EcoTec, Inc.

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Electronic Submittal to City of Newton
Certified Mail to MassDEP-NERO

July 22, 2022

Newton Conservation Commission
City of Newton Planning and Development Department
Attn: Jennifer Steel
1000 Commonwealth Avenue
Newton, MA 02159-1499

RE: -Notice of Intent under the Massachusetts Wetlands Protection Act and Newton Floodplain Ordinance
-Proposed House and Site Feature Demolition and Construction of New Two-family House with Site Features in Riverfront Area, Bordering Land Subject to Flooding, and Buffer Zone; 43 River Avenue, Newton, Massachusetts
-Applicant: Dina Onur

To the Commission:

This Notice of Intent (NOI) has been filed with the Newton Conservation Commission electronically under the Massachusetts Wetlands Protection Act and the Newton Floodplain Ordinance. Two checks made payable to the City of Newton: (1) $800.00 for the City Share of the Act Fee and (2) $50.00 for the filing fee under the Ordinance have been provided to Conservation Commission Staff by hand on July 22, 2022 for this filing.

Please have the legal notice billed to EcoTec, Inc. (508-752-9666 ext. 3).

Submitted Materials:

This submittal consists of the following:

1. This Cover Letter, which includes the
   a. Wetland Resource Evaluation with
      1) City of Newton Locus Map;

2) Flood Insurance Rate Map, Map No. 25017C0561E, dated June 4, 2010 with site indicated;
3) Newton GIS Browser with site and mapped resources indicated;
4) USGS Map, Boston South Quadrangle, 1987 with site indicated;
5) Massachusetts NHESP Atlas (15th Edition), August 1, 2021 with site indicated; and
6) Resume; and

b. Project Description and Analysis;
   1) Tree Report, prepared by Kray A. Small, Certified Arborist, dated June 8, 2022, Annotated by EcoTec, Inc.; and
   2) Planting Schematic, prepared by EcoTec, Inc., dated July 21, 2022;

2. City of Newton Cons.Com. Wetland Application Coversheet/Checklist and Copy of Ordinance Filing Fee Check;
3. The Notice of Intent Form, Fee Transmittal Form, and Copy of Act Filing Fee Checks;
4. Abutter Request, Abutters List, and Abutters Maps;
5. Stormwater Materials:
   a. "Storm Water Management Analysis for 43 River Avenue, Newton, Massachusetts," prepared by Thomas A. Ryder, P.E., dated July 16, 2022, signed and stamped by Thomas A. Ryder, P.E.;
   b. Soil Suitability Assessment Forms for Test Pits, prepared by Thomas A. Ryder, P.E. (Soil Evaluator #2121), dated July 12, 2022; and
   c. "Operations and Maintenance, Drainage System, 43 River Avenue, Newton, MA, prepared by RAV & Associates, Inc., dated July 21, 2022, signed and stamped by Richard A. Volkin, P.E.;
6. Conservation Plan Set:
   a. "Existing Conditions, 43 River Avenue, Newton, Massachusetts 02464," Sheet 1 of 4, Scale 1" = 10', prepared by RAV & Associates, Inc., dated July 20, 2022, signed and stamped by A. Matthew Belski, Jr., PLS and Richard A. Volkin, P.E.;
   b. "Proposed Site Plan, 43 River Avenue, Newton, Massachusetts 02464," Sheet 2 of 4, Scale 1" = 10', prepared by RAV & Associates, Inc., dated July 20, 2022, signed and stamped by A. Matthew Belski, Jr., PLS. and Richard A. Volkin, P.E.;
   c. "Notes, Profile, Chimney, Details, 43 River Avenue, Newton, Massachusetts 02464," Sheet 3 of 4, Scale NTS, prepared by RAV & Associates, Inc., dated July 20, 2022, signed and stamped by Richard A. Volkin, P.E.; and
   d. "Details, 43 River Avenue, Newton, Massachusetts 02464," Sheet 4 of 4, Scale NTS, prepared by RAV & Associates, Inc., dated July 20, 2022, signed and stamped by Richard A. Volkin, P.E.

One copy of this filing and payment of $775.00 have been sent by certified mail, return receipt requested and regular mail, respectively, to the Northeast Regional Office of the

Department of Environmental Protection and to the DEP Lockbox, respectively. Documentation of all payments is included in the filing.

In compliance with the Act and Regulations, all abutters within one hundred feet of the site shall be notified of this submittal via certificate of mailing immediately upon receipt of the meeting notice from the Conservation Commission Staff. Proof of timely notice to abutters, including the required abutters list, maps, notification, and affidavit of service, shall be provided to the Conservation Commission Staff via Email well in advance of the hearing on this matter.

We look forward to meeting remotely (or in person, as applicable) with the Conservation Commission on this matter on August 11, 2022. If you have any questions, please feel free to contact me at any time.

Wetland Resource Evaluation:

On May 18, 2022, EcoTec, Inc. inspected the above-referenced property for the presence of wetland resources as defined by the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, § 40; the "Act") and its implementing regulations (310 CMR 10.00 *et seq.*; the "Regulations"). The City of Newton does not have a Wetlands Protection Ordinance but does have a Floodplain Ordinance (the "Ordinance"; Section 22-22). John P. Rockwood, Ph.D., SPWS conducted the inspection.

The subject site consists of 0.277± acres (12,050± square feet) of land located to the north of River Avenue in the Newton Upper Falls section of Newton, Massachusetts. The site is previously developed and partially degraded with a one-story, single-family house, various access stairs and landings; paved driveway; concrete walks; various chain-link and wooden stockade fencing; and associated lawn and landscaping including twelve trees (shown on the Site Plan) almost all of which are in poor condition (see attached annotated Tree Report by Kray A. Small, Certified Arborist, dated June 8, 2022). A 20' wide utility easement occurs in the western part of the site. Roof runoff from house is discharged to the ground surface via downspouts; driveway runoff is not controlled or treated. A granite curb, paved sidewalk, and a utility pole occur between the site and River Avenue. One Norway maple tree is located off-site/along the street near the southeastern corner of the site. The wetland resources observed on or near the site are described below.

Wetland Resource Evaluation - Methodology

The subject site was inspected, and areas suspected to qualify as wetland resources were identified. Bordering Vegetated Wetlands were not observed on the subject site or along

the subject reach of the Charles River to the west of the site. The upper boundary of Bank and the Mean Annual High-water Line of the Charles River were delineated in the field with blue pin flags. The Regulations at 310 CMR 10.54(2)(c) state: "The upper boundary of Bank is the first observable break in the slope or the mean annual flood level, whichever is lower." The plant taxonomy used in this report is based on the *National List of Plant Species that Occur in Wetlands: Massachusetts* (Fish and Wildlife Service, U.S. Department of the Interior, 1988). As Bordering Vegetated Wetlands were not observed on the subject site or observed or delineated along the subject reach of the Charles River, DEP Bordering Vegetated Wetland Delineation Field Data Forms were not completed and are not attached to this letter. The table below lists the flag numbers and type and the resource area type and location for flags placed in the field.

Flag Numbers	Flag Type	Wetland Types and Locations
Start R1 to R8 Stop	Blue Pin Flags	Mean Annual High-water Line (MAHWL) and upper boundary of Bank of the Charles River located to the west of the site near the western site boundary.

Wetland Resource Evaluation - Findings

Land Under Water Bodies and Waterways, Bank, and Bordering Vegetated Wetlands: Land Under Water Bodies, Bank, and Bordering Vegetated Wetlands were not observed on the subject site. The Charles River is a perennially mapped stream that is located just off-site to the west of the subject site. Bordering Vegetated Wetlands were not observed or delineated along the subject reach of the Charles River adjacent to the site. The Charles River would be regulated as Bank and Land Under Water Bodies and Waterways under the Regulations. A 100' Buffer Zone would extend horizontally outward from the edge of Bank under the Regulations and would project into the western portion of the subject site.

Bordering Land Subject to Flooding and Section 22-22 Floodplain: Bordering Land Subject to Flooding is an area that floods due to a rise in floodwaters from a bordering waterway or water body. Where flood studies have been completed, the boundary of Bordering Land Subject to Flooding is based upon flood profile data prepared by the National Flood Insurance Program. Section 10.57(2)(a)3. states that "The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm." Based upon a review of the Flood Insurance Rate Map, Map Number 25017C0561E, Effective Date June 4, 2010 (attached), there is a mapped Zone AE (100-year floodplain) with a 100-year flood elevation of 89 feet NAVD 1988 associated with the Charles River in the western portion of the site; the balance of the site is mapped as Other Flood Areas: Zone X (i.e., areas within the 0.2% annual chance flood/areas within the 500-year floodplain) and as Other Areas: Zone X (i.e., areas located outside of the 0.2% annual chance flood/areas outside of the 500-year

floodplain). Bordering Land Subject to Flooding does not have a 100' Buffer Zone under the Regulations.

Under Section 22-22 of the Ordinance which identifies the Floodplain/Watershed Protection District, under Section (g)1. Floodplain/ Watershed Areas, the subject reach of the Charles River [i.e., (2) Nahanton Street bridge to Silk Mill Dam] (see attached Newton GIS Browser) has a 100-year floodplain elevation at the site of 95.5 City of Newton Datum. Section 22-22 does not establish any form of buffer zone.

Riverfront Area: 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, Boston South Quadrangle, dated 1987 (attached), the Charles River, which is always a river, is located near the western site boundary. Riverfront Area under the Act/Regulations would extend 200 feet horizontally outward from the Mean Annual High-water Line, which is represented by the R-series flags. Riverfront Area does not have a 100' Buffer Zone under the Act and Regulations but may overlap other wetland resources and their Buffer Zones.

Estimated Habitat and Certified 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, valid from August 1, 2021 and the Certified and Potential Vernal Pool layers from MassGIS (attached), 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 or Potential Vernal Pools on or in the immediate vicinity of the subject site.

The reader should be aware that the regulatory authority for determining wetland jurisdiction rests with local, state, and federal authorities.

Project Description and Analysis:

The subject site is 12,050± square feet in size and 11,880± square feet or 98.5% of the subject site occur within the 200' Riverfront Area to the Charles River: 5,760± square feet between 100 and 200 feet and 6,120± square feet within 100 feet. Bordering Land Subject to Flooding occurs in the western part of the site near the Charles River; this resource area makes up 3,490± square feet or 29.0% of the site. No other wetland resource areas occur on the subject site. The 100' Buffer Zone to the Charles River occurs in the western part of the site.

The proposed project consists of the complete demolition of the existing single-family house and associated site features including the paved driveway, access stairs and landings, front and side walks, wooden deck, and fences located on the subject site and the construction of a new two-family house with a chimney, balcony, two one-car garages, and front and rear landings with stairs; two paved driveways; two paver front walks; and associated grading, lawn, and landscaping. The proposed project includes the removal of twelve unhealthy and/or hazard trees from the site; the conditions of the trees are addressed in the attached Tree Report. The applicant is aware that compliance with the Tree Ordinance will be required. The proposed project includes the capping of existing utilities at the mains and the installation of new utilities to mains located on-site or within River Avenue. The on-site sewer connection requires temporary trenching within Bordering Land Subject to Flooding; this area will be returned to existing grade and seeded or sodded as lawn following sewer line installation. The proposed deck in the outer Riverfront Area is a minor exempt activity under 310 CMR 10.02(2)(b)2.e. and has been shown on the Site Plan for sake of completeness. The proposed utility disconnections and connections and pavement repairs within a roadway are exempt activities under 310 CMR 10.02(2)(b)2.i., j., and n., respectively; the utility work and pavement repair proposed within River Avenue has been shown on the Site Plan for sake of completeness.

The impervious/degraded area in the Riverfront Area on the subject site that is subject to permitting is proposed to be increased by 1,859± square feet from 1,568± square feet under existing conditions to 3,427± square feet under proposed conditions. The intent of the project design is to locate proposed degraded areas further from the Charles River than existing degraded areas and to locate as much of the proposed house and driveway as possible outside of the Riverfront Area. The configuration of the lot is challenging due to its dimensions; the proposed house will require subsequent local permitting regarding front and rear yard setbacks. The existing concrete side walk is located 104± feet and the existing house is located 107± feet from the Charles River; the proposed house is located 110± feet from the Charles River. The existing paved driveway is located 140± feet and the closer proposed paved driveway is located 144± feet from the Charles River. Approximately 164± square feet of the proposed house and 256± square feet of the further proposed paved driveway are located outside of the 200' Riverfront Area.

Twelve trees occur on the subject site, all within the Riverfront Area, three within Bordering Land Subject to Flooding, and seven within the 100' Buffer Zone. Due to health and/or safety concerns regarding these trees (see attached Tree Report), all twelve trees are proposed to be removed as part of this project. The existing off-site tree near the southeastern corner of the site will be protected during construction. As noted below, a total of eighteen native saplings will be planted on the subject site in the Riverfront Area as

part of the proposed enhancement planting area. The project also includes two trench drains, a deep sump manhole, and an infiltration system to address driveway and roof runoff as required by City of Newton drainage requirements. Details are provided in the July 16, 2022 Storm Water Management Analysis, prepared by Thomas A. Ryder, P.E. included with the Notice of Intent. Lastly, a substantive 3,850± square foot enhancement planting area in the Riverfront Area, Bordering Land Subject to Flooding, and Buffer Zone in the western part of the subject site is proposed to mitigate for the 1,859± square foot increase in degraded surfaces within the Riverfront Area on the subject site.

Any disturbed lawn and landscaped areas will be graded and will be loamed and seeded with a grass seed mixture to provide permanent cover or will be landscaped. Alternatively, sod may be used to establish lawn areas. The proposed limit of work will be demarcated in the field by the erosion control barrier as shown on the Site Plan. Soil will be temporarily stored in a covered stockpile within the limit of work on the subject site as shown on the Site Plan with excess soil trucked from the subject site. The Site Plan also shows a proposed construction entrance, a concrete washout area, and inlet protection for the double catch basin located across River Avenue from the site.

Enhancement Planting Area Plan:

A 3,850± square foot enhancement planting area is proposed in the western portion of the site within Riverfront Area, Bordering Land Subject to Flooding, and the Buffer Zone. This planting area comprises almost 32 percent of the site. Under existing conditions, this area is poorly maintained lawn with four trees that are in unhealthy or in poor condition (see attached Tree Report), two of which are Norway maples. The existing trees that will remain on the bank of the Charles River and on the abutting properties will provide shade and canopy in this general area until the proposed saplings mature. The intent of this plan is to establish a highly diverse habitat containing eighteen (18) native saplings of seven species, including evergreen and deciduous and canopy and understory species; one-hundred-ten (110) shrubs of eleven species including evergreen and deciduous species; and four pockets with a total of forty (40) small shrubs of five species including evergreen and deciduous species. These plantings will serve to stabilize the area, reduce stormwater runoff, and provide enhanced wildlife habitat, including cover, perching, and foraging habitat, compared to the existing condition.

The proposed saplings and shrubs will be spaced in general conformance with the planting specification under the supervision of a qualified wetland scientist and planted in accordance with current landscaping practices (i.e., hole twice as wide and as deep as the root ball with the area around the root ball backfilled with high quality loamy top soil). The proposed plant species listing is provided on the Planting Schematic included with this letter; the listed species are native and have been selected based upon the conditions of

the proposed planting area. If a species is not available, a substitution will be recommended by the wetland scientist and approved by Conservation Staff. The excess soil will be removed from the site. Following installation, the plants will be watered in well and the area should then be covered with a 3-inch-thick layer of partially decomposed leaf litter with some natural bark mulch as specified in the Planting Schematic. This will aid in keeping the plantings moist and will provide temporary cover and habitat value until leaves begin to accumulate in this area. The woody materials will be watered regularly for a period of four weeks, and will be watered, as necessary, if evidence of stress is observed. As shown on the Site Plan, the eastern and southern edges of the area will be demarcated with seven stone bounds as shown on the Site Plan.

Enhancement Planting Area Monitoring: The enhancement planting area will be monitored near the end of the growing season for two years after it is established. During each inspection, which will be conducted by a qualified wetland scientist, the condition of the area and the number of saplings and shrubs and their condition will be documented. Photographs of the area shall be taken, and representative photographs shall be included in the report. To be considered a success, the sapling plantings shall have an 90% survival rate and the shrub plantings shall have a 75% survival rate (or survival rates specified in the Order) at the end of the second growing season after establishment. The findings of each inspection will be documented in a report that will be submitted in a timely manner to the Commission. Each report will include any necessary recommendations to bring the area into compliance.

Compliance Evaluation under the Regulations:

The proposed project is a mixture of new and redevelopment activities within the Riverfront Area to the Charles River. The Charles River is located to the west of the site; the western part of the site consists of lawn with several unhealthy and/or hazard trees that are proposed to be removed. Under the current regulatory interpretation by MassDEP, proposed projects located in the Riverfront Area are to be treated either as new development under 310 CMR 10.58(4) or as redevelopment under 310 CMR 10.58(5). As significant degraded area occurs on the subject site within the Riverfront Area, this project has been evaluated herein as a redevelopment project pursuant to 310 CMR 10.58(5). Redevelopment projects are required to meet the two applicable standards at 310 CMR 10.58(4) [i.e., Section 10.58(4)(a) and (b)] and all the performance standards at 310 CMR 10.58(5). The proposed project has been designed as shown on the Site Plan and described within this letter to meet applicable general performance standards for Riverfront Area found at 310 CMR 10.58(4) and the performance standards for redevelopment of the Riverfront Area at 310 CMR 10.58(5) as well as the general performance standards for

Bordering Land Subject to Flooding at 310 CMR 10.57(4)(a) and the narrative standard for the Buffer Zone at 310 CMR 10.53(1). A discussion of compliance with the above-referenced performance standards and narrative standard is as follows:

Riverfront Area: Section 10.58(4) of the Regulations provides the general performance standards for work within the Riverfront Area, which states:

> (*4) General Performance Standard. Where the presumption set forth in 310 CMR 10.58(3) is not overcome, the applicant shall prove by a preponderance of the evidence that there are no practicable and substantially equivalent economic alternatives to the proposed project with less adverse effects on the interests identified in M.G.L. c.131 § 40 and that the work, including proposed mitigation, will have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131 § 40. In the event that the presumption is partially overcome, the issuing authority shall make a written determination setting forth its grounds in the Order of Conditions and the partial rebuttal shall be taken into account in the application of 310 CMR 10.58 (4)(d)1.a. and c.; the issuing authority shall impose conditions in the Order that contribute to the protection of interests for which the riverfront area is significant.*
>
> *(a) Protection of Other Resource Areas. The work shall meet the performance standards for all other resource areas within the riverfront area, as identified in 310 CMR 10.30 (coastal bank), 10.32 (salt marsh), 10.55 (Bordering Vegetated Wetland), and 10.57 (Land Subject to Flooding). When work in the riverfront area is also within the buffer zone to another resource area, the performance standards for the riverfront area shall contribute to the protection of the interests of M.G.L. c. 131, § 40 in lieu of any additional requirements that might otherwise be imposed on work in the buffer zone within the riverfront area.*

Work is proposed within the Riverfront Area to the Charles River. Limited temporary alteration associated with the installation of a sewer line to an existing sewer main on the site is proposed; work has been designed to comply with the applicable performance standards at 310 CMR 10.57(4)(a). Except as noted above, no other wetland resource areas occur on the site. As such, no work is proposed within Land Under Water Bodies and Waterways, Bank, Bordering Vegetated Wetlands, or Isolated Land Subject to Flooding. Work is proposed within the 100’ Buffer Zone; the 100' Buffer Zone is not a wetland resource area under the Regulations.

> *(b) Protection of Rare Species. No project may be permitted within the riverfront area which will have any adverse effect on specified habitat sites of rare wetland or upland, vertebrate or invertebrate species, as identified by the procedures established under*

310 CMR 10.59 or 10.37, or which will have any adverse effect on vernal pool habitat certified prior to the filing of the Notice of Intent.

Based upon the NHESP Atlas, 15th Edition, dated August 1, 2021, the site is not located within a mapped Estimated Habitat or Priority Habitat and no mapped Certified or Potential Vernal Pools occur on or near the subject site. As such, the proposed project will not have any adverse effect on specified habitat sites of rare wetland or upland, vertebrate or invertebrate species, and will not have any adverse effect on vernal pool habitat.

(c) Practicable and Substantially Equivalent Economic Alternatives. There must be no practicable and substantially equivalent economic alternative to the proposed project with less adverse effects on the interests identified in M.G.L. c. 131 § 40…."

As provided at 310 CMR 10.58(5), this standard is not applicable to a redevelopment project within the Riverfront Area. As such, a formal alternatives analysis has not been provided. A description of the project is provided in the Project Description and Analysis section of this letter above and compliance with the Redevelopment Standards is discussed below.

(d) No Significant Adverse Impact. The work, including proposed mitigation measures, must have no significant adverse impact on the riverfront area to protect the interests identified in M.G.L. c. 131, § 40…."

As provided at 310 CMR 10.58(5), this standard is not applicable to a redevelopment project within the Riverfront Area. As such, a significant adverse impact analysis has not been provided. A description of the project is provided in the Project Description and Analysis section of this letter above and compliance with the Redevelopment Standards is discussed below.

Section 10.58(5) of the Regulations provides the performance standards for redevelopment within previously developed and degraded Riverfront Area, which states:

Redevelopment Within Previously Developed Riverfront Areas; Restoration and Mitigation. Notwithstanding the provisions of 310 CMR 10.58(4)(c) and (d), the issuing authority may allow work to redevelop a previously developed riverfront area, provided the proposed work improves existing conditions. Redevelopment means replacement, rehabilitation or expansion of existing structures, improvement of existing roads, or reuse of degraded or previously developed areas. A previously developed riverfront area contains areas degraded prior to August 7, 1996 by impervious surfaces from existing structures or pavement, absence of topsoil,

junkyards, or abandoned dumping grounds. Work to redevelop previously developed riverfront areas shall conform to the following criteria:

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

The subject site is 12,050± square feet in size and 11,880± square feet or 98.5% of the subject site occur within the 200' Riverfront Area to the Charles River: 5,760± square feet between 100 and 200 feet and 6,120± square feet within 100 feet. Bordering Land Subject to Flooding occurs in the western portion of the site near the Charles River; this resource area comprises 3,490± square feet or 29.0% of the site. No other wetland resource areas occur on the subject site. The 100' Buffer Zone to the Charles River occurs in the western part of the site. The subject site is previously developed and significant degraded area consisting of the existing house, access landings and stairs, paved driveway, and front and side walks occurs within the Riverfront Area on the subject site. The proposed project has been designed to and will result in an improvement over the existing condition.

The proposed project consists of the complete demolition of the existing single-family house and associated site features including the paved driveway, access stairs and landings, front and side walks, wooden deck, and fences located on the subject site and the construction of a new two-family house with a chimney, balcony, two one-car garages, and front and rear landings with stairs; two paved driveways; two paver front walks; and associated grading, lawn, and landscaping. The proposed project includes the removal of twelve unhealthy and/or hazard trees from the site. Degraded areas associated with the proposed project are located further from the Charles River than degraded areas under the existing condition. The configuration of the lot is challenging due to its dimensions; the proposed house will require subsequent local permitting regarding front and rear yard setbacks. The house has been set at the eastern setback and is as far from the Charles River as possible; approximately 420± square feet of the proposed house and further proposed paved driveway are outside of the Riverfront Area. The proposed project results in an increase in degraded area in the Riverfront Area of 1,859± square feet.

Twelve unhealthy and/or hazard trees (see Tree Report) are proposed to be removed from within the Riverfront Area; eighteen saplings are proposed within the Riverfront Area as part of the mitigation effort. The project includes two trench drains, a deep sump manhole, and an infiltration system to address driveway and roof runoff as required by City of Newton drainage requirements. No such system is present under existing conditions; driveway runoff is uncontrolled and untreated and roof runoff is directed to the ground

surface. A 3,850± square foot enhancement planting area in the Riverfront Area, Bordering Land Subject to Flooding, and Buffer Zone in the western part of the subject site as detailed above is proposed to mitigate for the 1,859± square foot increase in degraded surfaces within the Riverfront Area on the subject site. An erosion control barrier, construction entrance, and inlet protection for the double catch basin in River Avenue will be used to mitigate project impacts during construction. Accordingly, the proposed project will serve to improve the capacity of the Riverfront Area on the subject site to protect the statutory interests presumed to be significant within the Riverfront Area.

(b) Stormwater management is provided according to standards established by the Department.

The proposed project is exempt from stormwater management standards under the Regulations. The project includes two proposed trench drains, a deep sump manhole, and an infiltration system to address driveway and roof runoff in accordance with City of Newton drainage requirements. Details are provided in the July 16, 2022 Storm Water Management Analysis, prepared by Thomas A. Ryder, P.E. Lastly, an Operations and Maintenance Plan for the drainage system prepared by RAV & Associates, Inc., dated July 21, 2022, is included as part of this Notice of Intent.

(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).

Redevelopment activities associated with the proposed project are not closer to the Charles River than the existing condition. The proposed house and closer driveway are located greater than 100 feet and are further from the Charles River than the existing house and paved driveway.

(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).

Degraded areas associated with the proposed project are located further from the Charles River than degraded areas under the existing condition. The house has been set at the eastern setback and is as far from the Charles River, given the lot configuration, as possible. The proposed house is further from the Charles River than the existing house and the proposed house expansion is away from the Charles River with 164± square feet of the proposed house located outside of the Riverfront Area. The closer proposed paved

driveway is located further from the Charles River than the existing paved driveway; 256± square feet of the further proposed paved driveway is located outside of the Riverfront area.

(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 impervious/degraded area in the Riverfront Area on the subject site that is subject to permitting is proposed to be increased by 1,859± square feet from 1,568± square feet under existing conditions to 3,427± square feet under proposed conditions. A 3,850± square foot enhancement planting area, which represents almost 32% of the subject site, is proposed under Section 10.58(5)(g) to address this increase in impervious/degraded area within the Riverfront Area.

(f) When an applicant proposes restoration on-site of degraded riverfront area, alteration ay 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. Areas immediately along the river shall be selected for restoration. Alteration not conforming to the criteria shall begin at the riverfront area boundary. Restoration shall include:
1. removal of all debris, but retaining any trees or other mature vegetation;
2. grading to a topography which reduces runoff and increases infiltration;
3. coverage by topsoil at a depth consistent with natural conditions at the site; and
4. seeding and planting with an erosion control seed mixture, followed by plantings of herbaceous and woody species appropriate to the site.

Restoration of degraded Riverfront Area on the site is not proposed as part of this project.

(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 of mitigation area to area of alteration not conforming to the criteria or an equivalent level of environmental protection where square footage is not a relevant measure. Alteration not conforming to the criteria shall begin at the riverfront area boundary. Mitigation may include off-site restoration of riverfront areas, conservation restrictions under M.G.L. c. 184, §§ 31 to 33 to preserve undisturbed riverfront areas that could be otherwise altered under 310 CMR 10.00, the purchase of development rights within the riverfront area, the restoration of bordering vegetated wetland, projects to remedy an existing adverse impact on the interests identified in M.G.L. c.

131, § 40 for which the applicant is not legally responsible, or similar activities undertaken voluntarily by the applicant which will support a determination by the issuing authority of no significant adverse impact. Preference shall be given to potential mitigation projects, if any, identified in a River Basin Plan approved by the Secretary of the Executive Office of Environmental Affairs.

An enhancement planting area totaling 3,850± square feet in size will be established within the Riverfront Area. Proposed plantings are provided in the Planting Schematic. The intent of this plan is to establish a highly diverse habitat containing eighteen (18) native saplings of seven species, including evergreen and deciduous and canopy and understory species; one-hundred-ten (110) shrubs of eleven species including evergreen and deciduous species; and four pockets with a total of forty (40) small shrubs of five species including evergreen and deciduous species. These plantings will serve to stabilize this area, minimize stormwater runoff toward the Charles River, and provide enhanced wildlife habitat, including cover, perching, and foraging habitat, compared to the existing condition. The enhancement planting area will be monitored near the end of the growing season for two years after it is established with 90% and 75% survival for saplings and shrubs, respectively (or the survival rate specified in the Order) after two growing seasons the threshold for success.

(h) The issuing authority shall include a continuing condition in the Certificate of Compliance for projects under 310 CMR 10.58(5)(f) or (g) prohibiting further alteration within the restoration or mitigation area, except as may be required to maintain the area in its restored or mitigated condition. Prior to requesting the issuance of the Certificate of Compliance, the applicant shall demonstrate the restoration or mitigation has been successfully completed for at least two growing seasons.

Enhancement of Riverfront Area is proposed as part of this project in the form of a bounded 3,850± enhancement planting area as shown on the Site Plan. As such, the applicant is not averse to the above-referenced continuing condition on this bounded area.

Bordering Land Subject to Flooding: Section 10.57(4)(a) provides the general performance standards for work proposed within Bordering Land Subject to Flooding. Section 10.57(4)(a) states:

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. Compensatory storage shall mean a volume not previously used for flood storage and shall be incrementally equal to the theoretical volume of

flood water at each elevation, up to and including the 100-year flood elevation, which would be displaced by the proposed project. Such compensatory volume shall have an unrestricted hydraulic connection to the same waterway or water body. Further, with respect to waterways, such compensatory volume shall be provided within the same reach of the river, stream or creek.

The work proposed within Bordering Land Subject to Flooding is limited to temporary impacts to 240± square feet of lawn within this resource area to install a sewer connection to the existing main, the removal of three trees in poor health, and the installation of significant enhancement plantings within an existing lawn area. The area of the sewer connection will be returned to the existing grade and will be reestablished as lawn. The three trees will be carefully cut close to the ground surface and the stumps of the Norway maples will be carefully treated with herbicide using a blot methodology to prevent sprouting. The stumps will not be ground or grubbed. A row of existing mature trees will remain between the site and the Charles River. The proposed work will not result in the placement of permanent fill within this resource area; as such, compensatory storage is not proposed or required.

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.

The project will not place permanent fill within Bordering Land Subject to Flooding; as such, compensatory storage is not proposed or required. The proposed work within Bordering Land Subject to Flooding will not restrict flows in the Charles River or result in an increase in flood stage or velocity along the Charles River.

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.

The Bordering Land Subject to Flooding where work is proposed for the sewer connection consists of lawn, which by definition is not important to the protection of wildlife habitat.

As such, this standard is not applicable to the proposed work in this resource area. Three unhealthy trees are also proposed to be removed from this resource area, two of which are Norway maples. A bounded 3,850± square foot enhancement planting area that includes 3,060± square feet of the 3,490± square feet or 87.7% of the Bordering Land Subject to Flooding on the site is proposed that will significantly augment the wildlife habitat characteristics in this resource areas in the part of the site closest to the Charles River.

Narrative Standard for Work in the Buffer Zone:

Section 10.53(1) of the Regulations provides a narrative standard for work in the Buffer Zone and states:

> *…If the issuing authority determines that a resource area is significant to an interest identified in M.G.L. c. 131, § 40 for which no presumption is stated in the Preamble to the applicable section, the issuing authority shall impose such conditions as are necessary to contribute to the protection of such interests. For work in the buffer zone subject to review under 310 CMR 10.02(2)(b)3., the issuing authority shall impose conditions to protect the interests of the Act identified for the adjacent resource area. The potential for adverse impacts to resource areas from work in the buffer zone may increase with the extent of the work and the proximity to the resource area. The issuing authority may consider the characteristics of the buffer zone, such as the presence of steep slopes, that may increase the potential for adverse impacts on resource areas. Conditions may include limitations on the scope and location of work in the buffer zone as necessary to avoid alteration of resource areas. The issuing authority may require erosion and sedimentation controls during construction, a clear limit of work, and the preservation of natural vegetation adjacent to the resource area and/or other measures commensurate with the scope and location of the work within the buffer zone to protect the interests of the Act. Where a buffer zone has already been developed, the issuing authority may consider the extent of existing development in its review of subsequent proposed work and, where prior development is extensive, may consider measures such as the restoration of natural vegetation adjacent to a resource area to protect the interest of the Act. The purpose of preconstruction review of work in the buffer zone is to ensure that adjacent resource areas are not adversely affected during or after completion of the work.*

As indicated in the Preface to the 2005 Revisions to the Regulations, "This standard is intended to provide better guidance to applicants, conservation commissions and DEP by identifying the measures that will ensure that adjacent wetland resource areas are not adversely affected during or after completion of the work."

Prior to the start of earth moving activities, an erosion control barrier consisting of entrenched siltation fence fronted by staked compost sock or compost sock only, which will also serve as the Limit of Work, will be located around the work area as shown on the Site Plan. This erosion control barrier will be maintained until the work area is stabilized. Approval of the issuing authority will be received prior to the removal of the erosion control barrier. The proposed house is located outside of the Buffer Zone; a small part of the proposed deck occurs within the Buffer Zone. Under existing and proposed conditions, the site slopes moderately to gradually to the west toward the Charles River. A total of seven unhealthy and/or hazard trees are proposed to be removed from the Buffer Zone. A 3,850± square foot enhancement planting area which will include eighteen saplings, 11 shrubs, and forty smaller shrubs/ground cover, is proposed in the western part of the site between the proposed redeveloped part of the site and the Charles River. This enhancement planting area includes 3,850± square feet of 6,120± square feet or 62.9% of the 100' Buffer Zone; 2,555± square feet of 2,895± square feet or 88.3% of the 50' Buffer Zone; and 1,045± square feet of 1,185± square feet or 88.2% of the 25' Buffer Zone on the site. This planting area will greatly reduce active use and activities proximate to the Charles River, including landscaping activities such as mowing and fertilizer and herbicide/pesticide applications. The proposed project results in an increase in impervious surfaces on the site; stormwater mitigation, which includes two trench drains, a deep sump manhole, and an infiltration system, has been proposed to address driveway and roof runoff as required by City of Newton drainage requirements.

<u>City of Newton 25-foot Naturally Vegetated Buffer (NVB) Policy:</u>

This Policy was implemented in June 2019 and is intended to protect the functions of Newton's wetland resource areas by protecting and or re-establishing a naturally vegetated buffer proximate to protected wetland resource areas. With the exception of the removal of one unhealthy hazard tree and the establishment of part of a significant enhancement planting area, no work associated with the proposed project will occur within the 25' Buffer Zone. Under existing conditions, this area consists of lawn with an overstory provided by unhealthy and/or hazard trees that are proposed to be removed as part of this project; understory vegetation does not occur within this area on the site. Approximately 1,045± square feet of 1,185± square feet or 88.2% of the 25' Buffer Zone on the site is included in the proposed enhancement planting area for this project. This enhancement planting area is detailed above in this letter and the Planting Schematic is included as part of this submittal. These plantings will serve to stabilize the area, reduce stormwater runoff, and provide enhanced wildlife habitat, including cover, perching, and foraging habitat, compared to the existing condition. In addition, the overall enhancement planting area will serve to prevent incremental creep toward the Charles River.

Conclusion:

In conclusion, it is EcoTec's opinion, based upon the information provided on the Site Plan and in this letter, that the proposed project meets the applicable general performance standards and redevelopment standards for work within the Riverfront Area, the general performance standards for Bordering Land Subject to Flooding, and the narrative standard for the Buffer Zone under the Regulations. The proposed project meets the intent of the City's 25-foot Naturally Vegetated Buffer Policy. The proposed project results in an increase in impervious area on the site and in the Riverfront Area; mitigation in the form stormwater improvements that address driveway and roof runoff in accordance with City of Newton drainage requirements and a significant 3,850± square foot enhancement planting area have been provided as part of the project. This plan as proposed meets the applicable performance standards and by regulation serves to protect the statutory interests.

Cordially,
ECOTEC, INC.

John P. Rockwood

John P. Rockwood, Ph.D., SPWS
Principal Environmental Scientist

Cc: Department of Environmental Protection, Northeast Regional Office (by Certified Mail/Return Receipt Requested)
Dina Onur (Via Email)
Mikhail Deychman (Via Email)

18/w/NEWTON43RIVER NOI CL WRE PD COMP

NEWTON LOCUS MAP

43 RIVER AVENUE

National Flood Hazard Layer FIRMette

FEMA

71°13'54"W 42°18'57"N

71°13'16"W 42°18'30"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

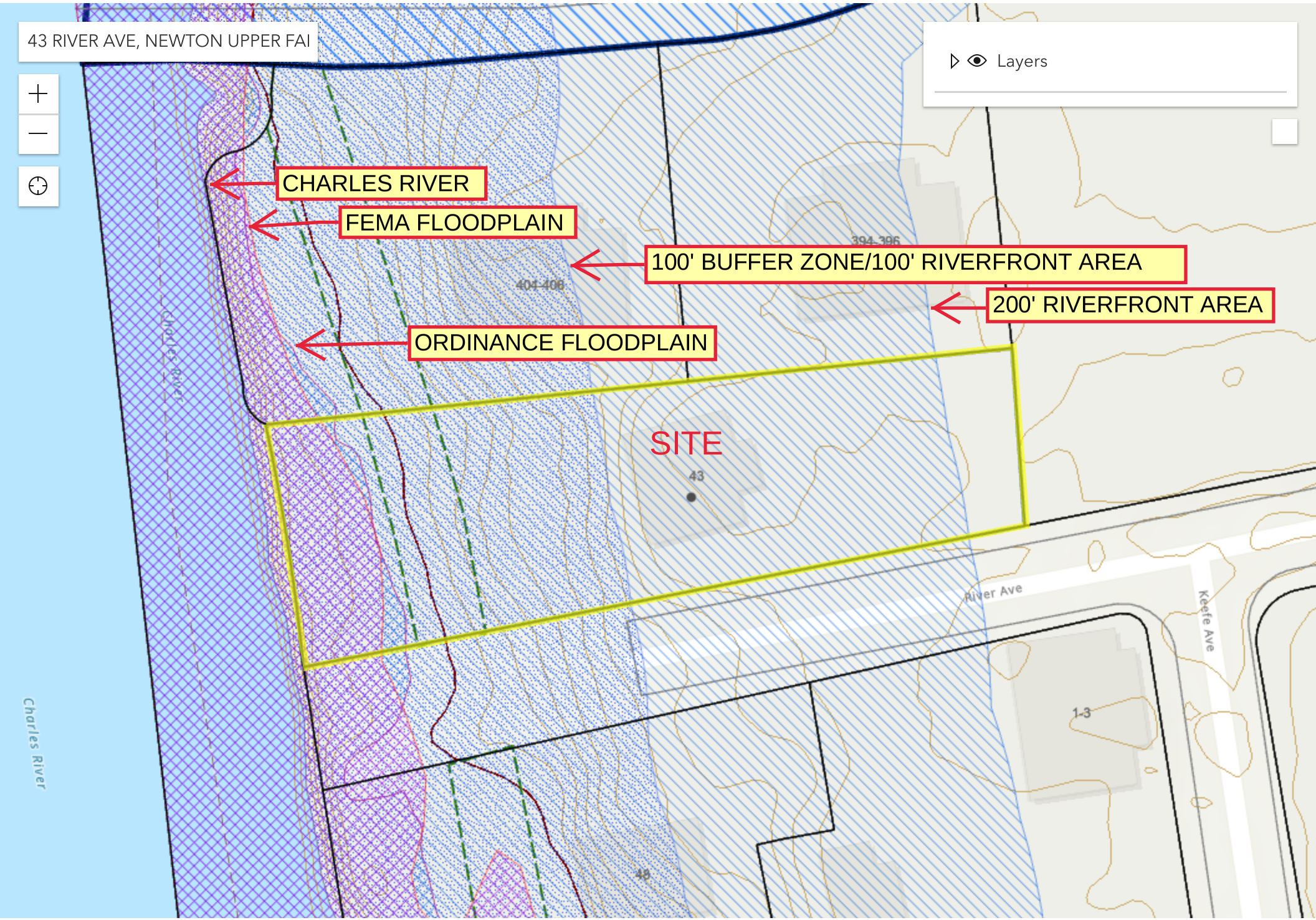
The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

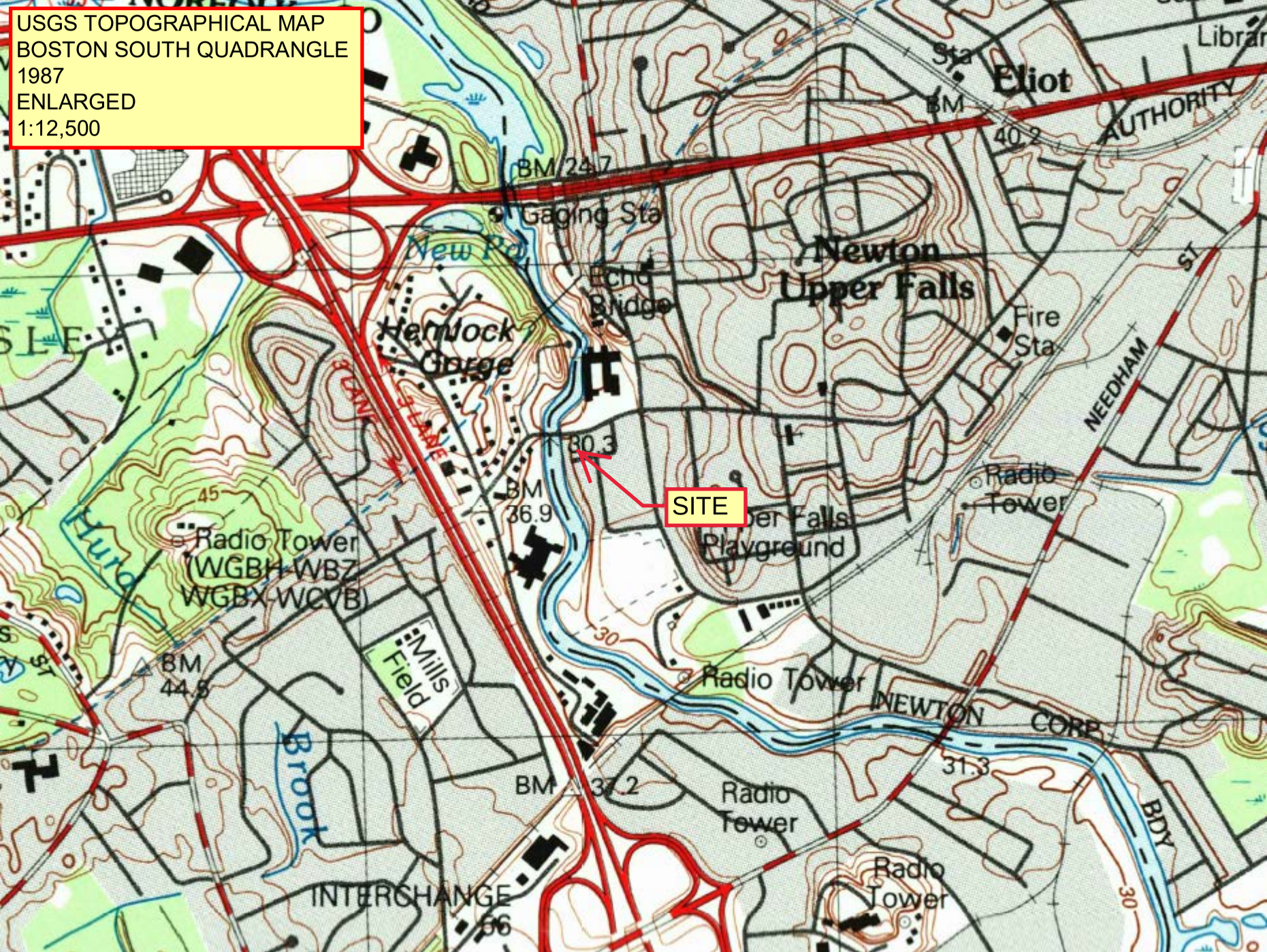
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

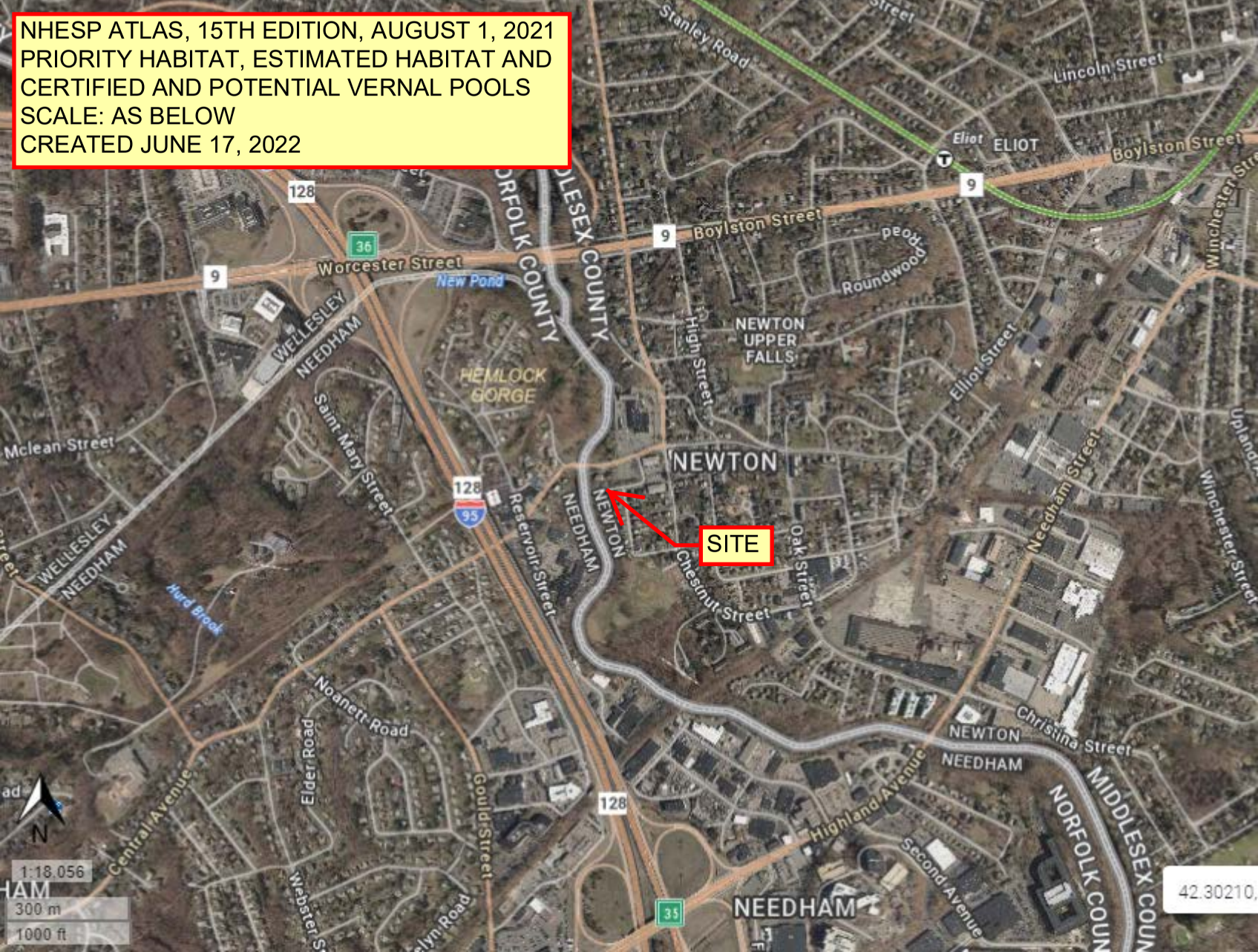
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/18/2022 at 10:00 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Newton GIS Browser




USGS TOPOGRAPHICAL MAP
BOSTON SOUTH QUADRANGLE
1987
ENLARGED
1:12,500
SITE
Eliot
Newton
Upper Falls
Hemlock
Gorge
Echo
Bridge
Gaging Sta
BM 24.7
BM 40.2
Fire
Sta
NEEDHAM
ST
AUTHORITY
BM 30.3
BM 36.9
Radio Tower
(WGBH-WBZ
WGBX-WCVB)
Radio
Tower
Playground
Mills
Field
BM 44.8
Brook
NEWTON
CORP
31.3
BDY
BM 37.2
INTERCHANGE
66
45
30


NHESP ATLAS, 15TH EDITION, AUGUST 1, 2021
PRIORITY HABITAT, ESTIMATED HABITAT AND
CERTIFIED AND POTENTIAL VERNAL POOLS
SCALE: AS BELOW
CREATED JUNE 17, 2022
SITE
NEWTON
NEEDHAM
WELLESLEY
NEWTON UPPER FALLS
HEMLOCK GORGE
New Pond
Roundwood Pond
Worcester Street
Boylston Street
Lincoln Street
Stanley Road
Eliot
ELIOT
High Street
Elliot Street
Needham Street
Winchester Street
Upland
Mclean Street
Saint Mary Street
Reservoir Street
Chestnut Street
Oak Street
Christina Street
Hurd Brook
Noanett Road
Elder Road
Gould Street
Central Avenue
Webster Street
Highland Avenue
Second Avenue
NORFOLK COUNTY
MIDDLESEX COUNTY
128
95
9
36
35
1:18,056
300 m
1000 ft
42.30210,

EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES

102 Grove Street
Worcester, MA 01605-2629
508-752-9666 – Fax: 508-752-9494

John P. Rockwood, Ph.D., SPWS
Principal Environmental Scientist

Dr. John P. Rockwood has been a Staff Scientist with EcoTec, Inc. since October 1999. He was previously a Chief Environmental Scientist at Sanford Ecological Services, Inc. of Southborough, Massachusetts from September 1990 to October 1999. Dr. Rockwood was certified in August 2002 and recertified in March 2008, January 2013, and June 2018 as a Professional Wetland Scientist (PWS) by the Society of Wetland Scientists Professional Certification Program (SWSPCP), and in April 2020, he was made a Senior Professional Wetland Scientist (SPWS) by the SWSPCP. His project experience includes wetland resource evaluation, delineation, and permitting at the local, state, and federal levels; wildlife habitat evaluation; pond and stream evaluation; vernal pool evaluation, certification, construction/replication, and monitoring; rare species habitat and impact assessment; wetland replacement, replication, and restoration area design, construction, and monitoring; invasive species removal and treatment protocols and monitoring; and expert testimony preparation. He has served as a consultant to municipalities, conservation commissions, the development community, engineering and survey firms, industry, and citizen's groups. He has managed and participated in a wide variety of wetlands-related projects ranging in scope from single-family house lots to subdivisions, commercial developments, mixed use developments, golf courses, a water park, MBTA commuter train station, and a regional mall. He has assessed the potential impacts of stormwater runoff, landfill leachate, and/or hazardous waste disposal sites on rare vertebrate and/or invertebrate species, and has conducted and/or directed surveys, delineated actual habitat, conducted habitat evaluations, and/or developed mitigation strategies necessary to protect rare vertebrate, invertebrate, and plant species and their habitats from proposed development-related impacts. He has designed and conducted drift fence studies for rare vertebrates. He has conducted and led preconstruction sweeps for the spotted turtle, wood turtle, and eastern box turtle. He has filed MESA Project Review Checklists for numerous species and has prepared applications for Conservation and Management Permits and Amendments for the eastern box turtle and marbled salamander under MESA. He has submitted rare animal and plant observation forms to NHESP for several vertebrate, invertebrate, and plant species. He has conducted environmental impact assessments and has prepared MEPA documentation related to an office park, an MBTA commuter train station, water park, residential subdivisions, skating rink facility, landfill, and regional mall. Dr. Rockwood also has extensive experience in environmental site assessment related to possible oil and/or hazardous material contamination. He has conducted numerous environmental assessments, several including subsurface investigations, for sites located in Massachusetts, and has conducted preliminary environmental assessments for properties located in New York, New Hampshire, and Rhode Island. He has conducted ecological risk assessments (i.e., Stage I Environmental Screenings and Stage II Environmental Risk Characterizations) for a number of disposal sites in Massachusetts, including several disposal sites that had the potential to affect state-listed vertebrate and invertebrate species, and has utilized the EPA Rapid Bioassessment Protocol for macroinvertebrates to assess potential impacts of disposal sites and hazardous material releases on streams and rivers in Massachusetts and New York. He has served as the environmental contractor to the Franklin Consolidated Office of the Federal Deposit Insurance Corporation (FDIC-FCO) for 16 months, where he reviewed environmental reports, prepared scopes-of-work for site assessments, and provided technical advice to FDIC employees related to environmentally compromised assets. Dr. Rockwood has designed, conducted, and evaluated numerous surface water and groundwater monitoring programs. His prior research includes laboratory studies of the effects of low pH and aluminum on dragonfly nymphs and a field survey of the impact of chlorinated sewerage effluent on algal periphyton community dynamics. Dr. Rockwood is the co-author of a textbook on aquatic biology and is the principal author of three peer-reviewed research publications in the field of aquatic toxicology that address the effect of low pH and aluminum on nymphs of the dragonfly *Libellula julia*. Dr. Rockwood served as the as the Editor of the AMWS Newsletter from November 2004 to October 2010 and as Assistant Editor from May 2003 to November 2004 and October 2010 to January 2012. He served as President of the Association of Massachusetts Wetland Scientists from November 2013 to December 2015 and as Immediate Past President from December 2015 to December 2017. He was twice awarded by AMWS with their President's Award.

Education:
Doctor of Philosophy (Ph.D.): Aquatic Pollution Biology – Plant and Soil Sciences
University of Massachusetts at Amherst, 1989
Bachelor of Science (B.S.): Environmental Sciences, *Summa Cum Laude*
University of Massachusetts at Amherst, 1984

Professional Affiliations:
Society for Freshwater Science
Sigma Xi, Full Member
Association of Massachusetts Wetland Scientists, Voting Member
Society of Wetland Scientists
Massachusetts Association of Conservation Commissions

Certifications:
Society of Wetlands Scientists Senior Professional Wetland Scientist, Certification Number 1349
OSHA Health and Safety Training, 40-Hour Training, 29 CFR 1910.120
OSHA Health and Safety Training, 8-Hour Supervisor Training
OSHA Health and Safety Training, 8-Hour Refresher Training

TREE NUMBERS FROM THIS REPORT ARE SHOWN ON THE EXISTING CONDITIONS PLAN

MARC WELSH INDICATED REPLACEMENT UNDER TREE ORDINANCE IS REQUIRED FOR SITE TREES T7, T8, T10, AND T11 IF REMOVED. SEE EMAIL TO RIGHT.

TREE REPORT

From: "Marc R. Welch" <newtonforestrymw@gmail.com>
Date: June 16, 2022 at 5:35:24 PM EDT
Subject: Re: 43 River Avenue

Hi Kray,

I have reviewed your information, thank you. For the most part I arrived at the same conclusions as you.

If removed the following trees will require replacement: trees 7, 8, 10, 11 and TT1.

Thank you,
Marc

June 8, 2022

43 River Avenue, Newton, MA

Town Of Newton

To whom it may concern,

I, Kray A. Small, Massachusetts Certified Arborist, License # 1797, have been retained by Dina Onur, to develop a tree protection plan for a property located at 43 River Avenue, in Newton, MA. The trees within the parcel 8 inches and above have been assessed. All trees reside within the 200' riparian buffer.

All trees 8 inches DBH and greater are located and numbered logically on engineer's print provided by Mikhail R. Deychman, of 41 Saybrook Street, Brighton, MA 02135.

1. ***Fraxinus americana*** (American White Ash) this tree is in fair-poor condition/health. A portion of the canopy is dead, and only tufts of foliage exist. These signs suggest the tree has succumb to a disease known as Ash Yellows, a micro-plasma like organism, that has no cure. This tree will continue to die a rather slow death. DBH was measured 4'6" from grade. (Please refer to photo #1)

   DBH: 13"
   Action: **Suggested Removal**
   Health: Fair-Poor

2. ***Ulmus americana*** (American Elm) this tree is in poor condition/health. A good portion of the canopy is dead and has most likely succumb to Dutch Elm Disease. This is a fungal pathogen that affects the cambium layer just under the bark and chokes off the transmission of water and nutrients to and from the roots and canopy. DBH was measured 4'6" from grade. (Please refer to photos #2 and #3)

   DBH: 14"
   Action: **Suggested Removal**
   Health: Poor

3. ***Acer platanoides*** (Norway Maple) this tree is in poor condition/health. The tree is made up of co-dominant leaders and has girdling roots. A co-dominant leader occurs when two stems grow parallel to one another. The point of attachment is usually less than 20 degrees. As the plant grows, annual rings are formed, and new wood is added every year. The new wood starts to push each leader away from one another and a crack starts to form. Water gets in between and ice forms creating more force. The tree recovers yearly by adding callus wood around the crack (wound) and healing happens yearly. This formation is callus is called a bark inclusion. As the tree continues to grow, the tree can't bridge the gap of the wound and a fissure is formed. At this point decay fungi has entered and is colonizing the main stem. The attachment of the co-dominant leader is now extremely weak and it will be a matter of time when the tree fails and may cause injury to either persons or real estate. DBH as measured 4'6" from grade. (Please refer to photos #3 and #4)

DBH: 15”
Action: **Suggested Removal**
Health: Poor

4. ***Acer negundo*** (Boxelder) this tree is in poor condition/health. This is a multi-leadered plant with much decay and dead wood. DBH was measured 4’6” from grade. (Please refer to photos #5 and #6)

   DBH: L-14” L2-13” L3-10”
   Action: **Suggested Removal**
   Health: Poor

5. ***Morus alba*** (Common Mulberry) this tree is in poor condition/health. The plant has decay at the base of the stem where a leader had broken out some time ago and had dead limbs and co-dominant leaders. DBH as measured 3’ from grade due to co-dominant leaders. (Please refer to photos #7 and #8)

   DBH: 26”
   Action: **Suggested Removal**
   Health: Poor

6. ***Acer platanoides*** (Norway Maple) this tree is in poor condition/health. Cavities of decay are present throughout the leaders of the plant. DBH was measured 3’ from grade due to low co-dominant leaders. (Please refer to photos #9 and #10).

   DBH: 21”
   Action: **Suggested Removal**
   Health: Poor

7. ***Acer platanoides*** (Norway Maple) this tree is in poor condition/health. DBH was measured 4’6” from grade. (Please refer to photos #11 and #12)

   DBH: 20”
   Action: **Suggested Removal**
   Health: Poor

8. ***Malus spp.*** (Unknown variety of apple) this tree is in fair condition/health. The tree has a fungal disease known as Botryosphaeria; it is a sort of canker blight that affects apple trees. In an orchard setting, the tree is always removed. DBH was measured 1’ from grade due to low branching. (Please refer to photos #13 and #14)

   Leaders are 9", 7", and 7"

   DBH: 14“
   Action: **Suggested Removal**
   Health: Fair

9. ***Malus spp.*** (Unknown variety of apple) this tree is in poor condition/health. This tree has a large cavity of decay within the central leader. DBH was measured 4'6" from grade. (Please refer to photos #15 and #16)

    DBH: 15"
    Action: **Suggested Removal**
    Health: Poor

10. ***Morus alba*** (Common Mulberry) this tree is in fair condition/health. The tree has several pockets of decay throughout the 5 co-dominant leaders and has numerous dead branch tips suggesting that there may be a root disorder. DBH as measured 4'6" from grade. (Please refer to photos #17 and #18)

    DBH: L1-14" L2-9" L3-9" L4-8" L5-8"
    Action: **Remove or prune**
    Health: Fair
    The Critical Root Zone of this plant shall be protected by snow fence at least 4' in height and staked every 5'. The protected area will be reduced and semi-circumvent the stem 10'.

11. ***Catalpa speciosa*** (Northern Catalpa Tree) this tree is in fair condition/health. The tree has a distinct lean of over 20 degrees and has decay within the central leader. DBH was measured 4'6" from grade. (Please refer to photos #19 and #20)

    DBH: 16"
    Action: **Remove**
    Health: Fair

12. ***Malus spp.*** (Unknown variety of apple) this tree is in poor condition/health. This tree has a large cavity of decay within the central leader. DBH was measured 4'6" from grade. (Please refer to photos #21 and #22)

    DBH: 8"
    Action: **Removal**
    Health: Poor

TT1. ***Acer platanoides*** (Norway Maple) this tree is in good condition/health. This tree is off locus and with permission from the town, it is suggested that the tree be pruned back. (Please refer to photo #23)

Action: **Prune**
Health: Good
Off Locus

Mitigation Plan of protected trees within the tree yard:

Tree #10 will be protected as explained in the description of trees unless it will be allowed to be removed.

Although Norway maples are considered an invasive species, it is still protected under the Town of Newton Tree by-law.

Planned Removals to be Mitigated:

Trees #9, #11, and #12 must be removed for the new proposed house.

If any questions arise, I may be reached by telephone at 508-328-4214 and by email ksmall4214@charter.net any other correspondence can be mailed to Kray Small P.O. Box 163, Woodville, MA 01784.

Respectively Submitted,

Kray A. Small, Massachusetts Certified Arborist #1797

Photo #1

Tree #1- Pointed out is the tufted branch and circled is dead canopy most likely brought about by Ash Yellows.

Photo #2

Tree #2- Circled is the canopy of the elm. Note numerous dead scaffold branches most likely from Dutch Elm Disease. This disease was vectored by beetle brought into this country back in the late 1800's.

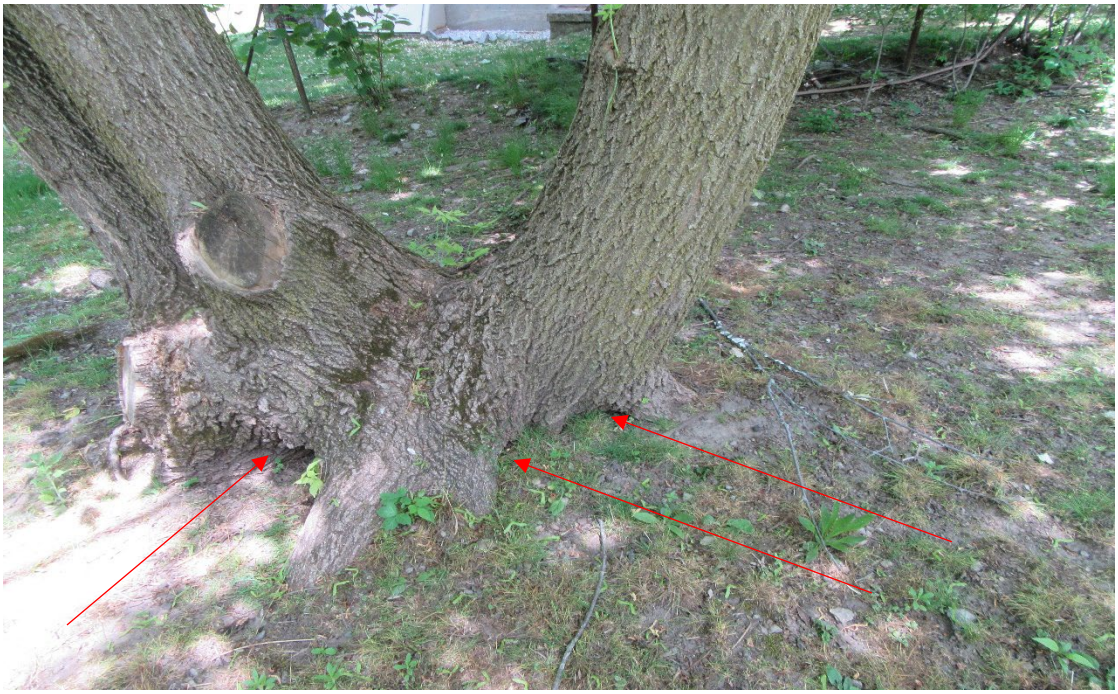
Photo #3

Tree #2 and #3- Shows the girdling roots. Girdling roots wrap around the base of the stem and choke it off. This inhibits the translocation of water and nutrients and eventually kills the tree.

Photo #4

Tree #3-Shows bark inclusion caused by the co-dominant leaders.

Photo #5



Tree #4-Pointed out are cavities at the base of the stems. Decay is evident.

Photo #6

Tree #4-Shows numerous dead tips most likely caused by a root disorder.

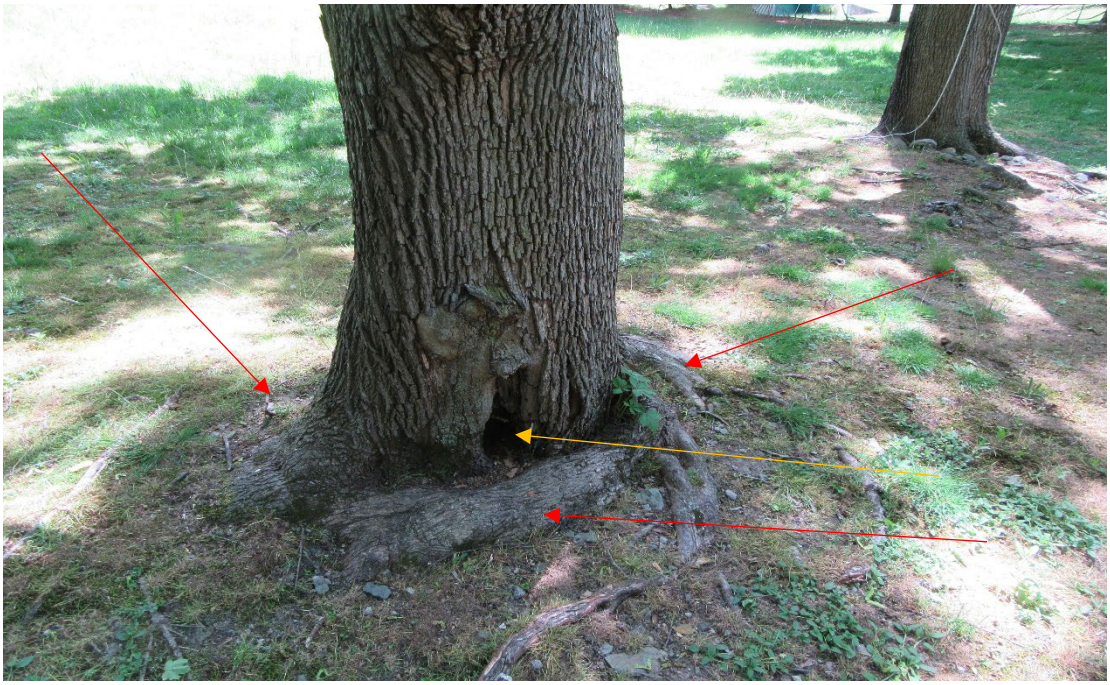
Photo #7

Tree #5-Pointed out is where a leader broke out. Decay is evident at the base of the stems.

Photo #8

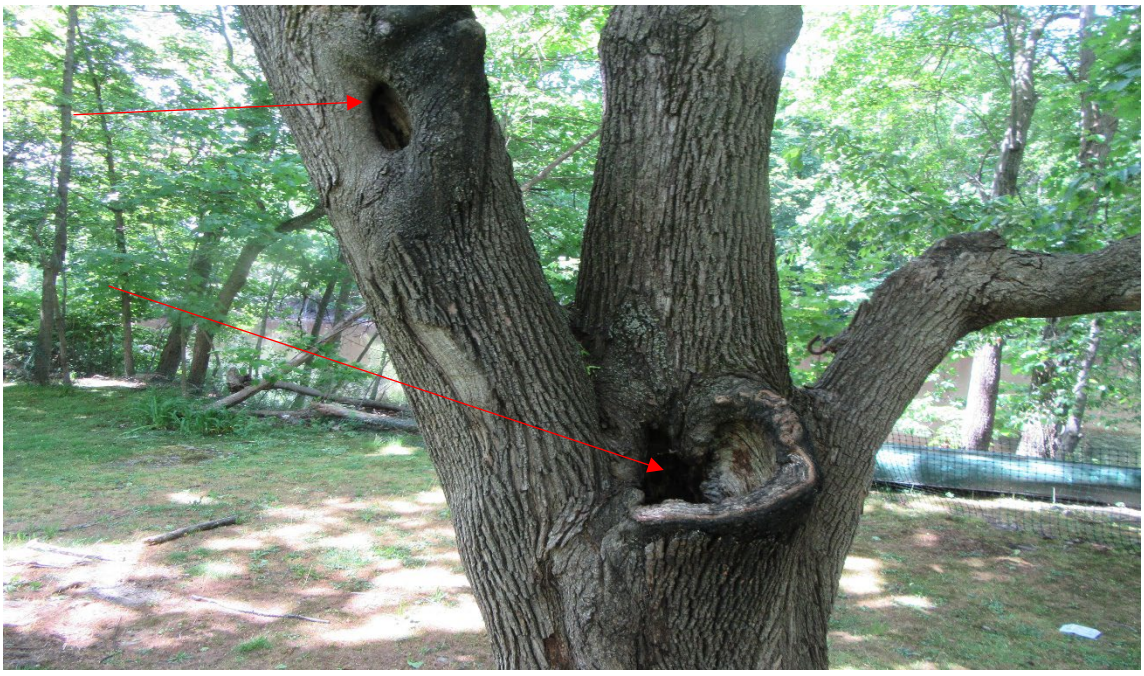
Tree #5-Shows numerous dead branches.

Photo #9



Tree #6-Pointed out in red is the girdling roots; Yellow arrow points out cavity in the root collar.

Photo #10



Tree #6-Shows cavities of decay within the co-dominant leaders.

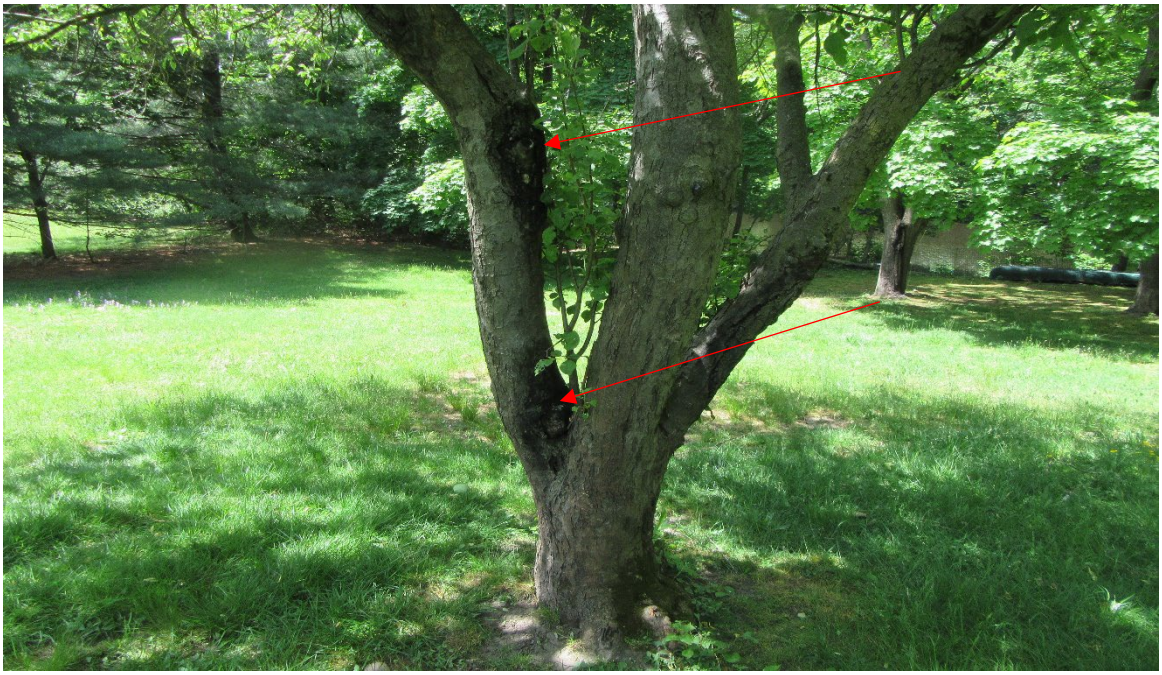
Photo #11

Tree #7-Pointed out in red is the girdling roots

Photo #12

Tree #7-Pointed out is the bark inclusion. The black stain is liquified decayed wood being exuded from the heart wood of the stem.

Photo #13



Tree #8-Pointed out is the fungus ***Botryosphaeria***. Once the tree is infected there is no cure to save it. It slowly infects lateral branches and kills them. In an orchard setting the tree is destroyed.

Photo #14

Tree #8-Pointed out is a lateral branch infected with the fungal disease ***Botryosphaeria.***

Photo #15

Tree #9- show massive cavity in the central leader of the tree.

Photo #16

Tree #9-Shows the top of the tree and mostly dead upper canopy.

Photo #17

Tree #10-Shows the tree growing into the utility lines; note the thin canopy.

Photo #18

Tree #10-Shows weak canopy. It is assumed that there is a root issue with this plant. Decay exists in several of the co-dominant leaders.

Photo #19

Tree #11-Photo show the distinct lean of the stem. At some point this tree was wind thrown but didn't totally uproot. Trees with this lean are considered to be of high risk.

Photo #20

Tree #11-There are several pockets of decay where a branch died and did not fall off. This creates a conduit for decay fungi to enter directly into the heartwood and will eventually hollow out the interior.

Photo #21

Tree #12-Shows cavity on remaining leader.

Photo #22

Tree #12-Shows large cavity where a leader broke away from the main stem.

Photo #23

Tree #TT1-Shows town tree to be pruned back approximately 10-12’

Ruthanne Fuller
Mayor

City of Newton, Massachusetts
Department of Planning and Development
1000 Commonwealth Avenue Newton, Massachusetts 02459

Telephone
(617) 796-1120
Telefax
(617) 796-1086
www.newtonma.gov

Barney S. Heath
Director

Cons. Com. Wetland Application Coversheet/Checklist

Date	For 07/26/2022 Deadline

Fill in all white cells completely

Parcel		**Applicant** name	Dina Onur
address	43 River Avenue	Address	165 Wampum Street Plainville, MA 02762
Sec/Block/Lot	51 / 043 / 0003	Email	dinaonur@yahoo.com
Book & Page	79646 & 319	Phone	508-718-8115
Owner name	Dina Onur	**Representative**	John P. Rockwood, Ph.D., SPWS EcoTec, Inc.
Address	165 Wampum Street Plainville, MA 02762	Address	102 Grove Street Worcester, MA 01605
Email	dinaonur@yahoo.com	Email	jrockwood@ecotecinc.com
Phone	508-718-8115	Phone	508-752-9666 x 3

Wetland type	Riverfront Area	**sf/cf affected**	3,560 sf	**Relevant Perf. Standards**	**10.** 58(4)(a&b)&(5)
Wetland type	Bordering Land Subject to Flooding	**sf/cf affected**	240 sf/ 0 cf	**Relevant Perf. Standards**	**10.** 57(4)(a)
Wetland type	Buffer Zone	**sf/cf affected**	--	**Relevant Perf. Standards**	**10.** 53(1)

Components of a Complete NOI Application

State Form: NOI Form 3	Included? ☒ Yes ☐ No
Plan* title(s) Plan date Plan stamped by *if legible, plans should be 11"x17"	See NOI Cover Letter for a complete listing of materials included as part of this filing.
Narrative	Included? ☒ Yes ☐ No See Cover Letter
Proof that all relevant perf. standards are met	Included? ☒ Yes ☐ No See Cover Letter
Locus map	Included? ☒ Yes ☐ No
Delineation lines (backup material)	Included? ☒ Yes ☐ No See Cover Letter
Fees ● Fee Transmittal form ● City portion of state fee $ 800.00 ● City fee $50	 Included? ☒ Yes ☐ No Included? ☒ Yes ☐ No Included? ☒ Yes ☐ No
Abutter Information ● List (within 100') ● Abutter letter ● Affidavit & proof -- bring to hearing	 Included? ☒ Yes ☐ No See Cover Letter Included? ☒ Yes ☐ No To be provided once abutter notifications are sent. *Present them at the hearing*
Other Attachments, e.g.	
Planting Plan	Included? ☒ Yes ☐ No ☐ Not Applicable See Planting Schematic
Floodplain analysis	Included? ☒ Yes ☐ No ☐ Not Applicable See Cover Letter
Stormwater analysis	Included? ☒ Yes ☐ No ☐ Not Applicable See Stormwater Report
Riverfront Area Alternatives Analysis	Included? ☒ Yes ☐ No ☐ Not Applicable See Cover Letter
Restoration or mitigation summary	Included? ☒ Yes ☐ No ☐ Not Applicable See Cover Letter
Phasing/Sequencing plan, O&M plan, etc.	Included? ☒ Yes ☐ No ☐ Not Applicable See O & M Plan

Components of a Complete NOI Application

Conservation Commission Wetland Permit Process

NOI	RDA	Process
1	-	**Submit applications (see bullets below) by noon of the Tuesday deadline** (16 days before desired hearing)**:** a. To Newton Conservation Commission: 1000 Comm Ave., Newton, MA 02459 • **This coversheet** (1 paper copy) • **Complete application** (2 paper copies and 1 .pdf) -- see other side of this page for checklist • IF LEGIBLE, plans should be provided in 11" x 17" format. • **Check** for city portion of the state fee • **$50 check** for city filing fee b. To Mass DEP Northeast Regional Office: 205B Lowell Street, Wilmington, MA 01887 • **Complete application** (see other side of this page): 1 paper copy • **Photocopy of the two state checks** c. To DEP Lock Box: Box 4062, Boston MA 02211 • **Check** for state portion of the state fee • **Fee transmittal form**
	1	**Submit application by noon of the Tuesday deadline** (16 days before the desired hearing): a. **DEP Form 1 (RDA),** b. **plans,** and c. **$50 check** made out to the City of Newton**.**
-	-	*The Conservation Agent will **schedule a Public hearing/meeting**.*
2	-	**Get a certified list of abutters within 100' of property lines from the Assessor's Office.**
3	-	Once you know the date and time of the hearing, **notify abutters within 100' of the property line** using the City's "**Notification to Abutters Form**" and **certified mail**, **certificate of mailing,** or **hand delivery with signatures**. (N.B. Present proof of notification at the beginning of the public hearing.)
4	2	*The Conservation Agent will **place a legal ad in the TAB** and the **Applicant will be billed for the ad.***
5	-	**Stake the project.** 2 weeks in advance of the public hearing, stake all new structures, erosion control barriers, stormwater systems, etc. within Con Com jurisdiction.
-	-	*The Conservation Agent will perform a **site visit** before the public hearing to confirm existing conditions and proposed work. If you wish to be informed of the time of the visit, please contact the Con Com office.*
6	3	**Attend the public hearing/meeting.** The applicant or representative is expected to **provide proof of abutter notification,** briefly **present the project**, and **answer any questions about possible impacts on wetlands.** At the end of the hearing, the Con Com will either: • **Issue a Determination of Applicability** ("negative" determination means no further permitting is needed), • **Issue an Order of Conditions** (OOC) approving or denying the project, **or** • **Approve a continuation** of the public hearing to allow time for additional information to be provided.
7	4	**Receive and read the decision and understand the conditions.** Contact the Con Com if you have any questions. Some conditions are temporary (such as maintaining erosion controls), and some are perpetual (such maintaining restoration planting areas or limiting the use of fertilizers and outdoor lighting).
8	-	**Wait-out the 10-Day appeal period.** A decision of the Con Com can be appealed to MassDEP by any abutter, applicant, or 10-citizen group within 10 business days of the decision.
9	-	**Record the Order** at the Registry of Deeds. Provide proof of recording to the Conservation office.
10	-	**Install MassDEP file number sign and erosion controls**.
11	-	**Schedule and attend a pre-construction site visit.** Contact the Conservation office to schedule the site visit.
12	5	**Execute the project.** The project must be completed within 3 years, unless an extension of the permit is issued; extensions must be requested least 30 days prior to the expiration of the permit.
13	-	**Request a Certificate of Compliance (COC).** Once the project is completed and all conditions are satisfied, request a COC from the Conservation office by submitting: (1) DEP **Form 8a**, (2) an **as-built plan**, and (3) a **letter from the engineer** stating that everything is in substantial compliance with the approved plans and OOC. The Con Com will perform a site visit to ensure compliance and issue a COC if appropriate.
14	-	**Record the Certificate of Compliance (COC)** at the Registry of Deeds to remove the cloud from the title. **Provide proof of recording to the Conservation office**.

INCOMPLETE APPLICATIONS WILL NOT BE ACCEPTED.

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

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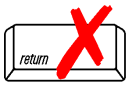
City/Town

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):

43 River Avenue — a. Street Address
Newton — b. City/Town
02464 — c. Zip Code

Latitude and Longitude:
42.31200 — d. Latitude
-71.22640 — e. Longitude

51 043 — f. Assessors Map/Plat Number
0003 — g. Parcel /Lot Number

2. Applicant:

Dina — a. First Name
Onur — b. Last Name
-- — c. Organization
165 Wampum Street — d. Street Address
Plainville — e. City/Town
MA — f. State
02762 — g. Zip Code
508-718-8115 — h. Phone Number
-- — i. Fax Number
dinaonur@yahoo.com — j. Email Address

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

Dina — a. First Name
Onur — b. Last Name
-- — c. Organization
165 Wampum Street — d. Street Address
Plainville — e. City/Town
MA — f. State
02762 — g. Zip Code
508-718-8115 — h. Phone Number
-- — i. Fax Number
dinaonur@yahoo.com — j. Email address

4. Representative (if any):

John — a. First Name
Rockwood — b. Last Name
EcoTec, Inc. — c. Company
102 Grove Street — d. Street Address
Worcester — e. City/Town
MA — f. State
01605 — g. Zip Code
508-752-9666x3 — h. Phone Number
-- — i. Fax Number
jrockwood@ecotecinc.com — j. Email address

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

$ 1,575.00 — a. Total Fee Paid
$ 775.00 — b. State Fee Paid
$ 800.00 — c. City/Town Fee Paid

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A. General Information (continued)

6. General Project Description:

The project consists of the demolition of the existing single-family house and associated site features and the construction of a new two-family house with associated site features within Riverfront Area, Bordering Land Subject to Flooding, and/or Buffer Zone. Erosion controls, stormwater management, and lawn renaturalization is proposed. Please see Cover Letter and Site Plan for more information.

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)
South Middlesex	--
c. Book	**d. Page Number**
79646	319

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.

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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	-- (1. linear feet)	-- (2. linear feet)
b. ☐ Bordering Vegetated Wetland	-- (1. square feet)	-- (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	240 (1. square feet); 0 (3. cubic feet of flood storage lost)	0 (see Cover Letter) (2. square feet); 0 (see Cover Letter) (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	Charles River - 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: 11,880 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.
3,560 (see Cover Letter)	0	3,560

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.

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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

	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

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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.

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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 - Cohasset 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 - Hull 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).

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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.

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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.

A complete listing of materials included in this filing is provided in the Cover Letter.

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:

110	7/20/2022
2. Municipal Check Number	3. Check date
111	7/20/2022
4. State Check Number	5. Check date
Ozgur	Onur
6. Payor name on check: First Name	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

NEWTON
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.

See Next Page

1. Signature of Applicant	2. Date
3. Signature of Property Owner (if different)	4. Date
John Rockwood	07/22/2022
5. Signature of Representative (if any)	6. Date

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.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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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: Dina Omer	2. Date: 06/24/2022
3. Signature of Property Owner (if different): Dina Omer	4. Date: 06/24/2022
5. Signature of Representative (if any)	6. Date

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.

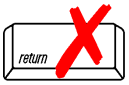
The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

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



A. Applicant Information

1. Location of Project:

43 River Avenue	Newton
a. Street Address	b. City/Town
111	$ 775.00
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Dina		Onur	
a. First Name		b. Last Name	
--			
c. Organization			
165 Wampum Street			
d. Mailing Address			
Plainville	MA	02762	
e. City/Town	f. State	g. Zip Code	
508-718-8115	--	dinaonur@yahoo.com	
h. Phone Number	i. Fax Number	j. Email Address	

3. Property Owner (if different):

Dina		Onur	
a. First Name		b. Last Name	
--			
c. Organization			
165 Wampum Street			
d. Mailing Address			
Plainville	MA	02762	
e. City/Town	f. State	g. Zip Code	
508-718-8115	--	dinaonur@yahoo.com	
h. Phone Number	i. Fax Number	j. Email Address	

B. Fees

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

Fee should be calculated using the following process & worksheet. ***Please see Instructions before filling out worksheet.***

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract $12.50. To calculate the city/town share of the fee, divide the total fee in half and add $12.50.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

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

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
3b. Construction of Townhouse Style Building and Associated Activities in RFA, BLSF and/or BZ	1	$ 1,050 x 1.5	$ 1,575.00

Step 5/Total Project Fee: $ 1,575.00

Step 6/Fee Payments:

Total Project Fee:	$ 1,575.00 (a. Total Fee from Step 5)
State share of filing Fee:	$ 775.00 (b. 1/2 Total Fee **less $**12.50)
City/Town share of filling Fee:	$ 800.00 (c. 1/2 Total Fee **plus** $12.50)

C. Submittal Requirements

a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
Box 4062
Boston, MA 02211

b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

10-19

111

PLAINVILLE, MA 02762-1605

07/20/2022

53-7054/2113
494

Date

Pay to the Order of Commonwealth of MA $ 775.00

Seven Hundred seventy Five 00/00 Dollars

Photo Safe Deposit® Details on back

TD Bank
America's Most Convenient Bank®

For State Share of State Fee

MP

Harland Clarke

TD Bank, N.A.

10-19

110

PLAINVILLE, MA 02762-1605

07/20/2022

53-7054/2113
494

Date

Pay to the Order of City of Newton $ 800.00

Eight Hundred 00/00 Dollars

Photo Safe Deposit® Details on back

TD Bank
America's Most Convenient Bank®

For City Share of State Fee

MP

Harland Clarke

TD Bank, N.A.

10-19

109

PLAINVILLE, MA 02762-1605

07/20/2022

53-7054/2113
494

Date

Pay to the Order of City of Newton $ 50.00

Fifty 00/00 Dollars

Photo Safe Deposit® Details on back

TD Bank
America's Most Convenient Bank®

For Ordinance Fee

MP

Harland Clarke

TD Bank, N.A.

Mailing Address
Assessing Department
1000 Commonwealth Ave.
Newton, MA 02459

Assessment Administration
City of Newton, MA

Phone Numbers
Main Office: 617-796-1160
Facsimile: 617-796-1179

REQUEST FOR ABUTTERS LIST AND MAILING LABELS

Purpose: (check one)

_X_ Conservation Commission Filing
___ Filing for Victualler's/Restaurant or Liquor License
___ Other: _____
(Ordinances, laws, or regulations that require a citizen/organization to send a notice by mail to "parties of interest.")

Name of organization: EcoTec, Inc.
Person filing request: John Rockwood, Ph.D. **Title:** Principal Scientist
Address: 102 Grove Street, Worcester, MA 01605
Telephone no. during day: 508-294-2548 (to notify for pick-up)

Subject property: 43 River Avenue (SBL 51 043 0003)
Abutters list requires owner names and addresses of: (check all that apply)

___ Abutters to subject property and abutters to abutters
_X_ Abutters within user-specified distance from property line: within 100 feet
___ Abutters along one or more streets (list below):

_____
_____
_____
_____

Please verify spelling of street on City map on wall near front door of Assessors office.

Mailing labels for abutters (as above): (Charge: $.50 per label sheet)

___ 1 set
___ 2 sets

I do not require labels. Please email letter, list, and map to jrockwood@ecotecinc.com when ready.

Fees: Staff preparation time if request takes 2 hours or more to complete.

Staff Fee:	**$ 23.75 /hour (or portion thereof)**
Mailing labels:	**$ .50 per label sheet**
Total:	***Calculated upon completion***

Please allow ten (10) business days for completion of this request.

Signature: John P. Rockwood **Date:** 06/06/2022

Abutters List
Date: June 07, 2022

print this list

Subject Property Address: 43 RIVER AVE Newton, MA
Subject Property ID: 51-043-0003

Search Distance: 100 Feet

Prop ID: 51-042-0019
Prop Location: 8-10 KEEFE AVE #A Newton, MA
Owner: LEE PHILIP S & CHLOE Y
Mailing Address:

8-10 KEEFE AVE A
NEWTON, MA 02464

Prop ID: 51-042-0019-A
Prop Location: 8-10 KEEFE AVE #B Newton, MA
Owner: XU DON
Co-Owner: LIU TREEN E TRS
Mailing Address:
8-10 KEEFE AVE B
NEWTON, MA 02464

Prop ID: 51-043-0001
Prop Location: 25 RIVER AVE Newton, MA
Owner: HAYNES G ARNOLD
Mailing Address:
34 WASHINGTON ST
WELLESLEY, MA 02481

Prop ID: 51-043-0002
Prop Location: 394-396 ELLIOT ST Newton, MA
Owner: W BROADWAY PROP DEV LLC
Mailing Address:
594 MARRETT RD STE 16
LEXINGTON, MA 02421

Prop ID: 51-043-0002-A

Prop Location: 404-406 ELLIOT ST Newton, MA
Owner: CHATHAM PROPERTIES LLC
Mailing Address:
594 MARRETT RD STE 16
LEXINGTON, MA 02421

Prop ID: 51-044-0001
Prop Location: 1-3 KEEFE AVE #1 Newton, MA
Owner: PHILLIPS MARK P
Co-Owner: PHILLIPS JENNIFER T
Mailing Address:
1 KEEFE AVE 1
NEWTON, MA 02464

Prop ID: 51-044-0001-A
Prop Location: 48 RIVER AVE Newton, MA
Owner: SALTZSTEIN BARBARA J TR
Co-Owner: BARBARA J SALTZSTEIN TRUST
Mailing Address:
48 RIVER AVE
NEWTON, MA 02464

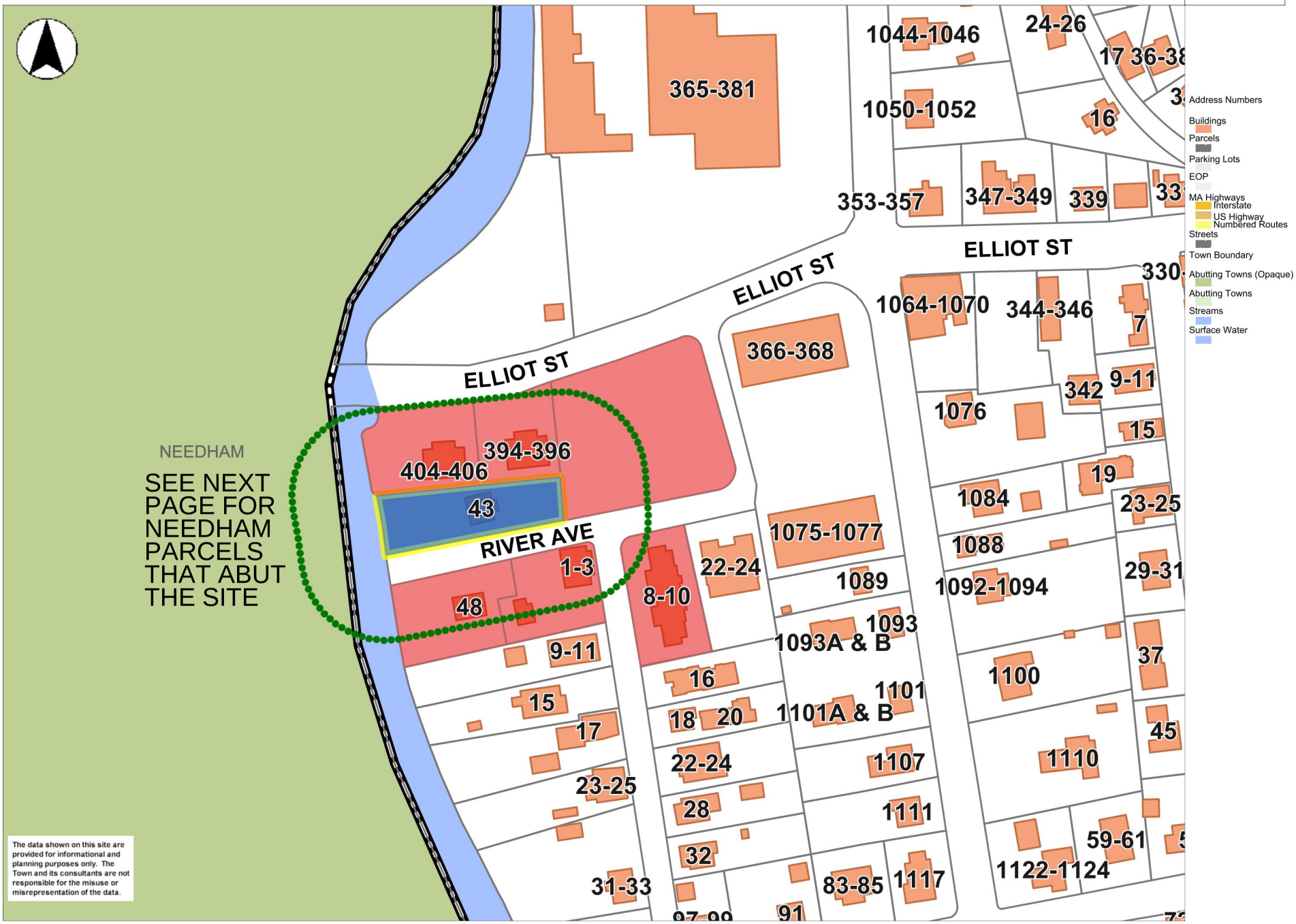
Prop ID: 51-044-0001-B
Prop Location: 1-3 KEEFE AVE #3 Newton, MA
Owner: HARRIS ALLON
Co-Owner: LEVY-HARRIS BRENDA F
Mailing Address:
1-3 KEEFE AVE 3
NEWTON, MA 02464

Needham Abutters

16 Central Avenue
ROSS DAVID A & LAUREN M
16 CENTRAL AVE
NEEDHAM, MA 02494

22/24 Central Avenue
PJ MCCORRICK LLC
193 BROAD MEADOW ST
NEEDHAM, MA 02492

28/30 Central Avenue
MURPHY MARGUERITE
28 CENTRAL AVE
NEEDHAM, MA 02494



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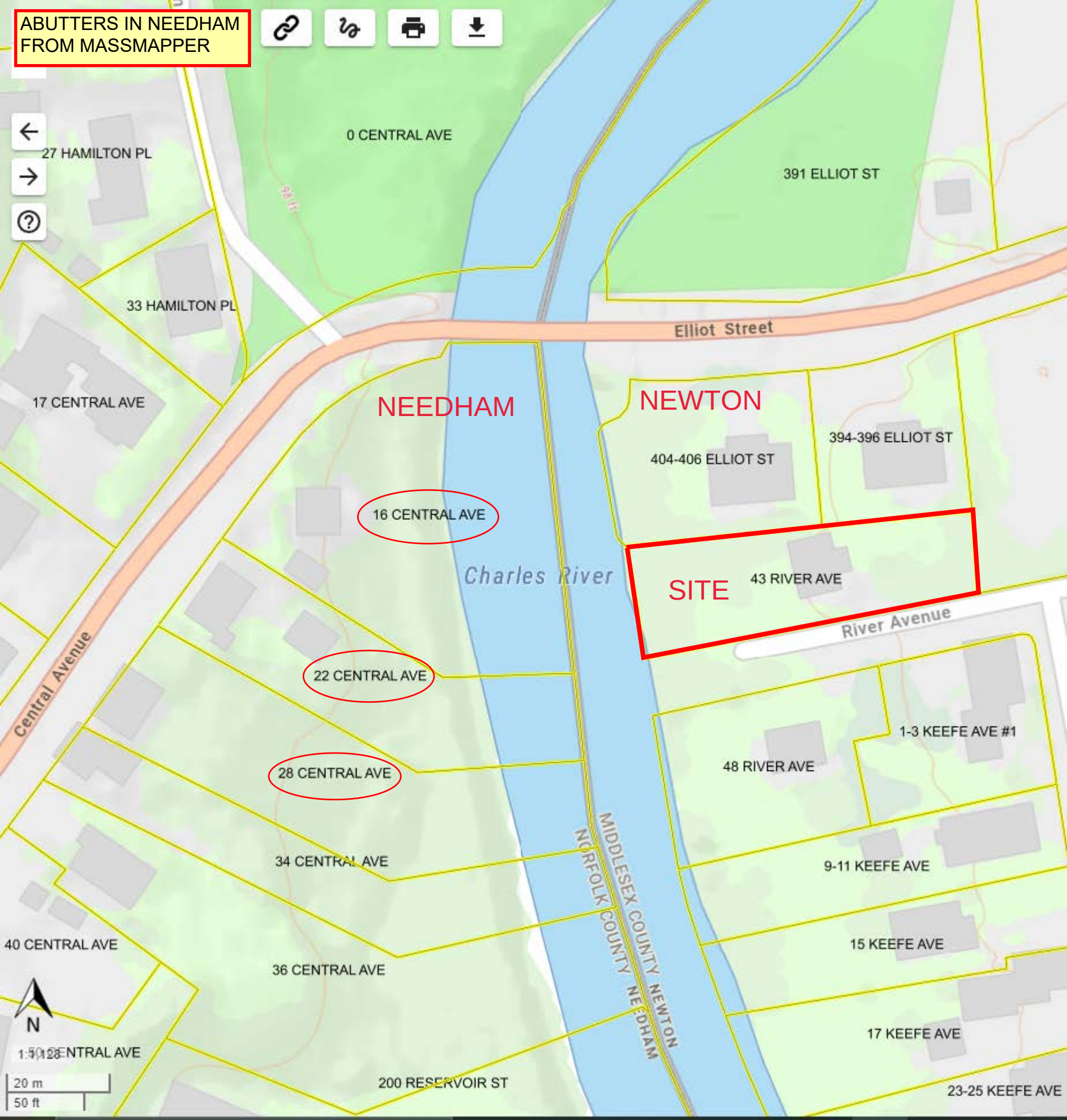
Printed on 06/07/2022 at 08:42 AM

Newton, MA DPW - MapsOnline


ABUTTERS IN NEEDHAM
FROM MASSMAPPER
0 CENTRAL AVE
27 HAMILTON PL
391 ELLIOT ST
33 HAMILTON PL
Elliot Street
17 CENTRAL AVE
NEEDHAM
NEWTON
394-396 ELLIOT ST
404-406 ELLIOT ST
16 CENTRAL AVE
Charles River
SITE
43 RIVER AVE
River Avenue
Central Avenue
22 CENTRAL AVE
1-3 KEEFE AVE #1
48 RIVER AVE
28 CENTRAL AVE
34 CENTRAL AVE
9-11 KEEFE AVE
MIDDLESEX COUNTY NEWTON
NORFOLK COUNTY NEEDHAM
40 CENTRAL AVE
15 KEEFE AVE
36 CENTRAL AVE
N
17 KEEFE AVE
200 RESERVOIR ST
23-25 KEEFE AVE
20 m
50 ft

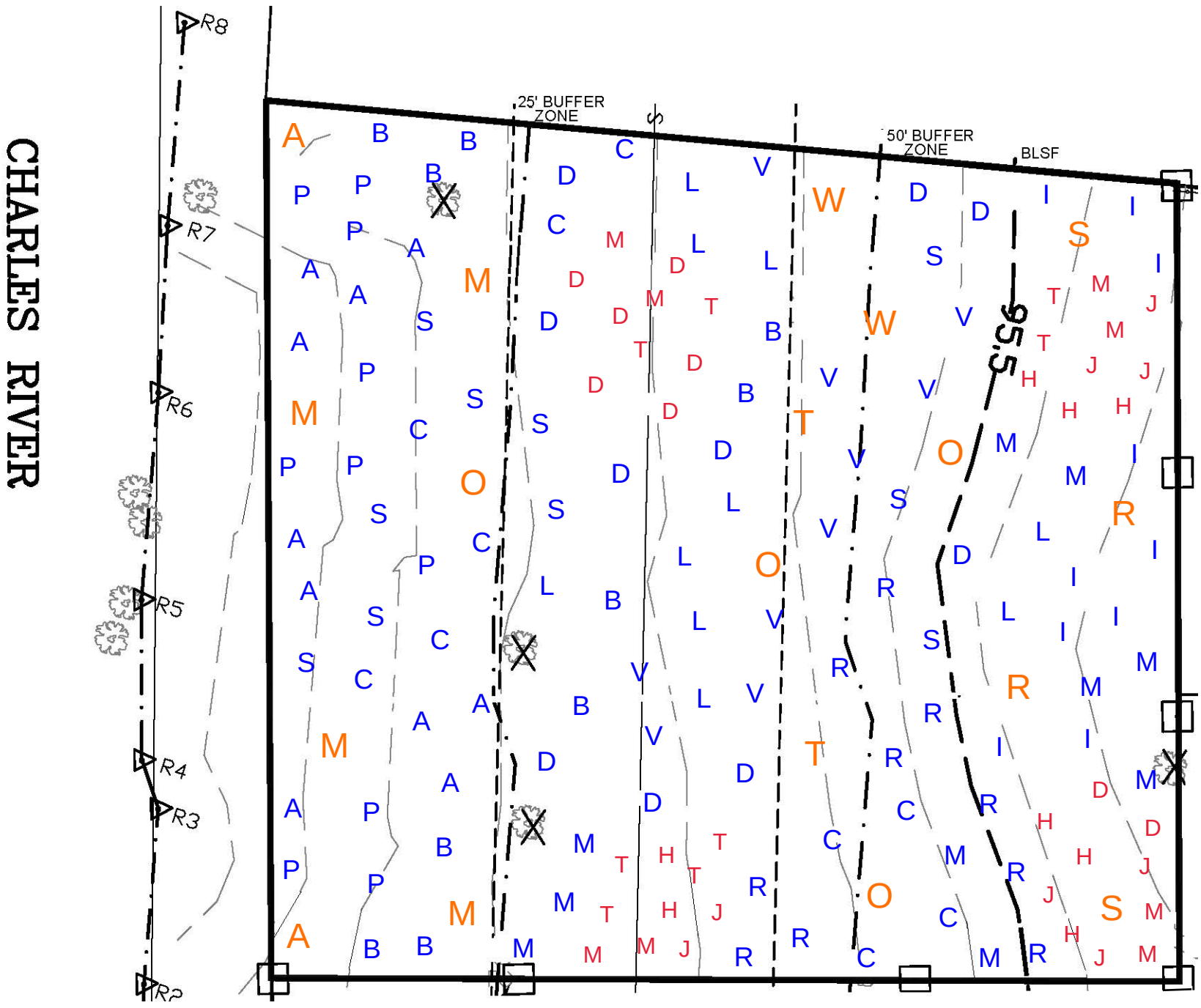
REVISED PLANTING SCHEMATIC FOR ENHANCEMENT PLANTING AREA
43 RIVER AVENUE, NEWTON

PREPARED BY ECOTEC, INC.
JULY 21, 2022; REVISED AUGUST 7, 2022

Enhancement Planting Area (3,850± S.F.)

Stratum; Species; Size; Spacing	
Saplings ; Various; 15' on-center	18
A Atlantic White Cedar (*Chamaecyparis thyoides*; 6" Caliper)	2
O Northern Red Oak or Pin Oak (*Quercus rubra* or *palustris*; 3" Caliper)	4
M Red Maple (*Acer rubrum*; 3" Caliper)	4
T Tulip Tree (*Liriodendron tulipifera*; 3" Caliper)	2
W White Spruce (*Picea alba*; 6" Caliper)	2
R Eastern Redbud (*Cercis canadensis*; 2" Caliper)	2
S Sweetbay Magnolia (*Magnolia virginiana*; 2" Caliper)	2
Shrubs (Evergreen and Deciduous); 3-4' height; 6' on-center	110
S Serviceberry (*Amelanchier canadensis*)	10
L Mountain Laurel (*Kalmia latifolia*)	10
V American Witch-hazel (*Hamamelis virginiana*)	10
C Gray Dogwood (*Cornus racemosa*)	10
D Alternate-leaved Dogwood (*Cornus alternifolia*)	10
A American Cranberrybush (*Viburnum trilobum*)	10
M Black Chokeberry (*Aronia melanocarpa*)	10
P Sweet Pepper-bush (*Clethra alnifolia*)	10
R Virginia Rose (*Rosa virginiana*)	10
I Inkberry (*Ilex glabra*)	10
B Bayberry (*Morella pensylvanica*)	10
Small Shrubs; Size Below; 4 Pockets of 10; 4' on -center in pockets	40
T New Jersey Tea (*Ceanothus americanus*; 18-24")	8
M Meadowsweet (*Spiraea latifolia*; 18-24")	8
H Northern Bush Honeysuckle (*Diervilla lonicera*; 18-24")	8
D Sand Cherry (*Prunus depressa* 18-24")	8
J Common Juniper (*Juniperis communis*; 18-24")	8

-Substitutions are subject to approval by Conservation Staff.
-Plants must be natives; cultivars and varietals will not be accepted.
-All excess soil must be removed and disposed of off-site.
-After planting, the area will be mulched with a 3" thick layer of a 4:1 mixture of decomposed leaf compost and natural bark mulch.
-After planting the plants must be watered in well and watered periodically until they are established.



Note: The locations of the individual saplings and shrubs are shown for permitting and review purposes; the locations of the plantings in the field will be based on this plan subject to the discretion of the qualified wetland scientist. The planting area will be monitored annually for two years after it is established. A brief report will be provided to the Commission in a timely manner after each annual inspection. A Request for a Certificate of Compliance will be made following the second annual inspection.

STORM WATER MANAGEMENT ANALYSIS

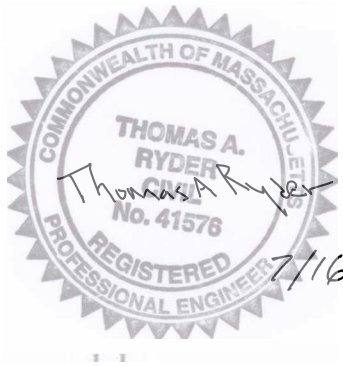
FOR

43 River Avenue
Newton– MASSACHUSETTS

Pre-Development Summary

The site consists of an existing house consisting of 1,011 square feet, and a 280 square foot driveway on a 12,050 square foot property. Total impervious area pre construction for the site is 1,858 ft^2. A 10,192 square foot lawn now exists at the site. Existing soils consist of fractured ledge with granular sand on the lot. The existing landscape lawn considered to be in fair condition. The grades direct flow from the street line towards the side yard at the Charles River. The existing conditions for the site in the urbanized areas utilizes a Hydrological Group A for run off conditions for conservative considerations.

Results of Analysis



DESIGN POINT- At Property Line	
Pre-Construction	
2-Year	0.03 cfs; 0.006 af
10-Year	0.17 cfs; 0.017 af
100-Year (Newton)	1.05 cfs; 0.077 af

Post-Development Summary

An infiltration rate based on the Rowls table is 8.27 in/hr for infiltration is used in the report for the site due to sandy conditions.

Upon completion of constructing the house and reconstructing the driveway near the same area of the property, the site will have an increase in impervious area by 2,390 square feet. The new house will be 2,847 sf, and a new drive ways combine 655 sf. The total impervious are post construction will be 4,248 sf. Stormwater controls are added to infiltrate a portion of the house roof and the driveway. The post development basins are identified as 1S “Property” consisting of fair landscape conditions, and 2S “roof & Drive”

The mitigation systems (pond routing) consist of infiltration recharge units identified as 2P, “System 1”. System 1 consists of eight Stormtech 310 units surrounded by 20.5-feet by 19-feet of stone. System 1 will collect the drive runoff and some roof after pretreatment through a deep sump catch basin with oil water separators.

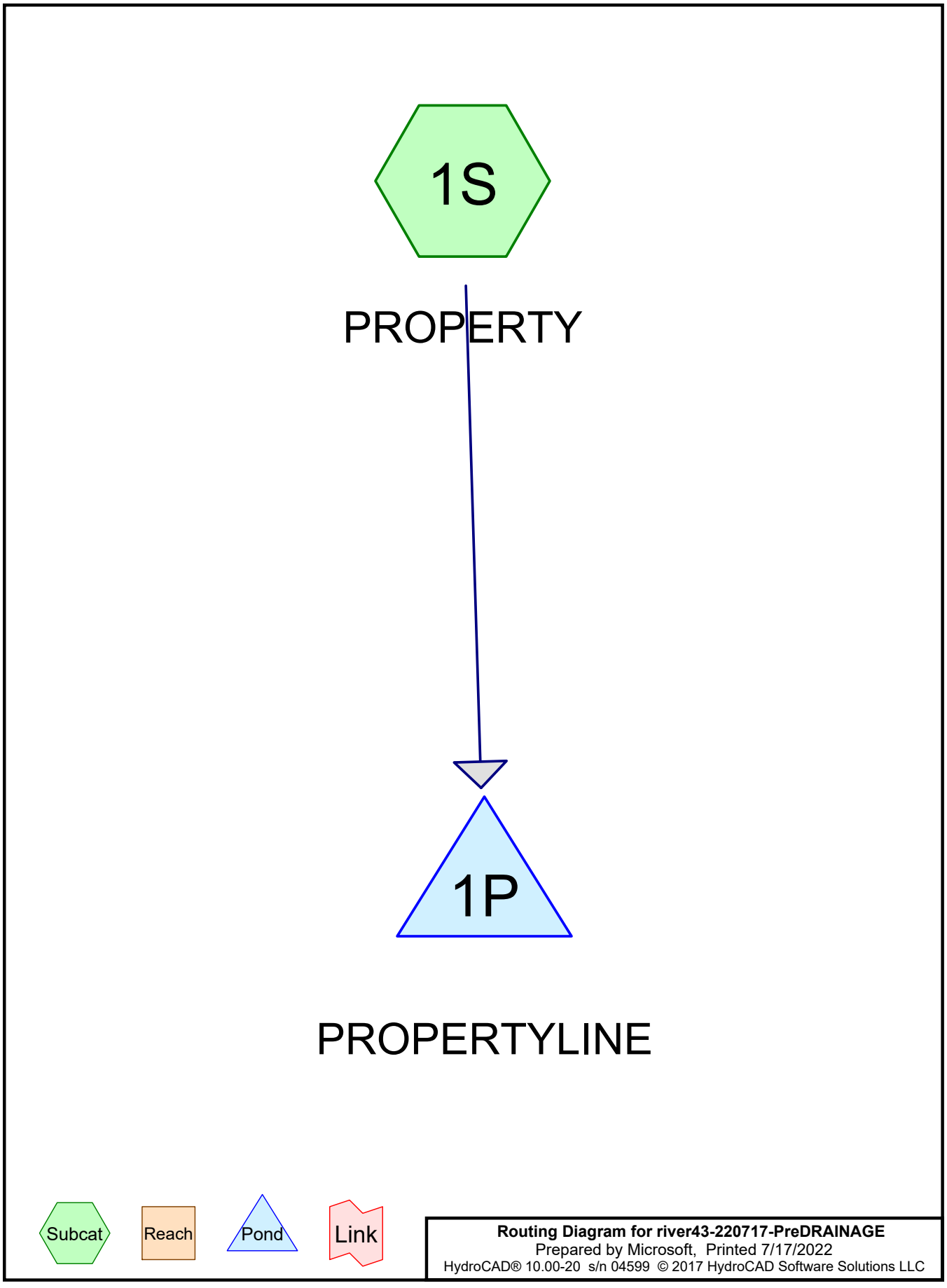
The total volume of storage to mitigate the flow from the impervious area is 420 cubic feet and infiltrate 1,200 cubic feet dynamically.

Results of Analysis

A storm water analysis was performed for the 2-year, 10-year, 100-year post construction storm events for the House and driveway impervious area in order to determine if there will be an increase in rate or volume of runoff during these storm events.

The results show a reduction in flows offsite post construction for the 2, 10, and 100-year events.

DESIGN POINT- At Property line	
Post-Construction	
2-Year	0.03 cfs; 0.005 af
10-Year	0.17 cfs; 0.015 af
100-Year	0.87 cfs; 0.063 af



Routing Diagram for river43-220717-PreDRAINAGE
Prepared by Microsoft, Printed 7/17/2022

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.234	49	50-75% Grass cover, Fair, HSG A (1S)
0.006	98	Paved parking, HSG A (1S)
0.023	98	Roofs, HSG A (1S)
0.013	98	Unconnected pavement, HSG A (1S)
0.277	**57**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.277	HSG A	1S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
0.277		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.234	0.000	0.000	0.000	0.000	0.234	50-75% Grass cover, Fair	1S
0.006	0.000	0.000	0.000	0.000	0.006	Paved parking	1S
0.023	0.000	0.000	0.000	0.000	0.023	Roofs	1S
0.013	0.000	0.000	0.000	0.000	0.013	Unconnected pavement	1S
0.277	**0.000**	**0.000**	**0.000**	**0.000**	**0.277**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: PROPERTY Runoff Area=12,050 sf 15.42% Impervious Runoff Depth=3.33"
Tc=6.0 min UI Adjusted CN=55 Runoff=1.05 cfs 0.077 af

Pond 1P: PROPERTYLINE Inflow=1.05 cfs 0.077 af
Primary=1.05 cfs 0.077 af

Total Runoff Area = 0.277 ac Runoff Volume = 0.077 af Average Runoff Depth = 3.33"
84.58% Pervious = 0.234 ac 15.42% Impervious = 0.043 ac

Summary for Subcatchment 1S: PROPERTY

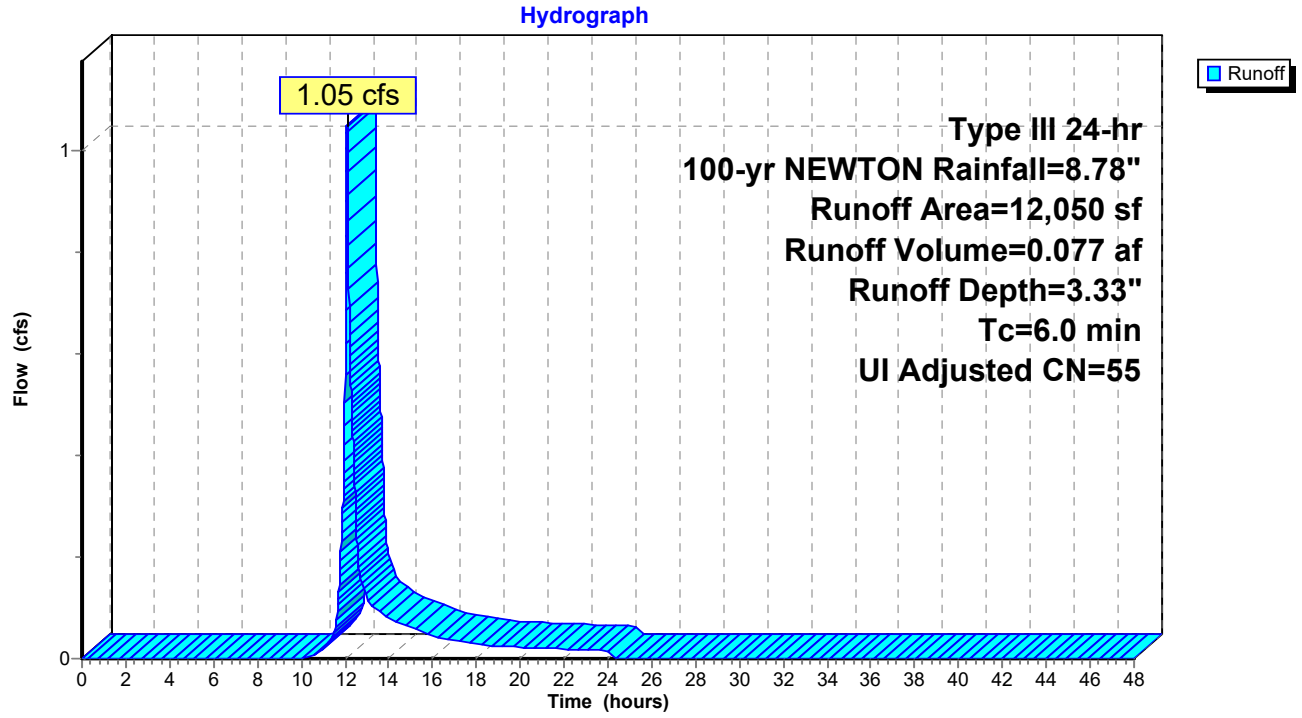
Runoff = 1.05 cfs @ 12.09 hrs, Volume= 0.077 af, Depth= 3.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-yr NEWTON Rainfall=8.78"

Area (sf)	CN	Adj	Description
10,192	49		50-75% Grass cover, Fair, HSG A
280	98		Paved parking, HSG A
1,011	98		Roofs, HSG A
567	98		Unconnected pavement, HSG A
12,050	57	55	Weighted Average, UI Adjusted
10,192			84.58% Pervious Area
1,858			15.42% Impervious Area
567			30.52% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, exist**

Subcatchment 1S: PROPERTY



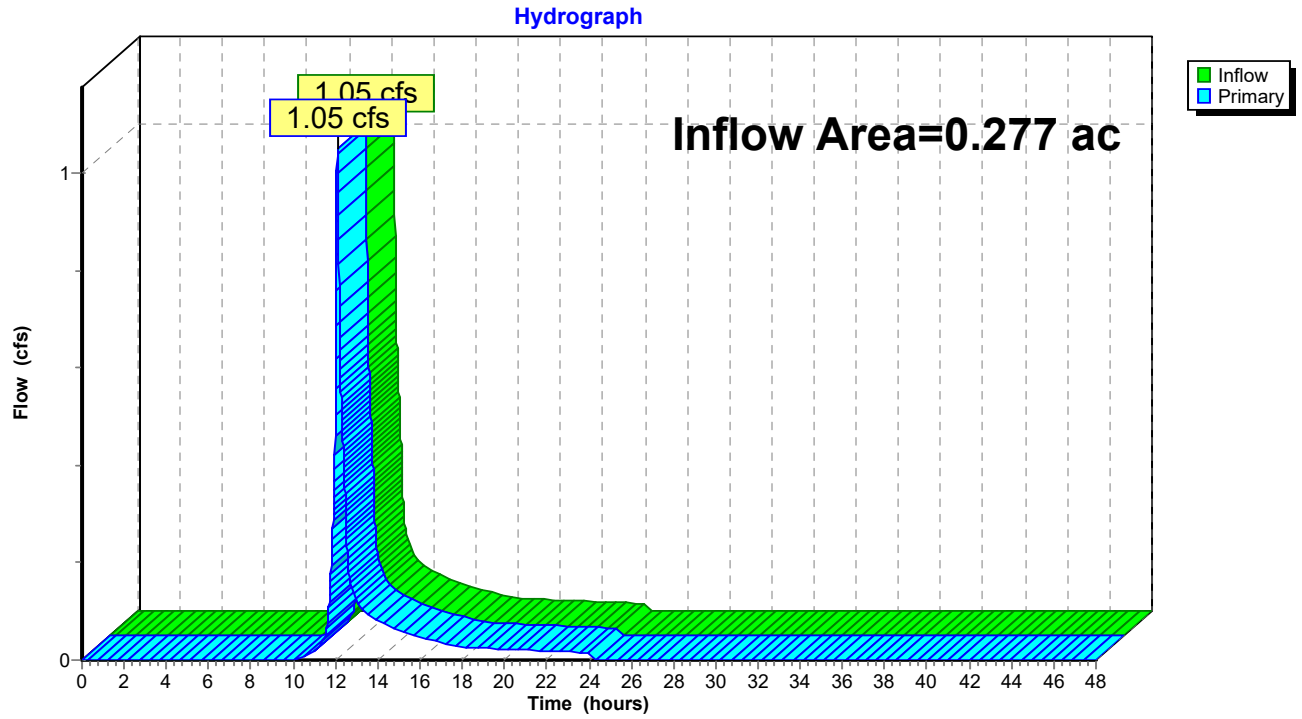
Summary for Pond 1P: PROPERTYLINE

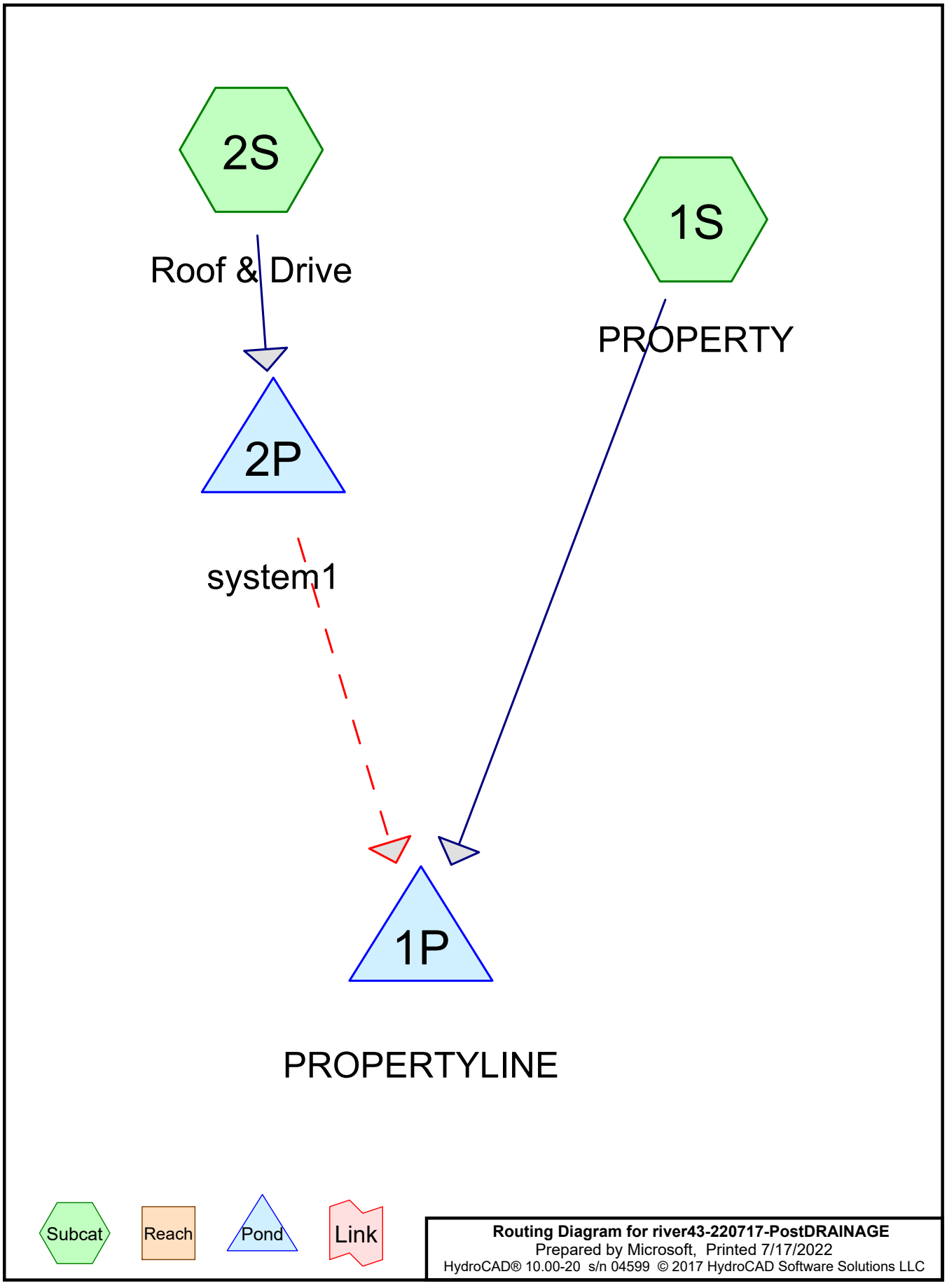
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.277 ac, 15.42% Impervious, Inflow Depth = 3.33" for 100-yr NEWTON event
Inflow = 1.05 cfs @ 12.09 hrs, Volume= 0.077 af
Primary = 1.05 cfs @ 12.09 hrs, Volume= 0.077 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Pond 1P: PROPERTYLINE





Routing Diagram for river43-220717-PostDRAINAGE
Prepared by Microsoft, Printed 7/17/2022

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.179	49	50-75% Grass cover, Fair, HSG A (1S)
0.015	98	Paved parking, HSG D (2S)
0.065	98	Roofs, HSG A (1S, 2S)
0.017	98	Unconnected pavement, HSG A (2S)
0.277	**66**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.262	HSG A	1S, 2S
0.000	HSG B	
0.000	HSG C	
0.015	HSG D	2S
0.000	Other	
0.277		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.179	0.000	0.000	0.000	0.000	0.179	50-75% Grass cover, Fair	1S
0.000	0.000	0.000	0.015	0.000	0.015	Paved parking	2S
0.065	0.000	0.000	0.000	0.000	0.065	Roofs	1S, 2S
0.017	0.000	0.000	0.000	0.000	0.017	Unconnected pavement	2S
0.262	**0.000**	**0.000**	**0.015**	**0.000**	**0.277**	**TOTAL AREA**	

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: PROPERTY Runoff Area=9,249 sf 15.64% Impervious Runoff Depth=3.57"
Tc=6.0 min CN=57 Runoff=0.87 cfs 0.063 af

Subcatchment 2S: Roof & Drive Runoff Area=2,801 sf 100.00% Impervious Runoff Depth=8.54"
Tc=6.0 min CN=98 Runoff=0.55 cfs 0.046 af

Pond 1P: PROPERTYLINE Inflow=0.87 cfs 0.063 af
Primary=0.87 cfs 0.063 af

Pond 2P: system1 Peak Elev=95.90' Storage=0.008 af Inflow=0.55 cfs 0.046 af
Discarded=0.21 cfs 0.046 af Secondary=0.00 cfs 0.000 af Outflow=0.21 cfs 0.046 af

Total Runoff Area = 0.277 ac Runoff Volume = 0.109 af Average Runoff Depth = 4.72"
64.75% Pervious = 0.179 ac 35.25% Impervious = 0.098 ac

Summary for Subcatchment 1S: PROPERTY

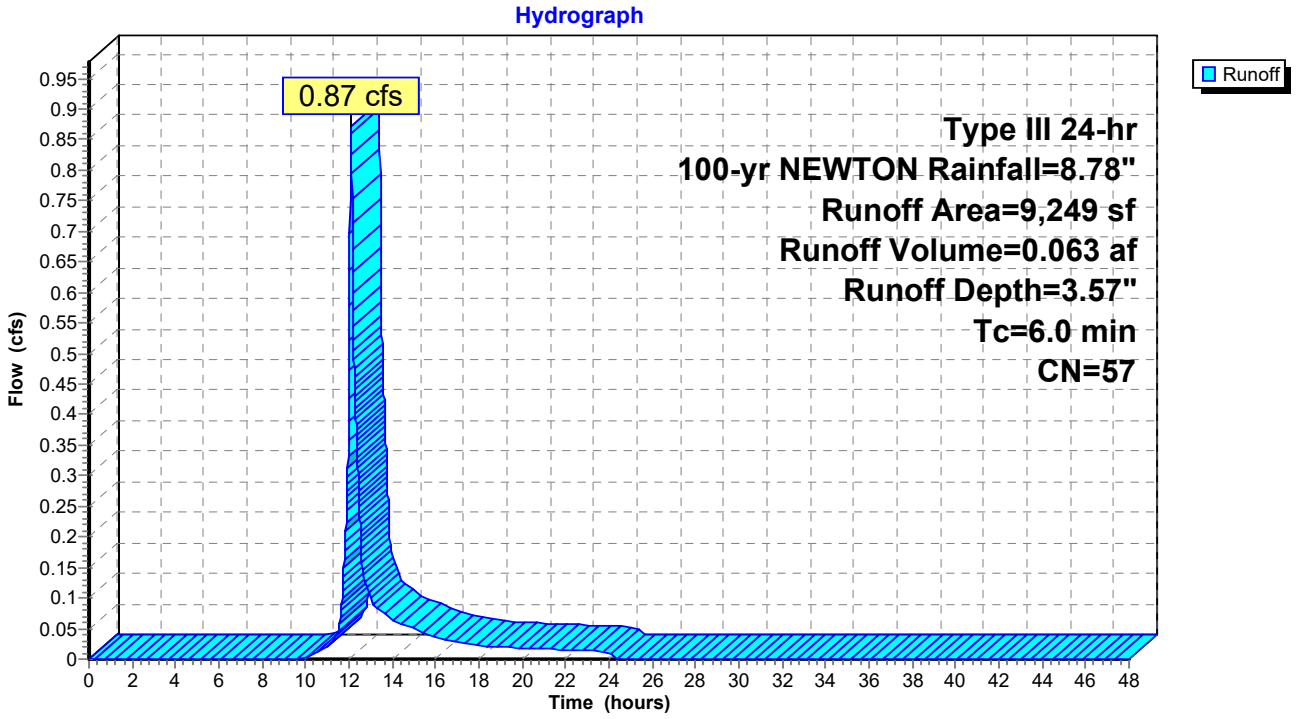
Runoff = 0.87 cfs @ 12.09 hrs, Volume= 0.063 af, Depth= 3.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-yr NEWTON Rainfall=8.78"

Area (sf)	CN	Description
7,802	49	50-75% Grass cover, Fair, HSG A
0	98	Unconnected pavement, HSG A
1,447	98	Roofs, HSG A
0	98	Unconnected roofs, HSG A
9,249	57	Weighted Average
7,802		84.36% Pervious Area
1,447		15.64% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, yard**

Subcatchment 1S: PROPERTY



Summary for Subcatchment 2S: Roof & Drive

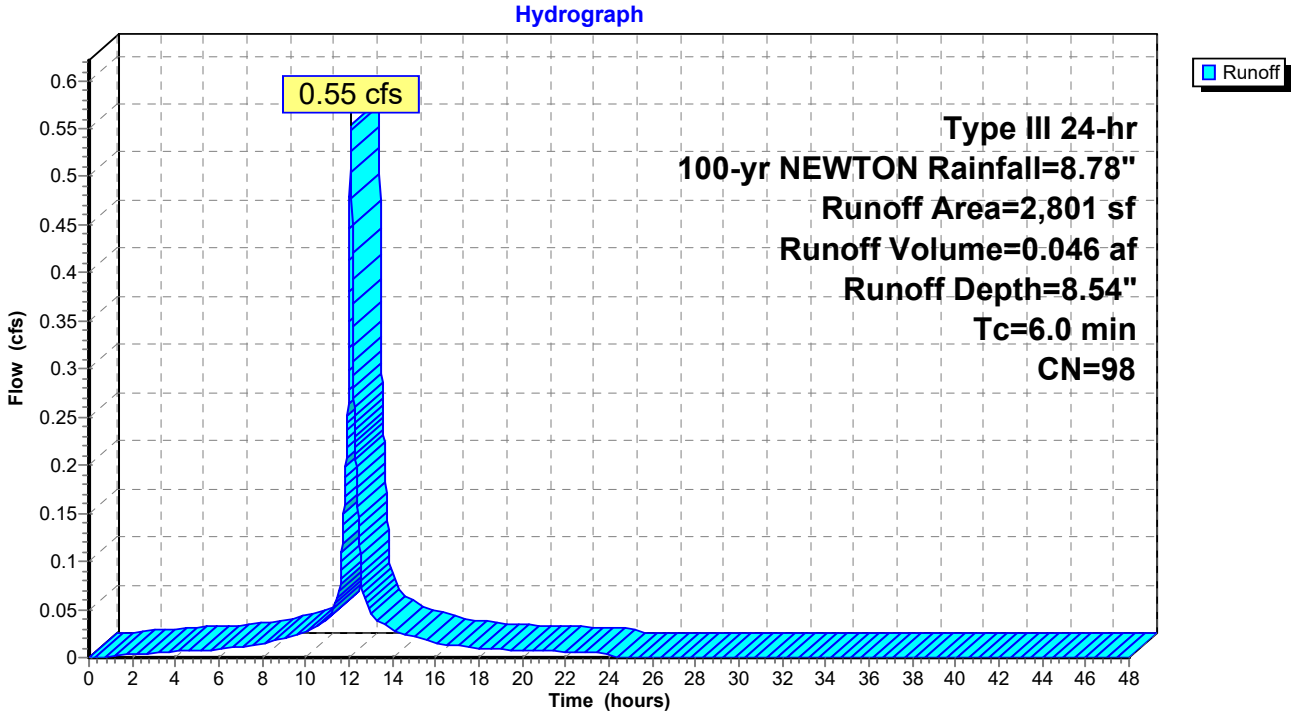
Runoff = 0.55 cfs @ 12.08 hrs, Volume= 0.046 af, Depth= 8.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-yr NEWTON Rainfall=8.78"

Area (sf)	CN	Description
655	98	Paved parking, HSG D
1,400	98	Roofs, HSG A
746	98	Unconnected pavement, HSG A
2,801	98	Weighted Average
2,801		100.00% Impervious Area
746		26.63% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, drive**

Subcatchment 2S: Roof & Drive



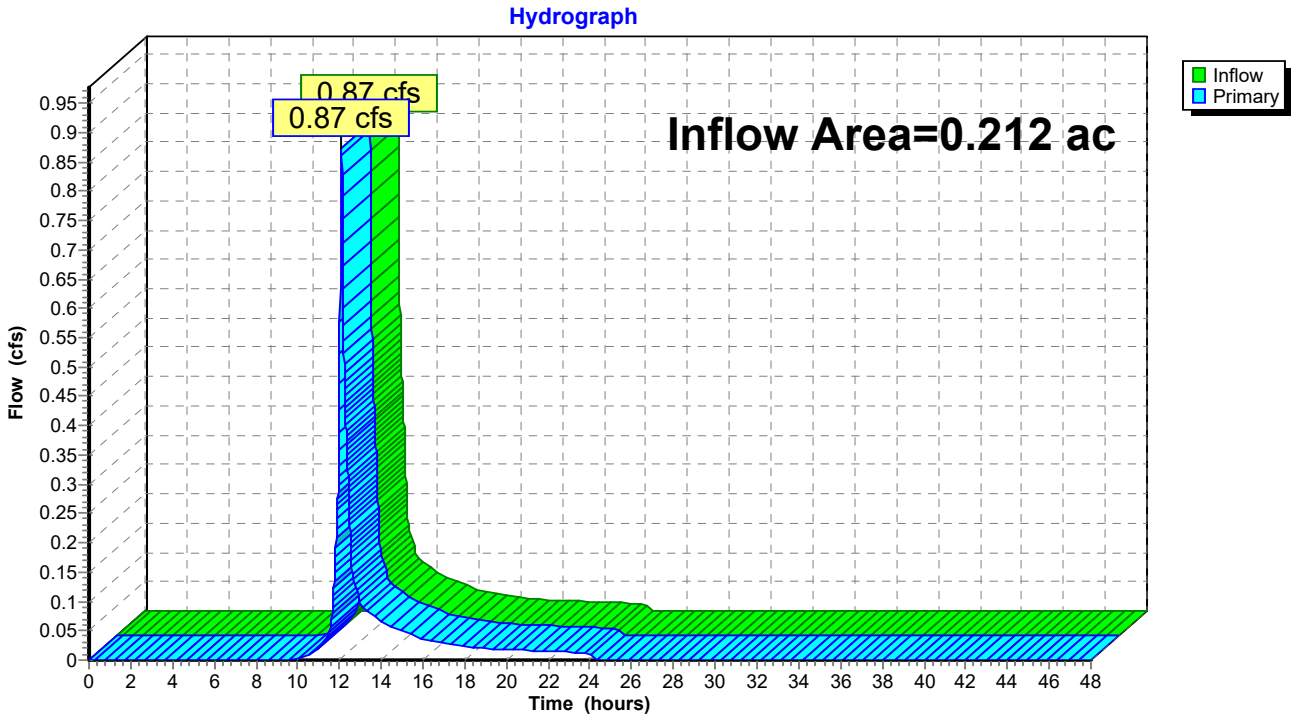
Summary for Pond 1P: PROPERTYLINE

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.212 ac, 15.64% Impervious, Inflow Depth = 3.57" for 100-yr NEWTON event
Inflow = 0.87 cfs @ 12.09 hrs, Volume= 0.063 af
Primary = 0.87 cfs @ 12.09 hrs, Volume= 0.063 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Pond 1P: PROPERTYLINE



Summary for Pond 2P: system1

Inflow Area = 0.064 ac,100.00% Impervious, Inflow Depth = 8.54" for 100-yr NEWTON event
Inflow = 0.55 cfs @ 12.08 hrs, Volume= 0.046 af
Outflow = 0.21 cfs @ 12.32 hrs, Volume= 0.046 af, Atten= 62%, Lag= 14.0 min
Discarded = 0.21 cfs @ 12.32 hrs, Volume= 0.046 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 95.90' @ 12.32 hrs Surf.Area= 0.009 ac Storage= 0.008 af

Plug-Flow detention time= 11.6 min calculated for 0.046 af (100% of inflow)
Center-of-Mass det. time= 11.6 min (751.7 - 740.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	94.00'	0.007 af	**18.67'W x 20.11'L x 2.33'H Field A** 0.020 af Overall - 0.003 af Embedded = 0.017 af x 40.0% Voids
#2A	94.50'	0.003 af	**ADS_StormTech SC-310 +Cap** x 8 Inside #1 Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap 4 Rows of 2 Chambers
		0.010 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	94.00'	**8.270 in/hr Exfiltration over Surface area** Conductivity to Groundwater Elevation = 93.00'
#2	Secondary	103.00'	**6.0" x 240.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.21 cfs @ 12.32 hrs HW=95.90' (Free Discharge)
↑—**1=Exfiltration** (Controls 0.21 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=94.00' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 2P: system1 - Chamber Wizard Field A

Chamber Model = ADS_StormTech SC-310 +Cap (ADS StormTech® SC-310 with cap length)
Effective Size= 28.9"W x 16.0"H => 2.07 sf x 7.12'L = 14.7 cf
Overall Size= 34.0"W x 16.0"H x 7.56'L with 0.44' Overlap

34.0" Wide + 6.0" Spacing = 40.0" C-C Row Spacing

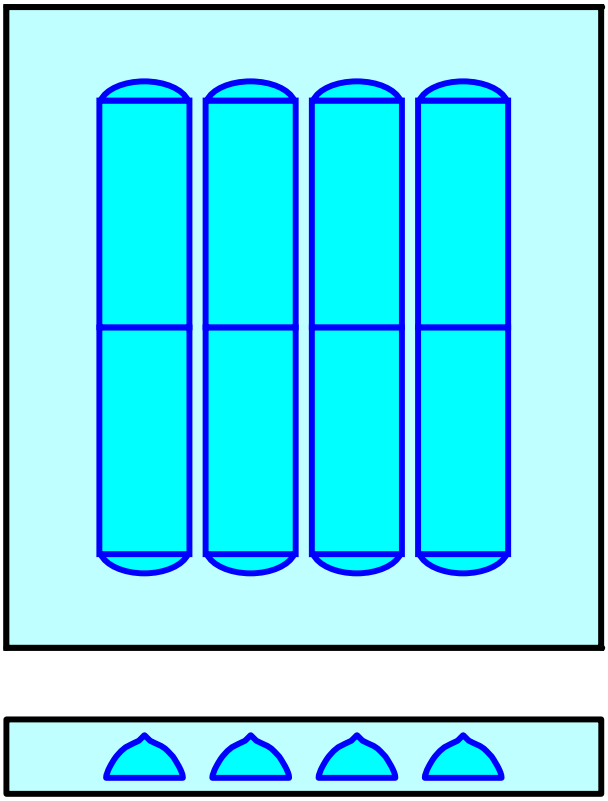
2 Chambers/Row x 7.12' Long +0.60' Cap Length x 2 = 15.44' Row Length +28.0" End Stone x 2 = 20.11' Base Length
4 Rows x 34.0" Wide + 6.0" Spacing x 3 + 35.0" Side Stone x 2 = 18.67' Base Width
6.0" Base + 16.0" Chamber Height + 6.0" Cover = 2.33' Field Height

8 Chambers x 14.7 cf = 117.9 cf Chamber Storage

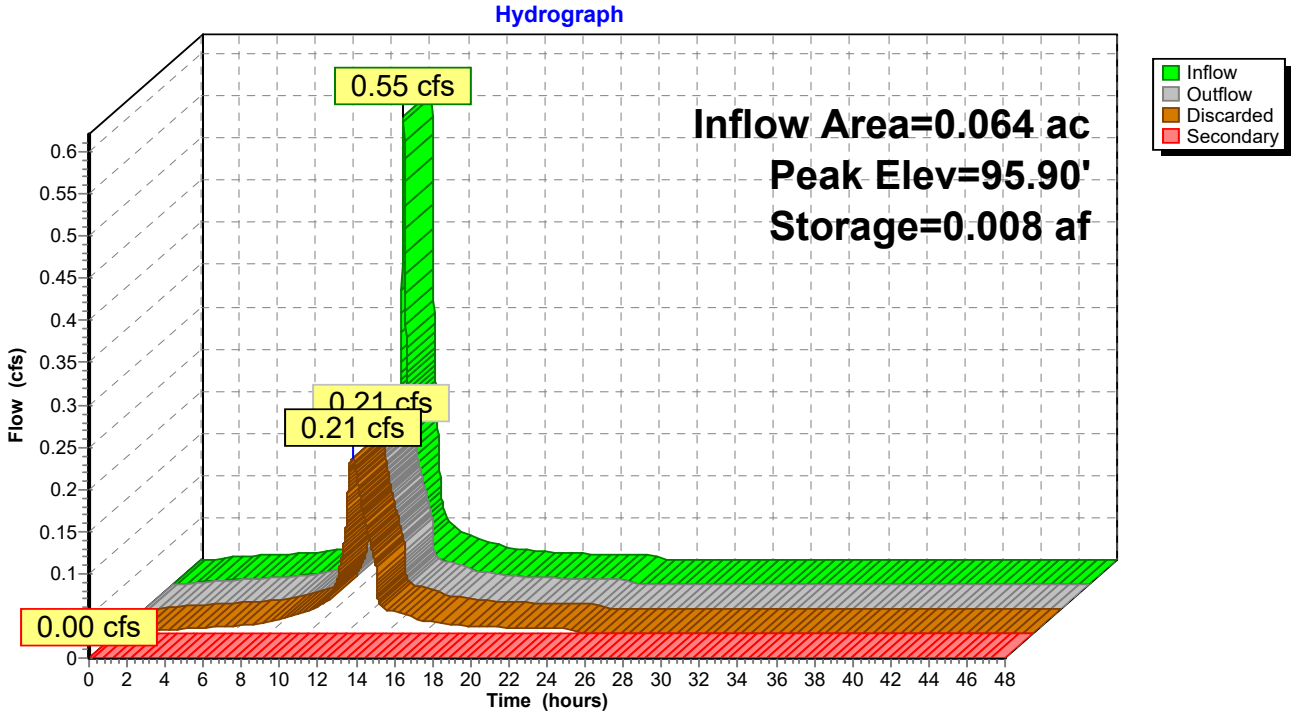
875.8 cf Field - 117.9 cf Chambers = 757.8 cf Stone x 40.0% Voids = 303.1 cf Stone Storage

Chamber Storage + Stone Storage = 421.1 cf = 0.010 af
Overall Storage Efficiency = 48.1%
Overall System Size = 20.11' x 18.67' x 2.33'

8 Chambers
32.4 cy Field
28.1 cy Stone



Pond 2P: system1



STORMWATER
OPERATION & MAINTENANCE PLAN
43 RIVER ROAD
NEWTON, MASSACHUSETTS

The proposed project includes stormwater runoff controls associated with a new 2-family house construction. These controls will require during construction by the site contractor and for continue maintenance by the property owner.

After Construction

The major system components associated with maintenance needs are the roof drain manifold and infiltration systems. These facilities will need to be cleaned periodically as noted below. Cleaning of these structures shall be done by the property owner or via a specialty Contractor with hydraulic cleaning ability and or landscaping knowledge as part of a long term maintenance program.

The components of the entire system include:

1. System 1- Stormwater from the driveways enter trench drains at the opening at River Road, then discharges into a manhole structure with 4-foot sump; discharge from the structure enters a Stormtech recharge (infiltration) system in the side (left) yard. Stormwater from the front section and rear side of the house roof discharges to this system as well.

The recharge system includes a minimum of 12-StormTech 310 Recharge units encased by 14' x 34' - 1-1/2 inch stone. See attached 11" x 17" - attached.

In addition to the facilities noted below, the property owner should maintain any roof gutters/drains on a regular basis to prevent clogging and overflow of the gutters. The following outlines the major maintenance issues associated with the project:

Driveway and Sediment Basin (trap)

The property has a proposed sediment basin with 4-foot sump and oil/water separators at the driveway off River Road. The proposed plan shows that the trench drains will collect stormwater from the driveways and discharge to the "trap" and eventually to the infiltration system (side yard). The sediment basin (trap) is subject to monitoring during storm events in order to determine frequency of maintenance needs. During construction the basin and sumps will be monitored and cleaned regularly and when the sump is at half capacity (maximum allowed condition).

After construction, driveway sweeping shall occur after a rain event deposit sediment into the driveway, and on regular seasonal schedule (January, April, July, and October minimum) for prevention; but more often if basin is determined by observation to fill with sediment. The sump will be continued to be monitored and cleaned when the sumps reach a maximum of ½ capacity.

Monitoring and cleanouts of the trap are accessible at the basin cover. Open the cover and visually inspect the structure, use a tape measure to determine how much sediment has accumulated. Sediment should be no closer than 2-feet from the outlet pipe. Use of a clam shell shovel or vactor system are the preferred method of to clean the trap. Fill out form attached.

Roof gutters, leaders and manifold Cleaning:

The pipe network collects roof drainage and discharges to one of the 12 Stormtech recharger units (Infiltration system) below grade. This pipe network should be inspected after completion of construction to assure that all debris were removed and no construction material will be cause the system to clog or restrict the outlet. Maintenance of this system is subject to continuous monitoring after storm events to determine frequency of maintenance needs. The roof gutters and leaders should be cleaned manually, after all major storms or as a minimum, and seasonally to remove accumulated solids and debris. This is required to prevent clogging and overflow of the infiltration units and potential overtopping the drain and discharging offsite. Assuming that the manifold is maintained and cleaned routinely, the roof runoff should be routed to the infiltration system.

The drainage through the gutters, leaders, and manifold should be inspected after major storm events, but no longer than a quarterly basis to note if slow to drain flow, standing water or sediment buildup is an issue. Visually inspect the gutters for signs of sediment, or leaf litter.

Monitoring should include noting flow of stormwater out of the gutter laterals during storm events to determine that the water is being collected. Initial observations should be compared to later observations to determine the loss of flow. Each leader is fitted with an overflow outlet just above grade.

Infiltration System (Stormtech 310 Rechargers, System 1)

The Infiltration system (aka system 1) consists of 12- Stormtech 310 Recharge units surrounded by 1-1/2" aggregate (14' x 34' bed). The stone bed on which the Stormtech units are placed should be inspected after completion of construction to assure that all debris was removed, and no construction material will be cause the system to clog.
Filter fabric is designed to separate the parent and fill soil materials from the infiltration system stone.

The Infiltration system has observation ports in the center of each Stormtech 310 Recharger unit. These ports can be unscrewed and accessed to observe if standing water or sediment remains underground and may be fitted with a vacuum system that can clean sediment on the bottom. It is not expected that these types of cleanouts will be warranted on a regular basis, but will need to be managed if the preceding prescribed maintenance is not followed regularly.

The system should be inspected after major storm events, but no longer than a quarterly basis to note if sediment buildup is an issue. Monitoring should include noting flow of stormwater out of the gutter laterals during storm events to determine that the water is surcharging the Infiltration units. Initial observations should be compared to later observations to determine the loss of infiltration capacity. Check if overflows are occurring at the closest roof leader that is attached to the gutters.

Maintenance Responsibilities

The maintenance of the Drainage System is the exclusive responsibility of the Property Owner. The actual work can be manually accomplished by the owner or representative or it could be subcontracted to a company that specializes in the cleaning of storm drainage facilities. Inspections should be performed by the owner and by independent individual such as the design

engineer or other experienced individual in the field, with yearly reports to the Town Engineer, At the end of January each year.

STORMWATER MANAGEMENT REPORT
43 RIVER ROAD
Newton, MASSACHUSETTS

INSPECTION REPORT: Complete quarterly (January, April, July, and October)

Inspection Firm:_____

Inspectors Name: Date:_____

Components Inspected:_____

Signed:_____

SYSTEM MAINTENANCE Complete quarterly (January, April, July, and October):

Maintenance Firm: Date:_____

Driveway Sweeping Yes No Comments:_____

Gutters Cleaned: Yes No Comments:_____

Downspouts Flushed: Yes No Comments:_____

Manifold and other pipes Cleaned: Yes No Comments:_____

Catch Basin and traps monitored/cleaned: Yes No Comments:_____

Recharge (System 1) inspected/cleaned if necessary Yes No Comments:_____

Yard planting/re-vegetating: Yes No Comments:_____

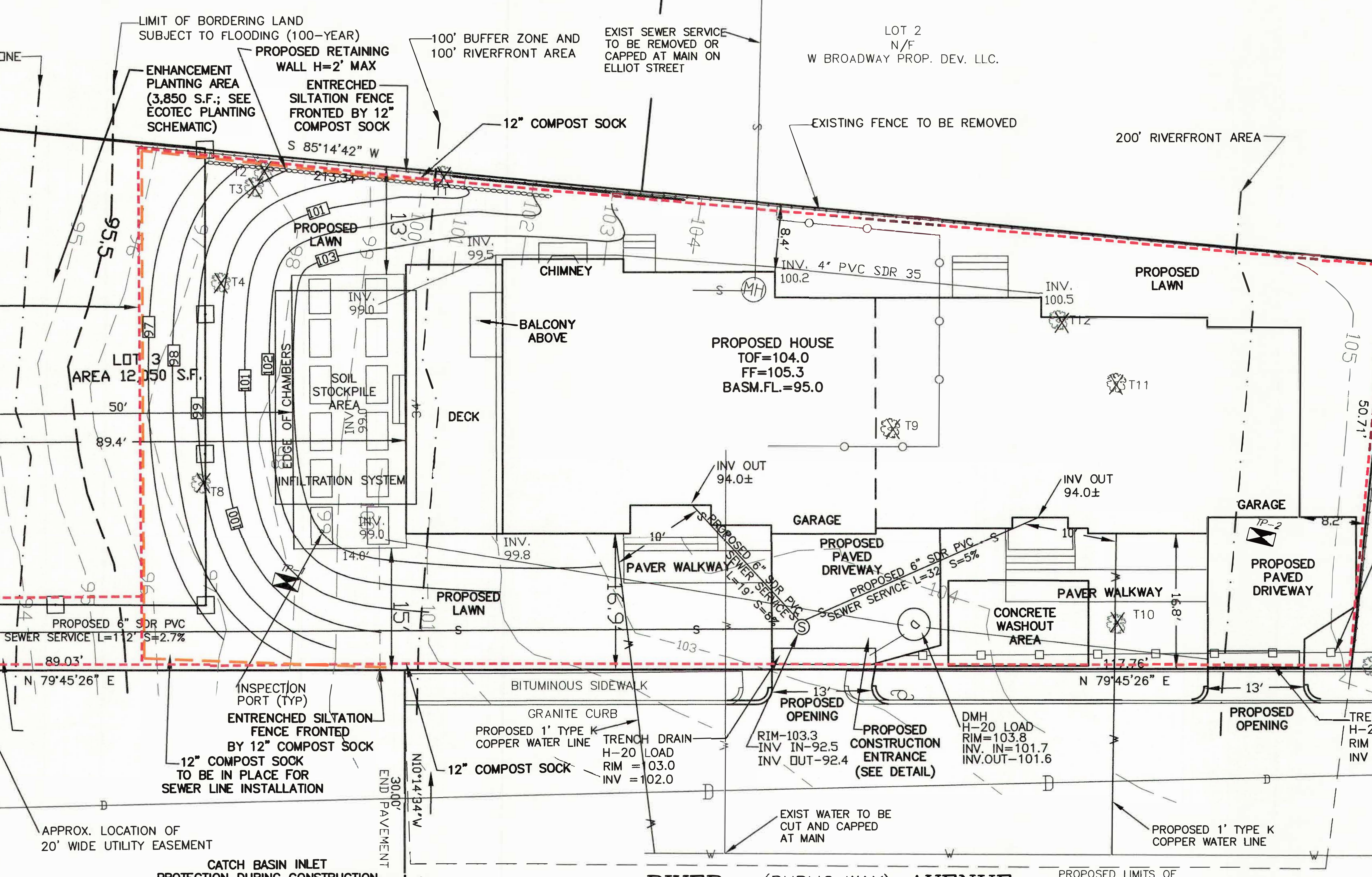
Estimate of Material Removed:_____

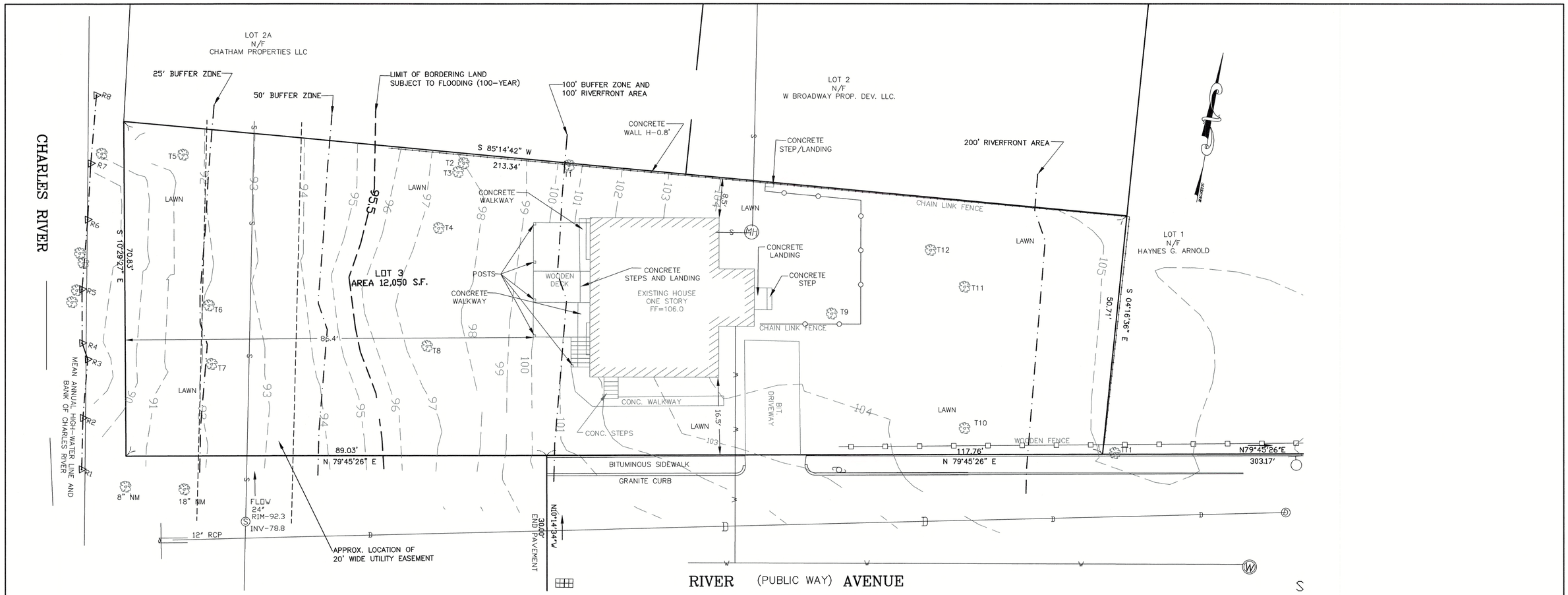
Disposal Location:_____

Other Comments:_____

Signed:_____

Submit this form to the Newton Town Engineer by the end of January each year


LIMIT OF BORDERING LAND SUBJECT TO FLOODING (100-YEAR)
PROPOSED RETAINING WALL H=2' MAX
100' BUFFER ZONE AND 100' RIVERFRONT AREA
EXIST SEWER SERVICE TO BE REMOVED OR CAPPED AT MAIN ON ELLIOT STREET
LOT 2 N/F W BROADWAY PROP. DEV. LLC.
ENHANCEMENT PLANTING AREA (3,850 S.F.; SEE ECOTEC PLANTING SCHEMATIC)
ENTRECHED SILTATION FENCE FRONTED BY 12" COMPOST SOCK
12" COMPOST SOCK
EXISTING FENCE TO BE REMOVED
200' RIVERFRONT AREA
S 85°14'42" W
213.34'
PROPOSED LAWN
INV. 99.5
CHIMNEY
INV. 4" PVC SDR 35 100.2
INV. 100.5
PROPOSED LAWN
INV. 99.0
BALCONY ABOVE
LOT 3 AREA 12,050 S.F.
SOIL STOCKPILE AREA
EDGE OF CHAMBERS
PROPOSED HOUSE TOF=104.0 FF=105.3 BASM.FL.=95.0
DECK
INFILTRATION SYSTEM
INV OUT 94.0±
INV OUT 94.0±
GARAGE
GARAGE
INV. 99.0
INV. 99.8
PAVER WALKWAY
PROPOSED 6" SDR PVC SEWER SERVICE L=19' S=6%
PROPOSED PAVED DRIVEWAY
PROPOSED 6" SDR PVC SEWER SERVICE L=32' S=5%
PROPOSED PAVED DRIVEWAY
PROPOSED LAWN
CONCRETE WASHOUT AREA
PAVER WALKWAY
PROPOSED 6" SDR PVC SEWER SERVICE L=112' S=2.7%
89.03'
N 79°45'26" E
117.76'
N 79°45'26" E
BITUMINOUS SIDEWALK
GRANITE CURB
INSPECTION PORT (TYP)
ENTRENCHED SILTATION FENCE FRONTED BY 12" COMPOST SOCK
12" COMPOST SOCK TO BE IN PLACE FOR SEWER LINE INSTALLATION
PROPOSED 1' TYPE K COPPER WATER LINE
12" COMPOST SOCK
TRENCH DRAIN H-20 LOAD RIM =103.0 INV =102.0
PROPOSED OPENING
RIM-103.3 INV IN-92.5 INV OUT-92.4
PROPOSED CONSTRUCTION ENTRANCE (SEE DETAIL)
DMH H-20 LOAD RIM=103.8 INV. IN=101.7 INV.OUT-101.6
PROPOSED OPENING
N10°14'34"W 30.00' END PAVEMENT
APPROX. LOCATION OF 20' WIDE UTILITY EASEMENT
CATCH BASIN INLET PROTECTION DURING CONSTRUCTION
EXIST WATER TO BE CUT AND CAPPED AT MAIN
PROPOSED 1' TYPE K COPPER WATER LINE
PROPOSED LIMITS OF



GRAPHIC SCALE

10 0 5 10 20

(IN FEET)
1 inch = 10 ft.

NOTE:
THE SURFACE EVIDENCE OF THE UTILITIES SHOWN HAS BEEN LOCATED BY FIELD SURVEY. THE LINEWORK REPRESENTING ALL UNDERGROUND STRUCTURES AND PIPES HAS BEEN SHOWN HEREON IN ITS APPROXIMATE LOCATION BASED ON AVAILABLE RECORD PLANS. THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

ASSESSOR'S MAP 134 NE
SECTION 51
BLOCK 43
LOT 3
NEIGHBORHOOD 5A

ZONING – MR1 OLD
MINIMUM LOT AREA: 7,000 SF
MINIMUM DEPTH OF FRONT YARD: 25 FT
MINIMUM WIDTH OF SIDE YARD: 7.5 FT
MINIMUM DEPTH OF REAR YARD: 15 FT
LOT COVERAGE: 30%
OPEN SPACE: 50%

REFERENCES:

MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS:
1. PLAN #427 OF 1985.
2. BOOK 17391 PAGE 311.

THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY COMPLETED ON MAY 25, 2022.

NOTES:
1. THE DATUM IS CITY OF NEWTON BASE.
2. SEE ARBORIST REPORT (6/8/2022) FOR TREE INFORMATION.

DESIGNED BY:
MIKHAIL DEYCHMAN
EMAIL: MDEYCH@YAHOO.COM
TEL. (857) 498-0951

COMMONWEALTH OF MASSACHUSETTS
MATTHEW BELSKY, JR.
37657
PROFESSIONAL LAND SURVEYOR
8/30/22

DATE	REVISION
08/10/22	COMMENTS

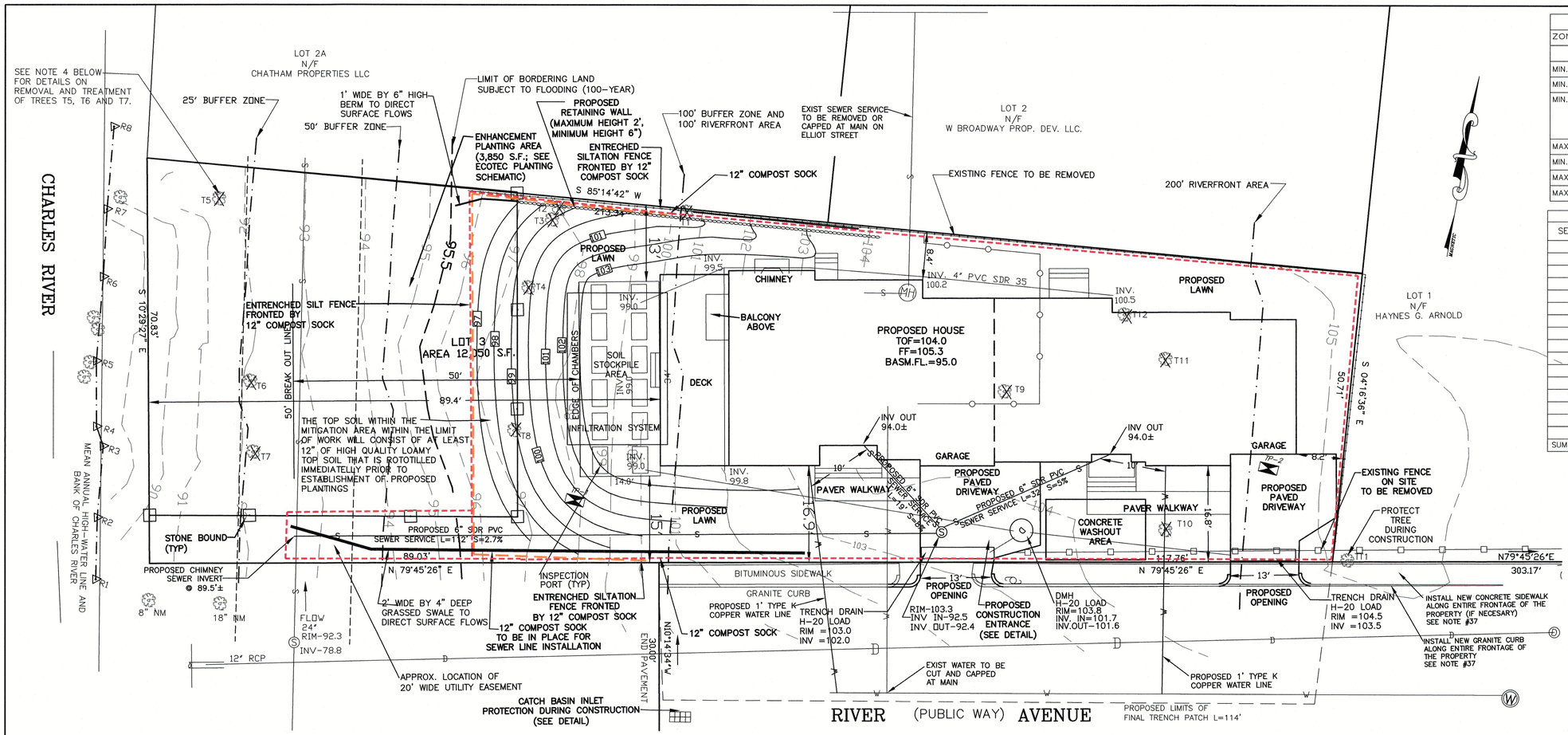
EXISTING CONDITIONS PLAN

43 RIVER AVENUE
NEWTON, MASSACHUSETTS 02464

RAV & Assoc., Inc.
21 HIGHLAND AVENUE
NEEDHAM, MASSACHUSETTS 02021
TELEPHONE: (781) 449-8200

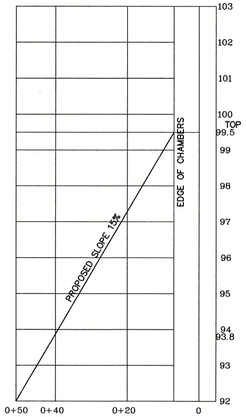
SCALE: AS NOTED DATE: 07/20/22

APPROVED: R.A.V.
DESIGNED BY: M.D.
DRAWN BY: M.D.
DRAWING No. S-130
SHEET: 1 OF 4



ZONING LEGEND			
ZONING DISTRICT:	MR 1 (LOT CREATED BEFORE 12/07/1953)		
	REQUIRED	PROPOSED	COMPLIANCE
MIN. AREA	7,000	12,050 S.F.	YES
MIN. FRONTAGE	70'	206.79'	NO
MIN.FRONT SETBACK	25'	16.8'	NO
SIDE SETBACK	7.5'	8.2'	YES
REAR SETBACK	15'	8.4'	NO
MAX. LOT COV.	30%	23.6%	YES
MIN. OPEN SPACE	50%	70.9% ±	YES
MAX. BLDG. HEIGHT	36'	33.7'±	YES
MAX. STORIES	2.5	2.5±	YES

AVERAGE GRADE PLANE					
SEGMENT	LENGTH	POINT 1	POINT 2	MEAN 1&2	MEANx LENGTH
1	34.1	103.0	103.0	103.0	3,512.3
2	15.0	103.0	103.3	103.2	1,548.0
3	18.8	103.4	104.4	103.9	1,953.3
4	33.1	104.5	104.6	104.6	3,462.3
5	20.6	104.6	104.8	104.7	2,156.8
6	11.5	104.8	104.9	104.8	1,205.2
7	23.5	105.0	105.3	105.2	2,472.2
8	11.5	105.3	105.3	105.3	1,211.0
9	14.8	105.3	104.7	105.0	1,554.0
10	6.9	104.8	104.3	104.6	721.7
11	17.0	104.3	104.1	104.2	1,771.4
12	13.0	104.1	103.8	104.0	1,352.0
13	7.5	103.8	104.0	103.9	779.2
14	10.0	104.0	104.0	104.0	1,040.0
15	15.8	103.3	103.0	103.2	1,630.6
E= 253.1'					E=26,370.0
SUM OF MEAN X LENGTH / SUM OF LENGTHS = AVERAGE GRADE PLANE =104.19'					



PROPOSED SLOPE PROFILE
(H-1"=20' V-1"=2')

EXISTING FEATURES:
HOUSE 1,011 S.F.
DRIVEWAY 280 S.F.
DECK 290 S.F.
WALKS, STAIRS AND LANDINGS 277 S.F.
TOTAL: 1,858 S.F.
GRASS: 10,192 S.F

PROPOSED FEATURES:
HOUSE 2,847 S.F.
DRIVEWAYS 655 S.F.
WALKS, STAIRS AND LANDINGS 345 S.F.
DECK 401 S.F.
TOTAL: 4,248 S.F.
GRASS: 7,802 S.F

INCREASED BY: 2,390 S.F.

NOTE:
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ASSESSOR'S MAP 134 NE
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LOT 3
NEIGHBORHOOD 5A

ZONING – MR1 OLD
MINIMUM LOT AREA: 7,000 SF
MINIMUM DEPTH OF FRONT YARD: 25 FT
MINIMUM WIDTH OF SIDE YARD: 7.5 FT
MINIMUM DEPTH OF REAR YARD: 15 FT
LOT COVERAGE: 30%
OPEN SPACE: 50%

REFERENCES:

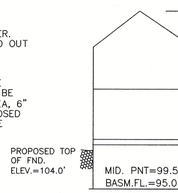
MIDDLESEX SOUTH DISTRICT REGISTRY OF DEEDS:
1. PLAN #427 OF 1985.
2. BOOK 17391 PAGE 311.

THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY COMPLETED ON MAY 25, 2022.

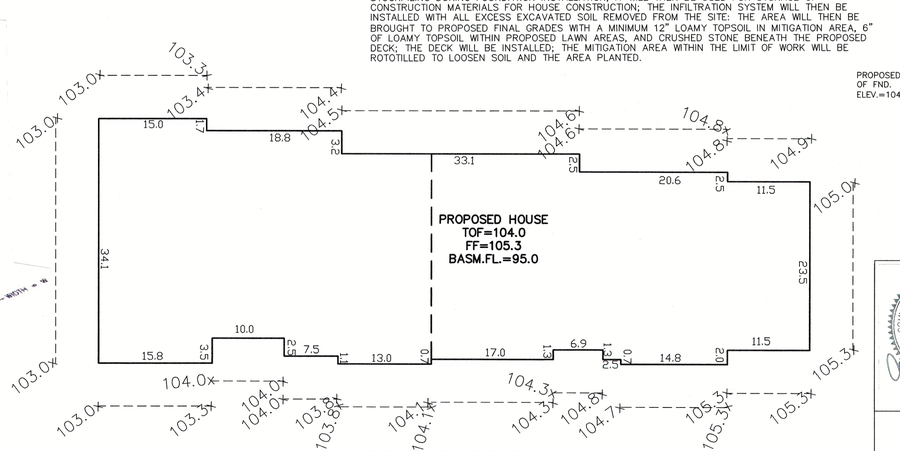
NOTES:
1. THE DATUM IS CITY OF NEWTON BASE.
2. SEE ARBORIST REPORT (6/8/2022) FOR TREE INFORMATION.
3. X INDICATES TREE TO BE REMOVED.
4. T5, T6 & T7 TO BE CUT CLOSE TO GROUND SURFACE WITH STUMPS LEFT IN PLACE (I.E., NOT GROUND OR GRUBBED) T6 AND T7 TO BE TREATED BY BLOTTING TO PREVENT SPROUTING.

GRAPHIC SCALE
10 0 5 10 20
(IN FEET)
1 inch = 10 ft.

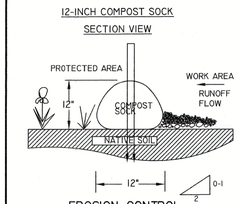
NOTE:
1.ALL TOPSOIL, SUBSOIL OR IMPERVIOUS SOIL MUST BE EXCAVATED AND REMOVED BELOW THE LEACHING SYSTEM AND IN ALL DIRECTIONS BEYOND THE SIDES OF THE GALLEYS. BACKFILL AS REQUIRED WITH A CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES. THE SAND SHALL HAVE A PERCOLATION RATE OF 2 MINUTES PER INCH OR FASTER.
2. NO STOCKPILING OVER THE INFILTRATION SYSTEM AFTER CONSTRUCTED. AREA TO BE MARKED OUT AFTER CONSTRUCTION TO PREVENT EQUIPMENT AND MATERIALS PLACED ON TOP.
3. INITIALLY, THE AREA WITHIN THE LIMIT OF WORK WEST OF THE HOUSE WILL BE USED FOR STOCKPILING DURING FOUNDATION INSTALLATION, IT WILL THEN BE USED FOR STORAGE OF CONSTRUCTION MATERIALS FOR HOUSE CONSTRUCTION; THE INFILTRATION SYSTEM WILL THEN BE INSTALLED WITH ALL EXCESS EXCAVATED SOIL REMOVED FROM THE SITE: THE AREA WILL THEN BE BROUGHT TO PROPOSED FINAL GRADES WITH A MINIMUM 12" LOAMY TOPSOIL IN MITIGATION AREA, 6" OF LOAMY TOPSOIL WITHIN PROPOSED LAWN AREAS, AND CRUSHED STONE BENEATH THE PROPOSED DECK; THE DECK WILL BE INSTALLED; THE MITIGATION AREA WITHIN THE LIMIT OF WORK WILL BE ROTOTILLED TO LOOSEN SOIL AND THE AREA PLANTED.

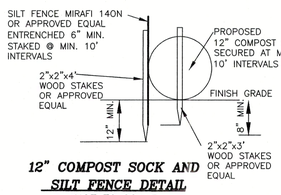


PROPOSED PROFILE
NOT TO SCALE

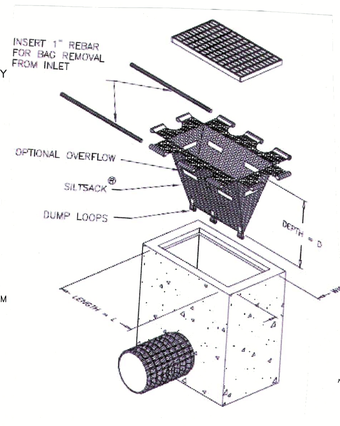


PROPOSED AVERAGE GRADE
6' OFFSET
NOT TO SCALE





12" COMPOST SOCK AND SILT FENCE DETAIL
NOT TO SCALE



INLET PROTECTION DETAIL
NOT TO SCALE

DESIGNED BY:
MIKHAIL DEYCHMAN
EMAIL: MDEYCH@YAHOO.COM
TEL. (857) 498-0951

DATE	REVISION
10/03/22	RESPONSE TO STAFF COMMENTS
09/12/22	RESPONSE TO ENGINEERING COMMENTS
08/10/22	RESPONSE TO ENGINEERING COMMENTS

COMMONWEALTH OF MASSACHUSETTS
MATTHEW BELSKI, JR.
No. 37557
PROFESSIONAL LAND SURVEYOR
10/3/22

RICHARD A. WOLKIN
No. 22281
REGISTERED PROFESSIONAL ENGINEER
10/3/22

PROPOSED SITE PLAN

43 RIVER AVENUE
NEWTON, MASSACHUSETTS 02464

RAV & Assoc., Inc.
21 HIGHLAND AVENUE
NEEDHAM, MASSACHUSETTS 02021
TELEPHONE: (781) 449-8200

SCALE: AS NOTED
DATE: 07/20/22
APPROVED: R.A.V.
DESIGNED BY: M.D.
DRAWN BY: M.D.
DRAWING No. S-130
SHEET: 2 OF 4

NOTES:

1. ELEVATIONS REFER TO CITY OF NEWTON DATUM.

2. UTILITIES APPROXIMATE AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ANY CROSSINGS OF PROPOSED AND EXISTING UTILITIES.

3. MASSACHUSETTS STATE LAW REQUIRES UTILITY NOTIFICATION AT LEAST THREE BUSINESS DAYS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL DIG-SAFE AT 1-888-344-7233 IN ORDER TO COMPLY WITH STATE LAW.

4. ALL UTILITY CONSTRUCTION SHALL CONFORM TO THE CITY OF NEWTON GENERAL CONSTRUCTION DETAILS, LATEST EDITION, PREPARED AND ISSUED BY THE NEWTON ENGINEERING DEPARTMENT. COPIES MAY BE OBTAINED AT THE OFFICE OF THE CITY ENGINEER. REFER TO NOTE 29 FOR DETAILS.

5. PROPOSED SEWER PIPE SHALL BE 6" PVC SDR 35.

6. PROPOSED WATER SERVICE SHALL BE 1" TYPE K COPPER.

7. THIS PLAN IS THE RESULT OF AN INSTRUMENT SURVEY DONE ON THE GROUND 05/25/2022.

8. ALL WORK SHALL BE SUBJECT TO THE INSPECTION BY AND APPROVAL OF THE CITY ENGINEER.

9. NO EXCAVATION SHALL BE MADE BY THE CONTRACTOR IN ANY PUBLIC WAY OR UTILITY EASEMENT UNLESS AT LEAST FORTY-EIGHT (48) HOURS NOTIFICATION FOR A REQUESTED INSPECTION MUST BE EITHER BY PHONE OR IN PERSON TO THE INSPECTOR ASSIGNED TO YOUR PROJECT, EXCLUSIVE OF SATURDAYS, SUNDAYS, AND HOLIDAYS, BEFORE THE PROPOSED EXCAVATION IS TO BE MADE, HE HAS SUBMITTED WRITTEN NOTICE OF THE PROPOSED EXCAVATION TO THE FOLLOWING:

a. SUCH PUBLIC UTILITY COMPANIES AS SUPPLY GAS, ELECTRICITY, AND TELEPHONE SERVICE IN THE CITY.

b. SUCH PRIVATE COMPANIES AS PROVIDE CABLE TELEVISION SERVICE IN THE CITY.

c. CITY OF NEWTON WATER & SEWER DEPARTMENT.
SUCH NOTICE SHALL SET FORTH THE STREET NAME AND A REASONABLY ACCURATE DESCRIPTION OF THE LOCATION OF THE EXCAVATION.

10. THE CONTRACTOR SHALL PROVIDE CITY OF NEWTON POLICE OFFICERS FOR THE DIRECTION AND CONTROL OF TRAFFIC, AS REQUIRED BY THE CITY ENGINEER.

11. NO WORK SHALL BE PERFORMED UNTIL THE NECESSARY PERMITS ARE OBTAINED FROM THE CITY OF NEWTON PUBLIC WORKS DEPARTMENT.

12. ALL TRENCHES IN PAVED STREETS SHALL MATCH EXISTING ASPHALT THICKNESS, LAID HOT AND MAINTAINED UNTIL THE PERMANENT PATCH IS INSTALLED OR AS DIRECTED BY ENGINEERING INSPECTOR.

13. WARNING SIGNS SHALL CONFORM REFER TO THE 2020 MUTCD STANDARD HIGHWAY SIGNS.

14. ALL TOPSOIL, SUBSOIL OR IMPERVIOUS SOIL MUST BE EXCAVATED AND REMOVED BELOW THE LEACHING SYSTEM AND IN ALL DIRECTIONS BEYOND THE SIDES OF THE GALLEYS. BACKFILL AS REQUIRED WITH A CLEAN GRANULAR SAND, FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES. THE SAND SHALL HAVE A PERCOLATION RATE OF 2 MINUTES PER INCH OR FASTER.

15. IN CASES WHERE LEDGE OR BOULDERS ARE ENCOUNTERED, RAV & ASSOCIATES, INC. WILL NOT BE RESPONSIBLE FOR THE AMOUNT OF ROCK ENCOUNTERED.

16. IF ANY MODIFICATIONS TO THE APPROVED PLAN ARE COMPLETED/UNDERTAKEN WITHOUT A REVISED "STAMPED" DESIGN PLAN BEING RECEVED FROM THE DESIGN ENGINEER FOR REVIEW BY THE ENGINEERING DIVISION, ALL WORK OF THAT PHASE OF THE PROJECT SHALL STOP. NO ADDITIONAL INSPECTIONS FOR THAT PHASE OF THE PROJECT WILL BE CONDUCTED BY THE ENGINEERING INSPECTOR UNTIL THE REVISED "STAMPED" PLAN IS APPROVED.

17. THE ROOF RUNOFF FROM THE ROOF SURFACES SHALL BE COLLECTED BY GUTTERS AND DIRECTED TO THE STORM WATER DRAINAGE SYSTEM.

18. ANY PROPOSED PVC PIPES UNDER PAVING OR CONCRETE WITH LESS THAN 30" OF COVER MUST MUST BE ENCASED IN CONCRETE. (SEE PAGE 21, CITY OF NEWTON GENERAL CONSTRUCTION DETAILS.)

19. THE EXISTING WATER & SEWER SERVICES SHALL BE CUT AND CAPPED AT THE MAIN AND BE COMPLETELY REMOVED FROM THE SITE, REPLACED AS SPECIFIED AND PROPERLY BACKFILLED. THE ENGINEERING DIVISION MUST INSPECT THIS WORK; FAILURE TO HAVE THIS WORK INSPECTED MAY RESULT IN THE DELAY OF ISSUANCE OF THE UTILITY CONNECTION PERMIT.

20. THE CONTRACTOR SHALL NOTIFY THE ENGINEERING DIVISION 48 HOURS IN ADVANCE AND SCHEDULE AN APPOINTMENT TO HAVE THE DRAINAGE SYSTEM, WATER & SEWER SERVICES INSPECTED. THE SYSTEM & UTILITIES MUST BE FULLY EXPOSED FOR THE INSPECTOR. ONCE THE INSPECTOR IS SATISFIED, THE SYSTEM & UTILITIES MAY THEN BE BACKFILLED.

21. NO WORK IS ALLOWED WITHIN A CITY OF NEWTON RIGHT-OF-WAY BETWEEN NOVEMBER 15TH AND APRIL 15TH. IF AN EMERGENCY EXISTS OR THERE ARE EXTENUATING CIRCUMSTANCES, APPLICANT MAY REQUEST PERMISSION FROM THE CITY ENGINEER. IF ALLOWED, SPECIAL CONSTRUCTION REQUIREMENTS WILL BE REQUIRED, AND AS SUCH IT IS RECOMMENDED THAT THE APPLICANT OR APPLICANT'S REPRESENTATIVE CONTACT THE CITY OF NEWTON ENGINEERING DEPARTMENT PRIOR TO START OF WORK FOR CLARIFICATION.

22. AT THE END OF CONSTRUCTION, ALL DRAINAGE STRUCTURES ARE TO BE CLEANED OF SILT, STONES AND OTHER DEBRIS.

23. DURING CONSTRUCTION, THE EROSION CONTROL MEASURES SHALL BE INSPECTED ONCE PER WEEK AND WITHIN 24 HOURS OF ANY STORM EVENT GENERATING MORE THAN 1/2" OF RAINFALL. THE EROSION CONTROL MEASURES SHALL BE CLEANED REGULARLY AND ADJUSTED IF NECESSARY TO ENSURE THAT NO SILT OR DEBRIS LEAVES THE SITE.

24. WITH EXCEPTION OF GAS UTILITY SERVICES, ALL UTILITY TRENCHES WITHIN ANY CITY OF NEWTON RIGHT-OF-WAY WILL BE BACKFILLED WITH TYPE IE (EXCAVATABLE) CONTROLLED DENSITY FILL, AS SPECIFIED BY THE CITY OF NEWTON ENGINEERING SPECIFICATIONS.

25. ALL CONSTRUCTION ACTIVITIES WITHIN THE CITY OF NEWTON RIGHT-OF-WAY MUST FULLY COMPLY WITH ALL OF CITY OF NEWTON CONSTRUCTION SPECIFICATIONS AS WELL AS 521 CMR 21.00 AND 22.00.

26. THE NEW SEWER SERVICE AND/OR STRUCTURES SHALL BE PRESSURE TESTED OR VIDEOTAPED AFTER FINAL INSTALLATION IS COMPLETE. METHOD OF FINAL INSPECTION SHALL BE DETERMINED SOLELY BY THE ENGINEERING INSPECTOR FROMTHE CITY OF NEWTON. ALL SEWER MANHOLES SHALL BE VACUUM TESTED IN ACCORDANCE WITH CITY OF NEWTON SPECIFICATIONS. THE SEWER SERVICE WILL NOT BE ACCEPTED UNTIL ONE OF THE TWO METHODS STATED ABOVE IS COMPLETED. ALL TESTING MUST BE WITNESSED BY A REPRESENTATIVE OF THE ENGINEERING DIVISION.

27. ALL SILTATION CONTROL NEEDS TO BE INSTALLED PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE CITY ENGINEER'S OFFICE FOR APPROVAL PRIOR TO COMMENCEMENT.

28. ALL TRENCH EXCAVATION CONTRACTORS SHALL COMPLY WITH MGL CHAPTER 82A, TRENCH EXCAVATION SAFETY REQUIREMENTS, TO PROTECT THE GENERAL PUBLIC FROM UNAUTHORIZED ACCESS TO UNATTENDED TRENCHES. A TRENCH EXCAVATION PERMIT IS REQUIRED. THIS APPLIES

29. CIVIL ENGINEER BASED DESIGN ON PROVIDED SURVEY. ENGINEER NOT RESPONSIBLE FOR ANY DISCREPANCY IN THE PROVIDED SURVEY.

30. CONTRACTOR TO ENSURE SEWER LINE IS PITCHED AT AN EQUAL SLOPE OF BETWEEN 2% AND 10% FROM HOUSE TO MAIN CONNECTION

31. CONTRACTOR TO CONFIRM LOCATION OF DOWNSPOUTS PRIOR TO CARRYING OUT ANY DRAINAGE WORKS

32. RAV & ASSOCIATES INC, ACCEPT NO LIABILITY FOR GROUND WATER OR OTHER SURFACE WATER IN BASEMENT

33. SEWER AND WATER MAIN LOCATION TO BE CONFIRMED BY CONTRACTOR

34. SURFACE WATER TO BE DIVERTED FROM ALL SIDES OF FOUNDATION WALL

35. ANY TREE BEING REMOVED SHALL COMPLY WITH CITY OF NEWTON TREE ORDINANCE

36. CONTRACTOR TO ENSURE THAT THE BUILDING FOOTPRINT REPRESENTED ON THIS PLAN IS THE SAME AS THE PROPOSED ARCHITECTURAL /STURUCTURAL PLANS AND INCORPORATES ALL OVERHANGS, CANTILEVERS AND ANY COMPONENT THAT IS SUBJECT TO ZONING RESTRICTIONS. IF THIS IS FOUND NOT TO BE THE CASE THE CONTRACTOR MUST CONTACT THE ENGINEER /SURVEYOR AND REQUEST A REVISED PLAN WHICH MUST BE RESUBMITTED TO I.S.D. CITY OF NEWTON

37. PER CITY OF NEWTON ORDINANCE NO. B-52, COUNCIL ITEM #251-19, BUILDING SEWER, WATER SERVICE PIPE AND SIDEWALK/CURB REPLACEMENT ORDINANCE. THE APPLICANT IS REQUIRED TO INSTALL/REPLACE SIDEWALK AND CURB ALONG THE ENTIRE FRONTAGE. THIS SHALL INCLUDE APPROPRIATE TRANSITION TO ADJOINING CURBING AND WALKWAYS, INCLUDING ACCESSIBLE CURB CUTS AND OTHER ACCESS AS REQUIRED. THE ENGINEERING CONSTRUCTION INSPECTOR MAKES A DETERMINATION, BASED ON THE MATERIAL AND MANNER OF CONSTRUCTION OF THE EXISTING SIDEWALK AND CURB, IF THE EXISTING SIDEWALK AND CURB HAS THE ABILITY TO BE REUSED WITHOUT REPLACEMENT.

38. ANY WALL IN EXCESS OF 4-FEET OR TALLER MUST BE DESIGNED BY A STRUCTURAL ENGINEER LICENSED IN MASSACHUSETTS.

39. THE ENGINEER OF RECORD IS RESPONSIBLE FOR THE ON-SITE INSPECTION(S)OF ALL SUBSURFACE STRUCTURES. THIS INCLUDES BUT IS NOT LIMITED TO DRAINAGE, UTILITIES, (INCLUDING SEWER PIPE SLOPE), ROOF LEADER COLLECTION SYSTEM, TRENCH DRAINS, MANHOLES, ETC. ENGINEER OF RECORD MUST ALSO CONDUCT "BOTTOM OF HOLE" INSPECTION(S) PRIOR TO SUBSURFACE DRAINAGE SYSTEM(S) BEING INSTALLED.

40. PRIOR TO AN OCCUPANCY PERMIT BEING ISSUED, AN AS-BUILT PLAN MUST BE SUBMITTED TO THE ENGINEERING DIVISION IN BOTH DIGITAL FORMAT AND HARD COPY. THE PLAN SHOULD SHOW ALL UTILITIES AND FINAL GRADES, TIES TO ALL GATES, VALVES, CLEAN-OUTS, CONNECTION POINTS AT MAINS, STRUCTURE ACCESS/MAINTENANCE COVERS, ANY EASEMENTS AND FINAL GRADING.

PRIOR TO THE ENGINEERING DIVISION RECOMMENDING THAT A CERTIFICATE OF OCCUPANCY BE ISSUED, AN AS-BUILT PLAN MUST BE SUBMITTED. THE AS-BUILT PLAN MUST SHOW DIMENSIONAL TIES FROM FIXED POINTS (FOUNDATION CORNERS) TO ALL SUBSURFACE COMPONENTS AS WELL AS FINAL GRADING. THE AS-BUILT PLAN MUST BE STAMPED, SIGNED AND DATED BY THE ENGINEER OF RECORD.

THIS NOTE MUST BE ON ALL AS-BUILT PLANS:
I CERTIFY THAT THE CONSTRUCTION SO SHOWN WAS INSPECTED PRIOR TO BACKFILL AND THAT ALL WORK CONFORMS WITH THE APPROVED PLAN AND MEETS OR EXCEEDS THE CITY OF NEWTON CONSTRUCTION STANDARDS.

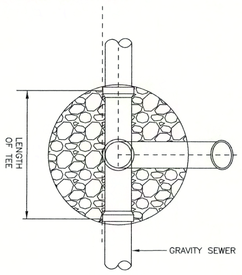
I CERTIFY THAT THE CONSTRUCTION SHOWN WAS INSPECTED PRIOR TO BACKFILL AND THAT ALL WORK CONFORMS WITH APPROVED PLAN
SIGNATURE DATE

41. IF AT TIME OF CONSTRUCTION THE ROADWAY FALLS UNDER A 5-YEAR CONSTRUCTION MORATORIUM, THE ROADWAY WILL BE MILLED CURB TO CURB FOR A DISTANCE OF 25 FEET FROM THE OUTER MOST TRENCEHES AND PAVED WITH BITUMINOUS CONCRETE.

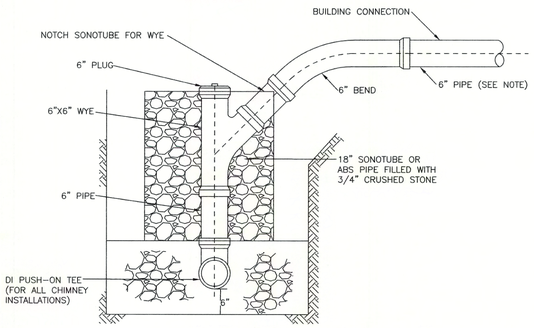
42. CONTRACTOR HAS TO STABILIZE SLOPE DURING CONSTRUCTION.

STORMTECH GENERAL NOTES

1. STORMTECH LLC ("STORMTECH") REQUIRES INSTALLING CONTRACTORS TO USE AND UNDERSTAND STORMTECH'S LATEST INSTALLATION INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION.
2. STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.): MINIMUM COVER IS 18 INCHES NOT INCLUDING PAVEMENT; MAXIMUM COVER IS 96 INCHES INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT, WHERE RUTTING FROM VEHICLES MAY OCCUR, MINIMUM REQUIRED COVER IS 24 INCHES, MAXIMUM COVER IS 96 INCHES.
3. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER.
4. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.
5. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
6. BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
8. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
8. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.

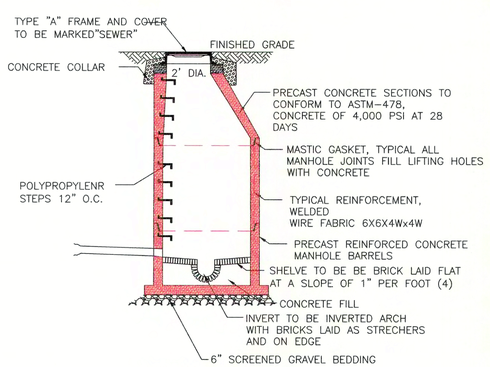


PLAN VIEW

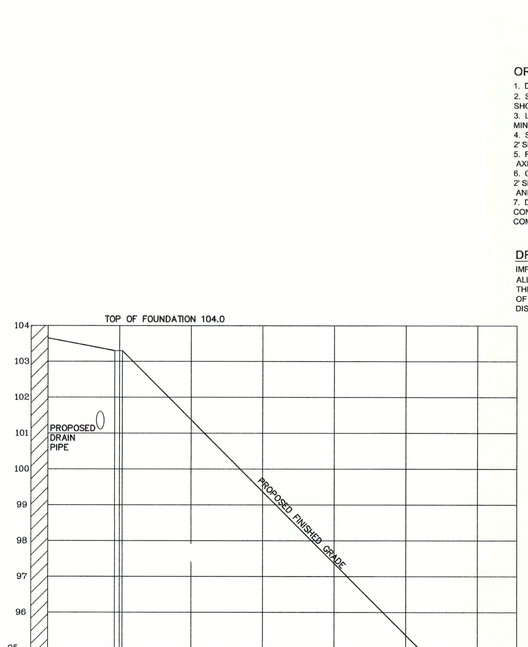


SEWER CHIMNEY

NOTE:
AT THE CONTRACTORS OPTION, THE CONTRACTOR MAY ELECT TO USE DI PIPE INSTEAD OF PVC AT NO ADDITIONAL COST TO THE OWNER, IF DI PIPE IS USED, THE DI PIPE SHALL EXTEND 12" BEYOND THE EDGE OF THE MAINLINE TRENCH AND FITTED WITH A PVC ADAPTER.



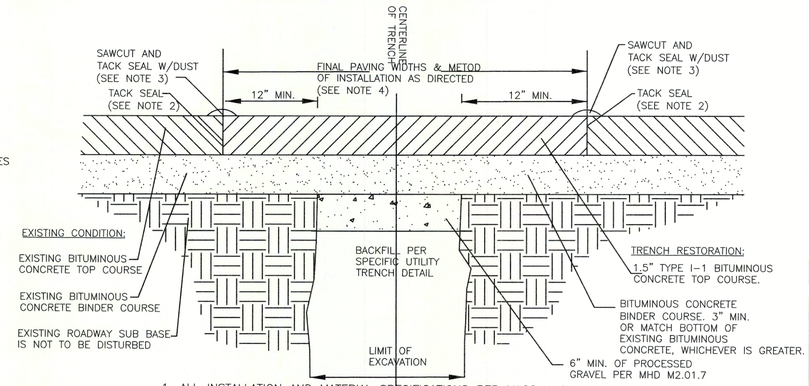
PROPOSED TYPICAL SEWER PRECAST CONCRETE MANHOLE DETAIL
NOT TO SCALE



PROPOSED SEWER PROFILE
(H-1"=20' V-1"=2')

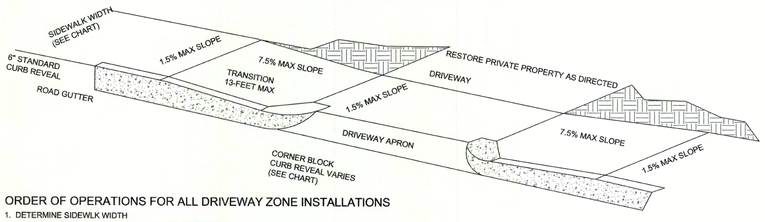
PROPOSED CONNECTION WITH PROPOSED CHIMNEY @ 89.5'±

INVERT IN SEWER PIPE WITH PROPOSED CHIMNEY @ 78.6'±



1. ALL INSTALLATION AND MATERIAL SPECIFICATIONS PER MASS. HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, 1988 AS AMENDED.
2. ALL EXPOSED BITUMINOUS CONCRETE IS TO BE TACKED PER MHD PRIOR TO NEW BITUMINOUS CONCRETE INSTALLATION.
3. ALL EXPOSED JOINTS ARE TO BE SEALED WITH TACK AND STONE DUST.
4. ANY TOP COURSE APPLIED AT A WIDTH OF 6' WIDE OR GREATER IS TO BE PLACED BY MACHINE/BOX SPREADER WHEN & AS DIRECTED BY THE CITY OF NEWTON.

TYPICAL TRENCH REPAIR & PAVEMENT SECTION DETAIL



ORDER OF OPERATIONS FOR ALL DRIVEWAY ZONE INSTALLATIONS

1. DETERMINE SIDEWLK WIDTH
2. SET THE CORNER BLOCK REVEAL TO THE DIMENSIONS SHOWN ON THE CHART BELOW AND INSTALL THE TRANSITION CURB.
3. LOCATE THE INTERCEPT AXIS AND RE-CHECK FOR THE MINIMUM ACCESSIBLE ROUTE WIDTH.
4. SET THE 1.5% GRADIENT TO THE BACK OF THE WALK WITH A 2' SMART LEVEL AND RIGID STRAIGHTEDGE.
5. FINE GRADE THE APRON AREA WHILE MAINTAINING THE INTERCEPT AXIS AND BACK OF SIDEWALK GRADE POINTS.
6. CHECK THE FORMS, HOWEVER, THE CONTRACTOR MUST USE A 2' SMART LEVEL DURING OPERATIONS TO ENSURE THAT THE FINAL LINE AND GRADE COMPLIES WITH THE NOTED DIMENSIONS AND/OR GRADIENTS.
7. DURING THE FINISHING OPERATIONS OF THE CEMENT CONCRETE, THE CONTRACTOR IS TO CHECK THE FINAL PRODUCT(S) TO ENSURE CONTINUED COMPLIANCE WITH THE NOTED STANDARDS.

DRIVEWAY APRONS

IMPORTANT NOTE (APPLICABLE TO ALL CURB AND DRIVEWAYS)
ALL DIMENSIONAL INFORMATION IS FOR PLANNING PURPOSES ONLY. THE FINAL PRODUCTS ROUTE CRITERIA PER THE RULES AND REGULATIONS OF THE MASSACHUSETTS ARCHITECTUAL ACCESS BOARD AND THE AMERICAN DISABILITIES ACT.

DRIVEWAY TRANSITIONS TO INTERCEPT 6" STD CURB REVEAL (TARGET VALUES ONLY) (1)

DRIVEWAY	CORNER BLOCK REVEAL	DISTANCE TO APRON INTERCEPT	RISE TO APRON INTERCEPT	GUTTER GRADE (2)	HIGH SIDE LENGTH TO TRANSITION CURB INCLUDING THE 2' RADIUS CORL BLK. (3)(4)
4'-6"	3 5/8" MAX	1'-6" FIXED	3 5/8" MAX	UP TO 0.5	4'-0"
				1	4'-0"
				2	4'-0"
				3	5'-0"
				4	6'-0"
				5	8'-0"
				6	13'-6"
				7 & GREATER	15'-0" MAX

(1) FINAL PRODUCT(S) MUST NOT EXCEED THE 7.5 % GRADIENT OR 1.5% CROSS SLOPE STANDARDS.
(2) WHEN THE FACTOR FALLS BETWEEN THE LISTED RANGE, USE THE LESSER GRADIENT FACTOR.
(3) THE MAXIMUM REQUIRED TRANSITION LENGTH OF CURB IS 15'-0"
(4) SIDEWALKS WITH LOAM BORDERS DO NOT REQUIRE TANSITION CURBS.

DRIVEWAY APRON DETAIL

NOT TO SCALE

DESIGNED BY:
MIKHAIL DEYCHMAN
EMAIL: MDEYCH@YAHOO.COM
TEL. (857) 498-0951

DATE	REVISION
08/10/22	COMMENTS

NOTES, PROFILE, CHIMNEY, DETAILS

43 RIVER AVENUE
NEWTON, MASSACHUSETTS 02464

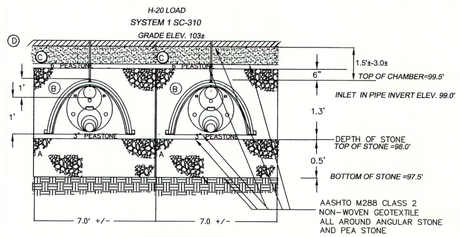
RAV & Assoc., Inc.
21 HIGHLAND AVENUE
NEEDHAM, MASSACHUSETTS 02021
TELEPHONE: (781) 449-8200

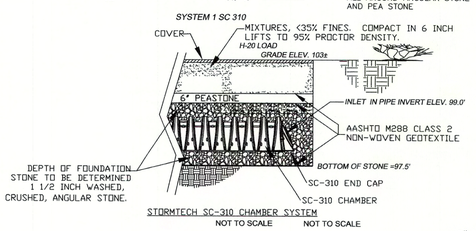
SCALE: AS NOTED DATE: 07/15/22

APPROVED: R.A.V.

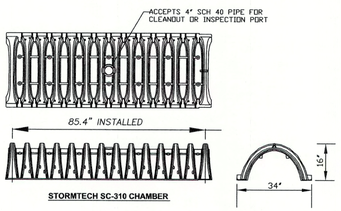
DESIGNED BY: M.D.
DRAWN BY: M.D.

DRAWING No.
S-130
SHEET: 3 OF 4





STORMTECH SC-310 CHAMBER SYSTEM
NOT TO SCALE NOT TO SCALE



HOLE NUMBER: PT-1 (LEFT)

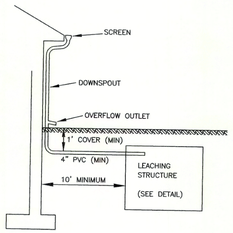
ELEVATION	DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	OTHER
98.5-.98.3'	0" – 2"	Ap	SL	10 YR 3/3	NONE	GRANULAR
98.3'-97.0'	2"– 18"	Bw	SL	10 YR 8/8	NONE	GRANULAR
97.0'-95.5'	18"– 36"	Cr	S	10 YR 8/1	NONE	SINGLE GRAIN
95.5'	36"	R			NONE	

DEEP OBSERVATION HOLE LOG #1
GENERAL SOIL CONDITIONS FOR THE AREA
PERFORMED AT 43 RIVER AVENUE
HOLE NUMBER: 1 DATED: 7/12/2022
TP – 1 7/12/22
GENERAL SITE CONDITIONS:
GRASS, TREES
PERFORMED BY: TOM RYDER, PE.
HOLE NUMBER: TP-1

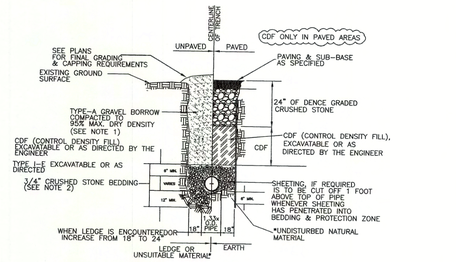
HOLE NUMBER: PT-2 RIGHT)

ELEVATION	DEPTH	HORIZON	TEXTURE	COLOR	MOTTLING	OTHER
104.5-.104.2'	0" – 4"	Ap	SL	10 YR 3/3	NONE	GRANULAR
104.2'-103.0'	4"– 18"	Bw	SL	10 YR 8/8	NONE	GRANULAR
103.0'-99.0'	18"– 66"	Cr	S	10 YR 8/1	NONE	SINGLE GRAIN
99.0'	66"	R			NONE	WEATHERED ROCK

DEEP OBSERVATION HOLE LOG #2
GENERAL SOIL CONDITIONS FOR THE AREA
PERFORMED AT 43 RIVER AVENUE
HOLE NUMBER: 2 DATED: 7/12/2022
TP – 2 7/12/22
GENERAL SITE CONDITIONS:
GRASS, BUSHES
PERFORMED BY: TOM RYDER, PE.
HOLE NUMBER: TP-2



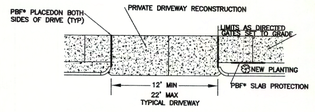
TYPICAL DOWNSPOUT DETAIL
N.T.S.



* SUITABILITY OF MATERIAL IS TO BE DETERMINED BY THE CITY OF NEWTON.

1. GRAVEL BORROW SHALL CONFORM TO MASSDOT SPECIFICATION M1.03.0
2. CRUSHED STONE BEDDING SHALL CONFORM TO MASS HIGHWAY SPECIFICATION M2.01.1

GRAVITY SEWER TRENCH DETAIL
N.T.S.



SIDEWALK AND CURB SCHEME

IMPORTANT NOTES:

CEMENT CONCRETE IS SHOWN ,SCHEME APPLIES TO BITUMINOUS CONCRETE ALSO HOWEVER, ALL JOINTS AND SCORE MARKS ARE ELIMINATED & TACK ABUTTING ADJACENT BITUMINOUS CONCRETE PAVEMENTS SHALL BE USED.

2' RADIUS CORNER BLOCKS THROUGHOUT UNLESS OTHERWISE SPECIFIED.

ALL CEMENT CONCRETE IS TO BE BROOM FINISHED.
ALL DRIVEWAY APPRONS TO REMAIN 1" ABOVE ADJACENT GUTTER.

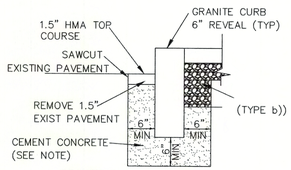
DEPTH 4" FOR SIDEWALK; 6" FOR DRIVEWAY APPRON ; 8" FOR PEDESTRIAN RAMPS.

RESET CURB INCLUDES ANY CURB THAT, AT THE DIRECTION OF THE ENGINEER, MUST BE RELOCATED WITHIN THE PROJECT LIMITS

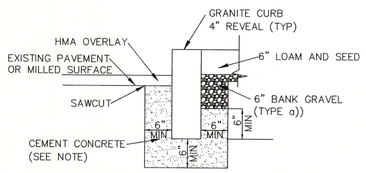
ALL CONCRETE IS TO BE FINISHED FLUSH WITH THE TOP BACK AND ENDS OF ALL CURBING AND CORNER BLOCKS.

NO MORE THAN TWO PIECES OF CURBING LESS THAN SIX FEET LONG WILL BE ALLOWED TO BE PLACED WITHIN THE SAME "CURB RUN" AND THEY SHALL NOT BE SET SIDE BY SIDE.

ALL CURB JOINTS SHALL NOT BE GREATER THAN 1/2", SHALL BE POINTED BEFORE THE WEARING COURSE IS PLACED, IF NOT SOONER, AND SHALL BE WIPED CLEAN WITH A CLOTH IMMEDIALTLEY AFTER POINTED.



GRANITE CURB IN EXISTING PAVEMENT
N.T.S.

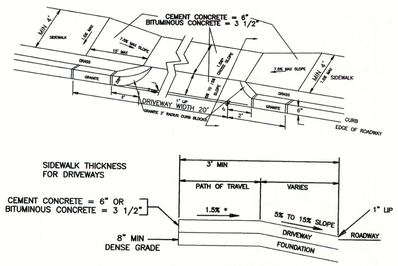


GRANITE CURB IN EXISTING PAVEMENT WITH OVERLAY
N.T.S.

NOTES:
1. THIS PROCEDURE IS APPLICABLE ONLY IF CURB IS TO BE SET AFTER BASE COURSE IS IN THE PLACE PRIOR TO BINDER AND TOP PLACEMENT.
2. ANY DESIGNATED CEMENT CONCRETE THAT IS ACCEPTABLE UNDER SECTION M4 OF THE STANDARD SPECIFICATION ARE WAIVED. HOT MIX ASPHALT SHALL NOT BE USED AS A SUBSTITUTE.

ACCEPTABLE FILL MATERIALS
STORMTECH SC-310 CHAMBER SYSTEMS

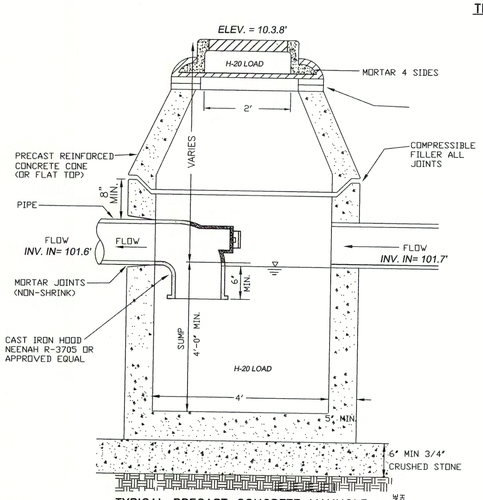
MATERIAL LOCATION	DESCRIPTION	AASHTO M43 DESIGNATION	AASHTO M145 DESIGNATION	COMPACTION/DENSITY REQUIREMENT
(D) FILL MATERIAL FROM 18" TO GRADE ABOVE CHAMBERS	ANY SOIL/ROCK MATERIALS, NATIVE SOILS OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	N/A	PREPARE PER ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
(C) FILL MATERIAL FOR 6" TO 18" ELEVATION ABOVE CHAMBERS (24" FOR UNPAVED INSTALLATIONS)	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES.	3, 357, 4, 467, 5, 56, 57, 6, 67, 68, 7, 78, 8, 89, 9, 10	A-1 A-2 A-3	COMPACT IN 6" LIFTS TO A MINIMUM 95 % STANDARD PROCTOR DENSITY. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 LBS. DYNAMIC FORCE NOT TO EXCEED 20,000 LBS.
(B) EMBEDMENT STONE SURROUNDING AND TO A 6" ELEVATION ABOVE CHAMBERS	WASHED ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN ¾ - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	NO COMPACTION REQUIRED
(A) FOUNDATION STONE BELOW CHAMBERS	WASHED ANGULAR STONE WITH THE MAJORITY OF PARTICLES BETWEEN ¾ - 2 INCH	3, 357, 4, 467, 5, 56, 57	N/A	PLATE COMPACT OR ROLL TO ACHIEVE A 95% STANDARD PROCTOR DENSITY



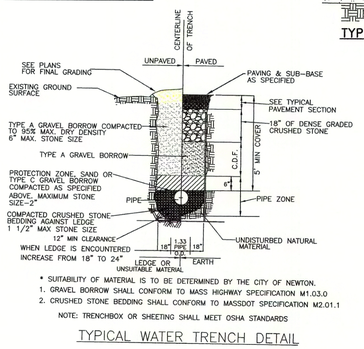
SECTION A-A

* TOLERANCE FOR CONSTRUCTION +/- 0.5%

DRIVEWAY APRON WITH CORNER BLOCKS



TYPICAL PRECAST CONCRETE MANHOLE
NOT TO SCALE



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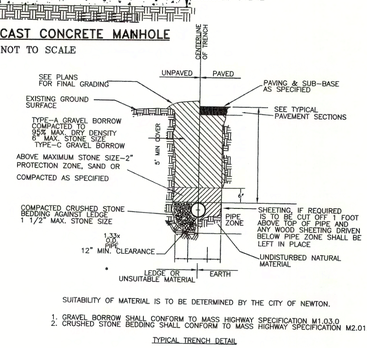
NOTE: TRENCHBOX OR SHEETING SHALL MEET OSHA STANDARDS

TYPICAL WATER TRENCH DETAIL



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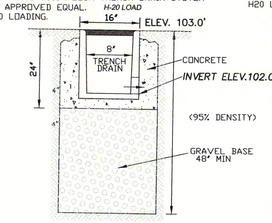
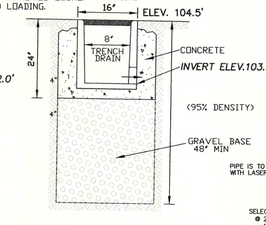
TYPICAL TRENCH DETAIL
N.T.S.

ACO POLYMER PRODUCTS, INC.
ACO K100S QUICK LOCK TRENCH DRAIN SYSTEM OR APPROVED EQUAL. *H-20 LOAD*
H20 LOADING.

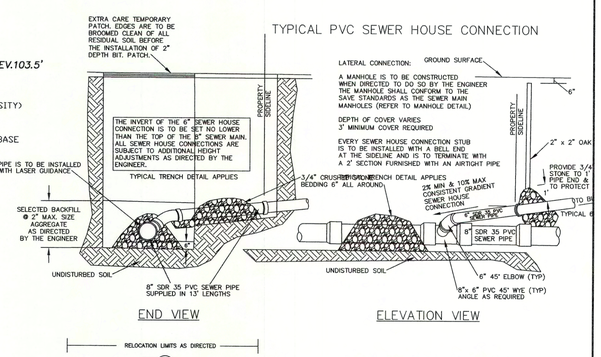


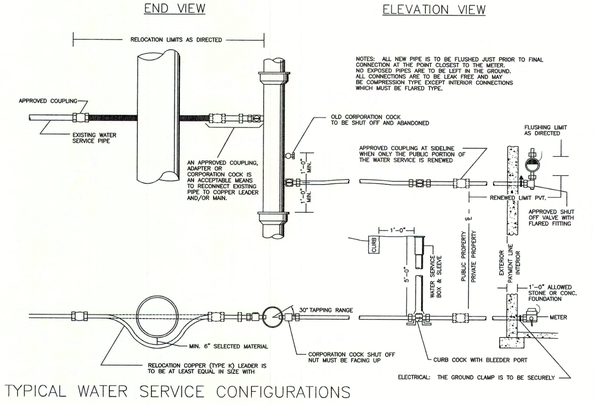
TRENCH DRAIN DETAIL #1
NOT TO SCALE

ACO POLYMER PRODUCTS, INC.
ACO K100S QUICK LOCK TRENCH DRAIN SYSTEM OR APPROVED EQUAL. *H-20 LOAD*
H20 LOADING.



TRENCH DRAIN DETAIL #2
NOT TO SCALE





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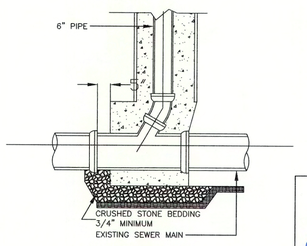

TYPICAL SEWER CONFIGURATION

TYPICAL WATER SERVICE CONFIGURATIONS

DESIGNED BY:
MIKHAIL DEYCHMAN
EMAIL: MDEYCH@YAHOO.COM
TEL. (857) 498-0951

DATE	REVISION
08/10/22	COMMENTS

DETAILS

43 RIVER AVENUE
NEWTON, MASSACHUSETTS 02464

RAV & Assoc., Inc.
21 HIGHLAND AVENUE
NEEDHAM, MASSACHUSETTS 02021
TELEPHONE: (781) 449-8200

SCALE: AS NOTED DATE: 07/20/22

APPROVED: R.A.V.

DESIGNED BY: M.D.

DRAWN BY: M.D.

DRAWING No. S-130
SHEET: 4 OF 4