGE:

1) ALL NEW PAVEMENT AND CONCRETE SURFACES SHALL MEET FLUSH WITH FINISH GRADES OF EXISTING WALKS, CONCRETE PADS, ETC., BE CONSTRUCTED TO EXISTING OR PROPOSED GRADES AS SHOWN, AND BE SMOOTH AND UNIFORM ELIMINATING DEFORMITIES, DEPRESSIONS, PUDDLES, AND TRIP HAZARDS. PROVIDE POSITIVE DRAINAGE ON ON ALL NEW PAVEMENT AND CONCRETE SURFACES, AWAY FROM BUILDINGS, AND TO EXISTING CATCH BASINS, OUTFALLS OR OTHER COLLECTION POINTS.

2) ALL CART PATH INTERSECTIONS (CART PATH TO CART PATH, CART PATH TO DRIVEWAY, ETC.) SHALL BE CONSTRUCTED WITH A 3-FOOT RADIUS (NO SQUARE CORNERS ARE ALLOWED).

3) ADJUST ALL EXISTING STRUCTURES, MANHOLES, CATCH BASINS, WATER GATE VALVES, SHUTOFFS, ETC. TO PROPOSED FINISH GRADES WITHIN THE LIMIT OF WORK.

4) ALL JOINTS OF EXISTING & PROPOSED BITUMINOUS PAVEMENT SHALL BE SEALED WITH HOT RUBBERIZED ASPHALT JOINT SEALANT AND SANDED.

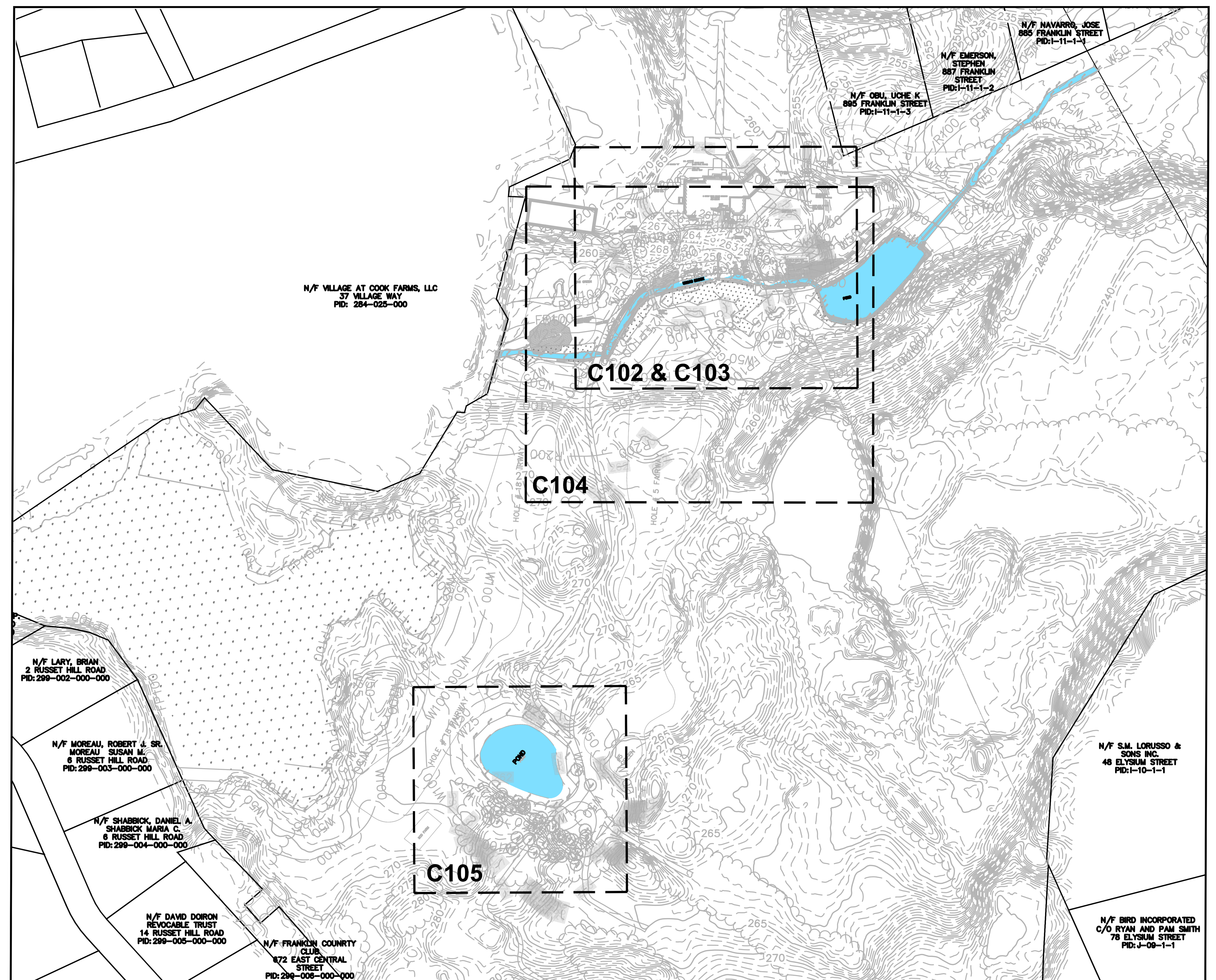
5) ALL FINISHED GRASSED SLOPES SHALL BE STABILIZED AS DIRECTED BY THE GOLF COURSE ARCHITECT.

6) THERE SHALL BE NO CONSTRUCTION EQUIPMENT, VEHICLE TRAFFIC OR STORAGE IN THE FOOTPRINT OF THE PROPOSED SUBSURFACE INFILTRATION SYSTEM WITHIN 2 FEET OF THE BOTTOM OF SYSTEM ELEVATION TO PROTECT AGAINST COMPACTION OF THE NATIVE SOILS.

7) A PORTION OF THE PROPOSED ROOF AREA SHALL BE CONSTRUCTED OF STANDING SEAM KYNAR FINISHED, GALVALUME STEEL MATERIAL AND THUS IS NOT CONSIDERED A TRADITIONAL GALVANIZED STEEL OR COPPER "METAL ROOF" AS DEFINED BY THE MASSDEP STORMWATER HANDBOOK AND DOES NOT REQUIRE ADDITIONAL TREATMENT PRIOR TO INFILTRATION DUE TO THE PRESENCE OF A CRITICAL AREA ON THE PROJECT SITE. HOWEVER, IT IS NOTED THAT THE PROPOSED STORMWATER TREATMENT SYSTEM (ISOLATOR ROW PLUS) PROVIDES UP TO 81% METAL (ZINC) REMOVAL.

LEGEND

Symbol	Description	Symbol	Description	Symbol	Description
D	DRAIN	GV	GAS VALVE	W	WELL
S	SEWER	WV	WATER VALVE		MONITORING WELL
FM	SEWER FORCE MAIN		HYDRANT		LIGHT
W	WATER		WATER SHUT-OFF	24" DEC.	TREE, TRUNK DIAM., DECIDUOUS (DEC.) OR CONIFEROUS (CON.)
OW	OVERHEAD UTILITY		BOUND		STUMP
UGT	UNDERGROUND TELEPHONE		FLARED END SECTION	S	SEWER MANHOLE
UGE	UNDERGROUND ELECTRIC		UTILITY POLE	D	DRAIN MANHOLE
CATV	UNDERGROUND CABLE & TELEVISION		UTILITY POLE & GUY WIRE	E	ELECTRIC MANHOLE
GAS or G	UNDERGROUND GAS		LIGHT FIXTURE	T	TELEPHONE MANHOLE
IR	IRRIGATION WATER	574.6	SPOT ELEVATION (FINISHED GRADE)		CATCH BASIN (CB)
RD	ROOF DRAIN		SIGN		DOUBLE CATCH BASIN
SCB	SEDIMENT CONTROL BARRIER	TP-#	TEST PIT - NUMBER		AREA DRAIN
LOW	LIMIT OF WORK		TRAFFIC CONTROL SIGNAL		LEACHING PIT
W25	25-FOOT WETLAND BUFFER ZONE (LOCAL-FRANKLIN)		TREELINE	ME	MATCH EXISTING (ELEVATION)
W50	50-FOOT WETLAND BUFFER ZONE (LOCAL-FRANKLIN)	EOP	EDGE OF PAVEMENT	TC	TOP OF CURB (ELEVATION)
W50	50-FOOT BUFFER ZONE (LOCAL-WRENTHAM)	D/S	DOWN SPOUT	BC	BOTTOM OF CURB (ELEVATION)
W100	100-FOOT BUFFER ZONE (LOCAL-WRENTHAM)	BCC	BITUMINOUS CAPE COD BERM	FFE	FINISH FLOOR ELEVATION
W100	100-FOOT WETLAND BUFFER ZONE	PCC	PRECAST CONCRETE CURB	HP	HIGH POINT (ELEVATION)
FP100	100-YEAR FLOODPLAIN	VGC	VERTICAL GRANITE CURB	LP	LOW POINT (ELEVATION)
R100	RIVERFRONT INNER RIPARIAN ZONE (100-FOOT) NOTE: WITHIN WRENTHAM, THIS LINE IS COINCIDENT WITH THE 100-FOOT LOCAL STREAM BUFFER ZONE	SGC	SLOPED GRANITE CURB	VIF	VERIFY IN FIELD (ELEVATION)
R200	RIVERFRONT OUTER RIPARIAN ZONE (200-FOOT)	CONC.	CONCRETE	R&R	REMOVE AND RESET
WF-#	RESOURCE AREA FLAG-NUMBER	BIT.	BITUMINOUS	R&D	REMOVE AND DISPOSE



INDEX PLAN

SCALE: 1"=175'

GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	BY	DESCRIPTION
4	09/24/25	SDM	REVISED PER FRANKLIN CC PEER REVIEW
3	09/08/25	SDM	REVISED FOR WRENTHAM RDA PERMITTING
2	08/27/25	SDM	SCRIVENER'S CORRECTIONS
1	08/18/25	SDM	ISSUED FOR PERMITTING

REVISIONS

COMMONWEALTH OF MASSACHUSETTS MICHAEL R. ANDRADE CIVIL No. 45609 REGISTERED PROFESSIONAL ENGINEER
ELECTRONICALLY STAMPED BY MICHAEL ANDRADE, P.E.

NOTES

CLUBHOUSE RENOVATIONS
FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

PREPARED FOR:
FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET , FRANKLIN, MA 02038

DATE: 08/18/25 | SCALE: VARIES | DES. BY: SDM | DRW. BY: SDM | CHK. BY: MRA | PRJ. NO.: 25109

C101

GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	BY	REVISIONS
4	09/24/25	SDM	REVISED PER FRANKLIN CC PEER REVIEW
3	09/08/25	SDM	REVISED FOR WRENTHAM RDA PERMITTING
2	08/27/25	SDM	SCRIVENER'S CORRECTIONS
1	08/18/25	SDM	ISSUED FOR PERMITTING

COMMONWEALTH OF MASSACHUSETTS
MICHAEL D. ANDRADE
NO. 45048
REGISTERED PROFESSIONAL ENGINEER

CERTIFIED AS PREPARED BY: MICHAEL D. ANDRADE, P.E.

EXISTING CONDITIONS PLAN - CLUBHOUSE

CLUBHOUSE RENOVATIONS

FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

PREPARED FOR:
FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET, FRANLIN, MA 02038

DATE: 08/18/25 | SCALE: 1" = 20' | DES. BY: SDM | DRW. BY: SDM | CHK. BY: MRA | PRJ. NO.: 25109

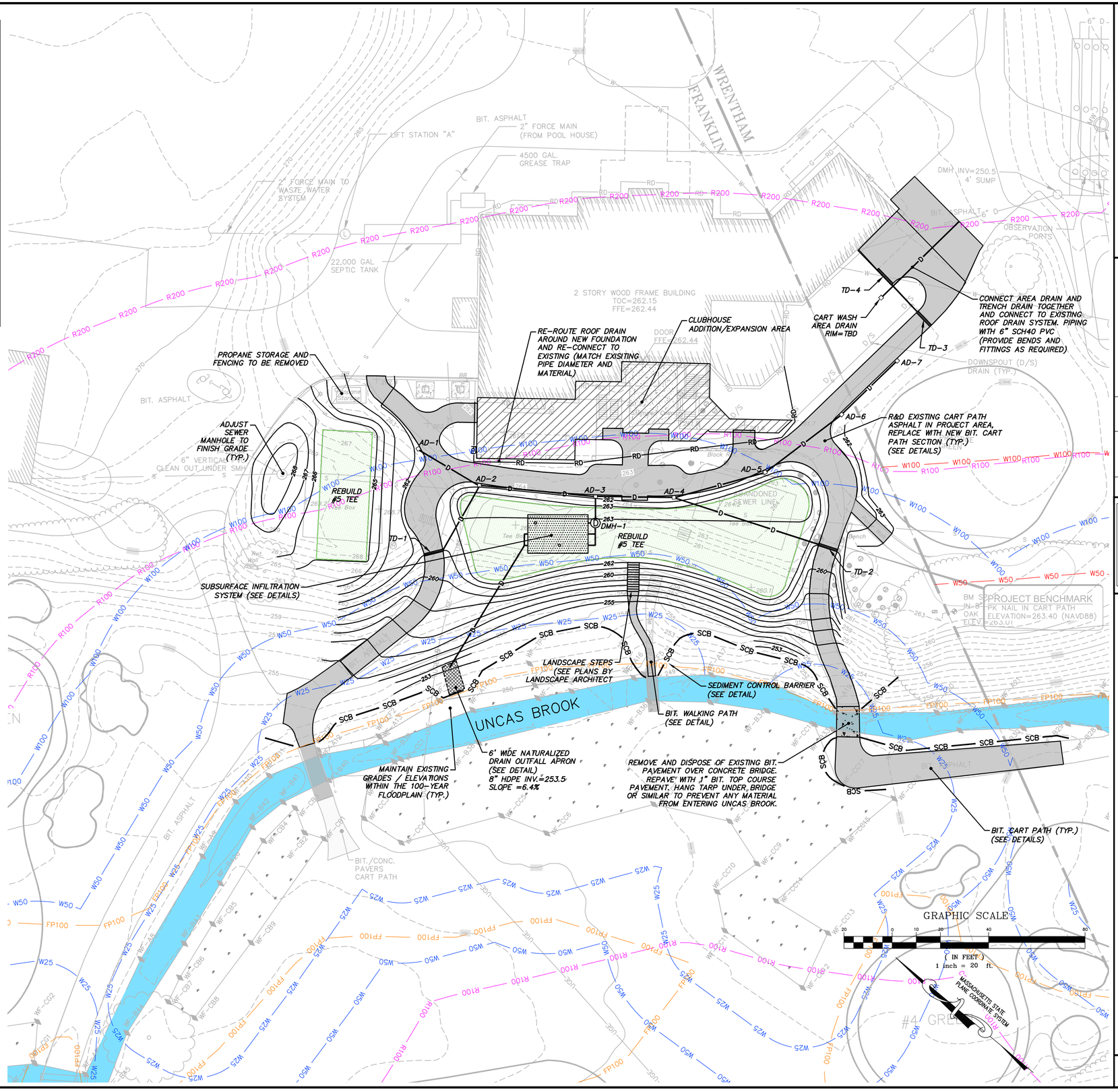
C102

PROPOSED DRAIN ELEVATION TABLE

STRUCTURE ELEVATIONS					PIPE SLOPE			
STRUCTURE	RIM ELEV.	PENETRATIONS	INVERT	NOTES	FROM	TO	LENGTH (ft).	SLOPE (%)
AD-1	261.3	6" HDPE OUT (AD-2)	260.30		AD-1	AD-2	28.0	2.00
AD-2	261.1	6"HDPE IN (AD-1)	259.74					
		4" PVC IN (TD-1)	258.70					
		6" HDPE OUT (AD-3)	258.60		AD-2	AD-3	47.0	2.00
AD-3	261.1	6" HDPE IN (AD-2)	257.66					
		6" HDPE IN (AD-4)	257.66					
		6" HDPE OUT (DMH-1)	257.56		AD-3	DMH-1	8.2	6.83
AD-4	261.1	6" HDPE IN (AD-5)	258.38					
		4" PVC IN (TD-2)	258.38					
		6" HDPE OUT (AD-3)	258.28		AD-4	AD-3	31.0	2.00
AD-5	261.3	6" HDPE IN (AD-6)	259.05					
		6" HDPE OUT (AD-4)	258.95		AD-5	AD-4	38.0	1.50
AD-6	261.4	6" HDPE IN (AD-7)	259.72					
		6" HDPE OUT (AD-5)	259.62		AD-6	AD-5	38.0	1.50
AD-7	261.4	6" HDPE OUT (AD-6)	260.17		AD-7	AD-6	30.0	1.50
TD-1	261.0	4" PVC OUT (AD-2)	259.00		TD-1	AD-2	30.0	1.00
TD-2	261.0	4" PVC OUT (AD-4)	259.00		TD-2	AD-4	62.0	1.00
TD-3	262.0	4" PVC OUT (TBD)	TBD		TD-3	TBD	–	–
TD-4	262.0	4" PVC OUT (TBD)	TBD		TD-4	TBD	–	–
DMH-1	261.0	6" PVC IN (AD-3)	257.00					
	(BURIED)	6" HDPE OUT (MANIFOLD)	257.00					
		24" HDPE OUT (ISO ROW)	255.57					

DRAINAGE KEY:

AD-#: AREA DRAIN-NUMBER
TD-#: TRENCH DRAIN-NUMBER
FES-#: FLARED END SECTION-NUMBER
DMH-#: DRAIN MANHOLE-NUMBER
HDPE: HIGH DENSITY POLYETHYLENE DRAINAGE PIPE (ADS N12 OR EQUAL)
PVC: SDR 35 POLYVINYL CHLORIDE PIPE



GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	DESCRIPTION
4	09/24/25	REVISED PER FRANKLIN CC PEER REVIEW
3	09/08/25	REVISED FOR WRENTHAM RDA PERMITTING
2	08/27/25	SCRIVENER'S CORRECTIONS
1	08/18/25	ISSUED FOR PERMITTING

REVISIONS

COMMONWEALTH OF MASSACHUSETTS MICHAEL R. ARUNDALE NO. 45858 REGISTERED PROFESSIONAL ENGINEER

ELECTRONICALLY SIGNED BY MICHAEL ARUNDALE, P.E.

SITE IMPROVEMENTS PLAN - CLUBHOUSE

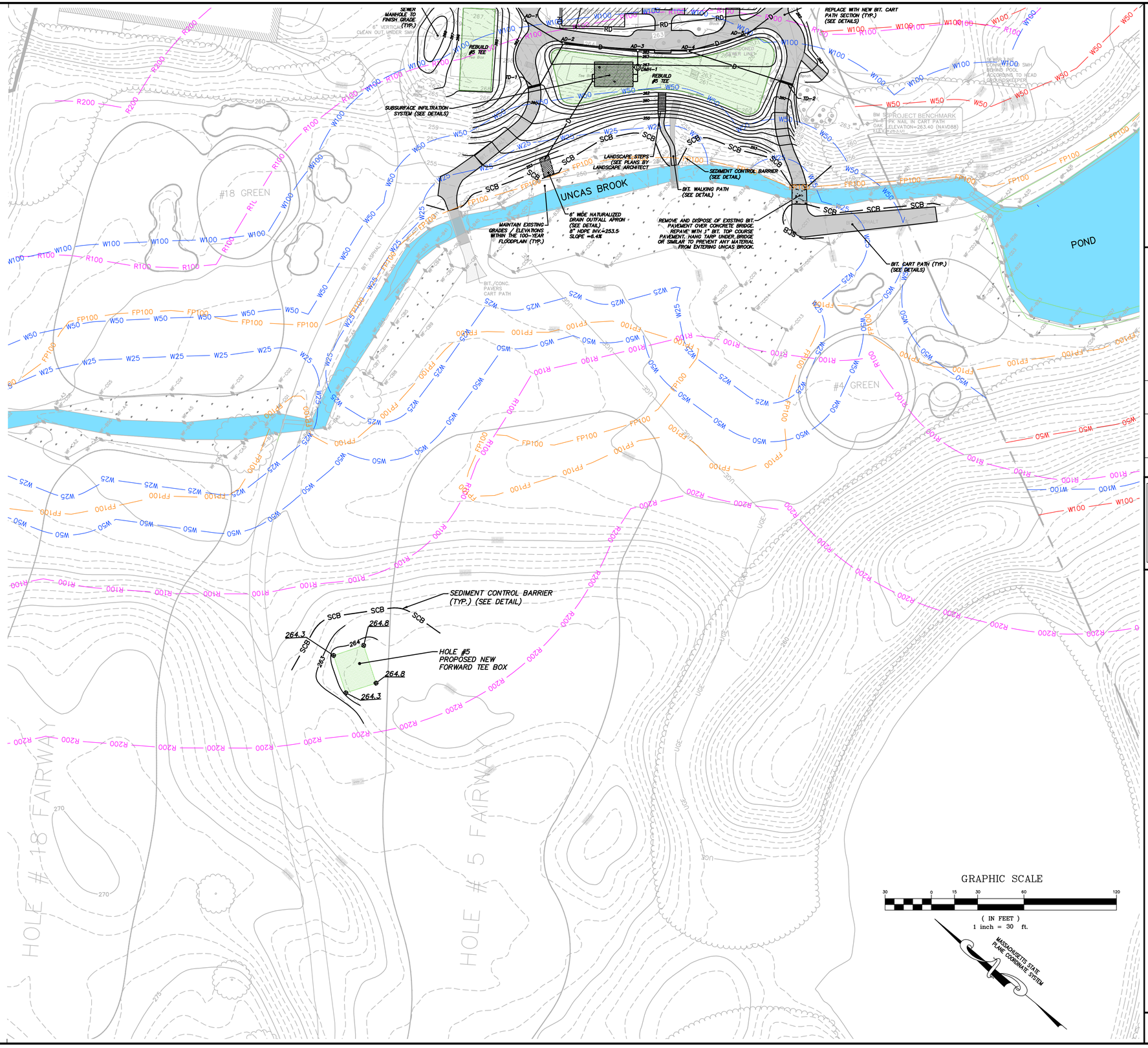
CLUBHOUSE RENOVATIONS

FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

PREPARED FOR: FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET, FRANKLIN, MA 02038

DATE: 08/18/25 | SCALE: 1" = 20' | DES. BY: SDM | DRW. BY: SDM | CHK. BY: MRA | PRJ. NO.: 25109

C103



GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	BY	REVISIONS
4	09/24/25	SDM	REVISED PER FRANKLIN CC PEER REVIEW
3	09/08/25	SDM	REVISED FOR WRENTHAM RDA PERMITTING
2	08/27/25	SDM	SCRIVENER'S CORRECTIONS
1	08/18/25	SDM	ISSUED FOR PERMITTING

MASSACHUSETTS — MICHAEL R. ANDRADE — No. 45084 — CIVIL — REGISTERED PROFESSIONAL ENGINEER

ELECTRONICALLY SIGNED BY MICHAEL ANDRADE, P.E.

SITE IMPROVEMENTS PLAN - HOLE #5 NEW FORWARD TEE
CLUBHOUSE RENOVATIONS
FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

PREPARED FOR:
FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET, FRANKLIN, MA 02038

DATE: 08/18/25 | SCALE: 1" = 30' | DES. BY: SDM | DRW. BY: SDM | CHK. BY: MRA | PRJ. NO.: 25109

C104

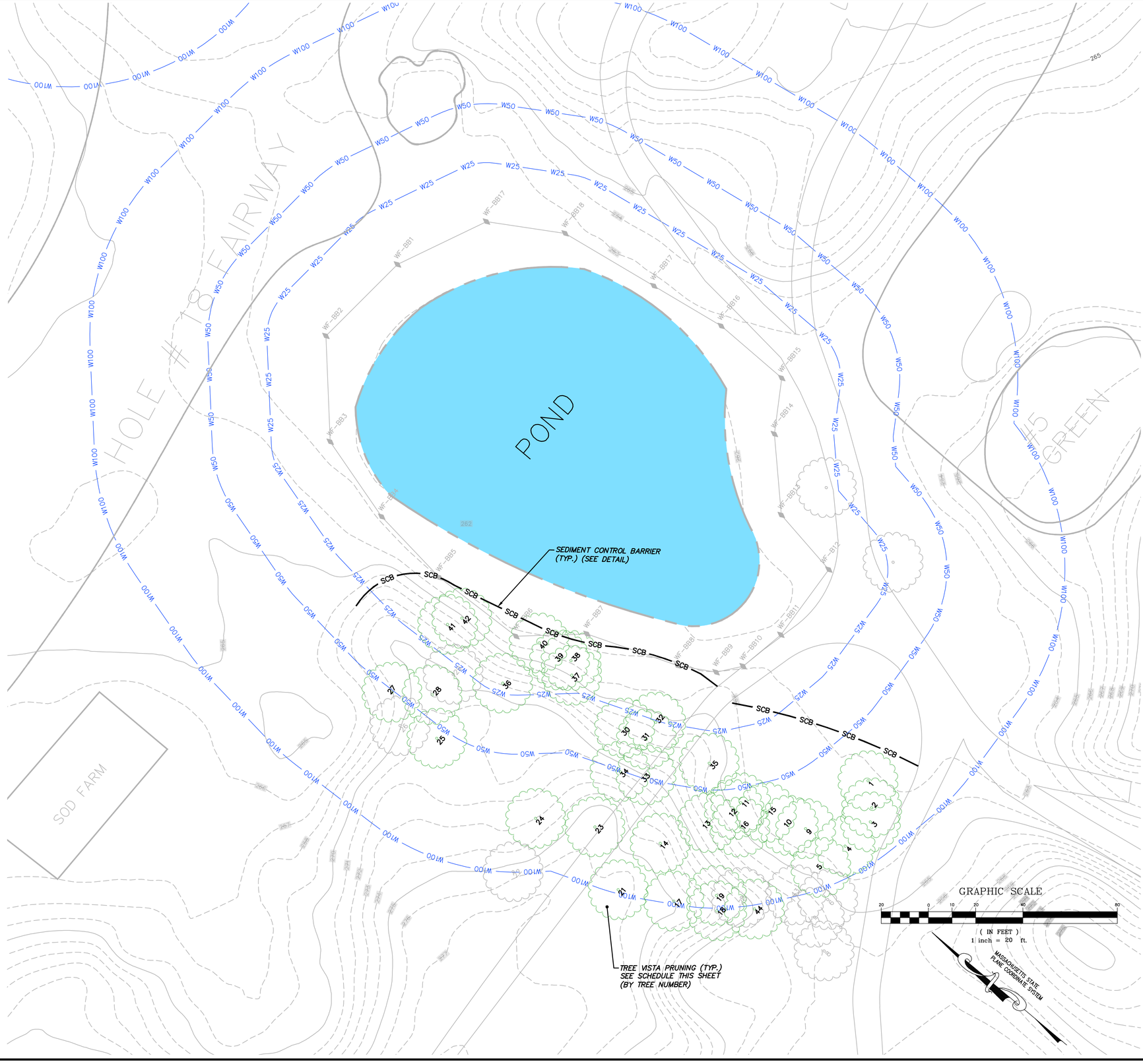
PROPOSED VISTA PRUNING SCHEDULE

NO. TREE	SIZE (DBH IN INCHES)	TYPE	JURISDICTIONAL LOCATION	NOTES
1	24	DECIDUOUS	50'–100'	CUT FROM 5' TO 30'
2	18	DECIDUOUS	50'–100'	CUT FROM 10' TO 25'
3	10	CONIFEROUS	50'–100'	CUT FROM 15' TO 25'
4	13	CONIFEROUS	50'–100'	CUT FROM 15' TO 25'
5	20	CONIFEROUS	50'–100'	CUT FROM 15' TO 25'
9	26	CONIFEROUS	50'–100'	CUT FROM 10' TO 30'
10	30	CONIFEROUS	50'–100'	CUT FROM 20' TO 30'
11	24	CONIFEROUS	50'–100'	CUT FROM 20' TO 30'
12	16	CONIFEROUS	50'–100'	CUT FROM 20' TO 30'
13	18	CONIFEROUS	50'–100'	CUT FROM 20' TO 30'
14	30	CONIFEROUS	50'–100'	CUT FROM 15' TO 25'
15	15	CONIFEROUS	50'–100'	CUT FROM 10' TO 30'
16	24	CONIFEROUS	50'–100'	CUT FROM 10' TO 30'
17	28	CONIFEROUS	50'–100'	CUT FROM 15' TO 25'
18	16	CONIFEROUS	50'–100'	CUT FROM 15' TO 25'
19	20	CONIFEROUS	50'–100'	CUT FROM 15' TO 25'
21	24	CONIFEROUS	50'–100'	CUT FROM 10' TO 25'
23	30	CONIFEROUS	50'–100'	CUT FROM 15' TO 25'
24	24	CONIFEROUS	50'–100'	CUT FROM 15' TO 25'
25	16	CONIFEROUS	50'–100'	CUT FROM 5' TO 30'
27	20	CONIFEROUS	50'–100'	CUT FROM 15' TO 30'
28	10	CONIFEROUS	25'–50'	CUT FROM 20' TO 35'
30	16	CONIFEROUS	25'–50'	CUT FROM 10' TO 35'
31	28	CONIFEROUS	25'–50'	CUT FROM 10' TO 35'
32	18	CONIFEROUS	25'–50'	CUT FROM 10' TO 35'
33	14	CONIFEROUS	25'–50'	CUT FROM 10' TO 30'
34	8	CONIFEROUS	25'–50'	CUT FROM 10' TO 30'
35	20	CONIFEROUS	25'–50'	CUT FROM 10' TO 35'
36	13	CONIFEROUS	0'–25'	CUT FROM 20' TO 35'
37	12	CONIFEROUS	0'–25'	CUT FROM 10' TO 35'
38	24	CONIFEROUS	0'–25'	CUT FROM 10' TO 35'
39	20	CONIFEROUS	0'–25'	CANOPY OVER WETLAND FLAG; CUT FROM 10' TO 35'
40	30	CONIFEROUS	0'–25'	CANOPY OVER WETLAND FLAG; CUT FROM 10' TO 35'
41	24	CONIFEROUS	0'–25'	CUT FROM 10' TO 35'
42	24	CONIFEROUS	0'–25'	CUT FROM 10' TO 35'
44	14	DECIDUOUS	50'–100'	CUT FROM 15' TO 35'

NOTE: TREE NUMBERS 6, 7, 8, 20, 22, 26, 29 AND 43 AS SHOWN (HAVE NO PROPOSED PRUNING.)

PROPOSED VISTA PRUNING KEY

XX = PROPOSED TREE TO BE PRUNED–NUMBER (SEE ATTACHED SCHEDULE)



GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	BY	REVISIONS DESCRIPTION
4	09/24/25	SDM	REVISED PER FRANKLIN CC PEER REVIEW
3	09/08/25	SDM	REVISED FOR WRENTHAM RDA PERMITTING
2	08/27/25	SDM	SCRIVENER'S CORRECTIONS
1	08/18/25	SDM	ISSUED FOR PERMITTING

COMMONWEALTH OF MASSACHUSETTS MICHAEL R. ANDRADE CIVIL No. 45598 REGISTERED PROFESSIONAL ENGINEER

REFERENCE PLAN PREPARED BY: MICHAEL ANDRADE, P.E.

VISTA PRUINING PLAN - HOLE # 5 POND
CLUBHOUSE RENOVATIONS
FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

PREPARED FOR: FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET, FRANKLIN, MA 02038

DATE: 08/18/25 | SCALE: 1" = 20' | DES. BY: SDM | DRW. BY: SDM | CHK. BY: MRA | PRJ. NO.: 25109

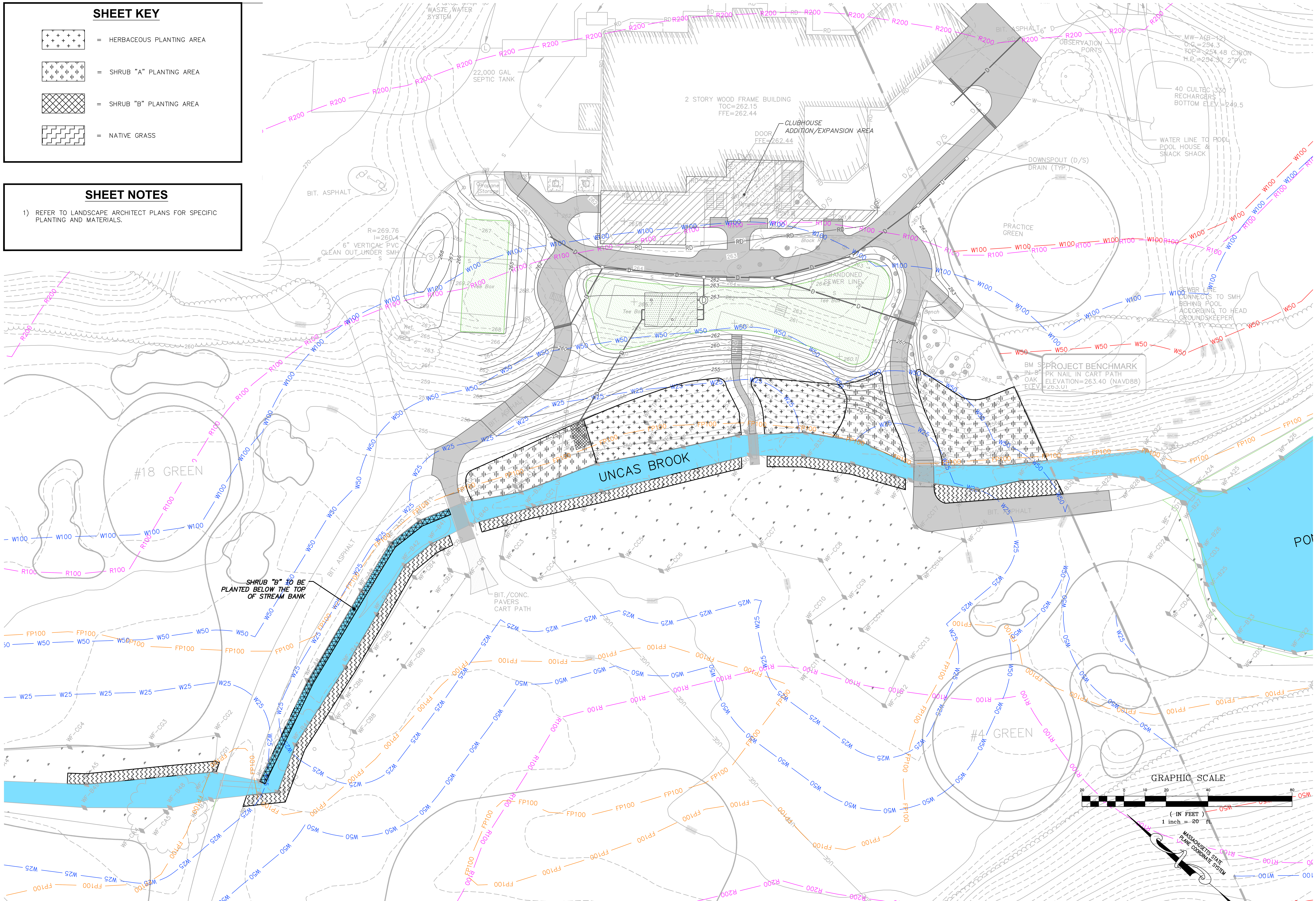
C105

SHEET KEY

- = HERBACEOUS PLANTING AREA
- = SHRUB "A" PLANTING AREA
- = SHRUB "B" PLANTING AREA
- = NATIVE GRASS

SHEET NOTES

1) REFER TO LANDSCAPE ARCHITECT PLANS FOR SPECIFIC PLANTING AND MATERIALS.



GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	BY	DESCRIPTION
4	09/24/25	SDM	REVISED PER FRANKLIN CC PEER REVIEW
3	09/08/25	SDM	REVISED FOR WRENTHAM RDA PERMITTING
2	08/27/25	SDM	SCRIVENER'S CORRECTIONS
1	08/18/25	SDM	ISSUED FOR PERMITTING

REVISIONS

ELECTRONICALLY STAMPED BY MICHAEL ANDRADE, P.E.

PLANTING PLAN

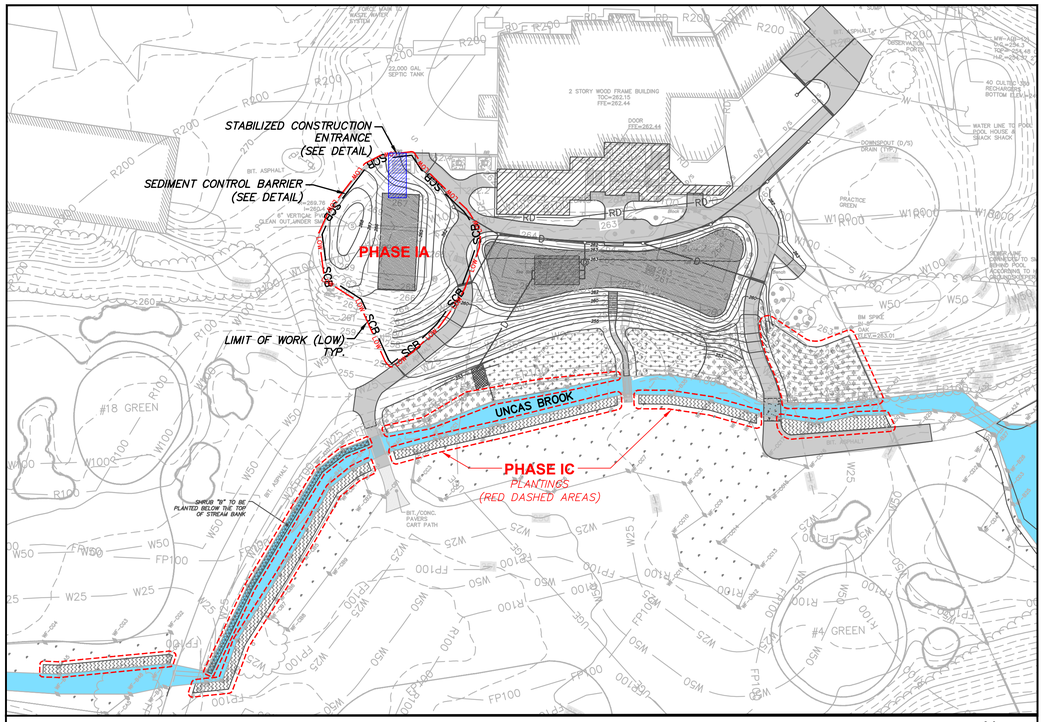
CLUBHOUSE RENOVATIONS

FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET, FRANKLIN, MA 02038

PREPARED FOR: FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET, FRANLIN, MA 02038

DATE: 08/18/25 | SCALE: 1" = 20' | DES. BY: SDM | DRW. BY: SDM | CHK. BY: MRA | PRJ. NO.: 25109

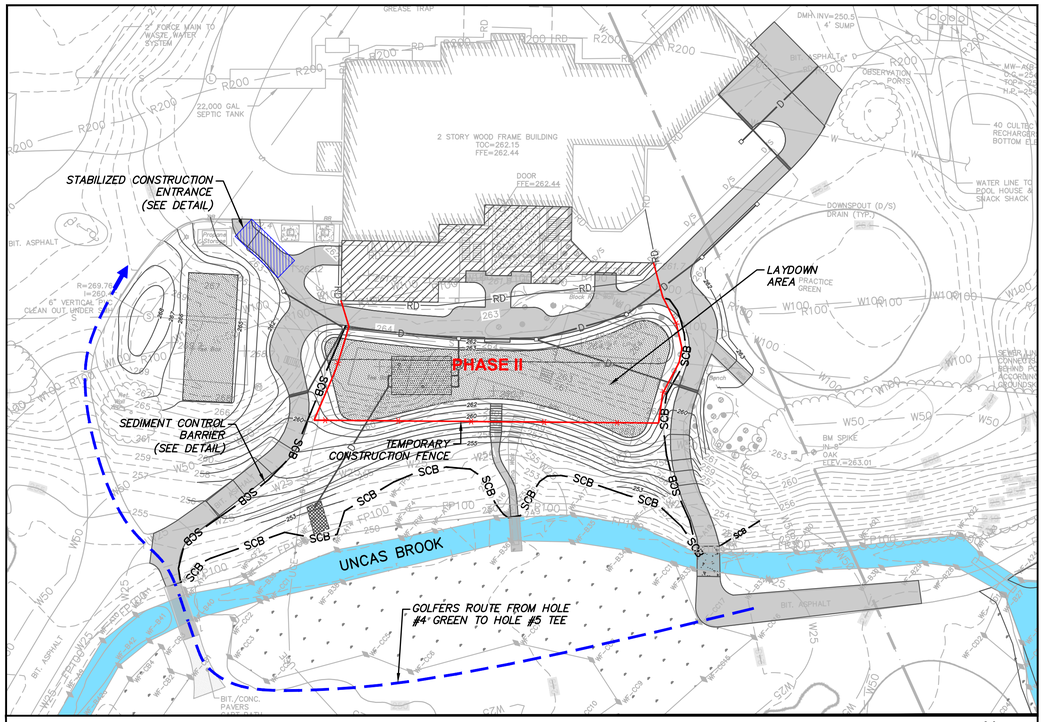
C106



PHASE IA + IC

SCALE: 1"=40'

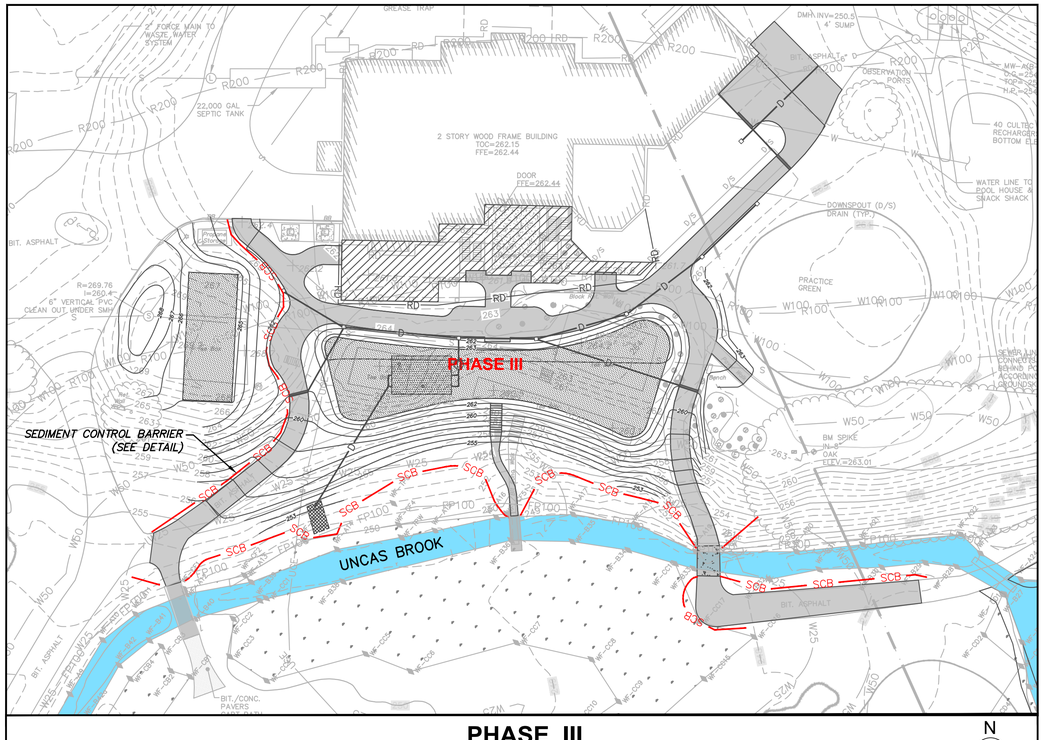
N



PHASE II

SCALE: 1"=30'

N



PHASE III

SCALE: 1"=30'

N

Construction Sequence and Schedule:

The project will be phased to allow portions of the 5th tee complex to be used throughout the construction period:

- **Phase IA: Westerly Tee – Expand the tee, approximately 3 weeks, Fall 2025**
  - Install erosion control (silt fence and filter sock) to isolate the work area and keep sediment off adjacent cart paths
  - Install tree protection
  - Remove propane storage and fencing to a location outside jurisdiction of the Conservation Commission
  - Remove existing stairs
  - Strip sod and compost/dispose of outside jurisdiction of the Conservation Commission
  - Grading to rebuild tee
  - Sod the area for stabilization
  - Remove erosion control after sodding
  - Remove tree protection
- **Phase IB: Vista Pruning at 5th Hole Pond, Fall 2025**
- **Phase IC: First Phase of Planting, Fall 2025**
  - Native grass overseeding (full)
  - Shrub B (full)
  - Shrub A (partial):
    - Lower Portion (wetland hydrology)
    - Easterly Portion (upland hydrology)
  - Herbaceous (partial): plant with New England Wetmix in Wetland Hydrology Areas
- **Phase II: Central Tee Complex – Bring to Rough Grade, Install stone pad and fence to create materials storage area; demo and construction of clubhouse, Fall 2025**

  (During this time, access to the single fifth tee will be from the paved cart path at the fourth hole, across the fairway and up the cart path)
  - Install erosion control (silt fence and filter sock) to isolate the work area and keep sediment off adjacent cart paths
  - Excavate and save perennials for future transplantation
  - Strip sod and compost/dispose of outside jurisdiction of the Conservation Commission
  - Remove existing stairs
  - Bring tee area to rough grade, install crushed stone to create materials storage pad. Note: refueling of equipment to be completed at the maintenance area on a paved surface outside jurisdiction of the Conservation Commission
  - Install temporary construction fencing
  - Demolition of existing clubhouse decking. Overnight vehicular storage on paved surface at maintenance facility outside jurisdiction of the Conservation Commission
  - Construction of exterior of clubhouse to water tight, replacement and addition of HVAC
- **Phase III: Shape Tee, Install Drainage and Construct Cart Paths – Spring 2026**

  (During this time, access to the single fifth tee will be from the paved cart path at the fourth hole, across the fairway and up the westerly cart path)

  Once the materials storage area is no longer needed, remove gravel and install drainage. Fine grade tee. Construct cart path with asphalt; The perimeter will be stabilized with sod and the top layer will be seeded.
  - Remove construction fencing
  - Relocate erosion control (silt fence and filter sock) to the outside of the proposed cart path locations
  - Remove existing stairs
  - Excavate gravel, fine grade tee and install drainage
  - Remove existing cart paths and recycle asphalt off site
  - Strip sod and compost/dispose of outside jurisdiction of the Conservation Commission
  - Construct cart paths and pave
  - Construct stairs
  - Stabilize with sod or seed and hydro mulch
  - Remove erosion control after area stabilized
- **Phase IV: Second Phase of Planting – Fall 2026**
  - Shrub A (partial):
    - Upper Portion (upland hydrology)
  - Herbaceous (partial): plant with New England Showy Wildflower Mix and New England Native Warm Season Grass Mix in Upland Areas

GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	BY	DESCRIPTION
4	09/24/25	SDM	REVISED PER FRANKLIN CC PEER REVIEW
3	09/08/25	SDM	REVISED FOR WRENTHAM RDA PERMITTING
2	08/27/25	SDM	SCRIVENER'S CORRECTIONS
1	08/18/25	SDM	ISSUED FOR PERMITTING

COMMONWEALTH OF MASSACHUSETTS — MICHAEL RICHARD ANDRADE — NO. 45838 — REGISTERED PROFESSIONAL ENGINEER

ELECTRONICALLY SIGNED BY MICHAEL ANDRADE, P.E.

PHASING PLAN

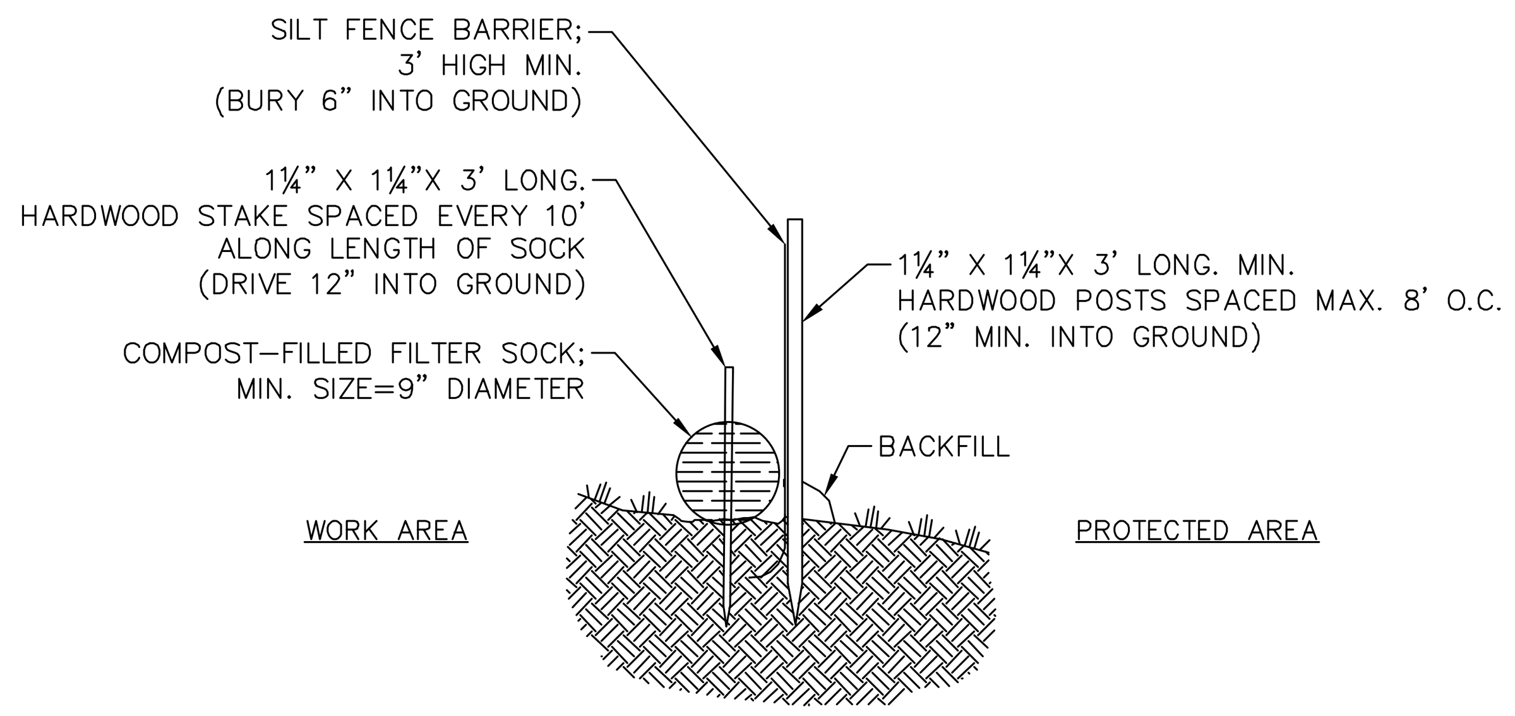
CLUBHOUSE RENOVATIONS

FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

PREPARED FOR: FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET, FRANKLIN, MA 02038

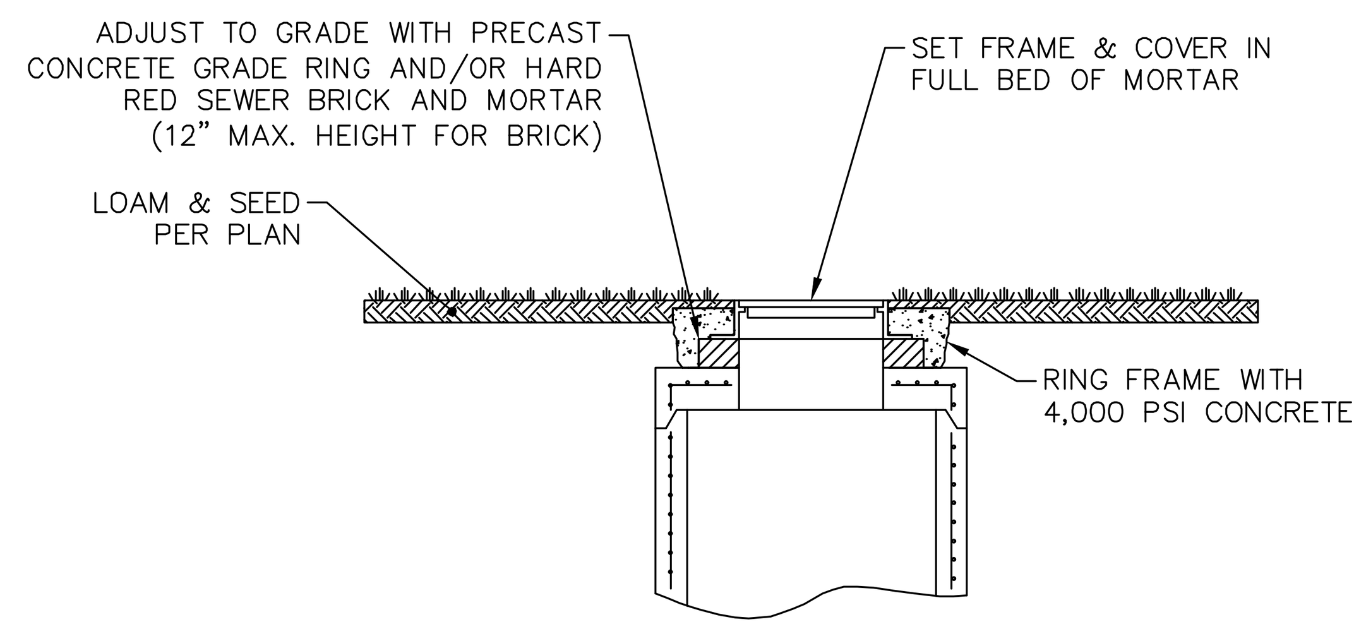
PRJ. NO.: 25109
CHK. BY: MRA
DRW. BY: SDM
DES. BY: SDM
SCALE: 1" = 20'
DATE: 08/18/25

C107

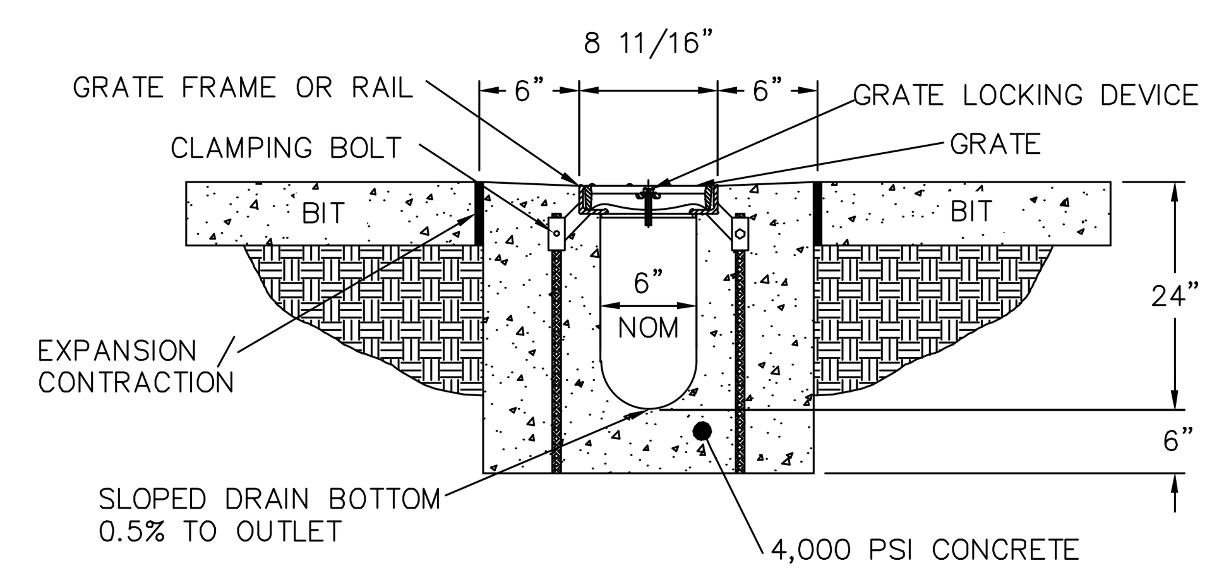


SEDIMENT CONTROL BARRIER– FILTER SOCK WITH SILT FENCE NTS

NOTE:
1) PROVIDE A 3' TO 6' LEVEL AREA BETWEEN THE FILTER SOCK AND THE TOE OF ANY SLOPE TO PROVIDE AREA FOR SEDIMENT ACCUMULATION.

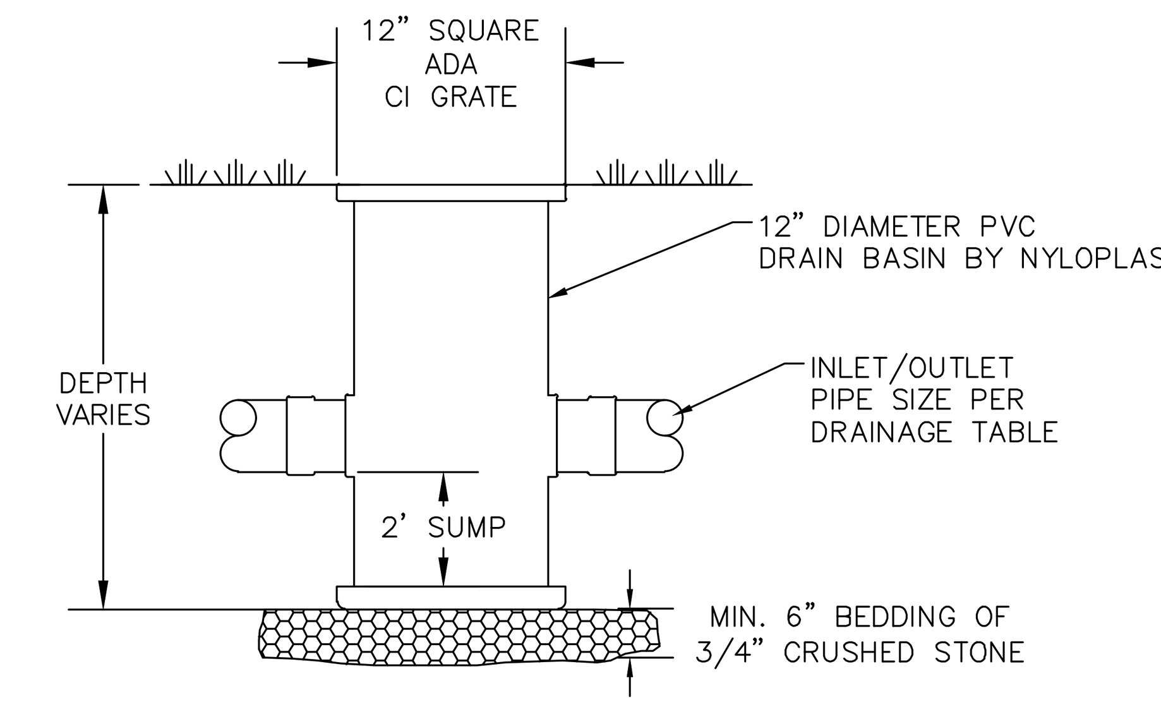


STRUCTURE CASTING ADJUSTMENT NTS



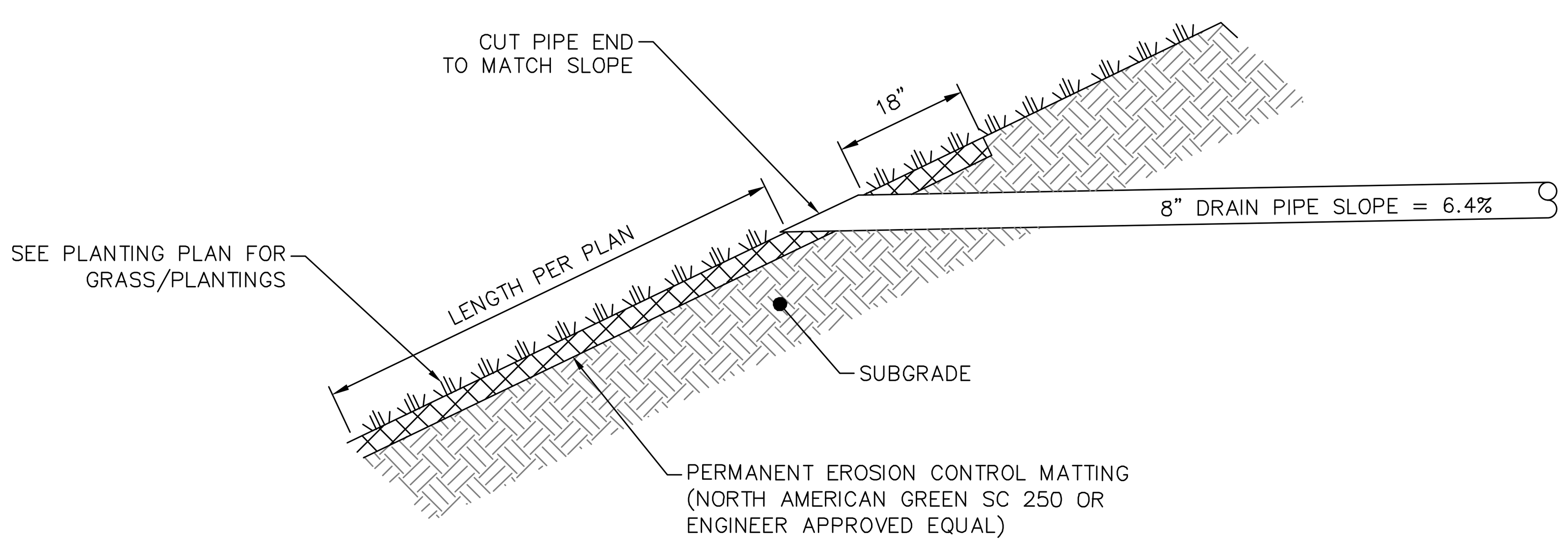
TRENCH DRAIN NTS

NOTES:
TRENCH DRAIN SHALL BE BY MULTI-DRAIN (MODEL# ECONODRAIN SERIES #6) OR ENGINEER APPROVED EQUAL. GRATE SHALL BE ADA-COMPLIANT. INSTALL TRENCH DRAIN PER MANUFACTURER'S RECOMMENDATIONS AND PROVIDE NECESSARY FITTINGS OR APPURTENANCES.

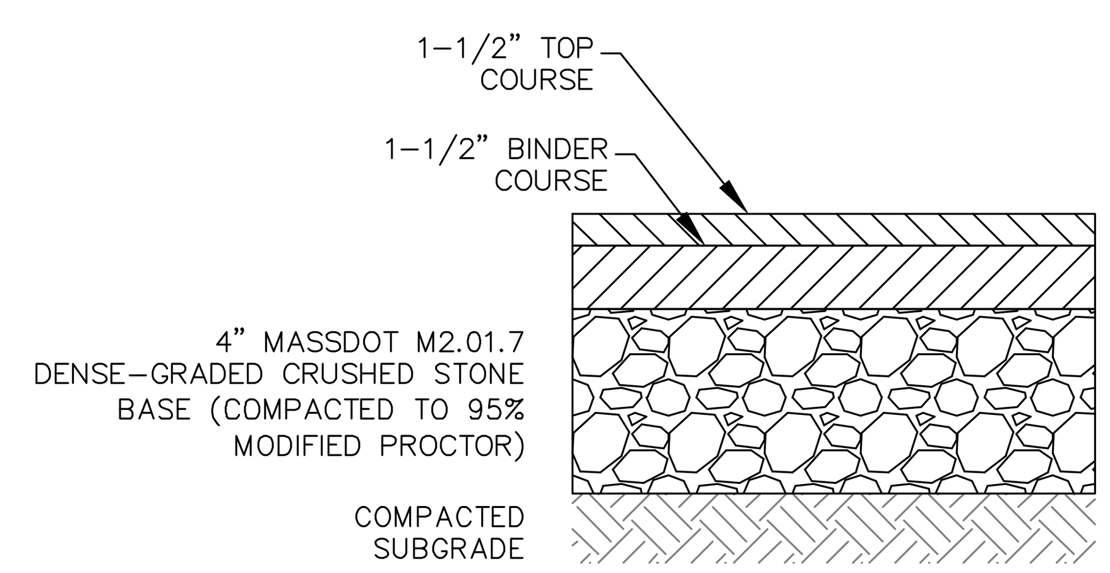


PVC DRAIN BASIN NTS

NOTE:
1) THESE BASINS ARE NOTED AS AREA DRAINS ON THE DRAWINGS.

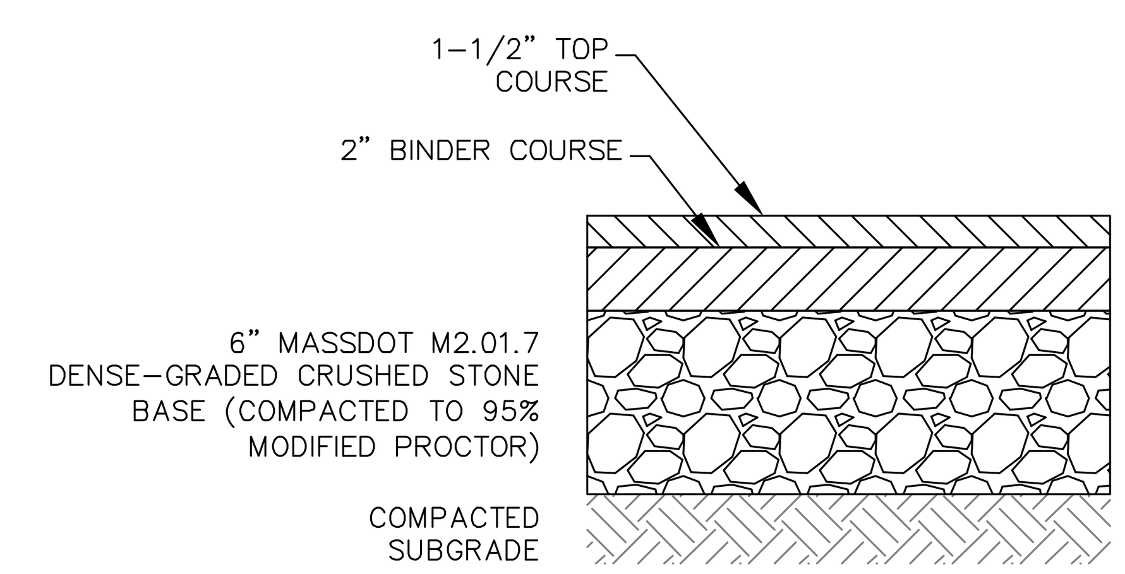


NATURALIZED DRAIN OUTFALL APRON NTS



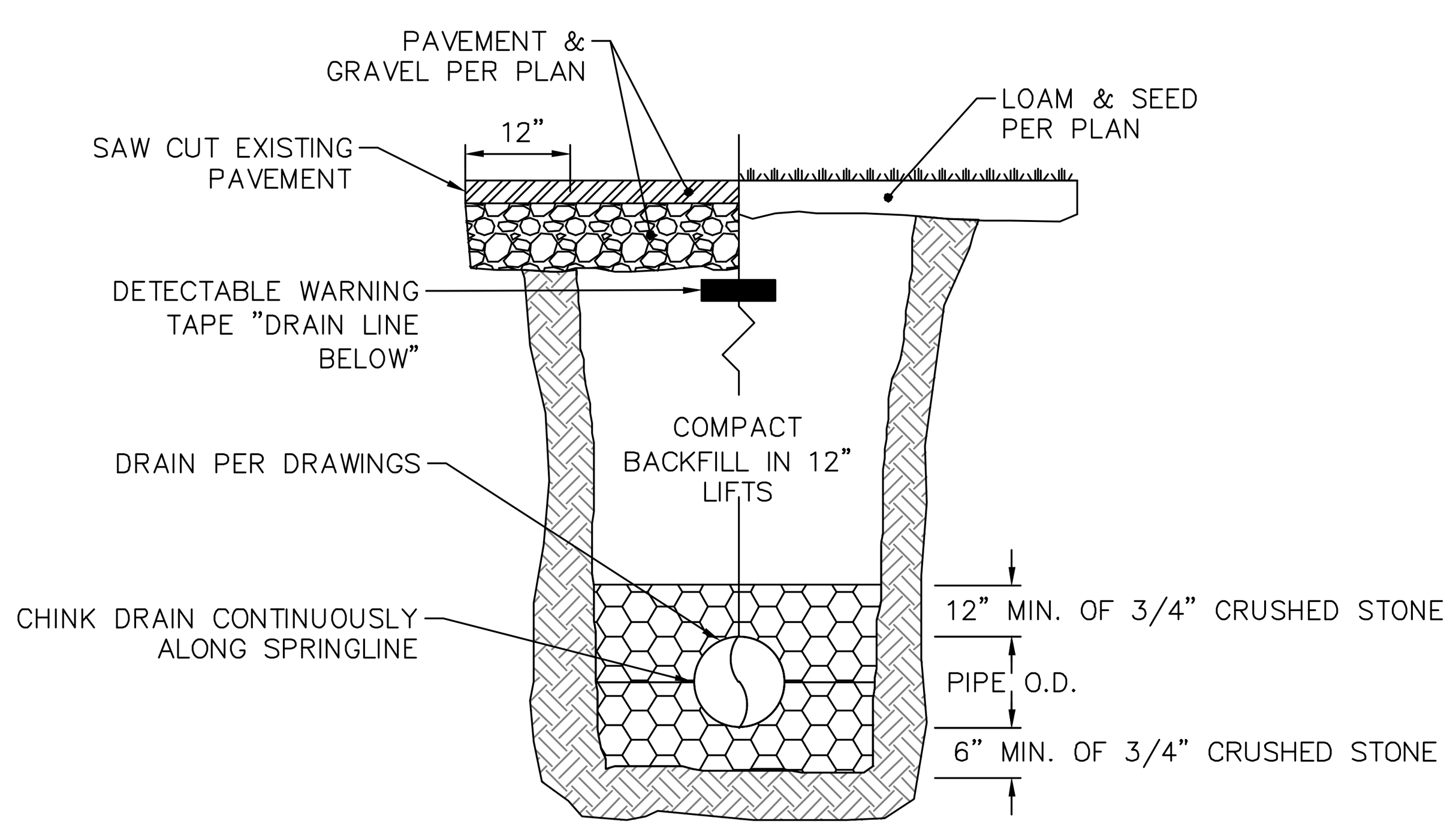
PAVEMENT SECTION–WALKING PATH NTS

NOTES:
1) TAMP ALL ASPHALT EDGES THAT ABUT LAWN, LANDSCAPED OR OTHER SOFT SURFACE.
2) BINDER COURSE: – MASSDOT M3.11.03, TABLE A, "HMA INTERMEDIATE COURSE DENSE BINDER" OR SUPERPAVE INTERMEDIATE COURSE – 19.0MM (MIXTURE DESIGNATION SIC – 19.0).
3) TOP COURSE: – MASSDOT M3.11.03, TABLE A, "SURFACE COURSE STANDARD TOP" OR SUPERPAVE SURFACE COURSE – 9.5MM (MIXTURE DESIGNATION SSC – 9.5).



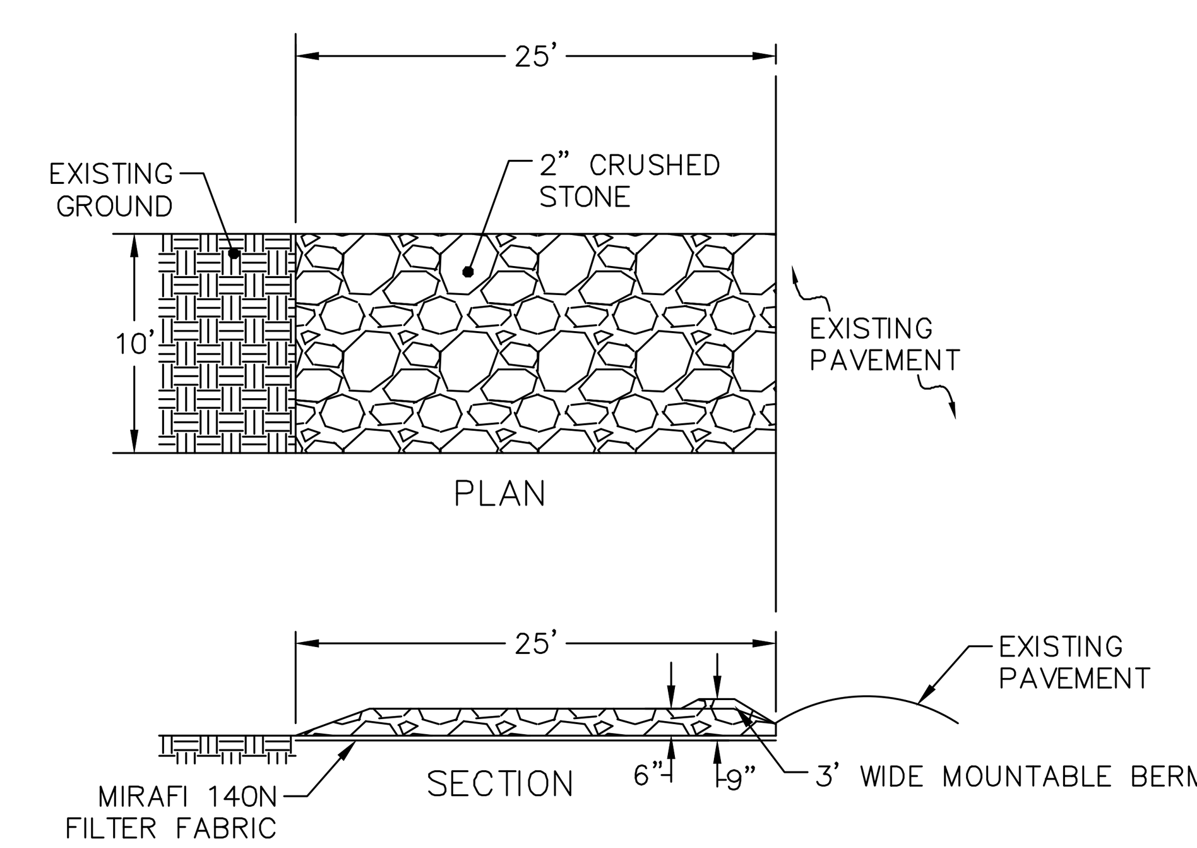
PAVEMENT SECTION–CART PATH NTS

NOTES:
1) TAMP ALL ASPHALT EDGES THAT ABUT LAWN, LANDSCAPED OR OTHER SOFT SURFACE.
2) BINDER COURSE: – MASSDOT M3.11.03, TABLE A, "HMA INTERMEDIATE COURSE DENSE BINDER" OR SUPERPAVE INTERMEDIATE COURSE – 19.0MM (MIXTURE DESIGNATION SIC – 19.0).
3) TOP COURSE: – MASSDOT M3.11.03, TABLE A, "SURFACE COURSE STANDARD TOP" OR SUPERPAVE SURFACE COURSE – 9.5MM (MIXTURE DESIGNATION SSC – 9.5).



HDPE/PVC DRAIN TRENCH SECTION NTS

NOTES:
1) BACKFILL SHALL BE AN AASHTO CLASS III SOIL; EITHER TRENCH SPOILS OR AN IMPORTED SAND AND GRAVEL WITH FINES AND COMPACTED TO 90% OF THE PROCTOR DENSITY.
2) BACKFILL OF HDPE PIPE SHALL CONFORM TO ASTM D2321 AND/OR MANUFACTURER'S SPECIFICATIONS.



STABILIZED CONSTRUCTION ENTRANCE NTS

NOTES:
1) PROVIDE WIDER AND LONGER DIMENSIONS AS REQUIRED; SHORTER LENGTHS WILL REQUIRE MORE FREQUENT MAINTENANCE TO REMAIN EFFECTIVE.

GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	BY	DESCRIPTION
4	09/24/25	SDM	REVISED PER FRANKLIN CC PEER REVIEW
3	09/08/25	SDM	REVISED FOR WRENTHAM RDA PERMITTING
2	08/27/25	SDM	SCRIVENER'S CORRECTIONS
1	08/18/25	SDM	ISSUED FOR PERMITTING

REVISIONS

ELECTRONICALLY STAMPED BY MICHAEL ANDRADE, P.E.

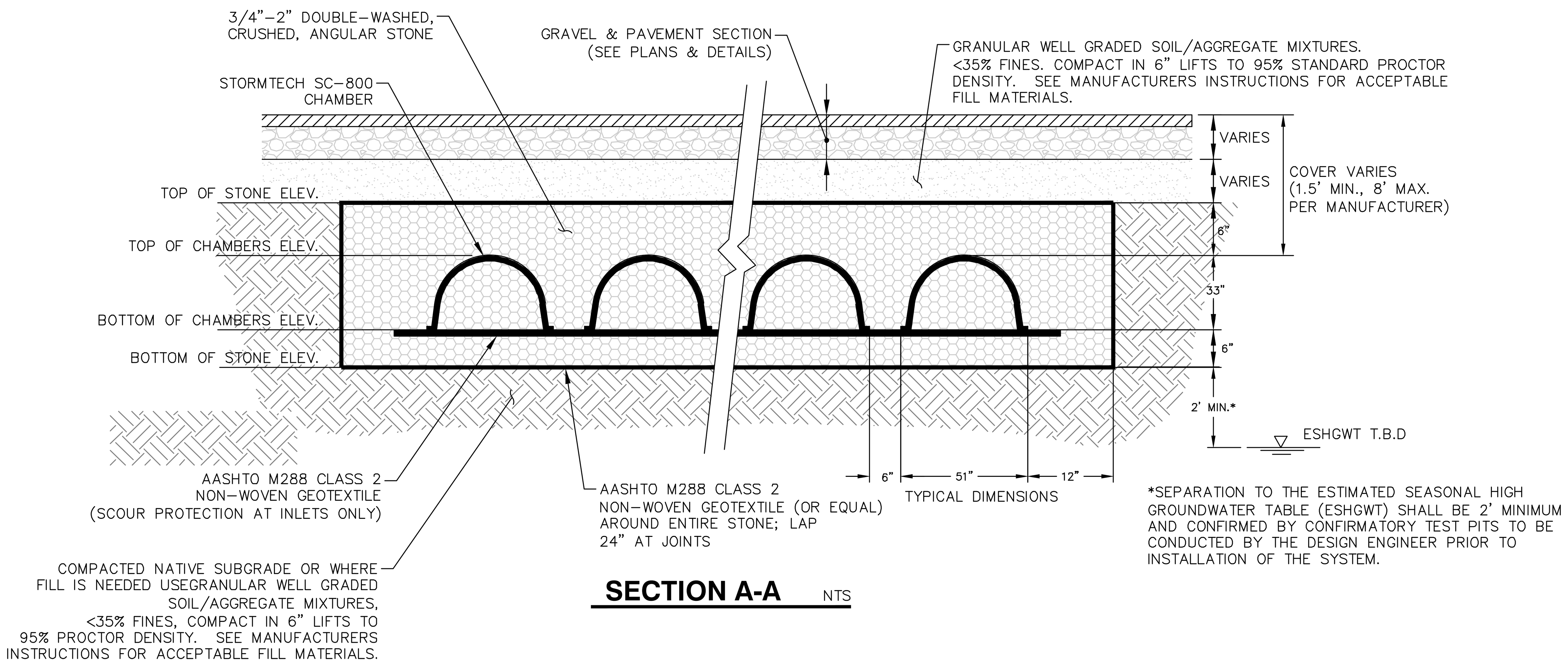
SITE DETAILS - 1

CLUBHOUSE RENOVATIONS
FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

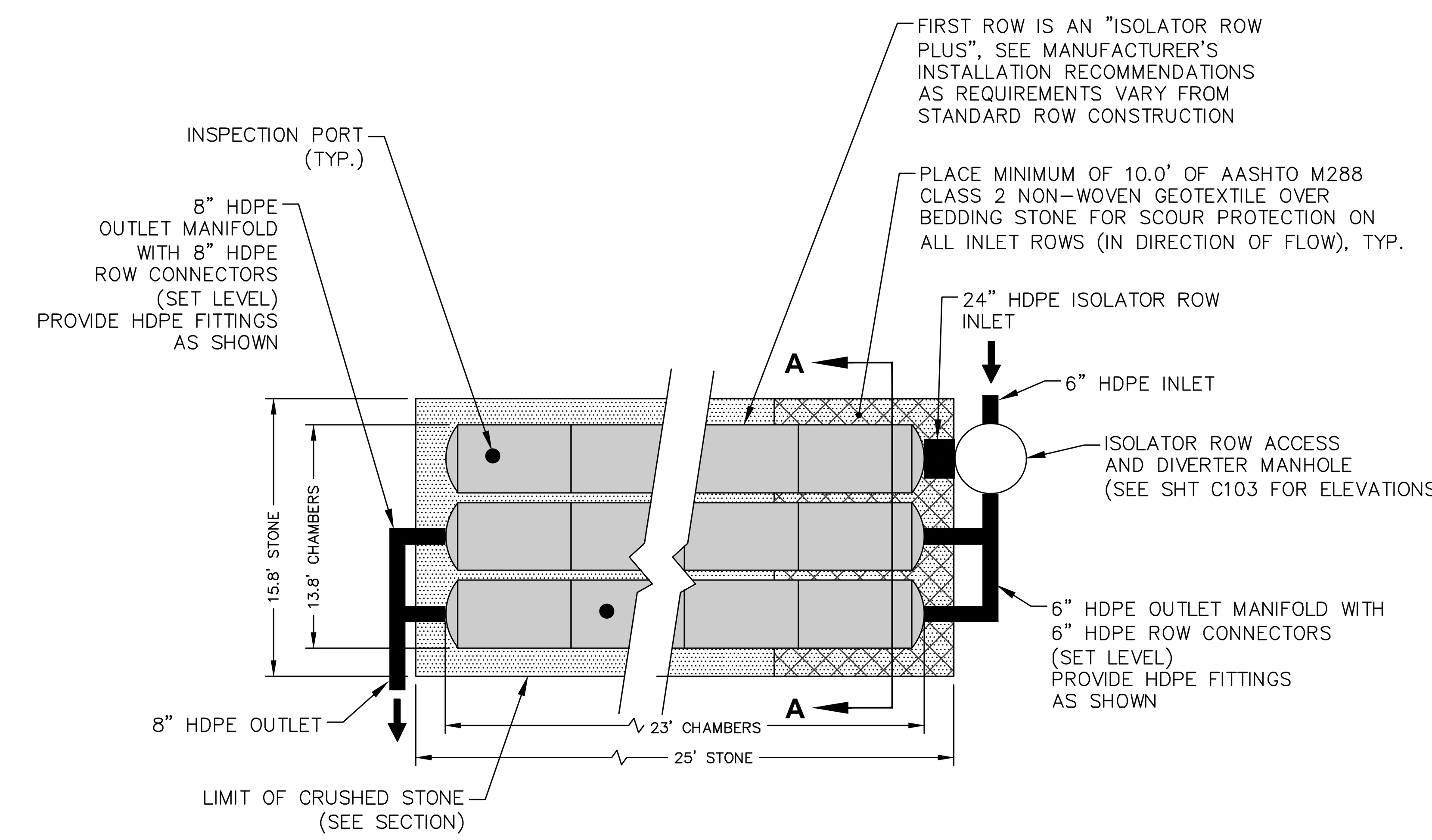
PREPARED FOR: FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET, FRANLIN, MA 02038

DATE: 08/18/25 | SCALE: NOT TO SCALE | DES. BY: SDM | DRW. BY: SDM | CHK. BY: MRA | PRJ. NO.: 25109

C501



SECTION A-A NTS

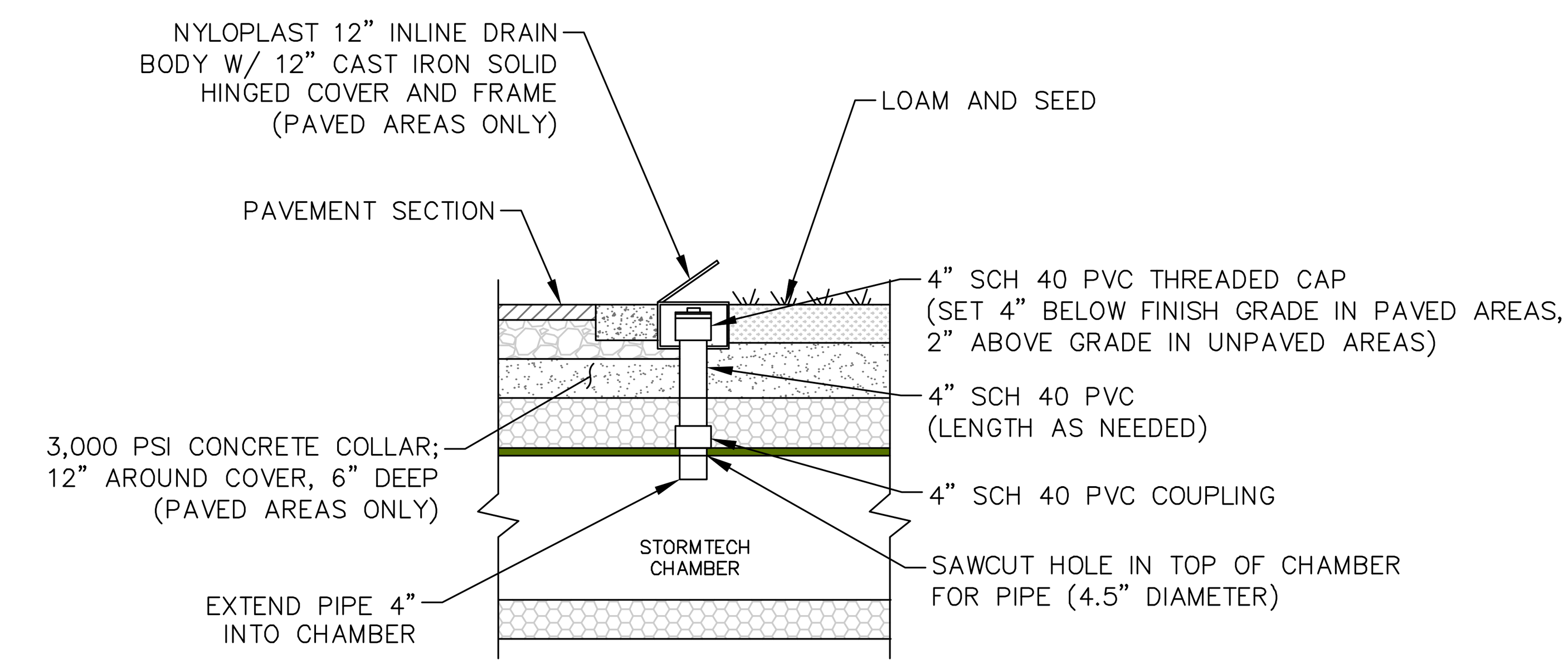


9 STORMTECH SC-800 CHAMBERS ARRANGED IN 3 ROWS OF 3 CHAMBERS LONG EACH
6 STORMTECH SC-800 END CAPS
WITH ISOLATOR ROW PLUS
INSTALLED WITH 6" COVER STONE & 6" BASE STONE

SYSTEM LAYOUT NTS

PROPOSED ELEVATIONS

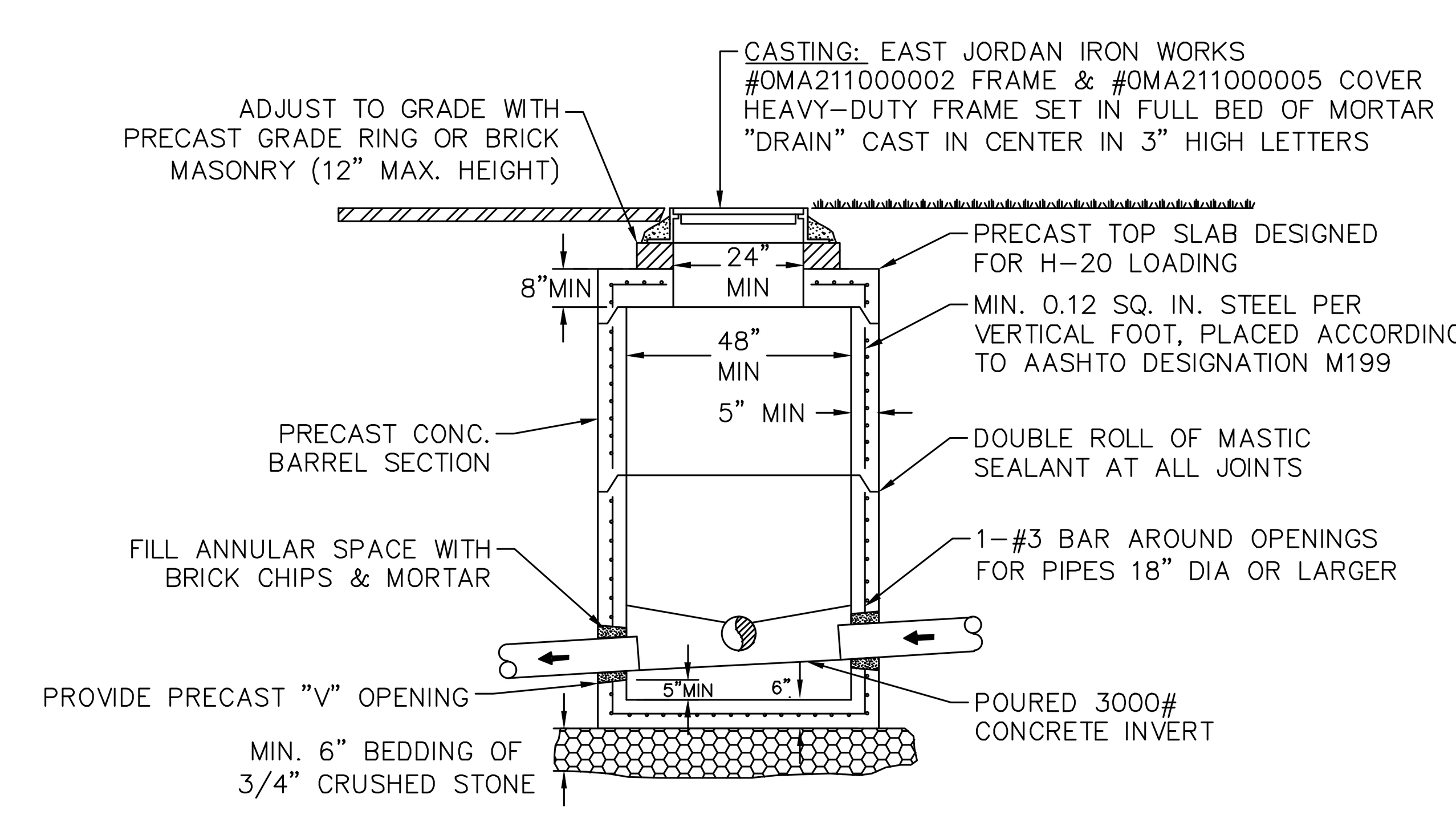
COMPONENT	ELEVATION
MAX. GRADE OVER CHAMBERS	263.1 (4.8' COVER)
MIN. GRADE OVER CHAMBERS	262.5 (4.2' COVER)
TOP OF STONE	255.07
TOP OF CHAMBERS	258.32
6" INLET MANIFOLD	257.00
8" OUTLET MANIFOLD	257.36
24" ISOLATOR ROW INLET	255.57
BOTTOM OF CHAMBERS	255.57
BOTTOM OF STONE	255.07



INSPECTION PORT NTS

SUBSURFACE INFILTRATION SYSTEM

NOTE:
1) THE SYSTEM STORAGE VOLUME BELOW THE LOWEST OUTLET IS DESIGNED TO PROVIDE THE ENTIRE REQUIRED RECHARGE AND 1.0" WATER QUALITY VOLUMES FOR THE PROJECT; 620 CU.FT. PROVIDED FOR COMPLIANCE WITH MASSDEP STORMWATER MANAGEMENT STANDARD #3 AND #4 AND LOCAL REGULATIONS.



FLAT TOP DRAIN MANHOLE NTS

GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	BY	DESCRIPTION
4	09/24/25	SDM	REVISED PER FRANKLIN CC PEER REVIEW
3	09/08/25	SDM	REVISED FOR WRENTHAM RDA PERMITTING
2	08/27/25	SDM	SCRIVENER'S CORRECTIONS
1	08/18/25	SDM	ISSUED FOR PERMITTING

REVISIONS

ELECTRONICALLY STAMPED BY MICHAEL ANDRADE, P.E.

SITE DETAILS - 2
CLUBHOUSE RENOVATIONS
FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

PREPARED FOR: FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET, FRANKLIN, MA 02038

DATE: 08/18/25 | SCALE: NOT TO SCALE | DES. BY: SDM | DRW. BY: SDM | CHK. BY: MRA | PRJ. NO.: 25109

C502

Appendix C

Landscape Plan by Gardner+Gerrish Landscape Architects LLC, dated August 20, 2025 and revised through September 24, 2025

New England Showy Wildflower Mix

Botanical Name	Common Name	Indicator
Schizachyrium scoparium	Little Bluestem	FACU
Chamaecrista fasciculata	Partridge Pea	FACU
Sorghastrum nutans	Indian Grass	UPL
Festuca rubra	Red Fescue	FACU
Elymus canadensis	Canada Wild Rye	FACU+
Elymus riparius	Riverbank Wild Rye	FACW
Heliopsis helianthoides	Ox Eye Sunflower	UPL
Coreopsis lanceolata	Lance Leaved Coreopsis	FACU
Rudbeckia hirta	Black Eyed Susan	FACU-
Liatris spicata	Spiked Gayfeather/Marsh Blazing Star	FAC+
Asclepias syriaca	Common Milkweed	FACU-
Vernonia noveboracensis	New York Ironweed	FACW+
Aster novae-angliae (Symphyotrichum novae-anglia	New England Aster	FACW-
Eupatorium purpureum (Eutrochium maculatum)	Purple Joe Pye Weed	FAC
Asclepias tuberosa	Butterfly Milkweed	NI
Solidago juncea	Early Goldenrod	
Eupatorium perfoliatum	Boneset	FACW

APPLY: 23 LBS/ACRE :1900 sq ft/lb

New England Native Warm Season Grass Mix

Botanical Name	Common Name	Indicator
Schizachyrium scoparium	Little Bluestem	FACU
Andropogon gerardii	Big Bluestem	FAC
Elymus virginicus	Virginia Wild Rye	FACW-
Sorghastrum nutans	Indian Grass	UPL
Festuca rubra	Red Fescue	FACU
Panicum virgatum	Switch Grass	FAC

APPLY: 23 LBS/ACRE :1900 sq ft/lb

New England Wetmix (Wetland Seed Mix)

Botanical Name	Common Name	Indicator
Carex vulpinoidea	Fox Sedge	OBL
Carex scoparia	Blunt Broom Sedge	FACW
Carex lurida	Lurid Sedge	OBL
Carex lupulina	Hop Sedge	OBL
Poa palustris	Fowl Bluegrass	FACW
Bidens frondosa	Beggar Ticks	FACW
Scirpus atrovirens	Green Bulrush	OBL
Asclepias incarnata	Swamp Milkweed	OBL
Carex crinita	Fringed Sedge	OBL
Vernonia noveboracensis	New York Ironweed	FACW+
Juncus effusus	Soft Rush	FACW+
Aster lateriflorus (Symphyotrichum lateriflorum)	Starved/Calico Aster	FACW
Iris versicolor	Blue Flag	OBL
Glyceria grandis	American Mannagrass	OBL
Mimulus ringens	Square Stemmed Monkey Flower	OBL
Eupatorium maculatum (Eutrochium maculatum)	Spotted Joe Pye Weed	OBL

APPLY: 18 LBS/ACRE :2500 sq ft/lb

SHRUB 'A' PLANTINGS- WETLAND HYDROLOGY

Shrub A - Planting Area Woody Planting Plan: Lower Portion (wetland hydrology)

SPECIES; SIZE; SPACING	NUMBER
Shrubs; min. 3' in height, min 1 gal container, 6' on-center average spacing	total*
Highbush blueberry (*Vaccinium corymbosum*)	9
Arrow-wood (*Viburnum recognitum*)	
Sweet pepperbush (*Clethra alnifolia*)	
Nannyberry (*Viburnum lentago*)	
Common winterberry (*Ilex verticillata*)	
Silky dogwood (*Cornus amomum*)	
Red-osier dogwood (*Cornus stolonifera*)	
Swamp Azalea (*Rhododendron viscosum*)	

* Depending upon availability from local nursery stock, at least four (4) of the listed shrub species will be selected, with at least two (2) specimens of each selected species planted, for a total of 9 shrubs (minimum).

SHRUB 'A' PLANTINGS- UPLAND HYDROLOGY

Shrub A - Planting Area Upper Portion (upland hydrology)

SPECIES; SIZE; SPACING	NUMBER
Shrubs; min. 3' in height, min 1 gal container; 6' on-center average spacing	total*
Meadowsweet (*Spirea latifolia*)	93
Lowbush blueberry (*Vaccinium angustifolium*)	
Maple Leaf Viburnum (*Viburnum acerifolium*)	
Bearberry (*Arctostaphylos uva-ursi*)	
Sweet Fern (*Comptonia peregrina*)	
New Jersey Tea (*Ceanothus americanus*)	
Northern Bush Honeysuckle (*Diervilla lonicera*)	

* Depending upon availability from local nursery stock, at least five (5) of the listed shrub species will be selected, with at least eighteen (18) specimens of each selected species planted, for a total of 93 shrubs (minimum).

SHRUB 'B' PLANTINGS

Shrub B (wetland hydrology)

SPECIES; SIZE; SPACING	NUMBER
Shrubs; min. 3' in height, min 1 gal container; 4' on-center average spacing	total*
Buttonbush (Cephalanthus occidentalis)	30
Leatherleaf (*Chamaedaphne calyculata*)	
Water Willow (*Decodon verticillatus*)	
Maleberry (*Lyonia ligustrina*)	
Sweetgale (*Myrica gale*)	
Steeplebush (*Spiraea tomentosa*)	

* Depending upon availability from local nursery stock, at least two (2) of the listed shrub species will be selected, with at least five (5) specimens of each selected species planted, for a total of 30 shrubs (minimum).

SHEET KEY

HERBACEOUS PLANTING AREA
PLANT WITH NEW ENGLAND WETMIX IN WETLAND HYDROLOGY AREAS, AND NEW ENGLAND SHOWY WILDFLOWER MIX AND NEW ENGLAND NATIVE WARM SEASON GRASS MIX IN UPLAND AREAS, SEE SPECS THIS SHEET

SHRUB "A" PLANTING AREA
SEE PLANTING SPECS THIS SHEET

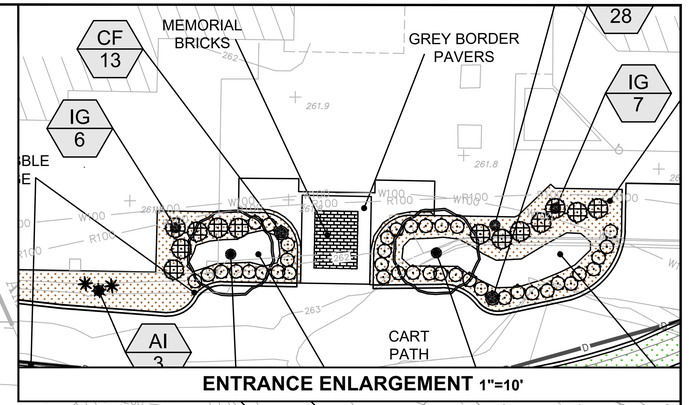
SHRUB "B" PLANTING AREA
SEE PLANTING SPECS THIS SHEET

NATIVE GRASS
PLANT WITH NEW ENGLAND NATIVE WARM SEASON GRASS MIX

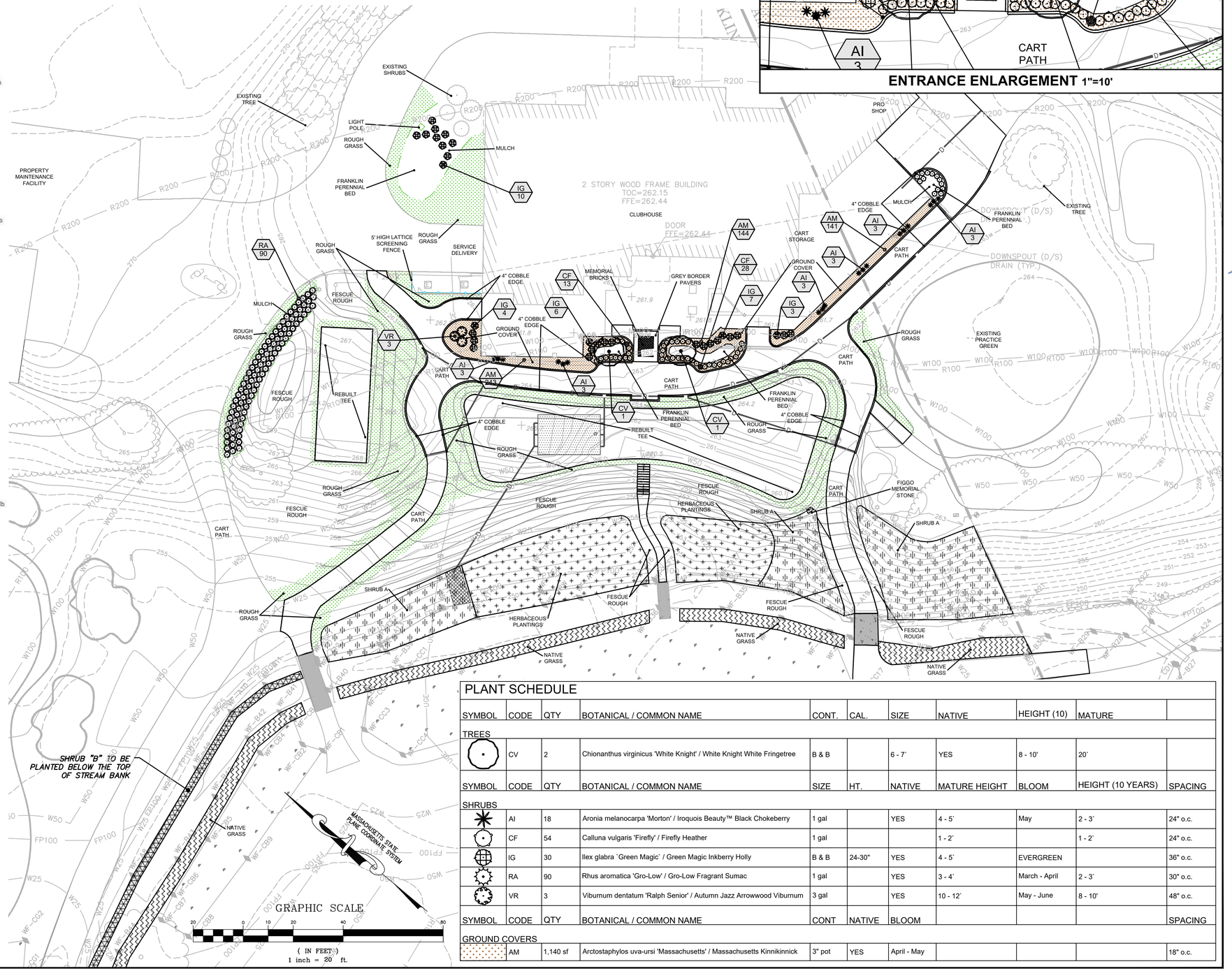
NOTES

AREAS PROPOSED TO BE VEGETATED WITH NATIVE PLANTINGS AND SEEDING SHALL BE MONITORED FOR AT LEAST TWO (2) GROWING SEASONS BY A QUALIFIED WETLAND SCIENTIST TO DEMONSTRATE SUCCESSFUL ESTABLISHMENT. REPORTS, INCLUDING PHOTOGRAPHS WILL BE ISSUED ANNUALLY.

FOR A PERIOD OF AT LEAST TWO (2) GROWING SEASONS, PURPLE LOOSESTRIFE (LYTHRUM SALICARIA) AND ANY OTHER INVASIVE PLANTS OBSERVED IN THE PLANTING AREAS WILL BE REMOVED BY HAND.



ENTRANCE ENLARGEMENT 1"=10'



PLANT SCHEDULE

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT.	CAL.	SIZE	NATIVE	HEIGHT (10)	MATURE	
TREES										
	CV	2	Chionanthus virginicus 'White Knight' / White Knight White Fringetree	B & B		6 - 7'	YES	8 - 10'	20`	
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	SIZE	HT.	NATIVE	MATURE HEIGHT	BLOOM	HEIGHT (10 YEARS)	SPACING
SHRUBS										
	AI	18	Aronia melanocarpa 'Morton' / Iroquois Beauty™ Black Chokeberry	1 gal		YES	4 - 5`	May	2 - 3`	24" o.c.
	CF	54	Calluna vulgaris 'Firefly' / Firefly Heather	1 gal			1 - 2`		1 - 2`	24" o.c.
	IG	30	Ilex glabra `Green Magic` / Green Magic Inkberry Holly	B & B	24-30"	YES	4 - 5`	EVERGREEN		36" o.c.
	RA	90	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	1 gal		YES	3 - 4`	March - April	2 - 3`	30" o.c.
	VR	3	Viburnum dentatum 'Ralph Senior' / Autumn Jazz Arrowwood Viburnum	3 gal		YES	10 - 12`	May - June	8 - 10'	48" o.c.
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	NATIVE	BLOOM				SPACING
GROUND COVERS										
	AM	1,140 sf	Arctostaphylos uva-ursi 'Massachusetts' / Massachusetts Kinnikinnick	3" pot	YES	April - May				18" o.c.

GARDNER + GERRISH LANDSCAPE ARCHITECTS LLC

NO.	REVISIONS	BY	DATE
1	Conservation Comments	TDG	9/24/25

REGISTERED LANDSCAPE ARCHITECT — COMMONWEALTH OF MASSACHUSETTS — Timothy D. Gerrish — No. 4045

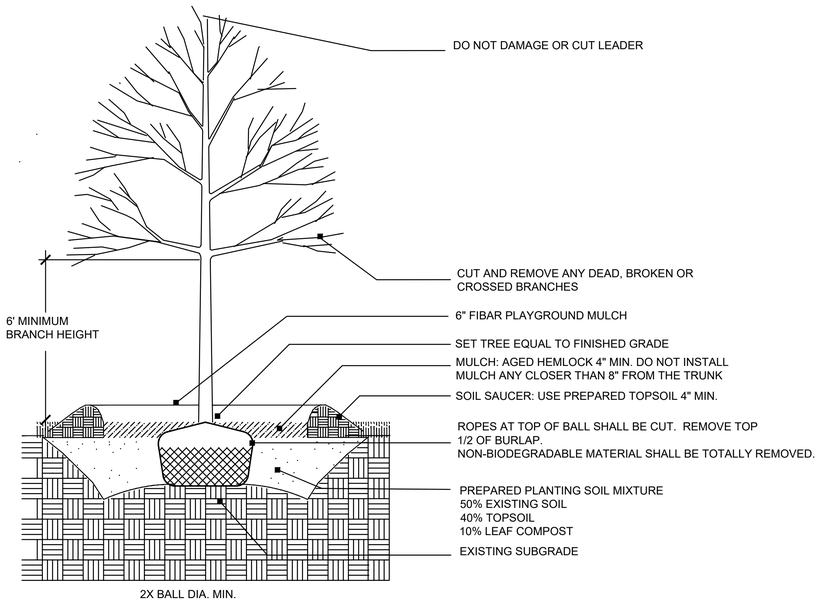
Landscape Plan

Franklin Country Club

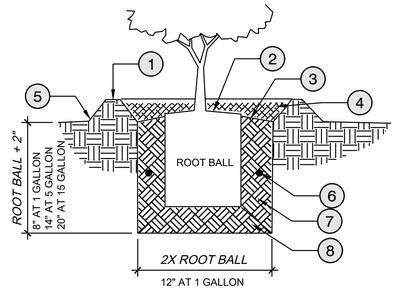
Franklin, Massachusetts

DESIGNED BY	DWG SCALE
TDG	1" = 20'
DRAWN BY	CONTRACT NO
TDG	
CHECKED BY	DATE
TDG	08.20.25

L-1

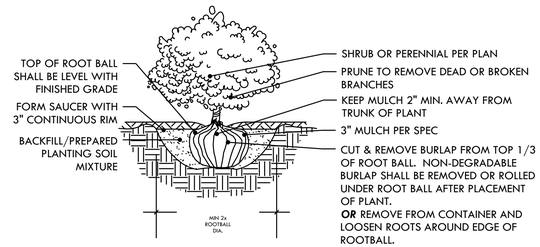


1 DECIDUOUS TREE PLANTING No Scale

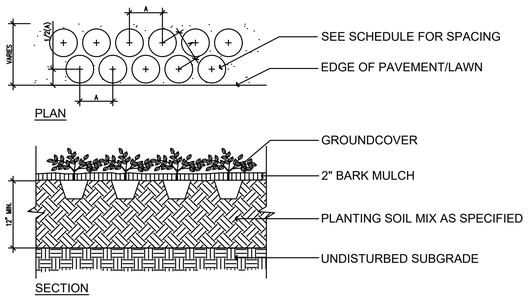


1. WATER WELL: 4" HIGH AT SHRUB, NO WATER WELL AT LAWN AREA.
2. SET ROOT BALL CROWN 1" HIGHER THAN SURROUNDING FINISHED GRADE.
3. SLOPE FINISHED GRADE AT BACKFILL AWAY FROM ROOT BALL.
4. MULCH TO 2" DEPTH AT WATER WELL.
5. FINISHED GRADE.
6. PLANT TABLETS AS NOTED OR SPECIFIED.
7. BACKFILL MIX. SEE NOTES AND SPECIFICATIONS.
8. NATIVE SOIL MIX FIRMLY COMPACTED.

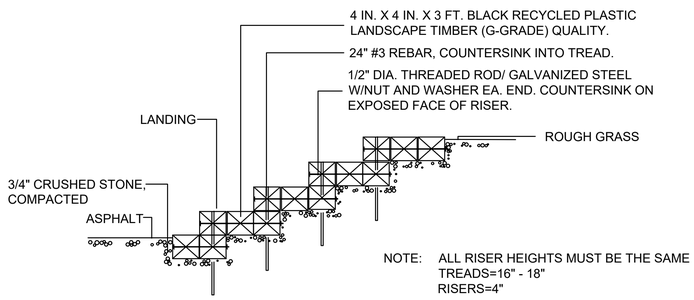
2 SHRUB PLANTING No Scale



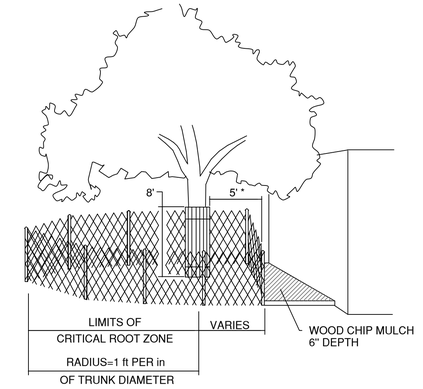
3 SHRUB B&B PLANTING No Scale



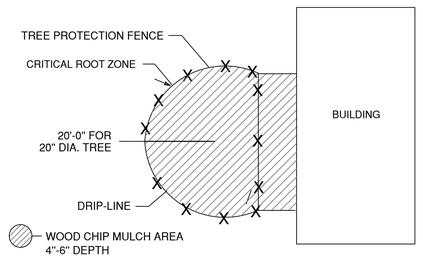
4 GROUND COVER PLANTING No Scale



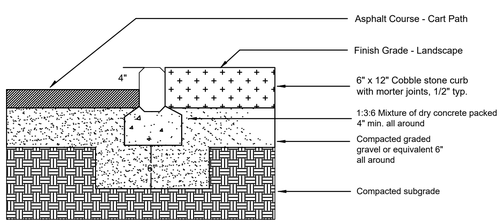
5 SYNTHETIC TIMBER STEPS No Scale



*AS NEEDED TO PROVIDE MINIMUM NECESSARY WORK SPACE.
IF LESS THAN 5', THEN ADD BOARDS STRAPPED TO TRUNK.



6 TREE PROTECTION No Scale



7 COBBLE EDGING No Scale

GARDNER+GERRISH
LANDSCAPE ARCHITECTS LLC

NO.	REVISIONS	BY	DATE

MASSACHUSETTS
Timothy D. Gerrish
REGISTERED LANDSCAPE ARCHITECT
NO. 4045

Details
Plan

Franklin Country Club
Franklin, Massachusetts

DESIGNED BY	TDG	DWG SCALE	N.T.S.
DRAWN BY	TDG	CONTRACT NO	
CHECKED BY	TDG	DATE	08.20.25

L-2

Appendix D

Supplement #1 to Stormwater Management Report
Prepared by Graves Engineering Inc, dated September 24, 2025

SUPPLEMENT #1
TO
STORMWATER REPORT
for
CLUBHOUSE RENOVATIONS

Franklin Country Club
672 East Central Street
Franklin, MA 02038

Prepared for:
Franklin Country Club
672 East Central Street
Franklin, MA 02038

Date:

September 24, 2025

Prepared By:

GRAVES ENGINEERING, Inc.
100 Grove Street
Worcester, MA 01605
T 508-856-0321
F 508-856-0357
gravesengineering.com

TABLE OF CONTENTS

NARRATIVE

REVISED 09/24/25

Project Description

Site Location: Clubhouse Building
Franklin Country Club
672 East Central Street, Franklin, MA 02038

Development Type: Golf Course

Project Summary:

The proposed project will consists of an addition to the existing Clubhouse building, reconfiguration of Hole #5 tee boxes, re-paving of cart paths adjacent to site improvements, and the installation of related stormwater improvements on the site. The project will increase impervious surfaces in the study area by 1,351 sq. ft.

A drainage and stormwater management system will recharge and attenuate runoff from the building in full compliance with MassDEP Stormwater Management Standards and applicable Town of Franklin Bylaws and Regulations pertaining to stormwater management.

Existing Site Conditions

Location: The project site is located at 672 East Franklin Street

Ground Cover: The ground cover in the drainage study area is a mix of impervious, lawn, paved cart path.

Slopes: Much of the disturbed area in the study area generally slopes from northeast to southwest towards Uncas Brook. The remaining portion of the site drains to an existing subsurface infiltration (Cultec) system.

Soil Types: Project site soil types as mapped by the USDA-NRCS are primarily Hinckley; loamy sand (map unit symbol 245C) and small area of Merrimac fine sandy loam (map unit symbol 254B). These soils are classified as hydrologic soil group (HSG) “A”. No onsite soil testing has been conducted in the project area as it is within the daily-use golf course area.

HYDROLOGY CALCULATIONS

Methodology

Peak rate of runoff flows were calculated using SCS TR-20 and TR-55 methodology as implemented by the HydroCAD Stormwater Modeling System computer program. The 2, 10, 25, and 100-year storm events were analyzed with the HydroCAD program using site-specific Northeast Regional Climate Center (NRCC) rainfall frequency data as follows:

Rainfall Amounts (inches) by Frequency (NRCC)			
2 Year	**10 Year**	**25 Year**	**100 Year**
3.28	4.94	6.25	8.95

Pre-Development

The pre-development drainage area has been modeled as two subcatchments that drain to separate discharge points (design points).

Design Point #1 (Uncas Brook): This design point represents runoff from the existing paved cart paths and #5 tee box southwestern patio area, existing building, and pervious area to the Uncas Brook.

Design Point #2 (Outfall of Existing Cultec system): This design point represents runoff from the existing roof drain system to an existing Cultec subsurface system.

In accordance with the Town of Franklin "Best Development Practices Guidebook", new developments are required to match both peak rates of runoff and volumes from pre-development to post-development conditions; as such volumes are presented in the tables below in addition to peak rates of runoff. Refer to Appendix B for the HydroCAD output sheets for each storm event. A summary is as follows:

Pre-Development Peak Rate of Runoff (cfs)				
	2 Year	**10 Year**	**25 Year**	**100 Year**
Design Point #1	0.02	0.52	1.19	2.91
Design Point #2	0.00	0.25	0.53	0.90

Pre-Development Volume (cf)				
	2 Year	**10 Year**	**25 Year**	**100 Year**
Design Point #1	567	2,435	4,539	10,030
Design Point #2	0	755	1,534	3,371

Post-Development

The total post-development drainage area is the same total area as the pre-development and is broken into three subcatchments that drain to either Design Point #1 or Design Point #2.

Refer to Appendix C for the HydroCAD output sheets for each storm event. A summary of the peak rate of runoff and volumes is as follows:

Post-Development Peak Rate of Runoff (cfs)				
	2 Year	**10 Year**	**25 Year**	**100 Year**
Design Point #1	0.00	0.05	0.31	2.13
Design Point #2	0.00	0.14	0.41	0.82

Post-Development Volume (cf)				
	2 Year	**10 Year**	**25 Year**	**100 Year**
Design Point #1	75	710	2,015	6,536
Design Point #2	0.00	526	1,443	3,634

The total net change in peak rate of runoff and volume from pre-development to post-development is as follows:

Comparison of Pre- vs. Post-Development Peak Rate of Runoff (cfs) Net Change				
	2 Year	**10 Year**	**25 Year**	**100 Year**
Design Point #1	-0.02	-0.47	-0.88	-0.78

Design Point #2	0.00	-0.11	-0.12	-0.08

Comparison of Pre- vs. Post-Development Volume (cf) Net Change				
	2 Year	**10 Year**	**25 Year**	**100 Year**
Design Point #1	-492	-1,725	-2,524	-3,494
Design Point #2	0.00	-229	-91	+263(1)

(1) The increase in volume for the 100-year storm is considered minimal and does not negatively impact receiving lands or waters.

STORMWATER MANAGEMENT

To demonstrate compliance with MassDEP Stormwater Management and the Town of Franklin Bylaws and Regulations pertaining to stormwater management. Due to the proposed increase of impervious surfaces with the project, it is considered a "mix of new and redevelopment" in terms of MassDEP.

Drain Outfall Riprap Sizing Calculations (Stormwater Management Standard 1)

In lieu of a traditional riprap-stabilized drain outfall apron, a naturalized drain outfall apron has been designed to compliment the golf course landscape plan and mask the outfall location, while also providing adequate stabilization for the prescribed outfall flows and velocities. Specifically, a permanent erosion control matting (North American Green SC250) has been selected for the apron which can withstand velocities up to 15 feet per second (when vegetated). The maximum velocity at the outfall during the 100-year is 10.9 feet per second this the selected matting will protect against erosion for all design storms.

Peak Rate Attenuation (Stormwater Management Standard 2)

Runoff is attenuated for the 2, 10, 25 and 100-year storm events.

Recharge to Groundwater (Stormwater Management Standard 3)

USDA-NRCS soil survey indicates site soils in the project area are hydrologic group A soils.

Required recharge volume

Required Recharge Volume (R_v) = F x Impervious Area where, F = Target Depth Factor (in.)
F = 0.06" for 'A' Soils

Net increase in site impervious area (pre to post conditions) = 1,351 ft²

R_v = (0.06"/12") x 1,351 ft² = 68 ft³

The proposed subsurface infiltration system has a total volume of 592 ft³ below the lowest outlet, thus Standard 3 is satisfied. See attached HydroCAD Stage-Area-Storage worksheet demonstrating the volume of the system.

Based upon an exfiltration rate of 2.41 in./hr. (a conservative Rawls rate for sandy loam 'A' soils), the drawdown time is calculated as follows:

$Time_{drawdown} = R_v / (K \times Bottom\ Area)$ where, R_v= recharge BMP storage volume
K= Saturated Hydraulic Conductivity (Rawls) Rate

$Time_{drawdown}$ = 617 ft³ / (2.41 in./hr./12" x 396 ft²) = 7.8 hours < 72 hours.

A portion of the proposed roof area shall be constructed of standing seam, Kynar finished, Galvalume steel material and thus is not considered a traditional galvanized steel or copper "metal roof" as defined by MassDEP and thus does not require additional runoff treatment prior to infiltration when located within a critical area as this project site is. It is noted that the proposed stormwater treatment system "Isolator Row Plus" provides up to 81% metal (zinc) removal.

Water Quality Calculations (Stormwater Management Standard 4)

The new impervious surfaces created by the project include roof area and cart paths. Many jurisdictions consider cart paths used by pedestrian and electric-only carts and that are seasonal is use (not in winter), to produce "clean" runoff that does not require treatment of total suspended solids (TSS) or total phosphorus (TP) (TP removal as required by the Town of Franklin Bylaws Chapter 153-Stormwater Management). As there is not yet published documentation to support this, the proposed stormwater system has been designed to treat TSS.

WQV for 1": 1"/12" x 4,110 ft²= 343 ft³

(4,110 ft²=total post-development impervious area to the proposed subsurface system. 1" depth required due to the presence of critical areas and per Town of Franklin Bylaws Chapter 153-Stormwater Management).

The proposed subsurface infiltration system has a total volume of 592 ft³ below the lowest outlet, thus the required Water Quality Volume is provided within the proposed system.

The proposed treatment train of a proprietary stormwater treatment unit ("Isolator Row Plus") and subsurface infiltration system is anticipated to have a TSS removal rate in excess of 80%. Refer to Appendix G for detailed TSS calculations that demonstrate the TSS removal rates for the site.

Further, the presence of a critical area and soils with rapid infiltration rates requires 44% TSS removal prior to discharging to infiltration. To address this, an "Isolator Row Plus" treatment device is proposed. This will remove 80% of TSS prior to discharge to the subsurface infiltration system.

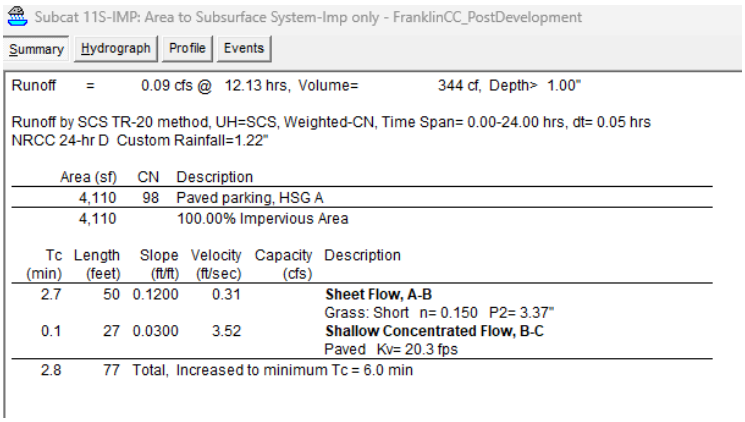
Per the manufacturer (Stormtech); the required number of chambers for the Isolator Row Plus is calculated as follows:

$$\text{\# of chambers} = \frac{\text{Water Quality Flowrate}}{\text{Chamber Treatment Rate}}$$

Thus:

$$\text{\# of chambers} = \frac{\text{0.09 cfs (for 1" runoff depth over contributing impervious area)*}}{\text{0.15 cfs}} = 0.6 \text{ chambers}$$

*See the clipped HydroCAD output below for the Water Quality Flowrate calculation:



Subcat 11S-IMP: Area to Subsurface System-Imp only - FranklinCC_PostDevelopment

Summary | Hydrograph | Profile | Events

Runoff = 0.09 cfs @ 12.13 hrs, Volume= 344 cf, Depth> 1.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
NRCC 24-hr D Custom Rainfall=1.22"

Area (sf)	CN	Description
4,110	98	Paved parking, HSG A
4,110		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	50	0.1200	0.31		**Sheet Flow, A-B** Grass: Short n= 0.150 P2= 3.37"
0.1	27	0.0300	3.52		**Shallow Concentrated Flow, B-C** Paved Kv= 20.3 fps
2.8	77	Total, Increased to minimum Tc = 6.0 min			

A row of 4 chambers is proposed thus the Isolator Row Plus is adequately sized to treat the Water Quality Volume.

Additionally, a Long-Term Pollution Prevention Plan has been developed for the project.

Higher Potential Pollutant Loads (Stormwater Management Standard 5)

The site is not classified as a land use with a higher potential pollutant load (LUHPPL).

Protection of Critical Areas (Stormwater Management Standard 6)

The site discharges to a critical area as shown on MassGIS (Zone II of a public water supply; PWS ID 4350000, Town of Wrentham Water Division). Per the Massachusetts DEP Stormwater Handbook, infiltration BMPs are “highly recommended” in such critical areas thus the design is appropriate.

Redevelopment Projects (Stormwater Management Standard 7)

The site does not meet the criteria of a redevelopment project as the net impervious area will increase.

Erosion/Sediment Control (Stormwater Management Standard 8)

Site plans provide details for erosion and sediment control during construction.

Operation/Maintenance Plan (Stormwater Management Standard 9)

Refer to the attached Long-Term Drainage System Operation & Maintenance Plan.

Illicit Discharge Compliance Statement (Stormwater Management Standard 10)

There are no existing illicit discharges to GEI or the owner’s knowledge and there are no proposed illicit discharges. There are no cross-connections between the stormwater system and the wastewater system and discharges to each will remain separate; these systems are shown on the project drawings to the extent that they are known. Refer to Appendix F Long-Term Drainage System Operation & Maintenance Plan for an owner-signed Compliance Statement.

Stage-Area-Storage for Pond 2P: Subsurface System

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
255.07	**396**	0	256.39	396	326	257.71	396	680
255.09	396	3	256.41	396	332	257.73	396	685
255.11	396	6	256.43	396	338	257.75	396	690
255.13	396	9	256.45	396	344	257.77	396	694
255.15	396	13	256.47	396	350	257.79	396	699
255.17	396	16	256.49	396	356	257.81	396	703
255.19	396	19	256.51	396	361	257.83	396	708
255.21	396	22	256.53	396	367	257.85	396	712
255.23	396	25	256.55	396	373	257.87	396	716
255.25	396	28	256.57	396	379	257.89	396	721
255.27	396	32	256.59	396	384	257.91	396	725
255.29	396	35	256.61	396	390	257.93	396	729
255.31	396	38	256.63	396	396	257.95	396	733
255.33	396	41	256.65	396	402	257.97	396	738
255.35	396	44	256.67	396	407	257.99	396	742
255.37	396	47	256.69	396	413	258.01	396	746
255.39	396	51	256.71	396	419	258.03	396	749
255.41	396	54	256.73	396	424	258.05	396	753
255.43	396	57	256.75	396	430	258.07	396	757
255.45	396	60	256.77	396	436	258.09	396	761
255.47	396	63	256.79	396	441	258.11	396	764
255.49	396	66	256.81	396	447	258.13	396	768
255.51	396	70	256.83	396	452	258.15	396	771
255.53	396	73	256.85	396	458	258.17	396	775
255.55	396	76	256.87	396	464	258.19	396	778
255.57	396	79	256.89	396	469	258.21	396	782
255.59	396	85	256.91	396	475	258.23	396	785
255.61	396	91	256.93	396	480	258.25	396	788
255.63	396	98	256.95	396	486	258.27	396	792
255.65	396	104	256.97	396	491	258.29	396	795
255.67	396	110	256.99	396	497	258.31	396	798
255.69	396	116	257.01	396	502	258.33	396	801
255.71	396	122	257.03	396	507	258.35	396	805
255.73	396	128	257.05	396	513	258.37	396	808
255.75	396	135	257.07	396	518	258.39	396	811
255.77	396	141	257.09	396	524	258.41	396	814
255.79	396	147	257.11	396	529	258.43	396	817
255.81	396	153	257.13	396	534	258.45	396	820
255.83	396	159	257.15	396	540	258.47	396	824
255.85	396	165	257.17	396	545	258.49	396	827
255.87	396	171	257.19	396	550	258.51	396	830
255.89	396	177	257.21	396	556	258.53	396	833
255.91	396	183	257.23	396	561	258.55	396	836
255.93	396	189	257.25	396	566	258.57	396	839
255.95	396	195	257.27	396	571	258.59	396	842
255.97	396	201	257.29	396	577	258.61	396	846
255.99	396	208	257.31	396	582	258.63	396	849
256.01	396	214	257.33	396	587	258.65	396	852
256.03	396	220	257.35	396	592	258.67	396	855
256.05	396	226	257.37	396	597	258.69	396	858
256.07	396	232	257.39	396	602	258.71	396	861
256.09	396	238	257.41	396	607	258.73	396	865
256.11	396	244	257.43	396	612	258.75	396	868
256.13	396	250	257.45	396	617	258.77	396	871
256.15	396	256	257.47	396	622	258.79	396	874
256.17	396	261	257.49	396	627	258.81	396	**877**
256.19	396	267	257.51	396	632			
256.21	396	273	257.53	396	637			
256.23	396	279	257.55	396	642			
256.25	396	285	257.57	396	647			
256.27	396	291	257.59	396	652			
256.29	396	297	257.61	396	657			
256.31	396	303	257.63	396	662			
256.33	396	309	257.65	396	666			
256.35	396	315	257.67	396	671			
256.37	396	321	257.69	396	676			

Volume below lowest outlet=592 cf

APPENDIX A

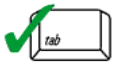
MASSDEP STORMWATER REPORT CHECKLIST

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature

Electronically stamped by Michael Andrade, PE: 09/24/25

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☐ New development

☐ Redevelopment

☒ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

☐ No disturbance to any Wetland Resource Areas

☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)

☐ Reduced Impervious Area (Redevelopment Only)

☒ Minimizing disturbance to existing trees and shrubs

☐ LID Site Design Credit Requested:

- ☐ Credit 1
- ☐ Credit 2
- ☐ Credit 3

☐ Use of "country drainage" versus curb and gutter conveyance and pipe

☐ Bioretention Cells (includes Rain Gardens)

☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)

☐ Treebox Filter

☐ Water Quality Swale

☐ Grass Channel

☐ Green Roof

☐ Other (describe): _____

Standard 1: No New Untreated Discharges

☐ No new untreated discharges

☒ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth

☒ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☐ Soil Analysis provided.

☒ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☒ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☒ Static ☐ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☐ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☒ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☐ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☒ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☒ is within the Zone II or Interim Wellhead Protection Area
- ☒ is near or to other critical areas
- ☒ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☐ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☒ The BMP is sized (and calculations provided) based on:

- ☒ The ½" or 1" Water Quality Volume or
- ☐ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

☒ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☒ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☐ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☐ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☒ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☐ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☐ Description and delineation of public safety features;
- ☒ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

☐ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☒ An Illicit Discharge Compliance Statement is attached;

☐ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

APPENDIX F

LONG-TERM DRAINAGE SYSTEM OPERATION & MAINTENANCE PLAN

LONG-TERM DRAINAGE SYSTEM OPERATION & MAINTENANCE PLAN

REVISED 09/24/25

System

The drainage system associated with the Clubhouse Improvements project at the Franklin Country Club consists of area and trench drain inlets, a subsurface infiltration system, and drain outfall. See project plans for locations of all system components. NOTE: This O&M Plan is intended to supplement that of any existing O&M Plan for the site that may exist (as prepared by others); O&M duties, etc. for the remainer of the site are not included in this plan.

Responsible Parties

The drainage system located on site property will be operated and maintained by the owner, Franklin Country Club, post-construction.

Drainage system maintenance tasks shall include routine cleaning of the overall drainage network and specific duties as listed below. Locations of the drainage system Best Management Practices (BMPs) is attached to this plan.

The responsible party must designate a "qualified personnel" to perform the inspections associated with this plan. This means a person knowledgeable of the layout and overall function of the stormwater system. As necessary, this "qualified personnel" shall employ the services of a registered professional engineer when inspections reveal a failing stormwater system component or when similar attention is needed beyond the knowledge or experience of the inspector.

Operation and Maintenance Duties

The following duties shall be considered the minimum required and may be supplemented by additional measures as necessary to maintain the function of the drainage system. All tasks conducted shall be recorded on the attached Log Form.

Sweeping:
As the impervious areas in this project are cart paths and of seasonal use (i.e. no winter sanding), sweeping is not generally required however shall be conducted as necessary to maintain clean surfaces.

Naturalized Drain Outfall Apron:
The drain outfall shall be inspected four times per year and repaired as necessary. Erosion control matting shall be replaced as necessary, and debris and accumulated sediment removed.

Area Drain and Trench Drain:
The area and trench drains shall be inspected and sediment removed at least four times per year and at the end of the foliage season. Outlet pipes shall be visually inspected and cleaned if found to be obstructed in any way.

Subsurface Infiltration System:
An aggressive inspection and maintenance schedule of all upstream BMPs must be maintained to prolong its operation life. Utilizing the observation ports, the system shall be inspected after the first several rain events upon installation. A log shall be kept noting the date and time of the inspection and the level of standing water or sediment (if any) observed within each observation port. The system must be inspected at least every 6 months or after every rainfall event exceeding the 2-year storm frequency (3.17 inches in 24 hours) and the log must estimate the volume of discharge (depth of outflow in inches will suffice) from the system by observing the outflow from the overflow pipe.

The subsurface system is designed to fully drain after a storm event therefore if standing water is observed within the system beyond 24 hours since the cessation of inflow to the system from a rainstorm, this may indicate a problem and it should be noted on the inspection log and further inspected for repairs. The Owner may need to contact a Registered Professional Engineer to evaluate the system in the event of major problems. Refer to the attached manufacturer's data for more product information including maintenance for the "Isolator Row Plus" treatment system.

Annual Budget

An annual budget for the operation and maintenance tasks is not estimated as the owner will utilize existing groundskeeping staff for the work.

Records

A copy of the O&M Plan will be kept by owner, Franklin Country Club. In the event of a change in property ownership, the new owner shall be provided with a copy of this Plan and be responsible for performing the require duties herein.

Illicit Discharge Compliance Statement

There are no existing illicit discharges to the owner's knowledge and there are no proposed illicit discharges. There are no cross-connections between the stormwater system and the wastewater system and discharges to each will remain separate; these systems are shown on the project drawings to the extent that they are known.

Signatures

As to the owner:

_____
Signature

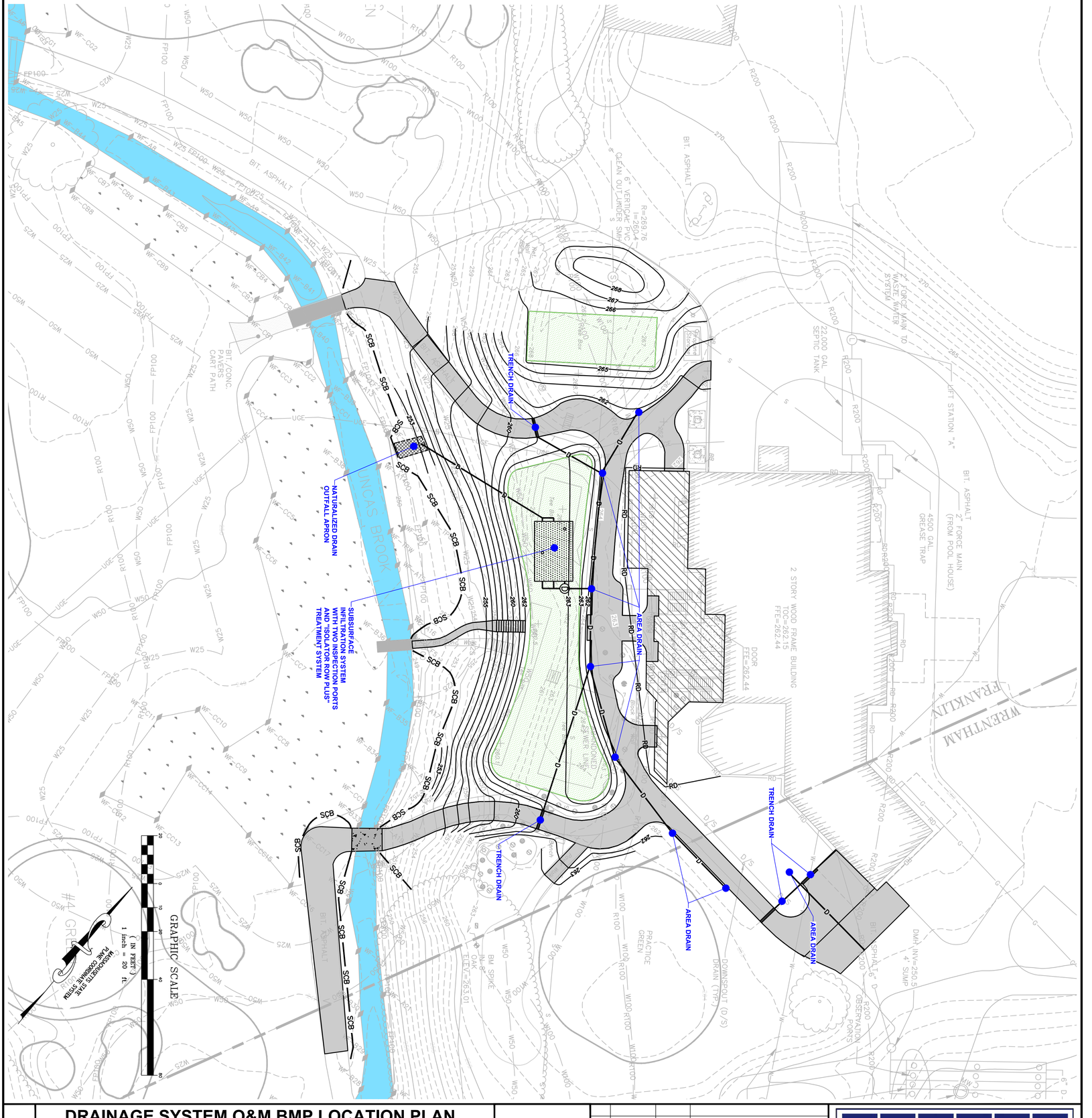
Steve Brennan, Director of Operations
Printed Name and Title

Franklin Country Club
672 East Central Street
Franklin, MA 02038
Owner

O&M LOG

PROJECT: Clubhouse Renovation
ADDRESS: Franklin Country Club, 672 East Central Street, Franklin, MA 02038

					ACTION		
LOG #	BY	DATE	BMP FEATURE	OBSERVATIONS	CORRECTIVE ACTION TAKEN (IF NEEDED)	DATE	NOTES



O&M

DRAINAGE SYSTEM O&M BMP LOCATION PLAN

CLUBHOUSE RENOVATIONS

FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

PREPARED FOR: FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET, FRANLIN, MA 02038

DATE: 09/24/25	SCALE: 1"= 20'	DES. BY: SDM	DRW. BY: SDM	CHK. BY: MRA	PRJ. NO.: 25109

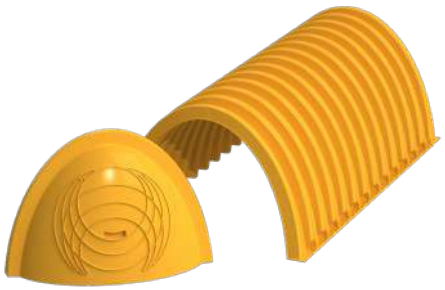
NO.	DATE	BY	DESCRIPTION
1	09/24/25	SDM	ISSUED FOR O&M PLAN

REVISIONS

GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

StormTech® SC-800 Chamber

Designed to meet the most stringent industry performance standards for superior structural integrity while providing designers with a cost-effective method to save valuable land and protect water resources. The StormTech system is designed primarily to be used under parking lots, thus maximizing land usage for private (commercial) and public applications. StormTech chambers can also be used in conjunction with Green Infrastructure, thus enhancing the performance and extending the service life of these practices.



Nominal Chamber Specifications
(not to scale)

Size (L x W x H)
85.4” x 51” x 33”
2169 mm x 1295 mm x 838 mm

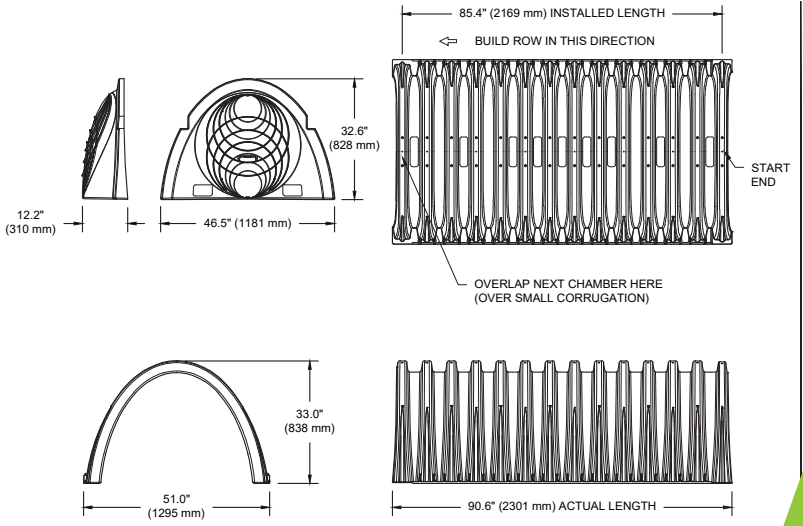
Chamber Storage
50.6 ft³ (1.43 m³)

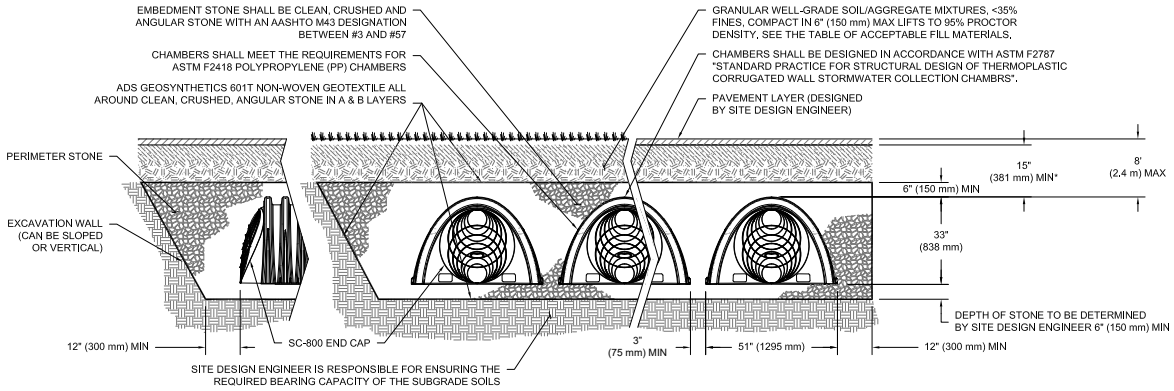
Min. Installed Storage*
78.4 ft³ (2.22 m³)

Weight
81.8 lbs (37.1 kg)

Shipping
30 chambers/pallet
60 end caps/pallet
12 pallets/truck

*Assumes 6” (150 mm) stone above and below chambers, 3” (75 mm) stone between chambers, and 40% stone porosity.





*MINIMUM COVER TO BOTTOM OF FLEXIBLE PAVEMENT. FOR UNPAVED INSTALLATIONS WHERE RUTTING FROM VEHICLES MAY OCCUR, INCREASE COVER TO 21" (533 mm).

ADS StormTech™

StormTech SC-800 Specifications

Cumulative Storage Volumes Per Chamber

Assumes 40% Stone Porosity. Calculations are Based Upon a 6” (150 mm) Stone Base Under Chambers.

Depth of Water in System Inches (mm)	Cumulative Chamber Storage ft³ (m³)	Total System Cumulative Storage ft³ (m³)
45 (1143)	50.62 (1.433)	78.41 (2.22)
44 (1118)	50.62 (1.433)	77.34 (2.19)
43 (1092)	50.62 (1.433)	76.28 (2.16)
42 (1067)	50.62 (1.433)	75.21 (2.13)
41 (1041)	50.62 (1.433)	74.14 (2.10)
40 (1016)	50.62 (1.433)	73.07 (2.07)
39 (991)	50.62 (1.433)	72.01 (2.04)
38 (965)	50.55 (1.431)	70.89 (2.01)
37 (940)	50.35 (1.426)	69.71 (1.97)
36 (914)	50.07 (1.418)	68.47 (1.94)
35 (889)	49.56 (1.403)	67.10 (1.90)
34 (864)	48.82 (1.382)	65.59 (1.86)
33 (838)	47.93 (1.357)	63.98 (1.81)
32 (813)	46.91 (1.328)	62.31 (1.76)
31 (787)	45.79 (1.297)	60.57 (1.72)
30 (762)	44.58 (1.262)	58.77 (1.66)
29 (737)	43.28 (1.226)	56.93 (1.61)
28 (711)	41.91 (1.187)	55.04 (1.56)
27 (686)	40.47 (1.146)	53.10 (1.50)
26 (660)	38.96 (1.103)	51.13 (1.45)
25 (635)	37.40 (1.059)	49.13 (1.39)
24 (610)	35.78 (1.013)	47.09 (1.33)
23 (584)	34.10 (0.966)	45.02 (1.27)
22 (559)	32.38 (0.917)	42.91 (1.22)
21 (533)	30.61 (0.867)	40.79 (1.15)
20 (508)	28.80 (0.816)	38.63 (1.09)
19 (483)	26.95 (0.763)	36.45 (1.03)
18 (457)	25.06 (0.710)	34.25 (0.97)
17 (432)	23.13 (0.655)	32.02 (0.91)
16 (406)	21.17 (0.599)	29.78 (0.84)
15 (381)	19.17 (0.543)	27.51 (0.78)
14 (356)	17.14 (0.485)	25.23 (0.71)
13 (330)	15.09 (0.427)	22.93 (0.65)
12 (305)	13.00 (0.368)	20.61 (0.58)
11 (279)	10.89 (0.308)	18.28 (0.52)
10 (254)	8.76 (0.248)	15.93 (0.45)
9 (229)	6.60 (0.187)	13.57 (0.38)
8 (203)	4.42 (0.125)	11.19 (0.32)
7 (178)	2.22 (0.063)	8.81 (0.25)
6 (152)	0 (0)	6.41 (0.18)
5 (127)	0 (0)	5.34 (0.15)
4 (102)	0 (0)	4.27 (0.12)
3 (76)	0 (0)	3.20 (0.09)
2 (51)	0 (0)	2.14 (0.06)
1 (25)	0 (0)	1.07 (0.03)

Stone Cover

Stone Foundation

Note: Add 1.07 ft³ (0.03 m³) of storage for each additional inch (25 mm) of stone foundation.

Storage Volume Per Chamber ft³ (m³)

	Bare Chamber Storage ft³ (m³)	Chamber and Stone Foundation Depth in. (mm)		
		6 (150)	12 (300)	18 (450)
SC-800 Chamber	50.6 (1.43)	78.4 (2.22)	84.8 (2.4)	91.2 (2.58)

Note: Assumes 6” (150 mm) stone above chambers, 3” (75 mm) row spacing and 40% stone porosity.

Amount of Stone Per Chamber

English Tons (yds³)	Stone Foundation Depth		
	6”	12”	18”
SC-800	3.6 (2.6)	4.4 (3.2)	5.3 (3.8)
Metric Kilograms (m³)	**150 mm**	**300 mm**	**450 mm**
SC-800	3270 (2.0)	3990 (2.4)	4810 (2.9)

Note: Assumes 6” (150 mm) of stone above chambers and 3” (75 mm) stone between chambers.

Volume Excavation Per Chamber yd³ (m³)

	Stone Foundation Depth		
	6” (150 mm)	12” (300 mm)	18” (450 mm)
SC-800	5.3 (4.1)	5.9 (4.5)	6.5 (5.0)

Note: Assumes 3” (75 mm) of row separation and 15” (375 mm) of cover. The volume of excavation will vary as depth of cover increases.

ADS StormTech products, manufactured in accordance with ASTM F2418 or ASTMF2922, comply with all requirements in the Build America, Buy America (BABA) Act.

Working on a project?
Visit us at adspipe.com/stormtech and utilize the Design Tool

ADS StormTech™

adspipe.com
800-821-6710

Isolator® Row Plus
O&M Manual

ADS StormTech™

The Isolator® Row Plus

Introduction

An important component of any Stormwater Pollution Prevention Plan is inspection and maintenance. The StormTech Isolator Row Plus is a technique to inexpensively enhance Total Suspended Solids (TSS), Total Phosphorus (TP), Total Petroluem Hydrocarbons (TPH) and Total Nitrogen (TN) removal with easy access for inspection and maintenance.

The Isolator Row Plus

The Isolator Row Plus is a row of StormTech chambers, either SC-160, SC-310, DC-780, SC-800, MC-3500, MC-4500 or MC-7200 models, are lined with filter fabric and connected to a closely located manhole for easy access. The fabric lined chambers provide for sediment settling and filtration as stormwater rises in the Isolator Row Plus and passes through the filter fabric. The open bottom chambers allow stormwater to flow vertically out of the chambers. Sediments are captured in the Isolator Row Plus protecting the adjacent stone and chambers storage areas from sediment accumulation.

ADS Isolator Row and Plus fabric are placed between the stone and the Isolator Row Plus chambers. The woven geotextile provides a media for stormwater filtration, a durable surface for maintenance, prevents scour of the underlying stone and remains intact during high pressure jetting.

The Isolator Row Plus is designed to capture the “first flush” runoff and offers the versatility to be sized on a volume basis or a flow-rate basis. An upstream manhole provides access to the Isolator Row Plus and includes a high/low concept such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row Plus bypass through a manifold to the other chambers. This is achieved with an elevated bypass manifold or a high-flow weir. This creates a differential between the Isolator Row Plus row of chambers and the manifold to the rest of the system, thus allowing for settlement time in the Isolator Row Plus. After Stormwater flows through the Isolator Row Plus and into the rest of the chamber system it is either exfiltrated into the soils below or passed at a controlled rate through an outlet manifold and outlet control structure.

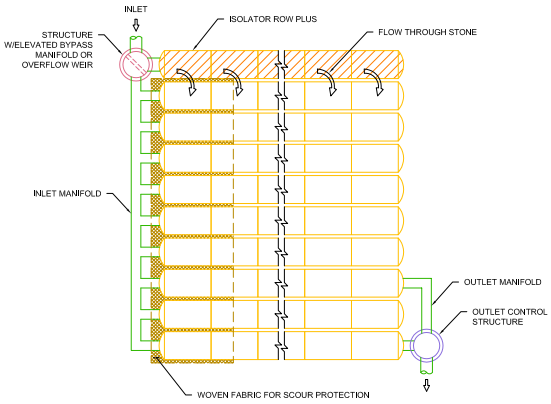
The Isolator Row Plus Flamp™ is a flared end ramp apparatus attached to the inlet pipe on the inside of the chamber end cap. The FLAMP provides a smooth transition from pipe invert to fabric bottom. It is configured to improve chamber function performance by enhancing outflow of solid debris that would otherwise collect at the chamber's end, or more difficult to remove and require confined space entry into the chamber area. It also serves to improve the fluid and solid flow into the access pipe during maintenance and cleaning and to guide cleaning and inspection equipment back into the inlet pipe when complete.

The Isolator Row Plus may be part of a treatment train system. The treatment train design and pretreatment device selection by the design engineer is often driven by regulatory requirements. Whether pretreatment is used or not, StormTech recommend using the Isolator Row Plus to minimize maintenance requirements and maintenance costs.

Note: *See the StormTech Design Manual for detailed information on designing inlets for a StormTech system, including the Isolator Row Plus.*

Looking down the Isolator Row Plus from the manhole opening, ADS Plus Fabric is shown between the chamber and stone base.

StormTech Isolator Row Plus with Overflow Structure (not to scale)



Isolator Row Plus Inspection/Maintenance

Inspection

The frequency of inspection and maintenance varies by location. A routine inspection schedule needs to be established for each individual location based upon site specific variables. The type of land use (i.e. industrial, commercial, residential), anticipated pollutant load, percent imperviousness, climate, etc. all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row Plus should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

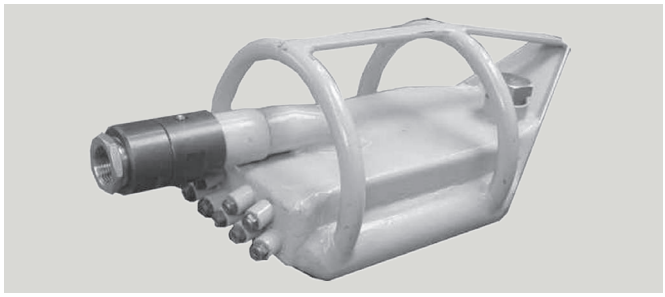
The Isolator Row Plus incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3" (75 mm) throughout the length of the Isolator Row Plus, clean-out should be performed.

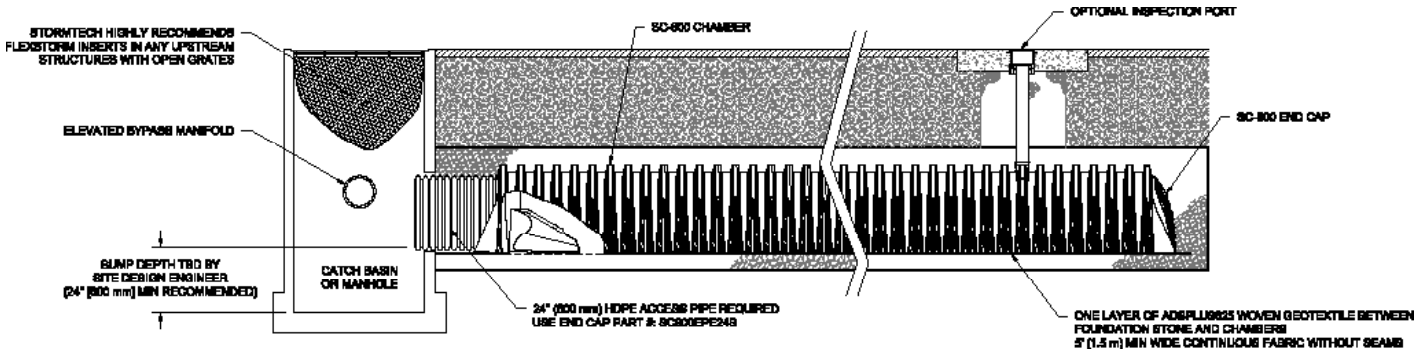
Maintenance

The Isolator Row Plus was designed to reduce the cost of periodic maintenance. By “isolating” sediments to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout. If entry into the manhole is required, please follow local and OSHA rules for a confined space entry.

Maintenance is accomplished with the JetVac process. The JetVac process utilizes a high pressure water nozzle to propel itself down the Isolator Row Plus while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/JetVac combination vehicles. Selection of an appropriate JetVac nozzle will improve maintenance efficiency. Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear facing jets with an effective spread of at least 45” are best. StormTech recommends a maximum nozzle pressure of 2000 psi be utilized during cleaning. JetVac reels can vary in length. For ease of maintenance, ADS recommends Isolator Row Plus lengths up to 200' (61 m). **The JetVac process shall only be performed on StormTech Isolator Row Plus that have ADS Plus Fabric (as specified by StormTech) over their angular base stone.**



StormTech Isolator Row Plus (*not to scale*)



Isolator Row Plus Step By Step Maintenance Procedures

Step 1

Inspect Isolator Row Plus for sediment.

A) Inspection ports (if present)
   i. Remove lid from floor box frame
   ii. Remove cap from inspection riser
   iii. Using a flashlight and stadia rod,measure depth of sediment and record results on maintenance log.
   iv. If sediment is at or above 3 inch depth, proceed to Step 2. If not, proceed to Step 3.

B) All Isolator Row Plus
   i. Remove cover from manhole at upstream end of Isolator Row Plus
   ii. Using a flashlight, inspect down Isolator Row Plus through outlet pipe
      1. Mirrors on poles or cameras may be used to avoid a confined space entry
      2. Follow OSHA regulations for confined space entry if entering manhole
   iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches), proceed to Step 2.
   If not, proceed to Step 3.

Step 2

Clean out Isolator Row Plus using the JetVac process.

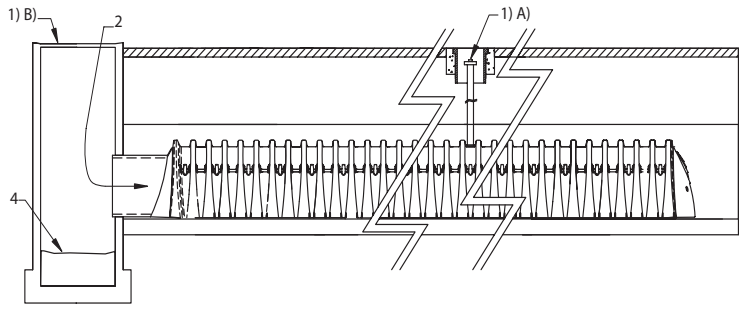
A) A fixed floor cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable
B) Apply multiple passes of JetVac until backflush water is clean
C) Vacuum manhole sump as required

Step 3

Replace all caps, lids and covers, record observations and actions.

Step 4

Inspect & clean catch basins and manholes upstream of the StormTech system.



Sample Maintenance Log

Date	Stadia Rod Readings		Sedi-ment Depth (1)–(2)	Observations/Actions	Inspector
	Fixed point to chamber bottom (1)	Fixed point to top of sediment (2)			
3/15/11	6.3 ft	none		New installation. Fixed point is CI frame at grade	DJM
9/24/11		6.2	0.1 ft	Some grit felt	SM
6/20/13		5.8	0.5 ft	Mucky feel, debris visible in manhole and in Isolator Row Plus, maintenance due	NV
7/7/13	6.3 ft		0	System jetted and vacuumed	DJM

adspipe.com
800-821-6710

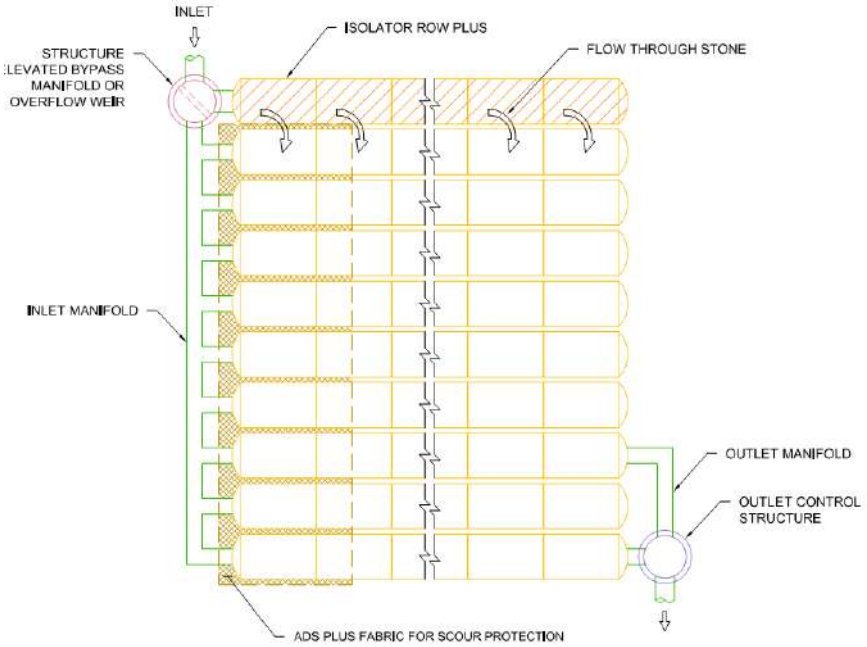
StormTech Isolator Row PLUS – Pollutant Removal

The following information is intended to provide a general overview of the pollutant removal capability of the StormTech Isolator™ Row PLUS, which is a patented filtration type BMP manufactured by StormTech, LLC. The StormTech Isolator Row PLUS is covered under several US and International patents.

I. Description:

The StormTech Isolator Row PLUS is a row or rows of thermoplastic chambers that sit on a layer of ADS PLUS fabric and are connected to a closely located structure for easy access. The chambers provide for settling and filtration of sediment and other contaminants as stormwater rises in the Isolator Row PLUS and ultimately passes through the fabric. The open-bottom chambers allow stormwater to flow out of the chambers. Sediment is captured in the Isolator Row PLUS, protecting the storage areas of the adjacent stone and chambers from sediment accumulation.

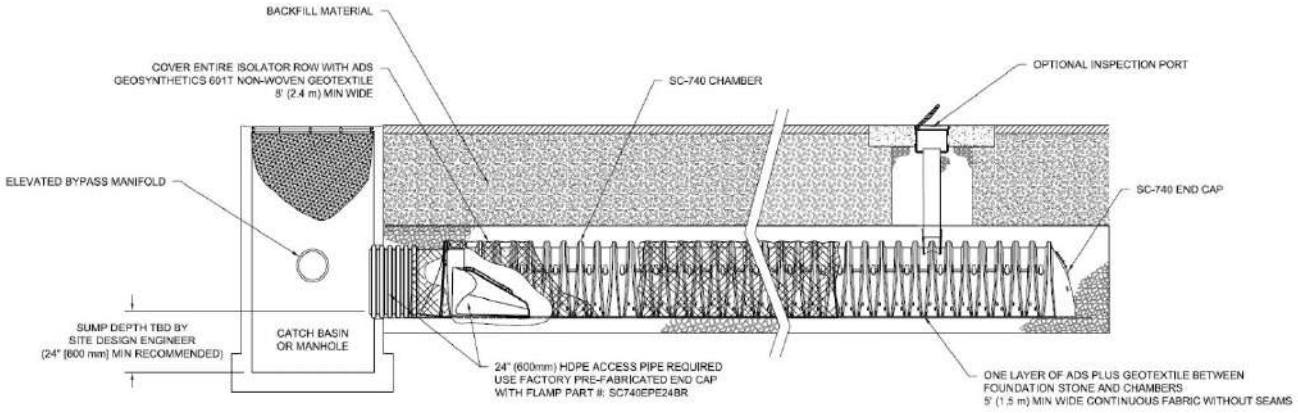
The StormTech Isolator Row PLUS is designed to capture the "first flush" and offers the versatility to be sized on a volume basis or a flow-rate basis. An upstream manhole not only provides access to the Isolator Row but includes a high low/concept such that stormwater flow rates or volumes that exceed the capacity of the Isolator Row bypass through a manifold to the other chambers. This is achieved with either a high-flow weir or an elevated manifold. This creates a differential between the Isolator Row PLUS and the manifold, thus allowing for settlement time in the Isolator Row PLUS.



Schematic of the StormTech Isolator Row PLUS System

Some of the unique features of the Isolator Row that contribute to its effectiveness and practicality include:

- Vast filtration surface area
- Large sediment storage volume
- Easily maintainable by most pipe and sewer maintenance companies
- Large network of ADS personnel that can help with designs and provide onsite guidance
- A state-of-the-art structural design that meets ASTM standards and incorporates AASHTO safety factors for both live loads and permanent dead loads



Isolator Row PLUS Cross Section Detail

II. Applicable Sites:

The Isolator Row PLUS can be effectively used for essentially all developed sites. The most common applications are highly impervious sites such as paved parking areas, roads as well as developed sites that include grassy or other landscaped areas. It is not intended to be used for construction sediments.

III. StormTech System & Isolator Row Testing:

October 2006 – Tennessee Tech University's Civil and Environmental Department prepared the "Performance Evaluation of Sediment Removal Efficiency – StormTech Isolator Row". Testing on a full-scale Isolator Row in a laboratory was done to determine the sediment removal efficiency with two different silica-water slurries in accordance with NJCAT protocols. In August of 2007, the technology was verified by NJCAT. Results are shown in Table 1.

September 2010 – The University of New Hampshire Stormwater Center released the "Final Report on Field Verification Testing of the StormTech Isolator Row Treatment Unit". Testing consisted of determining the water quality performance for multiple stormwater pollutants in accordance with TARP Tier II protocol. Testing was done for a system only consisting of the StormTech Isolator Row. Data was recorded for 23 storm events. Results are shown in Table 1.

January 2020 – BaySaver Technologies prepared the "NJCAT Technology Verification of Isolator Row PLUS". Testing on a full-scale Isolator Row PLUS in a laboratory was done to determine the sediment removal efficiency with a silica-water slurry in accordance with the updated NJCAT protocols. In July of 2020, the technology was verified by NJCAT. Results are shown in Table 1.

June 2020 – North Carolina State University Department of Biological and Agricultural Engineering prepared the technical report "An Evaluation of the StormTech Isolator Row and Subsurface Stormwater Management System at Capital Oaks Retirement Resort, Raleigh, North Carolina". 14 months of monitoring and over 73 precipitation events were completed to study the hydrologic and water quality performance of a StormTech MC-4500 system in Raleigh, NC. Results are shown in Table 1.

Table 1: StormTech Isolator Row 3rd Party Pollutant Removal Efficiency Data

Pollutant	University of New Hampshire (Isolator Row Only) Median	Raleigh, North Carolina (StormTech system with Isolator Row)	Tennessee Tech University (Isolator Row Only)	NJCAT Verification (Isolator Row PLUS only)
Total Suspended Solids	83%*	91%*	84%*	81%**
Total Phosphorus	33%	68%	Not Tested	Not Tested
Total Nitrogen	Not Tested	35%	Not Tested	Not Tested
Total Zinc	81%	Not Tested	Not Tested	Not Tested
Total Petroleum Hydrocarbons	91%	Not Tested	Not Tested	Not Tested

*Based on a flow rate of 2.5 gpm/sf (Isolator Row)
** Based on a flow rate of 4.1 gpm/sf (Isolator Row PLUS)

IV. Product Performance and Design

Minimum 80% TSS removal is achieved by sizing the Isolator Row PLUS to treat the water quality at a specific flow rate per chamber floor area using a single layer of ADS PLUS fabric. The design flow rates for each chamber size are listed below.

Model	Specific Flow Rate	Bottom Area	Flow Per Model
StormTech SC-160LP	4.1 gpm/sf	11.45 sf	0.11 cfs
StormTech SC-310	4.1 gpm/sf	17.7 sf	0.16 cfs
StormTech SC-740	4.1 gpm/sf	27.8 sf	0.26 cfs
StormTech DC-780	4.1 gpm/sf	27.8 sf	0.26 cfs
StormTech MC-3500	4.1 gpm/sf	42.9 sf	0.40 cfs
StormTech MC-4500	4.1 gpm/sf	30.1 sf	0.28 cfs

V. StormTech Isolator Row Approvals:

The StormTech Isolator Row and Isolator Row PLUS have been approved on a project by project basis for tens of thousands of projects around the world. Following are some examples:

- The Isolator Row PLUS is a verified filtration manufactured treatment device by the New Jersey Corporation for Advanced Testing (NJCAT) in accordance with NJDEP Filter Protocols.
- In Ohio, the Isolator Row is approved per the Ohio EPA as a pretreatment to underground storage and can be used for both storage volume and pretreatment as the water quality volume all passes through the Isolator Row.
- The Metropolitan St. Louis Sewer District (MSD) has approved the StormTech Isolator Row as a standalone post-construction stormwater Best Management Practice.
- In Massachusetts, approvals for the State DEP requirement of 80% TSS removal on an annual load basis are issued at the Conservation Commission level, and the Isolator Row is commonly used to meet these criteria.
- In Oregon, the Rogue Valley Storm Water Advisory Team (SWAT) has incorporated the StormTech Isolator Row into their Stormwater Design Manual as a pre-approved proprietary device for stormwater quality treatment.
- The Kansas City Metro Chapter of the American Public Works have included the StormTech Isolator Row wit a value rating of 3.0 in their Manual of Best Management Practices for Stormwater Quality.
- Maine DEP has approved the Isolator Row pollutant removal efficiency based on laboratory testing of 110 micron (US Silica OK-110) particle size
- In Texas, the City of Houston PWE as well as Harris county, has recognized the Isolator Row as an official water quality device.
- Under the New Environmental Technology Evaluation program, the Ontario (Canada) Ministry of the Environment has evaluated the Isolator row and issued a Certificate of Technology Assessment
- The Isolator Row PLUS has been evaluated and approved for Canadian Environment Technology Verification (ETV) by VerifiGlobal.

V. Isolator Row Maintenance:

The frequency of Inspection and Maintenance varies by location. A routine inspection schedule needs to be established for each individual location, based upon site-specific variables. The type of land use (i.e. industrial, commercial, public, residential), anticipated pollutant load, percent imperviousness, climate, rainfall data, etc., all play a critical role in determining the actual frequency of inspection and maintenance practices.

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection schedule should be adjusted based upon previous observation of sediment deposition.

The Isolator Row incorporates a combination of standard manhole(s) and strategically located inspection ports (as needed). The inspection ports allow for easy access to the system from the surface, eliminating the need to perform a confined space entry for inspection purposes.

If, upon visual inspection, it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment. When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean-out should be performed.

The Isolator Row was designed to reduce the cost of periodic maintenance. By "isolating" sediment to just one row, costs are dramatically reduced by eliminating the need to clean out each row of the entire storage bed. If inspection indicates the potential need for maintenance, access is provided via a manhole(s) located on the end(s) of the row for cleanout.

Maintenance is accomplished with the jetvac process. The jetvac process utilizes a high-pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediment. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole for vacuuming. Most sewer and pipe maintenance companies have vacuum/jetvac combination vehicles. Selection of an appropriate jetvac nozzle will improve maintenance efficiency.

Fixed nozzles designed for culverts or large diameter pipe cleaning are preferable. Rear-facing jets with an effective spread of at least 45" are best. Most jetvac reels have 200 feet of hose, allowing maintenance of an Isolator Row up to 50 chambers long. The jetvac process shall only be performed on StormTech Isolator Rows that have fabric specified by StormTech over their angular base stone.

Complete details of the design, operation, and maintenance of the Isolator Row PLUS can be found in the StormTech Isolator Row and Isolator Row PLUS O&M Manuals.

APPENDIX H

TOTAL SUSPENDED SOLIDS REMOVAL WORKSHEET

INSTRUCTIONS:
1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: Subsurface Infiltration System

TSS Removal Calculation Worksheet

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Proprietary Treatment Practice	**0.80**	**1.00**	**0.80**	**0.20**
Subsurface Infiltration Structure	**0.55**	**0.20**	**0.11**	**0.09**
	0.00	**0.09**	**0.00**	**0.09**
	0.00	**0.09**	**0.00**	**0.09**
	0.00	**0.09**	**0.00**	**0.09**

Total TSS Removal = **91%**

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: **Franklin CC**
Prepared By: **MRA**
Date: **9/24/2025**

*Equals remaining load from previous BMP (E) which enters the BMP

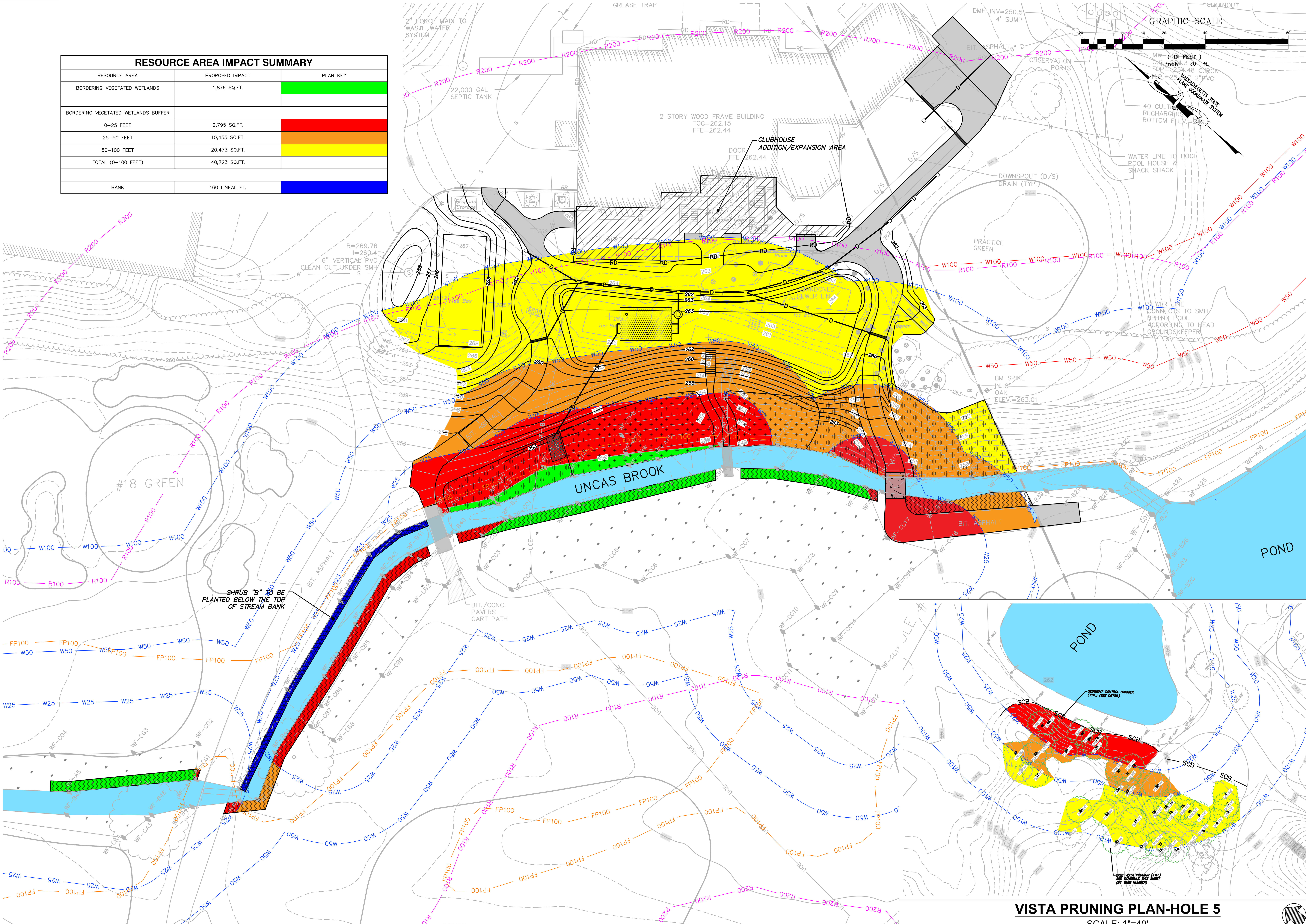
Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed
1. From MassDEP Stormwater Handbook Vol. 1

Appendix E

Exhibit A – Resource Area Impact Plan – BVW & Bank
Exhibit B – Resource Area Impact Plan – RA & BLSF
Prepared by Graves Engineering, Inc.,
dated September 24, 2025

RESOURCE AREA IMPACT SUMMARY

RESOURCE AREA	PROPOSED IMPACT	PLAN KEY
BORDERING VEGETATED WETLANDS	1,876 SQ.FT.	(green)
BORDERING VEGETATED WETLANDS BUFFER		
0–25 FEET	9,795 SQ.FT.	(red)
25–50 FEET	10,455 SQ.FT.	(orange)
50–100 FEET	20,473 SQ.FT.	(yellow)
TOTAL (0–100 FEET)	40,723 SQ.FT.	
BANK	160 LINEAL FT.	(blue)



VISTA PRUNING PLAN-HOLE 5
SCALE: 1"=40'

GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	BY	DESCRIPTION
1	09/24/25	SDM	ISSUED FOR PERMITTING

REVISIONS

COMMONWEALTH OF MASSACHUSETTS MICHAEL R. ANDRADE CIVIL NO. 45669 REGISTERED PROFESSIONAL ENGINEER
ELECTRONICALLY STAMPED BY MICHAEL ANDRADE, P.E.

EXHIBIT A - RESOURCE AREA IMPACT PLAN - BVW & BANK
CLUBHOUSE RENOVATIONS
FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

PREPARED FOR:
FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET, FRANLIN, MA 02038

DATE: 09/24/25 | SCALE: 1"= 20' | DES. BY: SDM | DRW. BY: SDM | CHK. BY: MRA | PRJ. NO.: 25109

EX-A

RESOURCE AREA IMPACT SUMMARY

RESOURCE AREA	PROPOSED IMPACT	PLAN KEY
RIVERFRONT AREA		
0–100 FEET	28,735 SQ.FT.	
100–200 FEET	10,200 SQ.FT.	
TOTAL (0–200 FEET)	38,935 SQ.FT.	
BORDERING LAND SUBJECT TO FLOODING	4,906 SQ.FT.	

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

CLUBHOUSE ADDITION/EXPANSION AREA

UNCAS BROOK

POND

SHRUB "B" TO BE PLANTED BELOW THE TOP OF STREAM BANK

SEDIMENT CONTROL BARRIER (TYP.) (SEE DETAIL)

HOLE #5 PROPOSED NEW FORWARD TEE BOX

HOLE 5 NEW FORWARD TEE
SCALE: 1"=20'

GRAVES ENGINEERING, Inc.
100 GROVE STREET, SUITE 219, WORCESTER MA 01605
T 508-856-0321
gravesengineering.com

NO.	DATE	BY	DESCRIPTION
1	09/24/25	SDM	ISSUED FOR PERMITTING

COMMONWEALTH OF MASSACHUSETTS — MICHAEL A. ANDRADE — No. 45648 — REGISTERED PROFESSIONAL ENGINEER — CIVIL
CERTIFICATION BY: MICHAEL A. ANDRADE, P.E.

EXHIBIT B - RESOURCE AREA IMPACT PLAN - RA & BLSF
CLUBHOUSE RENOVATIONS
FRANKLIN COUNTRY CLUB, 672 EAST CENTRAL STREET , FRANKLIN, MA 02038

PREPARED FOR: FRANKLIN COUNTRY CLUB
672 EAST CENTRAL STREET, FRANKLIN, MA 02038

DATE: 09/24/25 | SCALE: 1"= 20' | DES. BY: SDM | DRW. BY: SDM | CHK. BY: MRA | PRJ. NO.: 25109

EX-B

Appendix F

WPA Form 3 – Notice of Intent
Signed September 24, 2025

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

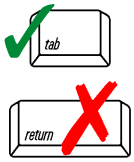
Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note: Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

672 East Central Street — a. Street Address
Franklin — b. City/Town
02038 — c. Zip Code

Latitude and Longitude:
42.07484 — d. Latitude
-71.26907 — e. Longitude

300 — f. Assessors Map/Plat Number
002 — g. Parcel /Lot Number

2. Applicant:

Steve — a. First Name
Brennan — b. Last Name
Franklin Country Club, Inc. — c. Organization
672 East Central Street — d. Street Address
Franklin — e. City/Town
MA — f. State
02038 — g. Zip Code
508-528-6110 x237 — h. Phone Number
i. Fax Number
sbrennan@franklincc.com — j. Email Address

3. Property owner (required if different from applicant): ☐ Check if more than one owner

a. First Name
b. Last Name
c. Organization
d. Street Address
e. City/Town
f. State
g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Kelly — a. First Name
Cardoza — b. Last Name
Avalon Consulting Group, LLC — c. Company
41 Cals Court — d. Street Address
Taunton — e. City/Town
MA — f. State
02780 — g. Zip Code
508-880-2905 — h. Phone Number
508-942-2174 — i. Fax Number
kdc@avaloncon.com — j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

$2325.00 — a. Total Fee Paid
$1150.00 — b. State Fee Paid
$1175.00 — c. City/Town Fee Paid

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

A. General Information (continued)

6. General Project Description:

Expansion of the existing clubhouse, modifications to the 5th tee complex, and vista pruning adjacent to the pond on the 5th hole (see narrative)

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

1. ☐ Single Family Home
2. ☐ Residential Subdivision
3. ☐ Commercial/Industrial
4. ☐ Dock/Pier
5. ☐ Utilities
6. ☐ Coastal engineering Structure
7. ☐ Agriculture (e.g., cranberries, forestry)
8. ☐ Transportation
9. ☒ Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☐ Yes ☒ No

If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

a. County	b. Certificate # (if registered land)
Norfolk	
c. Book	**d. Page Number**
38500	201

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. ☐ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
2. ☒ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☒ Bank	160 (planting of native shrubs) 1. linear feet	160 (planting of native shrubs) 2. linear feet
b. ☒ Bordering Vegetated Wetland	1,876 (planting of native plants 1. square feet	1,876 (planting of native plants 2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☒ Bordering Land Subject to Flooding	4,906 (no change to elevation) 1. square feet	4,906 (no change to elevation) 2. square feet
	3. cubic feet of flood storage lost	4. cubic feet replaced
e. ☐ Isolated Land Subject to Flooding	1. square feet	
	2. cubic feet of flood storage lost	3. cubic feet replaced
f. ☒ Riverfront Area	Uncas Brook - Inland 1. Name of Waterway (if available) - **specify coastal or inland**	

2. Width of Riverfront Area (check one):

☐ 25 ft. - Designated Densely Developed Areas only

☐ 100 ft. - New agricultural projects only

☒ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: 575,200 (est.) square feet

4. Proposed alteration of the Riverfront Area:

a. total square feet	b. square feet within 100 ft.	c. square feet between 100 ft. and 200 ft.
38,935	28,735	10,200

5. Has an alternatives analysis been done and is it attached to this NOI? ☒ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☒ Yes ☐ No

3. ☐ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f**. above.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged	
l. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4. ☐ Restoration/Enhancement

If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW

b. square feet of Salt Marsh

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings

b. number of replacement stream crossings

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

C. Other Applicable Standards and Requirements

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

   a. ☐ Yes ☒ No

   If yes, include proof of mailing or hand delivery of NOI to:

   Natural Heritage and Endangered Species Program
   Division of Fisheries and Wildlife
   1 Rabbit Hill Road
   Westborough, MA 01581

   August 1, 2021
   b. Date of map

   If *yes*, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

   c. Submit Supplemental Information for Endangered Species Review*

      1. ☐ Percentage/acreage of property to be altered:

         (a) within wetland Resource Area _____ percentage/acreage

         (b) outside Resource Area _____ percentage/acreage

      2. ☐ Assessor's Map or right-of-way plan of site

2. ☐ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

   (a) ☐ Project description (including description of impacts outside of wetland resource area & buffer zone)

   (b) ☐ Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see https://www.mass.gov/ma-endangered-species-act-mesa-regulatory-review).
Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Franklin
City/Town

C. Other Applicable Standards and Requirements (cont'd)

(c) ☐ MESA filing fee (fee information available at https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review).
Make check payable to "Commonwealth of Massachusetts - NHESP" and ***mail to NHESP*** at above address

*Projects altering **10 or more acres** of land, also submit:*

(d) ☐ Vegetation cover type map of site

(e) ☐ Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing. a. NHESP Tracking # b. Date submitted to NHESP

3. ☐ Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. ☐ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Bourne to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
836 South Rodney French Blvd.
New Bedford, MA 02744
Email: dmf.envreview-south@mass.gov

North Shore - Plymouth to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: dmf.envreview-north@mass.gov

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

c. ☐ Is this an aquaculture project? d. ☐ Yes ☐ No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
MassDEP File Number
Document Transaction Number
Franklin
City/Town

C. Other Applicable Standards and Requirements (cont'd)

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

   a. ☐ Yes ☒ No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

   b. ACEC

5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

   a. ☐ Yes ☒ No

6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

   a. ☐ Yes ☒ No

7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

   a. ☒ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

      1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)

      2. ☒ A portion of the site constitutes redevelopment

      3. ☐ Proprietary BMPs are included in the Stormwater Management System.

   b. ☐ No. Check why the project is exempt:

      1. ☐ Single-family house

      2. ☐ Emergency road repair

      3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)

2. ☒ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

D. Additional Information (cont'd)

3. ☒ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☒ List the titles and dates for all plans and other materials submitted with this NOI.

Clubhouse Renovations, Franklin Country Club
a. Plan Title

Graves Engineering, Inc.
b. Prepared By

Michael Andrade, P.E.
c. Signed and Stamped by

8/18/2025
d. Final Revision Date

1" = 20'
e. Scale

Landscape Plan by Gardner+Gerrish
f. Additional Plan or Document Title

August 20, 2025
g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. ☒ Attach NOI Wetland Fee Transmittal Form

9. ☒ Attach Stormwater Report, if needed.

E. Fees

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

48283
2. Municipal Check Number

08/20/25
3. Check date

48282
4. State Check Number

08/20/25
5. Check date

Franklin Country Club
6. Payor name on check: First Name

Franklin Country Club
7. Payor name on check: Last Name

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Franklin
City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

1. Signature of Applicant

2. Date 9/24/25

3. Signature of Property Owner (if different)

4. Date

5. Signature of Representative (if any) Kelly Dunfee Cardoza

6. Date 9/24/25

For Conservation Commission:
Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:
One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.