STATE OF CONNECTICUT – COUNTY OF TOLLAND
INCORPORATED 1786

TOWN OF ELLINGTON

55 MAIN STREET – PO BOX 187
ELLINGTON, CONNECTICUT 06029-0187
www.ellington-ct.gov

TEL. (860) 870-3120 **TOWN PLANNER'S OFFICE** FAX (860) 870-3122

INLAND WETLANDS AGENCY
REGULAR MEETING AGENDA
MONDAY, JUNE 14, 2021, 7:00 P.M.
TOWN HALL ANNEX MEETING ROOM, 57 MAIN ST, ELLINGTON, CT

IN-PERSON PUBLIC ATTENDANCE LIMITED DUE TO COVID19 RESTRICTIONS
ZOOM ATTENDANCE INSTRUCTIONS PROVIDED BELOW

I. CALL TO ORDER

II. PUBLIC COMMENTS (on non-agenda items):

III. PUBLIC HEARING(S):

1. IW202106 – Brooks Crossing Developers LLC owner/applicant, request for a permit to conduct regulated activity to construct an eleven (11) lot subdivision (known as Highfield Estates Phase 4), roadways, drainage facilities, and associated site improvements on property located off of Jobs Hill Road between Brook Crossing and Brook Crossing Extension, APN 119-004-0000.

IV. OLD BUSINESS: None

V. NEW BUSINESS:

1. IW202107 – Edward & Alice Wysocki and James Wysocki owners/ James Wysocki, applicant, request for acceptance to harvest timber as a use permitted as of right on properties located off of Jobs Hill Road, Elderberry Lane, Lanz Lane, and Egypt Road, APNs 160-056-0000, 179-022-0000, 179-023-0000, 179-025-0000, 180-003-0000, 180-004-0000, 180-005-0000, 180-006-0000, 180-007-0000, 188-002-0000, 189-004-0000, 188-001-0000, 180-017-0000, and 181-015-0000.

VI. ADMINISTRATIVE BUSINESS:

1. Approval of the May 10, 2021 Regular Meeting Minutes.
2. Correspondence/Discussion:

VII. ADJOURNMENT:

Join Meeting via ZOOM Communications: Due to COVID-19, in-person attendance is limited to maximum occupancy based on fixed seating arrangements meeting social distancing requirements. **Attendance for this meeting is also available using the online video conferencing provider Zoom Meeting**. Details to attend the meeting virtually are provided on this meeting agenda and posted on the Town of Ellington's webpage (www.ellington-ct.gov) under Agenda & Minutes, Inland Wetlands Agency. For questions and assistance please contact the Ellington Planning Department at 860-870-3120**.**

Join Zoom Meeting:
https://zoom.us/j/97711152394
Meeting ID: 977 1115 2394
Password: 952317

Dial by your location:
+1 646 558 8656 US (New York)
Meeting ID: 977 1115 2394
Password: 952317

Next Regular Meeting is scheduled for July 19, 2021

Town of Ellington
Inland Wetlands and Watercourses Agency
Application

Application # IW202106
Date Submitted 4/27/2021

Notices associated with this application will be sent to the applicant unless otherwise requested.

Owner's Information

Name: BROOKS CROSSING DEVELOPERS, LLC

Mailing Address: 164 DOCKERAL ROAD
TOLLAND, CT 06084

Email: Rashidnaek@gol.com

WHEN NOT REQUIRED BY LAW TO MAIL NOTICE BY USPS, MAY NOTICES BE EMAILED TO YOU? ☒ Yes ☐ No

Primary Contact Phone #: 860-875-1895

Secondary Contact Phone #:

Owner's Signature: [signature] **Date:** 4.26.21.

By signing below I certify that all information submitted with this application is true and accurate to the best of my knowledge, that I am aware of and understand the application requirements and regulations, and acknowledge that the application is to be considered complete only when all information and documents required by the Agency have been submitted. Moreover, by signing above I/we expressly provide written consent to the filing of the application and access to the site by the Agency or its staff.

Notices associated with this application will be sent to the applicant unless otherwise requested.

Applicant's Information (if different than owner)

Name: SAME AS OWNER

Mailing Address:

Email:

WHEN NOT REQUIRED BY LAW TO MAIL NOTICE BY USPS, MAY NOTICES BE EMAILED TO YOU? ☐ Yes ☐ No

Primary Contact Phone #:

Secondary Contact Phone #:

Applicant's Signature: **Date:**

By signing below I certify that all information submitted with this application is true and accurate to the best of my knowledge, that I am aware of and understand the application requirements and regulations, and acknowledge that the application is to be considered complete only when all information and documents required by the Agency have been submitted.

Street Address: JOBS HILL ROAD / BROOK CROSSING

Assessor's Parcel Number (APN): 119 - 004 - 0000

Proposed upland review area affected in square feet: 7.05

Proposed wetlands/watercourses affected in square feet and linear feet (as applicable): 402 l.f.

Total area of wetlands/watercourses on parcel in square feet or acres: 9.12 Ac.

Public Water: ☐ Yes ☒ No **Public Sewer:** ☐ Yes ☒ No *If not served by public water and sewer, applicant shall make application to North Central District Health Department (Enfield Office) if required.*

Is the project in a public water supply watershed area? ☐ Yes ☒ No
If YES, applicant is required to notify the Connecticut Water Company and Commissioner of Public Health by certified mail, return receipt within 7 days of this application (Conn. Gen Stat. Sec 22a-42f). Copy of application, plans, and supporting documents must accompany notice. Applicant can email the Commissioner of Public Health using their approved form. Proof of notice (return receipt and sent email) must be provided to the Planning Department.

Describe the nature of proposed regulated activity, request for acceptance of a permitted use as of right or a nonregulated use, map or regulation amendment, or other activity requiring review by the Agency or its Agent:
See attached Application Checklist and Appendix D for guidance when preparing application

REGULATED ACTIVITIES - SEE NARRATIVE ATTACHED

RECEIVED
APR 27 2021
TOWN OF ELLINGTON
PLANNING DEPARTMENT

Applicant shall provide certification in accordance with Wetlands Regulation, Section 7.4e, Application Requirements:

Whether or not any portion of the property on which the regulated activity is proposed is located within 500 feet of an adjoining town. ☐ **Yes** ☒ **No**

Whether or not a significant portion of the traffic to the completed project will use streets within an adjoining town to exit or enter the site. ☐ **Yes** ☒ **No**

Whether or not a significant portion of the sewer or water drainage from the project will flow through and significantly impact the sewer or water drainage system of an adjoining town. ☐ **Yes** ☒ **No**

Whether water run-off from the improved site will impact streets or other municipal/private property within an adjoining town. ☐ **Yes** ☒ **No**

FOR OFFICE USE ONLY

If YES to any of the above, the Agency shall, in accordance with CGS 8-7d(f) notify the clerk of any adjoining municipality of the pendency of any application, petition, appeal, request or plan concerning any project on any site. Notice of the pendency of such application shall be made by certified mail, return receipt requested, and shall be mailed within seven (7) days of the date of receipt of the application, petition, appeal, request or plan. **(See Agency requirements Section 8.4)**

Type of Project: (check one)

___Commercial/Industrial X Residential ___ Mixed Use ___Timber ___Agricultural

___Other, explain: _____

Type of Application: (check one)

___ Notification for Non-Regulated Use (Section 4.2)

___ Notification of Permitted Use as of Right (Section 4.1)

___ Administrative Permit (Section 6.4)

X Agency Permit **(TWELVE COPIES REQUIRED)**

___ Permit Modification

___ Permit Extension

___ Regulation Amendment

___ Map Amendment

___ Appeal of Administrative Permit

Application Submittals:

RECEIVED
APR 27 2021
TOWN OF ELLINGTON
PLANNING DEPARTMENT

X Completed Application Form (Section 7.4a)

X Application Fee (Section 7.4b)

X Abutters List (Section 7.4c)

X Certification as to Adjacent Towns (See above)

N/A Certification as to Connecticut Water Company & Commissioner of Public Health (See above)

X Notification Narrative and Supporting Documentation (If applicable, Appendix D)

X Project Narrative and Supporting Documentation (Section 7.4g, 1-11 inclusive, as deemed applicable)

X Project Site Plan - circle one: Administrative (Section 7.4h1) / (Agency) (Section 7.4h2)

X Supplemental Information (Section 7.5a-j, inclusive, as deemed applicable)

TOWN OF ELLINGTON
INLAND WETLANDS & WATERCOURSES APPLICATION CHECKLIST

(For use as a guide in preparation and review of plans. Not intended to replace regulations.)

GENERAL REQUIREMENTS FOR ALL APPLICANTS

COUNTER STAFF TO CONFIRM AT TIME OF SUBMITTAL

- Complete application, signed by the owner & applicant;
- Required fee (See: Town Ordinance or Appendix A);
- Site Plan - 12 copies (Two should be 24" x 36", signed & sealed, **INCLUDING SOIL SCIENTIST'S SIGNATURE**; others may be 11" x 17" if legible);
- If the proposed project located within a public water supply watershed area the **applicant** is required to notify the Connecticut Water Company and Commissioner of Public Health by certified mail, return receipt within 7 days of this application (Conn. Gen Stat. Sec 22a-42f). Copy of application, plans, and supporting documents must accompany notice. Applicant can email the Commissioner of Public Health using their approved form. Proof of notice (return receipt and sent email) must be provided to the Planning Department.

NARRATIVE REQUIREMENTS BELOW (See Section 7.4.g)

PLEASE REVIEW WITH STAFF AS SOME ITEMS MAY NOT BE REQUIRED DEPENDING ON THE COMPLEXITY OF THE APPLICATION

Check each item supplied or list recommended abbreviation: N/A = Not Applicable; N/P = Not Provided; W/R = Waiver Requested)

X 1. The amount of regulated upland review area affected, in square feet;

X 2. The amount of inland wetlands & watercourses affected, in square or linear feet, as applicable;

X 3. The overall (aggregate) area affected;

X 4. The amount of permanent versus temporary impact;

X 5. The general characteristics of the regulated areas being affected by the proposal in terms of land cover, vegetation, soil types, slope, and relationship to other regulated areas on and off the project site;

X 6. The purpose and a description of the proposed activity;

X 7. The proposed erosion and sedimentation controls and other best management practices and mitigation measures which may be considered as a condition of issuing a permit for the proposed regulated activity including, but not limited to, measures to:

- prevent or minimize pollution or other environmental damage,
- maintain or enhance existing environmental quality, or
- in the following order of priority, restore, enhance and create productive wetland or watercourse resources.

N/A 8. For commercial and industrial uses, a general description of the business operations, including but not limited to:

- the type of business,
- production and manufacturing procedures,
- handling and disposition of any process wastewaters, cooling waters, and/or stormwater,
- types of materials used and stored on site,
- spill contingency plans,
- septic disposal (unless tied to sewers),
- waste/refuse storage, handling and disposal, and similar operations.

RECEIVED
APR 27 2021
TOWN OF ELLINGTON
PLANNING DEPARTMENT

NARRATIVE continued:

N/A 9. For commercial and industrial uses, a list of current State of Connecticut and Federal environmental and land use permits issued for the facility. Such list shall also include a disclosure of any enforcement action taken by the State DEEP regarding the facility, either current or within the previous five years from the date of the subject application, including any consent orders, fines, penalties and/or resolution of such enforcement actions.

X 10. A construction or project narrative describing:

- method of construction,
- duration of construction activity,
- methods to control stormwater and limit erosion before, during & following construction,
- type of equipment to be used,
- type and location of access to the regulated area,
- storage and disposal of excess materials or stockpiles,
- type and composition of any fill material,
- removal and disposition of trees and stumps,
- measures to dewater, divert flows, and similar activities.

X 11. A description of any changes to water velocity, volume or course, the anticipated impacts of these changes, and measures to mitigate those impacts.

X 12. A list of any other local, State of Connecticut or U.S. environmental or land use approvals required for the proposed regulated activity such as but not limited to, DEEP Construction or Commercial Stormwater Permit Registration, Army Corp permits, ConnDOT, STC, and waste water or process water discharge permits.

X 13. Where stormwater systems are proposed, detailed storm drainage calculations, construction details and other support documentation, certified by a Professional Engineer licensed to practice in the State of Connecticut.

X 14. If the area to be disturbed is ½ acre or more in area, a detailed erosion control plan and narrative, in compliance with the latest State DEEP Guidelines for Soil Erosion and Sediment Control.

X 15. A disclosure listing any previous Ellington inland wetland permit applications and Ellington wetland enforcement actions regarding the subject parcel(s).

X 16. A graphic and textual description of all alternatives to the proposed regulated activity considered, and a general discussion of each, including the reason or reasons for choosing the proposed alternative. This requirement relates to the evaluation of the initial application only, and shall not be construed as a conclusion by the Agency or its agent that the proposed activity is "significant." The determination of significance shall be made by the Agency or its agent after review of the initial application, and if the proposed regulated activity or any component of that activity is deemed "significant," the applicant may be required by the Agency or its agent to submit a more detailed analysis of alternatives, in order to allow the Agency to make the necessary findings with respect to prudent and feasible alternatives.

If the Agency determines, based upon its review of the initial submittal that either the proposed activity involves a significant activity as determined by the Agency, or additional technical or other information is necessary in order to properly and fully evaluate the proposed activity, any or all of the additional information listed in Section 7.5 of the IWWA Regulations may be required. Submittal of additional information is guided by Section 8.6.

Inland Wetlands and Watercourses Agency Application
Highfield Estates – Phase IV
Brooks Crossing Developers, LLC

RECEIVED
APR 27 2021
TOWN OF ELLINGTON
PLANNING DEPARTMENT

Project Narrative

INTRODUCTION:

The subject property is 55.94 acres located west of Brook Crossing, a town road off of Jobs Hill Road in Ellington, CT, as shown on the attached Town GIS Map. The parcel is zoned RAR for single family residential homes. The development of this parcel would be Phase 4 in the development of the subdivision known as Highland Estates. For the most part, the land is moderately wooded with several cleared open areas scattered throughout, primarily cleared for establishment of the proposed ROW. There are four (4) wetland and watercourse areas identified on the property as shown on the attached plans (A, B, C & D). The Muddy Brook corridor (Area D) crosses through the eastern most portion of the property.

Chris Allen from Landtech has been retained to assist with the new applications to ACOE/CTDEEP and the town agencies. The wetland resources on the parcel have been studied several times in the past and were last flagged by George Logan from REMA in 2011. A letter report from REMA dated July 10, 2013 is attached. The Official Town Wetlands Map is shown on the attached Town GIS Map and is generally consistent with the field flagging completed by the soil scientists. The attached report title "Wetland Impact Mitigation Report" prepared by Landtech dated March 16, 2020 provides an updated and more thorough description of the resources on the property. Wetland Area A will not be affected by the proposed project.

An east-west ROW was cleared through the property with the development of Phases 2 and 3 circa 2002-2005 to provide an emergency gravel drive from Phases 2/3 to Brook Crossing. The intent is to follow this ROW to construct a town road for development of the lots proposed in Phase 4. With the construction of the gravel drive, cross culverts were installed across two intermittent watercourses (B & C) and a third culvert system was installed across Muddy Brook (D). Additional catch basins, storm drain piping and three (3) detention basins (DB #1,2,3) were also installed along the ROW in anticipation of constructing the future paved town road.

A second ROW was cleared from the intersection of Brook Crossing Extension to the abutting property line to the south where a fourth detention (DB #4) basin was constructed. Drainage piping from Phases 2/3 is piped to this basin. Additional work on the property has been halted since the enforcement notification was received by the property owner from the ACOE/CTDEEP to stop work.

The current planning proposal is to construct a new town road following the two existing ROW's and develop 11 new lots in accordance with the RAR Subdivision Regulations. Land not incorporated in the new lots would be put into permanent Open Space. In addition to the limitations imposed by wetland and watercourse impact considerations,

there are additional limitations to the number of feasible building lots resulting from existing soil conditions to support individual septic systems.

PROJECT INFORMATION:

Project Location: Jobs Hill Road/Brook Crossing ID: 119-004-0000

Owner/Applicant: Brooks Crossing Developers, LLC
164 Dockerel Road
Tolland, Ct 06084
Attn: Rashid Hamid
860-875-1895

Project Contact: F. A. Hesketh & Associates, Inc.
3 Creamery Brook
East Granby, CT 06026
Attn: David Ziaks, PE
860-653-8000
dziaks@fahesketh.com

GENERAL SITE INFORMATION:

- Current Site Boundary and Topographic information is shown on the attached map, Sheet PS-1 and GR-1 thru GR-5.
- Wetland Limits are indicated on the attached Town GIS Map and other maps attached.
- The proposed stormwater system would provide adequate detention/retention capabilities to maintain existing peak runoff conditions along with sufficient Water Quality Volume and Groundwater Recharge.
- The topography of the parcel slopes generally from north to south and excessive cuts and fills will not be required to construct the new town road or develop the residential lots on the site.
- Residential lots will be served by on-site private wells and septic systems.
- Based on detailed field surveys, there are no known vernal pools on the property.
- The CT DEEP Natural Diversity Database map does not indicate areas of State and Federal Listed Species, however three state listed species have been documented nearby as identified in the attached letter dated 2/28/20 from CTDEEP. Construction practices will be implemented as recommended in the letter during the seasonal time periods noted.
- There are no FEMA FIRM floodplains on the property.
- There are no Stream Channel Encroachment lines or Aquifer Protection Zones on the property.
- There are no activities that would qualify as a critical activity per CT Section 25-68b(4).

- As shown on the attached Sheets AC-1 and AC-2, there are three (3) direct wetland impact areas resulting from previous construction of the gravel drive and installation of three (3) culverts. The area of disturbance was developed by comparing the wetlands flagging from pre-construction mapping versus the latest 2011 flagging.

  Area A – 0
  Area B – 9,672 s.f
  Area C – 3,135 s.f.
  Area D – 23,784 s.f.

  Total Wetland Impact Area = 36,591 s.f.

- The installation of the existing twin 48" concrete culverts on Muddy Brook does not currently meet the design criteria established by ACOE/CTDEEP for such watercourse crossings and would be replaced with a concrete box culvert that meets all of the required design criteria.

PROPOSED MITIGATION MEASURES:

- Remove existing pipe culverts at Muddy Brook (Area D) and replace with box culvert and new concrete block end walls that meet ACOE/CTDEEP design criteria as shown on attached Sheets AC-3 thru AC-5.
- Reduce length of Muddy Brook culvert crossing from 150 ft. to 50 feet.
- Reduce length of existing culvert at Area C.
- Complete erosion control improvements at existing culvert at Area B.
- Reduce number of building lots from 13 to 11.
- Establish 27.74 acres of permanent Open Space.
- Develop an Invasive Species Control Plan, Mitigation Plan and Monitoring Protocol as recommended by Landtech.
- Complete Mitigation Area #1 (15,205 s.f) and Mitigation Area #2 (11,353 s.f.)

DETAILS PER SECTION 7.4g, 1-11:

1. Amount of 100' Upland Review Area affected:

   Total Review Area: 298,516 s.f. (6.85 ac.) on proposed lots & ROW
   1,067,220 s.f. (24.50 ac.) in Open Space Area

   Review Area Disturbed: 222,156 s.f (5.10 ac.) on lots & ROW
   84,942 s.f. (1.95 ac.) in Open Space Area

2. Amount of wetlands/watercourses affected: 36,591 s.f. plus 402 l.f. of watercourse

3. The overall area affected: 311,454 s.f. (7.15 ac.)

4. The amount of permanent versus temporary impact: 4.5 ac.+/- permanent

5. Areas being affected include what appear to be second growth woodlands in upland areas adjacent to wetland and watercourse resource areas. They are characterized by a combination of canopy trees and undergrowth, with scrub grown more prominent in less dense woodlands. See Landtech Report dated March 16, 2020 for specific details.

6. The purpose of the disturbance is to construct two town roads and develop a residential subdivision in accordance with town subdivision regulations for the RAR Zone.

7. A comprehensive erosion control plan has been incorporated into the plans. After areas are disturbed, these areas will be stabilized by replacing topsoil, seeding and mulching. To maintain and in some cases enhance environmental quality, two mitigation areas are proposed.

8. N/A/, project is not a commercial or industrial use.

9. N/A/, project is not a commercial or industrial use.

10. Method of construction: General roadway and site construction practices using conventional earth excavation, roller compaction and loader equipment, dump trucks and paving equipment. A small crane will be required for removal of the Muddy Brook existing culvert and installation of the new box culvert.

    Duration of Construction Activity: Approx. 8 months for roadway and drainage construction. Individual lot development will be market demand driven. Construction is expected to start this summer.

    See Sheets GR-1, NT-1 and Sheets SD-1 thru SD-3 for additional details and notes.

11. Four detention/water quality basins are proposed to maintain flows and no changes are proposed to surface water drainage patterns. Culverts are probably sized to maintain existing stream peak flows and velocities.

12. List of other approvals required:

    - Town Subdivision application approval
    - Final approval from Health District for Individual Septic System installation
    - ACOE/CTDEEP final individual permit
    - CTDEEP Registration for Stormwater-Construction General Permit

13. Detailed Stormwater Report is attached.

14. Proposed project is in compliance with CTDEEP E&S guidelines.

15. A number of wetlands applications and wetlands actions have been filed/taken over the years with Phases 1, 2, and 3 of the proposed development. Copies of the applications and actions, and related information related to the original subdivision parcel and subject parcel

(56 remaining acres) are on file with the town's planning department.

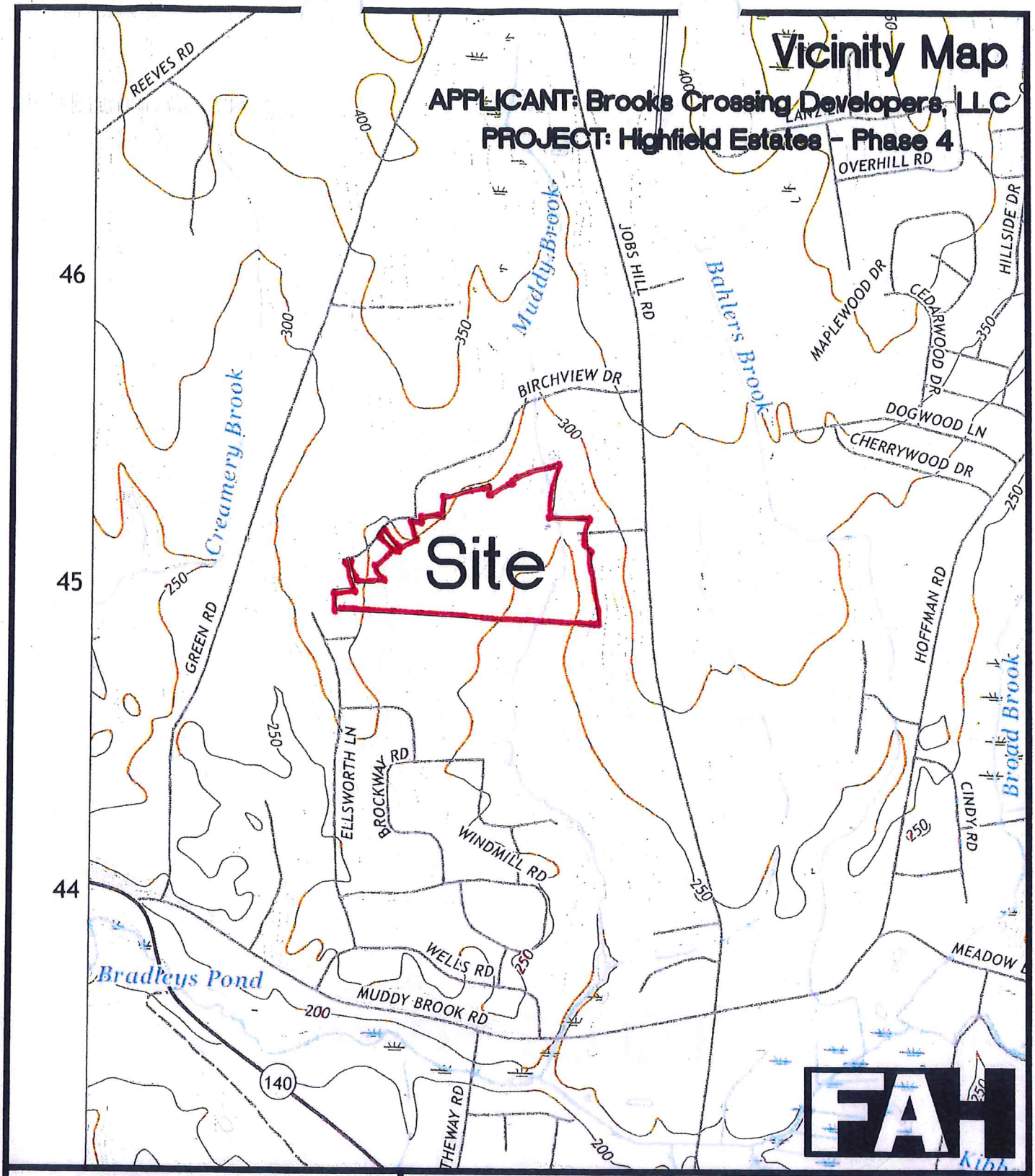
16. This application consisting of 11 new single family lots is for the proposed Phase IV of the Highfield Estates subdivision which has been under development over the past two decades. This is the final phase of development possible on the subject property. The ROW's for the two new roads were previously cleared and established and the drainage systems including four detention/water basins for those roads have been installed. Construction of the main road, Brook Crossing, completes the roadway network connecting previous phases back to Job's Hill Road. The new work associated with the 3 existing cross culverts is related to upgrading them to be in compliance with current CTDEEP/ACOE design requirements.

    Two areas of Mitigation totally 25,631 s.f. (see Sheet AC-7) are proposed for the unavoidable loss of wetland resources lost as part of the roadway and culvert installation. The proposed lot configuration is such that it minimizes disturbance in the upland review areas. The number of lots proposed has been reduced from previous master layouts considered. There is no direct disturbance to wetlands or watercourses associated with lot development. Through the ACOE/CTDEEP permitting process, it has been determined that the proposed project represents the most feasible and prudent alternate for developing the property as a residential subdivision.

Vicinity Map

APPLICANT: Brooks Crossing Developers, LLC

PROJECT: Highfield Estates - Phase 4



USGS Topo Map

PREPARED FOR

Highfield Estates

Ellington Quadrangle

ELLINGTON, CONNECTICUT

F. A. Hesketh & Associates, Inc.

3 Creamery Brook, East Granby, CT 06026

Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects

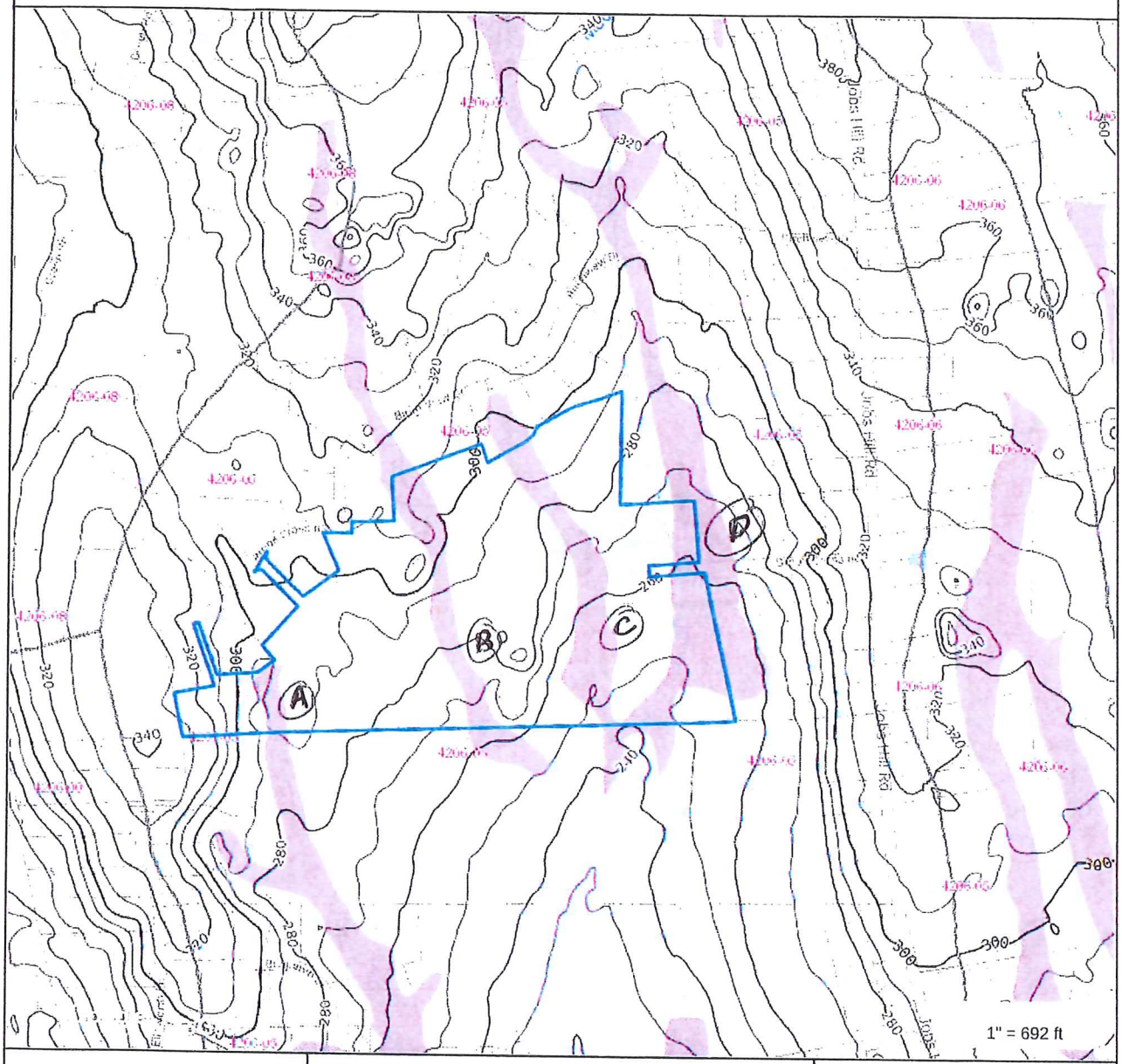
Phone (860) 653-8000

Fax (860) 844-8600

e-mail mail@fahesketh.com

CRCOG

March 7, 2019



CRCOG CAPITOL REGION COUNCIL OF GOVERNMENTS

MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

CRCOG makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

February 28, 2020

David Ziaks
F. A. Hesketh & Associates, INC
3 Creamery Brk
East Granby, CT 06026
dziaks@fahesketh.com

NDDB DETERMINATION NUMBER: 202001418

Project: Residential subdivision; Highfield Estates Phase 4, Brook Crossing in Ellington, CT

Expiration: February 28, 2022

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding this project. According to our records, there are State-listed species (RCSA Sec. 26-306) documented nearby the proposed project area.

Whip-poor-will (*Caprimulgus vociferus*)- State Special Concern
Brown thrasher (*Toxostoma rufum*)- State Special Concern
Eastern box turtle (*Terrapene carolina carolina*)- State Special Concern

Turtle recommendations:
In Connecticut, this terrestrial turtle inhabits a variety of habitats, including woodlands, field edges, thickets, marshes, bogs, and stream banks. Typically, however, box turtles are found in well-drained forest bottomlands and a matrix of open deciduous forests, early successional habitat, fields, gravel pits, and or powerlines.
The greatest threat to this species is habitat loss, fragmentation, and degradation due to development. This species is very sensitive to adult mortality because of late maturity (10 years old) and long life span (50-100years). Vehicular traffic, heavy equipment used for farming, and ATV use in natural areas are implicated specifically in adult mortality through collisions. Illegal collection by the pet trade and unknowing public for home pets exacerbates mortality rates and removes important individuals from the population. Predation rates are also unnaturally high because of increased predator populations (e.g. skunks, foxes, raccoons, and crows) that surround developed areas.

Land disturbance activities that will crush adult turtles or unearth hibernating turtles or turtle nests need to consider local habitat features and apply fencing and/or time of year restrictions as appropriate. We recommend you consult with a herpetologist familiar with preferred habitats to assist you with proper techniques and training to ensure the best protection strategies are employed for your site.
If land disturbance will occur in forested habitat you will need to take precautions to avoid crushing hibernating adults. This can be achieved by using either of the 2 recommendations:

- Restrict your land disturbance activities in forested habitat to the turtle active season (conduct land disturbance activites between April 1- November 1 and apply active season precautions described below).
- Before November 1: Install Exclusionary fencing and conduct a turtle sweep to remove any adults and to prevent turtles from accessing and hibernating in forested habitat that will be disturbed.

In general, between April 1- November 1, during the turtle active season:

- Exclusionary practices will be used to prevent any turtle access into disturbance areas. These measures will need to be installed at the limits of disturbance as shown on the plans.

- Exclusionary fencing be at least 20 in tall and must be secured to and remain in contact with the ground and be regularly maintained (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through.
- All staging and storage areas, outside of previously paved locations, regardless of the duration of time they will be utilized, must be reviewed to remove individuals and exclude them from re-entry.
- All construction personnel working within the turtle habitat must be apprised of the species description and the possible presence of a listed species.
    - You can find information on Eastern Box Turtle here:
        - http://www.ct.gov/deep/cwp/view.asp?a=2723&q=416520
- The Contractor search the work area each morning prior to any work being done.
- Any turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and fencing should be inspected to identify and remove access point. This animal is protected by law and should not be relocated off-site.
- In areas where silt fence is used for exclusion, it shall be removed as soon as the area is stable and disturbance is finished to allow for reptile and amphibian passage to resume.

Birds recommendations

Whip-poor-will

The whip-poor-will is a bird that nests in forest habitat with an open understory, often adjacent to areas of shrubby or herbaceous habitat. They are ground-nesting birds that breed between April 20- July 30. They consume aerial invertebrates, especially Lepidoptera and Coleoptera. Whip-poor-will will benefit from protection of unfragmented forested blocks, which serve as insulation to development subsidized predators, invasive plants, and forest disturbance.

Brown thrasher

This bird nests in shrubs, thickets, and brush. Especially hedgerows adjacent to open fields. Their breeding season is approximately from April through August and it is during this period that the species is most susceptible to disturbances in its feeding or nesting habitat.

Develop a building façade and site design strategy to make the building and site structures visible barriers to birds. Limit interior and exterior night lighting. Security lighting should always be down-shielded to keep light within the boundaries of the site. Take steps necessary to assure that construction is designed, built, and operated in accordance with the standards and requirements of the LEED Green Building Rating System Pilot Credit #55. The USGBC releases revised versions of the LEED Building Rating System on a regular basis, and you should refer to the most current version when beginning a new building or construction project or renovation.

Plan natural landscaping: Avoid use of pesticides that will affect invertebrate food source (hymenoptera, coleoptera, diptera, lepidoptera, orthoptera). Protect native vegetation to promote insect availability and diversity.

Please submit an updated NDDB Request for Review if the scope of the proposed work changes.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Bureau of Natural Resources and cooperating units of DEEP,

independent conservation groups, and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDB should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated in the NDDB as it becomes available.

Please contact me if you have any questions (shannon.kearney@ct.gov). Thank you for consulting with the Natural Diversity Data Base and continuing to work with us to protect State-listed species.

Sincerely,

/s/ Shannon B. Kearney
Wildlife Biologist

• Ecology
• Soil & Wetland Studies
• Water Quality Monitoring • GPS
• Environmental Planning & Management
• Ecological Restoration & Habitat Mitigation
• Aquatic, Wildlife and Listed Species Surveys
• Application Reviews • Permitting & Compliance

July 10, 2013

F.A. Hesketh & Associates, Inc.
6 Creamery Brook
East Granby, CT 06026

Attn: Guy A. Hesketh, P.E.

Re: ***Highfield Estates Subdivision – Phase IV***
Birch View Drive, Ellington, CT

REMA Job No.: 08-1365-ELL8

Dear Guy:

At your request, I have reviewed the June 2011 Wetlands Delineation Compilation Plan, that shows all of the wetland delineations associated with the property. These are as follows:

1. The original wetland delineations were completed by Roy A. Shook, Jr., Soil Scientist, in the Spring of 1987. These are the non-numbered wetland boundaries on the plan. The great majority of these wetland delineations were verified in the field by myself in the Spring and Summer of 2009, and found to be substantially correct.

2. The second set of wetland delineations were performed in the vicinity of the road wetland and stream crossings by John Ianni, Soil Scientist, in September of 2009, to satisfy the requirements of the US Army Corps of Engineers (their criteria are essentially the same for this site with those found the in the Connecticut General Statutes for wetlands). REMA soil scientists, myself included, verified these wetland delineations and found them to be substantially correct.

3. The third set of wetland delineations were performed by myself in June 2011 at three locations: (1) a small isolated wetland pocket within Wetland Mitigation Area #5, (2) a small isolated wetland pocket within Wetland Mitigation Area #7, and (3) the newly created wetland area along the southern property boundary, receiving discharge from both an existing wetland corridor and the large detention basin south of Lot G.

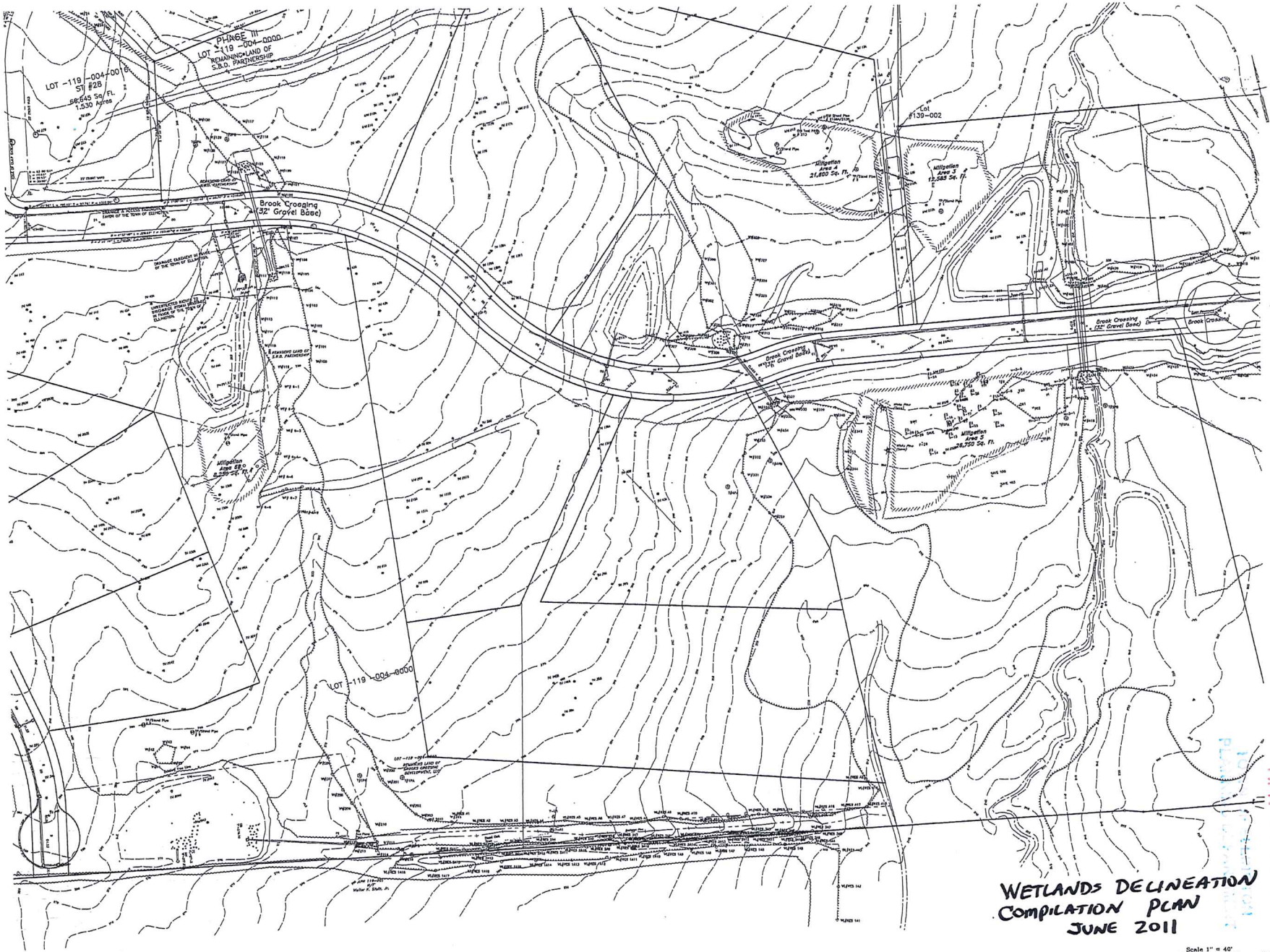
Please feel free to contact our office with any questions on the above.

Respectfully submitted,

REMA ECOLOGICAL SERVICES, LLC

George T. Logan, MS, PWS, CE
Registered Soil Scientist
Certified Professional Wetland Scientist

VIA E-MAIL



LANDTECH

Civil Engineering · Site Planning
Environmental Science & Engineering
Structural Engineering · Land Surveying
Permit Coordination & Management
Construction Management & Financing

Wetland Impact Mitigation Report

Highfield Estates
Brook Crossing
Ellington, Connecticut

March 16, 2020

518 Riverside Avenue · Westport CT 06880 · www.landtechconsult.com · info@landtechconsult.com · 203-454-2110

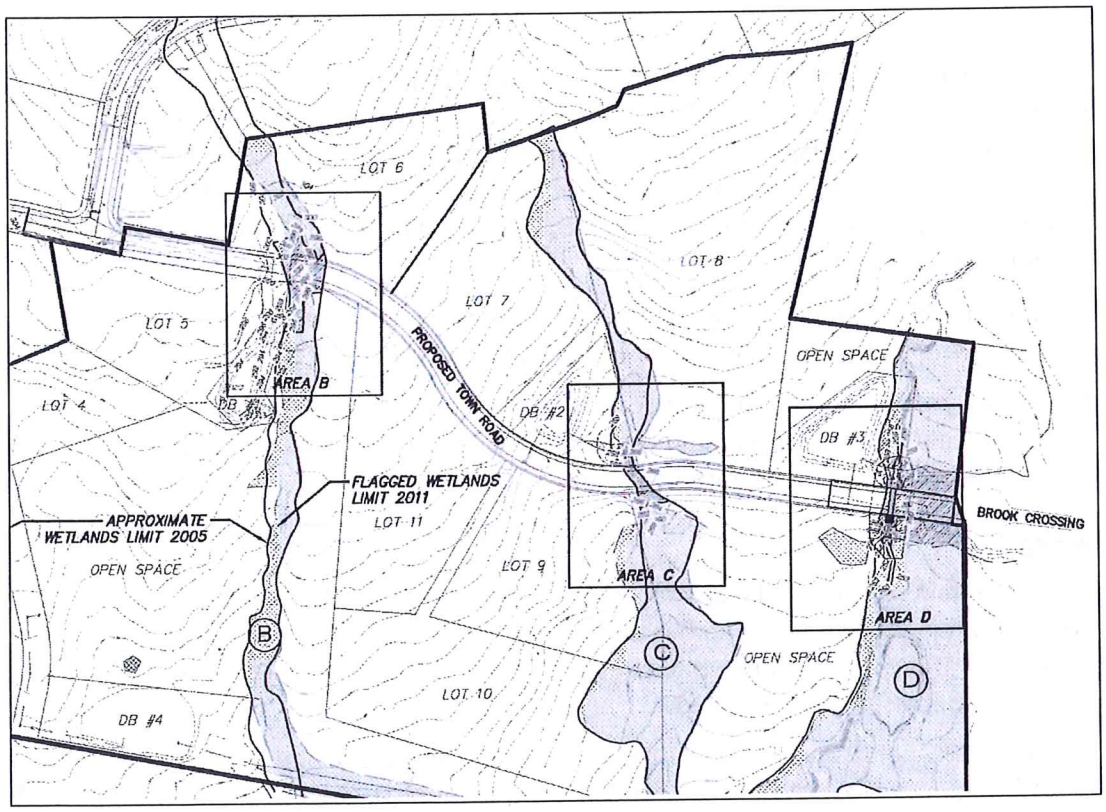
Contents

1.0 PROJECT/SITE DESCRIPTION

The 56.4+/- acre property identified as Highfield Estates is a residential subdivision consisting of 4 development phases. The 4th phase of development is currently proposed consisting of 11 proposed residential building lots with open space.

During development of phases 2 and 3 between 2002 and 2004, an east-west Right-of-Way was cleared through the property to provide an emergency gravel drive from Phases 2/3 to Brook Crossing. The intent was to follow this ROW to construct a town road for development of the lots proposed in Phase 4.

Construction of the gravel drive and associated roadway drainage infrastructure resulted in three watercourse crossings and associated wetland fill approved by the Ellington Inland Wetlands Agency. The wetland crossings are shown on the ACOE Wetland Impact Plan, Highfield Estates Phase IV prepared by F.A. Hesketh and Associates, Inc. The wetland impact areas are identified as Areas B, C, and D on the ACOE Wetland Impact Plan and the figure below.



2.0 EXISTING CONDITIONS

The wetland resources on the parcel have been studied several times in the past and were last flagged by George Logan from REMA in 2011.

Area B

Area B consists of an intermittent watercourse and bordering palustrine forested wetlands (PFO1e). The second growth wooded wetland has a cover story of relatively young deciduous trees including red maple, white oak, wild black cherry, yellow birch and gray birch. The understory contains some tree saplings including white pine and shrubs such as winterberry, highbush blueberry and multi-flora rose.

The intermittent watercourse is diffuse and braided in several locations and does not flow year-round. It has a substrate consisting mainly of silts and sands.

Based on a comparison of pre- and post-development wetland delineations, approximately 9,057 square feet of wetland was filled and 154 ft of intermittent watercourse was piped for construction of the gravel roadway.

Area C

Area C is very similar to Area B and consists of an intermittent watercourse and bordering palustrine forested wetlands (PFO1e). The second growth wooded wetland has a cover story of relatively young red maple, eastern hemlock and gray birch. The understory contains some tree saplings including white pine and shrubs such as winterberry and multi-flora rose. Multi-flora rose is relatively more abundant than other understory species.

The intermittent watercourse is diffuse and braided in several locations and does not flow year-round. It has a substrate consisting mainly of silts and sands.

Based on a comparison of pre- and post-development wetland delineations, approximately 2,721 square feet of wetland was filled and 98 ft of intermittent watercourse was piped for construction of the gravel roadway.

Area D

Area D contains a perennial watercourse identified as Muddy Brook. The brook is approximate 6-10 feet wide and has a moderately steep gradient with small hydraulic jumps and riffles. It has somewhat steep eroded banks and a substrate consisting mainly of cobbles, gravel and sand.

The bordering palustrine forested riparian wetlands (PFO1e) contains a sparse cover story of relatively young red maple. The dense understory is dominated by multi-flora rose.

Based on a comparison of pre- and post-development wetland delineations, approximately 22,741 square feet of wetland was filled and 150 ft of perennial watercourse was piped for construction of the gravel roadway.

3.0 Proposed Wetland/Watercourse Impact Mitigation

Other than the direct loss of wetlands associated with the locally permitted construction of the roadway, there are no other secondary wetland impacts or loss of wetland functions and values outside of the filled wetland areas. Mitigation measures are proposed that will create additional wetland area and restore a portion of the impacted watercourse at the Muddy Brook road crossing.

Since the intermittent watercourses in Areas B and C do not support fish habitat, the piping of these intermittent watercourses does not have an impact on fisheries. The 48" diameter culverts do not interrupt water flow and are large enough to allow passage of small animals. Therefore we do not recommend their removal and replacement with crossings that meet the CT DEEP fisheries and ACOE best management practices for Stream crossings.

Muddy Brook is a perennial watercourse and appears capable of supporting fish habitat. The installation of the twin 48" diameter culverts does not meet the CT DEEP Fisheries and ACOE BMPS for stream crossings. The twin pipe outlets are elevated above the downstream stream bed and do not allow unimpeded fish movement. The crossing is longer than necessary, does not a have natural stream bottom, or thalweg channel and does not meet the openness ratio guidelines.

In order to mitigate watercourse impacts, the existing twin culverts will be removed and replaced with a partially buried 5' x 8' box culvert. The crossing would be shortened from 150 feet to the 50 foot width of the Right of Way. 12-24" of natural stream substrate would be placed within the box culvert and graded to form a low flow (thalweg) channel. The box culvert with added substrate would have an openness ratio of 0.64.

The impacted watercourse areas upstream and downstream of the box culvert would be reshaped and graded with natural stream substrate materials to match the natural upstream and downsteam profiles. Additional features to enhance fish habitat will be provided including: cobble riffles at the upstream and downstream ends of the restored watercourse, a cobble lined-deep water pool, and boulder shelter areas. The restored stream banks will be revegetated with tubelings or live stake plantings of willows, dogwoods, river birch and black chokeberry. All other disturbed areas will be seeded with a Restoration/Conservation seed mix. The proposed culvert replacement and stream restoration is shown on the ACOE Wetland Impact Plans (Sheets AC-3 & AC-4) prepared by F.A. Hesketh and Associates, Inc.

Additional wetland mitigation is proposed adjacent to two stormwater management basins on the north side of Brook Crossing as shown on the Detention Pond Mitigation Plan (Sheet AC-7) prepared by F.A. Hesketh and Associates, Inc. The areas adjacent to the detention basins will be regraded to expose the shallow groundwater table and planted with native wetland plant species. There will be no surface connection to the adjacent stormwater treatment basins.

The Highfield subdivision area has been studied thoroughly over the past few years relative to the design of on-site septic systems, including considerable groundwater

information. A minimum of 3 standpipes per lot were installed on thirteen lots in 2018 and groundwater monitored ten times from 3/20/2018 to 6/1/2018. Data from the six lots closest to the proposed mitigation areas shows that depth to groundwater ranged from 20.3 inches below grade to 39.5 inches below grade, with the overall average being 31.7 inches or 2.6 feet below grade.

The bottom of Mitigation Area #1 will be graded to elevation 262.0. Based on observed groundwater readings, groundwater at the western cut slope of Mitigation Area #2 is expected to be at elevation 265.4. The bottom of Mitigation Area #2 will be graded to elevation 272.0. Based on observed groundwater readings, groundwater at northwestern cut slope of Mitigation Area #2 is expected be at elevation 275.4. Therefore both mitigation areas will intercept normal ground water flow and the subsurface hydrologic conditions will be conducive to the establishment of a wetland soil and plant regime.

4.0 Invasive Species Control Plan

Following restoration of disturbed areas associated with the culvert replacement in Area D and planting of the created Wetland Mitigation Areas 1 & 2, measures will be needed to prevent the colonization of invasive plant species. Based on our site evaluation, there are sources of multi-flora rose, phragmites, Japanese barberry, Japanese stilt grass and autumn olive that could potentially colonize the restored areas. The best way to prevent the establishment of invasive plants is to densely vegetate the restored areas with native seed mix and plantings immediately following restoration.

If post construction monitoring reveals the presence of invasive plants, the following guidelines for their removal should be followed.

Multiflora Rose

Multiflora rose *(Rosa multiflora)* is a large, dense shrub that has escaped from ornamental and conservation plantings to become a serious invasive plant problem across the eastern half of the U.S. It invades natural areas, pastures, and light gaps in forests. Multiflora rose produces abundant small white flowers in the spring. Birds and mammals consume the red fruits, called hips, and may disperse them long distances. The majority of plants develop from seeds in the soil, which may remain viable for 10 to 20 years. It may also spread vegetatively when tips of arching branches touch the ground and develop roots (called layering), and from plants that emerge from shallow roots. Plants grow slowly for the first one or two years followed by rapid expansion through layering and root sprouts. Multiflora rose spreads quickly and may grow 1 to 2 feet per week to form impenetrable thickets of thorny stems.

Mechanical Control: Hand pulling can be an effective strategy for young small stems of multiflora rose, and repeated harvesting can control the spread and top growth of established shrubs, but total eradication comes from the use of herbicides.

Chemical Control: Multiflora rose is susceptible to both glyphosate and triclopyr. Triclopyr can be applied starting in spring before or during flowering. Glyphosate is most effective when applied after flowering (early summer) until early fall. Cut-stump treatments with both herbicides also provide control, but cutting stumps in established thickets is very difficult because of the numerous thorny branches. A licensed applicator must apply the herbicide on commercial sites.

Phragmites

Phragmites is a tall, perennial grass that can grow to over 15 feet in height. In North America, both native phragmites (Phragmites australis ssp. americanus) and introduced subspecies are found. Introduced Phragmites forms dense stands which include both live stems and standing dead stems from previous year's growth. Leaves are elongate and typically 1-1.5 inches wide at their widest point. Flowers form bushy panicles in late July and August and are usually purple or golden in color. As seeds mature, the panicles begin to look "fluffy" due to the hairs on the seeds and they take on a grey sheen. Below ground, Phragmites forms a dense network of roots and rhizomes which can go down several feet in depth. The plant spreads horizontally by sending out rhizome runners which can grow 10 or more feet in a single growing season if conditions are optimal. Once introduced Phragmites invades a site it quickly can take over a marsh community, crowding out native plants, changing marsh hydrology, altering wildlife habitat, and increasing fire potential. Its high biomass blocks light to other plants and occupies all the growing space belowground so plant communities can turn into a Phragmites monoculture very quickly. Phragmites can spread both by seed dispersal and by vegetative spread via fragments of rhizomes that break off and are transported elsewhere.

Management options: Areas with large, established, populations of Phragmites are best restored using herbicides. Other options include mowing and prescribed burning.

Biological: At this time no means of biological control are available in the United States for treating Phragmites infestations.

Chemical: Glyphosate-based herbicides (e.g., Rodeo) are the most effective control method for established populations. If a population can be controlled soon after it has established chances of success are much higher because the below-ground rhizome network will not be as extensive. Herbicides are best applied in late summer/early fall after the plant has flowered either as a cut stump treatment or as a foliar spray. It is often necessary to do repeated treatments for several years to prevent any surviving rhizomes from re-sprouting. When applying herbicides in or around water or wetlands, be sure to use products labeled for that purpose to avoid harm to aquatic organisms.

Mechanical: This type of control (e.g., repeated mowing) may be effective at slowing the spread of established stands but is unlikely to kill the plant. Excavation of sediments may also be effective at control but if small fragments of root are left in the soil, they may lead to reestablishment.

Japanese Barberry

Japanese Barberry *(Berberis thunbergii)* is multi-branched dense shrub that can grow to 2.5 m (8 ft) in height. Shiny green to burgundy leaves are alternate along its thorny stems. Solitary yellow flowers bloom from March to April, and the fruit is a round or elliptical red berry. Japanese barberry is a popular landscape shrub that has escaped into many natural areas, and can grow in dense thickets in the understory of woods and forests. It is a prolific seed producer, and numerous birds eat and subsequently disperse the seeds.

Mechanical Control: Removal strategy for Japanese Barberry includes repeated cutting to stop the spread of the shrub. However, cutting alone will not eradicate the shrubs. For eradication it is recommended that herbicide be used.

Chemical Control: Japanese barberry breaks bud earlier in the spring than most woody species. Thus, it is possible to selectively spray its young leaves before other woody species have produced leaves. For such early season treatments, triclopyr is usually more effective than glyphosate. Wait until significant leaf expansion to ensure sufficient absorption of triclopyr. From mid summer to fall, both glyphosate and triclopyr are effective when applied as foliar sprays or as cut stump treatments. The half-life of triclopyr in water is less than 24 hours so it may be safe to use near open water (REF: A.1). As always, the owner should consult state regulations and a licensed applicator prior to use of herbicide. Treatment is expected to require two to three years of management to achieve control of the plant.

Japanese Stilt Grass

Japanese stilt grass *(Microstegium vimineum)*, also known as Nepalese brown-top and other names is an annual plant. It has a sprawling habit and grows slowly through the summer months, ultimately reaching heights of 2 to 3 1/2 ft. (6-10 dm.). The leaves are pale green, lance-shaped, asymmetrical, 1-3 in. (3-8 cm.) long, and have a distinctive shiny midrib. Slender stalks of tiny flowers are produced in late summer (August - September). The fruits or achenes mature soon after flowering and the plant dies back completely by late fall.

Japanese stilt grass is especially well adapted to low light conditions. It threatens native plants and natural habitats in open to shady, and moist to dry locations. Stilt grass spreads to form extensive patches, displacing native species that are not able to compete with it. Where white-tail deer are overabundant, they may facilitate its invasion by feeding on native plant species and avoiding stilt grass. Stilt grass occurs in a wide variety of habitats including moist ground of open woods, floodplain forests, wetlands, uplands, fields, thickets, paths, clearings, roadsides, ditches, utility corridors, and gardens.

Japanese stilt grass is a colonial species that spreads by rooting at stem nodes that touch the ground. Stilt grass reproduces exclusively by seed. Individual plants may produce 100 to 1,000 seeds that fall close to the parent plant. Seed may be carried further by water currents during heavy rains or moved in contaminated hay, soil, or

potted plants, and on footwear. Stilt grass seed remains viable in the soil for five or more years and germinates readily.

> ***Note:*** *Japanese Stiltgrass resembles a similar native species, White Grass or Virginia Cutgrass (Leersia virginiana). Look for distinguishing characteristics possessed by stiltgrass such as a shiny midrib and asymmetrical leaves.*

Management Options: Preventing the introduction of stilt grass into non-infested areas and out of infested areas should be a priority. Early control of new infestations will also reduce the likelihood of establishment.

Manual: Stilt grass is a shallow-rooted annual that can be pulled by hand throughout the growing season, especially when the soil is moist and entire plants with roots can be removed. Pulling is easier and probably more effective in mid-to-late summer when the plants are much taller and more branched. At this stage, entire plants can be easily removed by grabbing the basal portion of a plant and pulling firmly. In short time, a fair amount of stilt grass can be pulled and piled up to dehydrate on site. If plants are already in the fruiting stage, they should be bagged and disposed of offsite to prevent dispersal of seed. Also, try to avoid pulling native grasses like Virginia cutgrass (Leersia virginia) that often grow intermingled with stilt grass and may be difficult to distinguish from it. Because hand pulling plants disturbs the soil and may expose stilt grass seed from previous seasons, late season pulling will avoid the likelihood of seed germination. Hand pulling of plants will need to repeated and continued for many seasons until the seed bank is exhausted.

Mechanical: Stilt grass can be mowed in late summer (i.e., August through September) when the plants are flowering but preferably before seed is produced. This can be done using a lawn mower or "Weed Whacker" type machine or a scythe. Because stilt grass is primarily an annual plant, cutting late in the season before the plants would die back naturally avoids the possibility of re-growth. Recent information suggests that stilt grass plants cut early in the summer respond by and re-growing and flowering soon after cutting, much earlier than they would normally flower. Another reason to cut late in late summer to fall.

Chemical: For extensive stilt grass infestations, use of a systemic herbicide such as glyphosate (e.g., Roundup) is a more practical and effective method. If applying glyphosate to stilt grass in wetland sites, use the formulation labeled for wetland areas (e.g., Rodeo). Apply a 2% solution mixed with water (8 oz. per 3 gals. mix) and a surfactant in late summer. Be careful to avoid application to non-target plants because glyphosate is a nonspecific herbicide that will kill or damage most plant species it contacts.

Autumn Olive

Ecological impact: Autumn Olive (*Eleagnus umbellata*) grows rapidly and is a prolific seed producer. It establishes in disturbed sites adjacent to ornamental plantings where it shades out other plants that require direct sunlight. It is widely disseminated by birds and can easily adapt to many sites including areas with infertile soil. Its ability to fix

nitrogen can adversely affect the nitrogen cycle of native plant communities that depend on low soil fertility.

Control methods: The most effective control method for autumn olive is to prevent establishment by annually monitoring for and hand pulling small plants. Cutting and burning stimulate sprouting. Repeated cuttings over several consecutive years will reduce plant vigor and may prevent spread. However, herbicide use in combination with cutting may be more effective.

Mechanical Control: Seedlings and small plants should be hand pulled when the soil is moist. Be sure to remove the entire plant including all roots, since new plants can sprout from root fragments. Root sprouts resemble seedlings, but are attached to a lateral root and are nearly impossible to pull up. Larger plants can be cut off at the main stem and treated with herbicide.

Chemical Control: Herbicides can be applied broad scale as a foliar spray, or to select individuals as injection or cut stump treatments. Foliar sprays are highly effective, but should be used only where contact with nearby native vegetation can be prevented. Injection treatment can inhibit or prevent sprouting if done at the right time of year.

1) Foliar pray: this method is most effective on small stands. Spraying should be done in late August or September when plants are actively translocating nutrients to the roots. Use a 1-2% solution of glyphosate (e.g., Roundup ™ or Rodeo™ and water). If plants are in or near wetlands, only Rodeo™ should be used. Glyphosate is a non-selective herbicide that will kill all vegetation. Managers should be cautious not to spray so heavily that herbicide drips off the leaves. Other herbicides that have proven effective, but remain in the soil for longer, are specific for broadleaf and woody species. These include Dicamba (Banvel™, Picloram Tordon™, Silvex, and 2,4,5-T applied in late June in a 90% water/10% diesel oil carrier. Dicamba applied in late June at 4 lbs./gal. (2 qts./100 gal./acre) with a surfactant is also effective.

2) Cut stump treatment: This method is most effective if done in late August or September. To ensure uptake of the herbicide before the plant seals off the cut, apply immediately after cutting, within 5-15 minutes. Use a 10-20% solution of glyphosate (e.g., Roundup™ or Rodeo™) and water. Apply with a sponge or paint brush or spray with a spray bottle or backpack sprayer. Follow-up with a foliar spray or cut stump treatment the next year if sprouts appear.

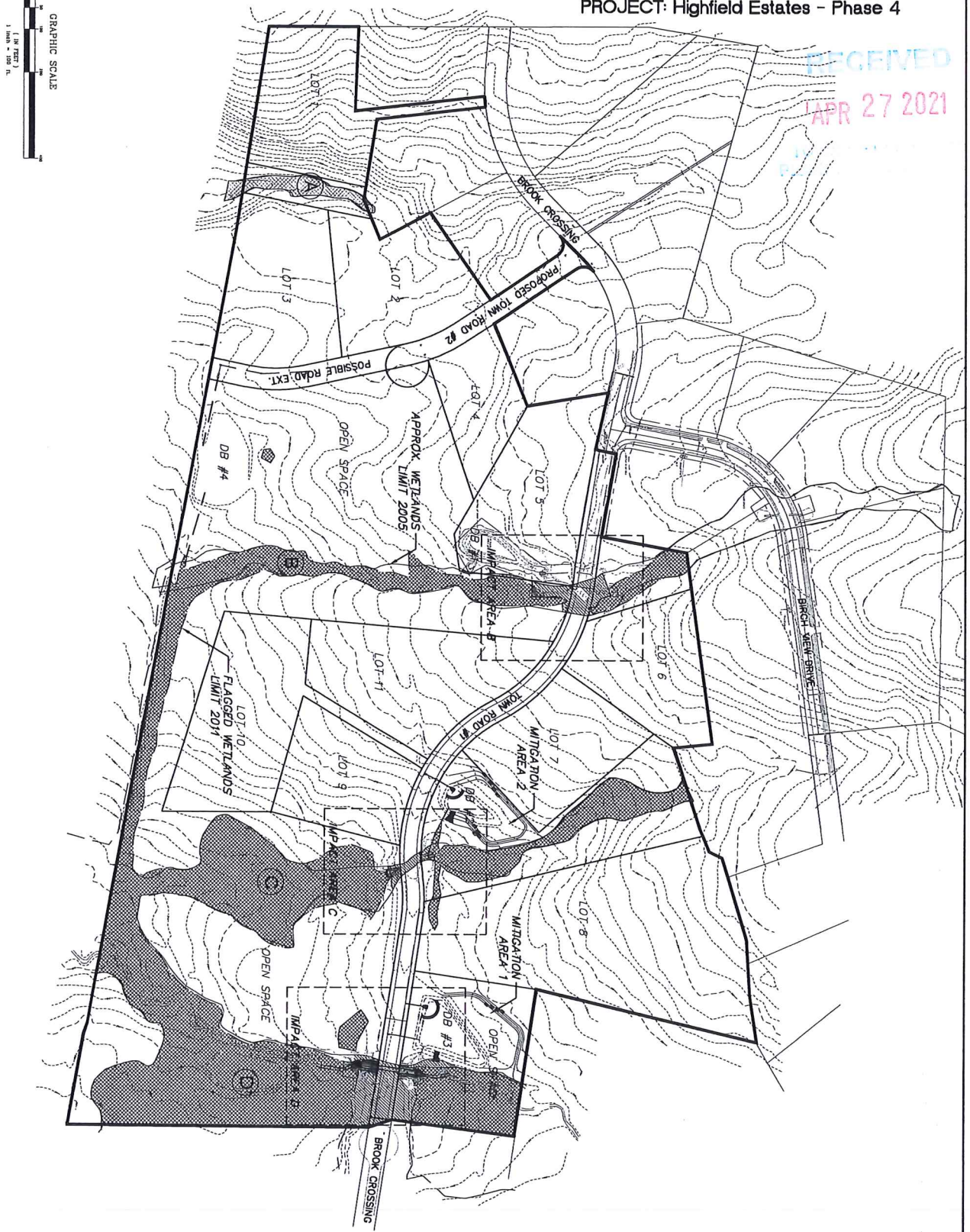
3) Injection Treatment: This treatment is most effective if done during the dormant season, in March. Using a hand axe, make downward-angled cuts into the sapwood around the tree trunk. Make one cut for each inch of diameter, plus one extra (e.g., for a 10 inch diameter tree, make 11 cuts). Space the cuts so that 1-2 inches of uncut living tissue remains between them. Apply a low concentration (down to 1% in diesel oil) of oil-soluble triclopyr (Garlon 4™) into each cut so that the bottom of the cut is covered, but not running over. A trigger spray bottle works well as an applicator. This method is relatively easy for one person to do, but working with a partner is recommended in case of accident. Follow-up with a foliar spray or cut stump treatment the next year to control any sprouts.

Biological Control: currently, there are no known biological control methods. (REF: 2)

Plan View Index

APPLICANT: Brooks Crossing Developers, LLC

PROJECT: Highfield Estates - Phase 4



AC-1	ACOE WETLAND IMPACT PLAN PREPARED FOR *HIGHFIELD ESTATES PHASE IV* BIRCH VIEW DRIVE ELLINGTON, CT	Revisions: No. Date Description 1 09-18-2013 Cond. of Wetlands Approval 2 07-25-2014 Cut-off Trench As-built 3 03-29-2019 ACOE Submission 4 01-26-2020 ACOE NWP PCN 5 12-21-2020 DEEP Comments 6 02-15-2021 ACOE update

Date: 07-10-2013 | Drawn by: RJK | Job no: 12162
Scale: 1" = 100' | Checked by: DSZ | Sheet no: 1 OF 5

F. A. Hesketh & Associates, Inc.
6 Creamery Brook, East Granby, CT 06026 · 146 N W Broad Street, Southern Pines, NC 28387
Phone (860) 653-8000 · Fax (860) 844-6600 · Phone (910) 692-2844 Fax (910) 692-3356
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects www.fahesketh.com · mail@fahesketh.com

LANDTECH

Civil Engineering · Site Planning
Environmental Science & Engineering
Structural Engineering · Land Surveying
Permit Coordination & Management
Construction Management & Financing

Memorandum

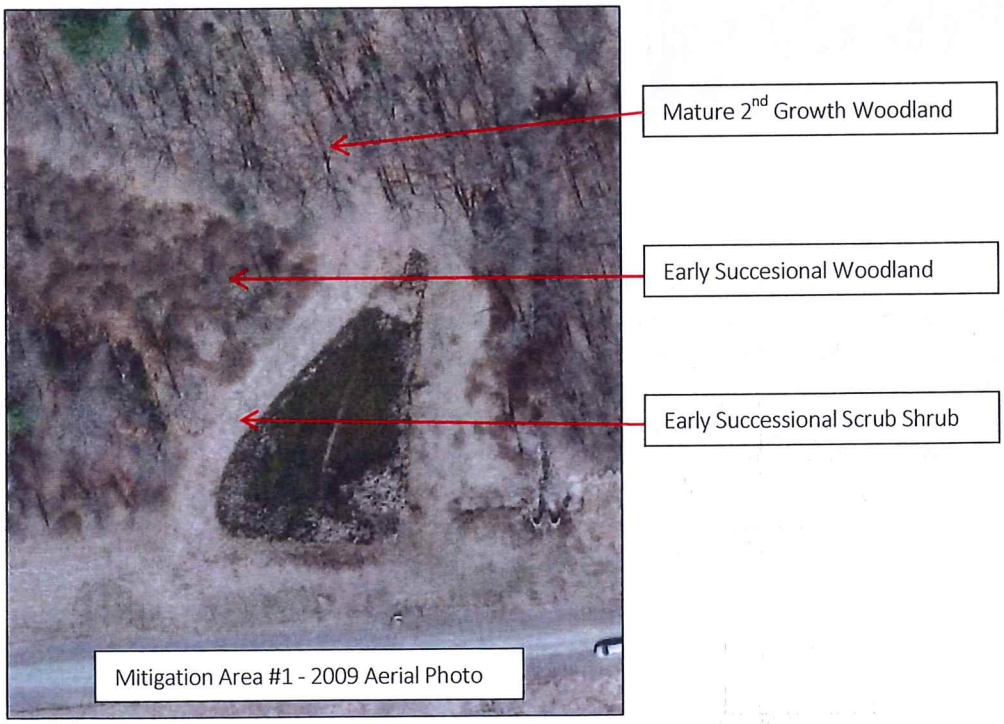
September 30, 2020

To: Roger Kellman, David Ziaks
F.A. Hesketh and Associates
From: Chris Allan
Subject: Proposed Wetland Mitigation Areas
Highfield Estates, Phase IV
Brook Crossing, Ellington, CT

The information provided below is provided in response to a request for additional information from the Connecticut DEEP regarding the proposed wetland mitigation areas at Highfield Estates Phase IV. The mitigation areas are shown on Sheet AC-7 of the application plan set.

Mitigation Area #1

Mitigation Area #1 is proposed to the northwest of existing Detention Pond #3. The proposed mitigation area consists of early successional scrub shrub and woodland habitat and mature second-growth woodland habitat. These areas are shown below in a 2009 aerial photo that shows the detention basin shortly after the time of construction. Photos of area taken on September 28, 2020 are on the following page.



Mitigation Area #1 - 2009 Aerial Photo

The early successional scrub shrub habitat contains young white pine saplings, autumn olive, and multiflora rose. The early successional woodland habitat contains white pine saplings, cottonwood and grey birch. The mature second-growth woodland contains, white pine, red maple, red and black oak, privet, multiflora rose and Asiatic bittersweet.

Early Successional Scrub Shrub

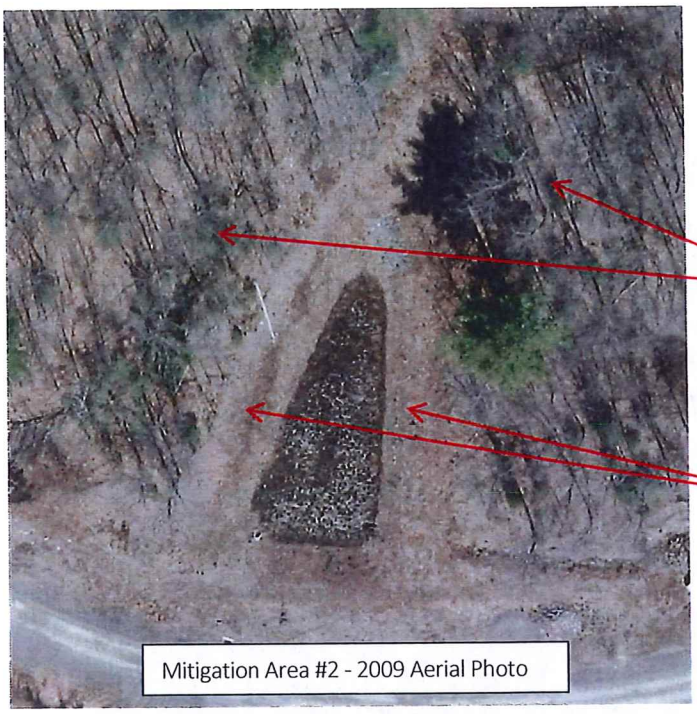
Early Successional Woodland

Mature 2nd Growth Woodland

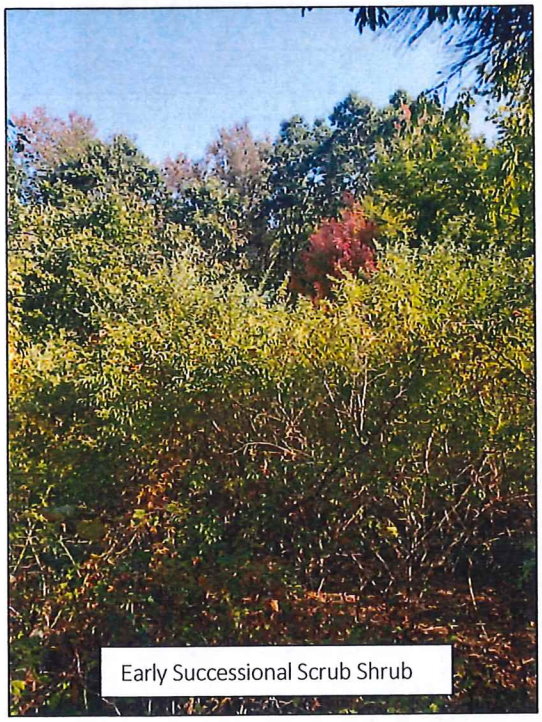
Mitigation Area #2

Mitigation Area #2 is proposed around the west, north and east perimeter of existing Detention Pond #2. The proposed mitigation area consists mainly of early successional scrub shrub habitat that has colonized the area that was disturbed around the basin as shown on the 2009 aerial photo, below. The early successional habitats contain white pine saplings, autumn olive, multiflora rose, and mountain laurel. Areas beyond the limits of disturbance shown on the aerial are vegetated with mature second-growth woodland containing red maple, red and black oak, and white pine.

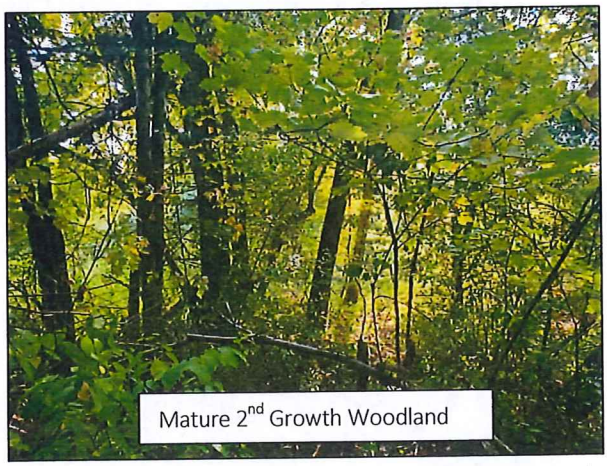
Photos of area taken on September 28, 2020 are on the following page.



Mitigation Area #2 - 2009 Aerial Photo

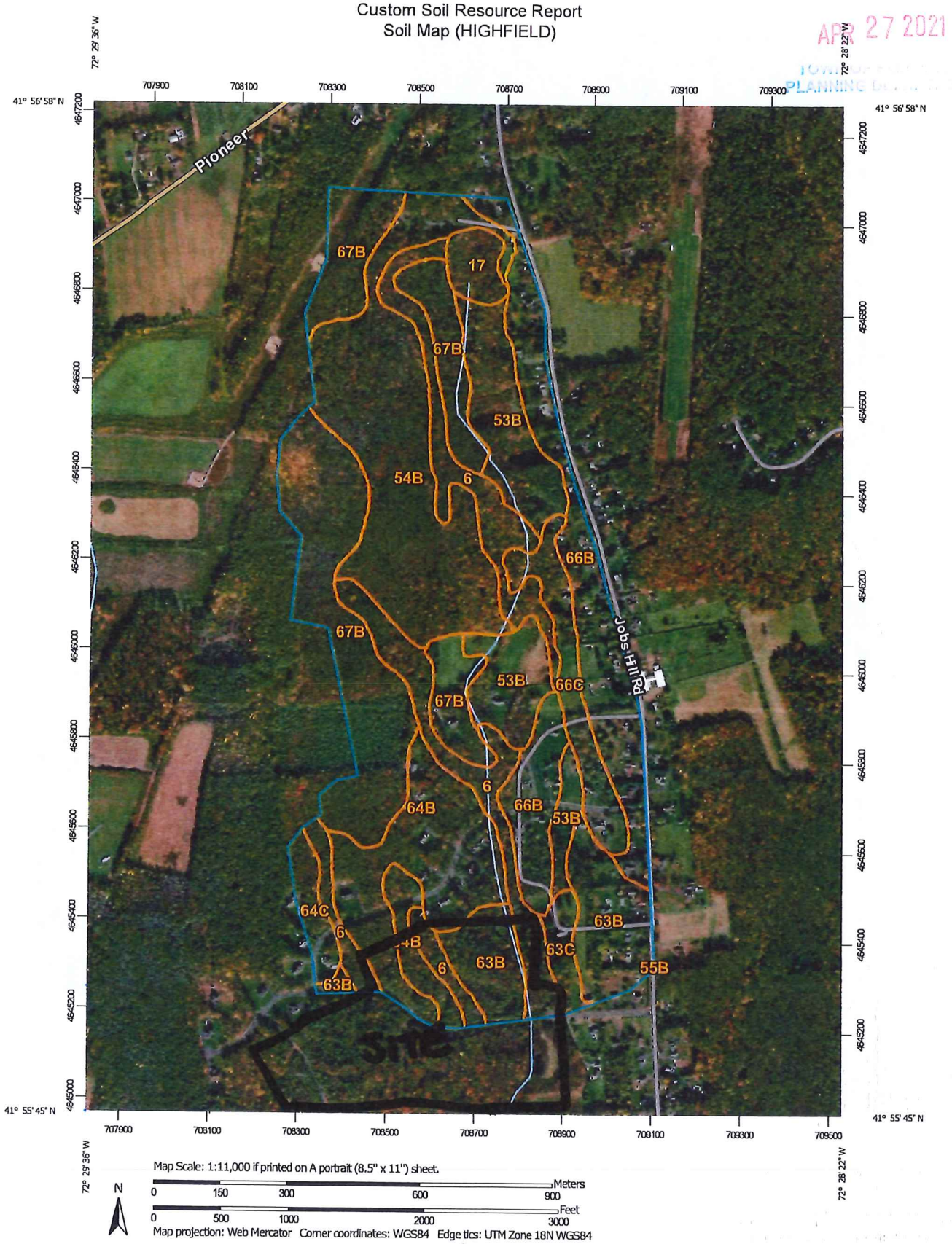


Early Successional Scrub Shrub



Mature 2nd Growth Woodland

Custom Soil Resource Report
Soil Map (HIGHFIELD)



MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 18, Dec 6, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 27, 2016—Oct 30, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (HIGHFIELD)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6	Wilbraham and Menlo soils, 0 to 8 percent slopes, extremely stony	36.5	12.4%
17	Timakwa and Natchaug soils, 0 to 2 percent slopes	4.7	1.6%
53B	Wapping very fine sandy loam, 3 to 8 percent slopes	28.8	9.8%
54B	Wapping very fine sandy loam, 2 to 8 percent slopes, very stony	56.2	19.1%
55B	Watchaug fine sandy loam, 3 to 8 percent slopes	0.0	0.0%
63B	Cheshire fine sandy loam, 3 to 8 percent slopes	22.7	7.7%
63C	Cheshire fine sandy loam, 8 to 15 percent slopes	4.1	1.4%
64B	Cheshire fine sandy loam, 3 to 8 percent slopes, very stony	27.3	9.3%
64C	Cheshire fine sandy loam, 8 to 15 percent slopes, very stony	4.8	1.6%
66B	Narragansett silt loam, 2 to 8 percent slopes	38.3	13.0%
66C	Narragansett silt loam, 8 to 15 percent slopes	12.4	4.2%
67B	Narragansett silt loam, 3 to 8 percent slopes, very stony	58.1	19.8%
Totals for Area of Interest		**293.9**	**100.0%**

Map Unit Descriptions (HIGHFIELD)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made

STORM WATER MANAGEMENT REPORT

Proposed Residential Subdivision
Highfield Estates Phase IV
Brook Crossing
Ellington, CT

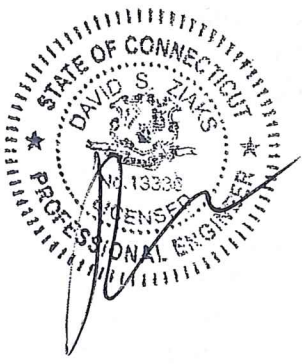
Prepared For:

Brooks Crossing Developers, LLC

Prepared By:

F. A. Hesketh & Associates, Inc.
3 Creamery Brook
East Granby, CT 06026

F. A. Hesketh
& Associates, Inc.



April 20, 2021

1. Introduction

This stormwater management report has been prepared for this final phase of development to demonstrate that the storm water management practices for the proposed residential subdivision meet the requirements of Town of Ellington Subdivision Regulations, follow sound engineering practices, and protect adjacent landowners from adverse storm water impacts.

The subject property is 55.94 acres located west of Brook Crossing, a town road off of Jobs Hill Road in Ellington, CT, as shown on the attached Town GIS Map. The parcel is zoned RAR for single family residential homes. The development of this parcel would be Phase 4 in the development of the subdivision known as Highland Estates. For the most part, the land is moderately wooded with several cleared open areas scattered throughout, primarily cleared for establishment of the proposed ROW. There are four (4) wetland and watercourse areas identified on the property as shown on the attached plans (A, B, C & D). The Muddy Brook corridor (Area D) crosses through the eastern most portion of the property.

The proposed subdivision would consist of 11 lots ranging in size from 1.12 ac. to 2.99 ac. with 27.74 acres dedicated for Open Space. Brook Crossing is a town road that starts at Jobs Hill Road continuing some 1,100 l.f. to the west ending with a temporary cul-de-sac. It would be extended some 1,450 l.f. to intersect with Birch View Drive and Brook Crossing Extension. A 650 l.f new town road would also be constructed from Brook Crossing Extension and end with a temporary cul-de-sac. The 50 ft. ROW establish for this new road would extend to the southerly boundary line to allow the town road to be extended in the future if development is proposed on the abutting open land.

Highfield Estates subdivision has been developed in three phases thus far. An east-west ROW was established and cleared through the property with the development of Phases 2 and 3 circa 2002-2005 to provide a temporary emergency gravel drive from Phases 2/3 to the Brook Crossing. Brook Crossing which is a town road currently ends with a temporary paved cul-de-sac. Following construction of the emergency drive, the intent was to follow up with the full construction of town roads using the temporary gravel roadways as a base. At that time, a full storm drainage system with four detention/water quality basins was designed to town standards by the firm Tarbell, Heintz & Associates and constructed by the developer. Copies of the original roadway design plans are attached.

The two proposed roadways will follow this ROW to construct a town road to town standards as shown on the final design plans for development of the lots proposed in Phase 4. During the construction of the temporary gravel drive (Brooks Crossing), cross culverts were installed across two intermittent watercourses (B & C) and a third culvert system was installed across Muddy Brook (D). Additional catch basins, storm drain piping and three detention basins (DB #1,2,3) were also installed along the ROW in anticipation of constructing the future paved town road.

A second ROW was cleared from the intersection of Brook Crossing Extension to the abutting property line to the south where a fourth detention (DB #4) basin was constructed. A drainage system from Phases 2/3 is piped to this basin. Additional work on the property has been halted since an enforcement notification was received by the property owner from the ACOE/CTDEEP to stop work, requiring the filing of a permit application to these agencies for wetland and watercourse impacts associated with the culverts.

The current planning proposal is to construct a new town road following the two existing ROW's and develop 11 new lots in accordance with the RAR Subdivision Regulations. Land not incorporated in the new lots would be put into permanent Open Space. In addition to the limitations imposed by wetland and watercourse impact considerations, there are additional limitations to the number of feasible building lots resulting from existing soil conditions to support individual septic systems.

With regards to the existing storm drainage systems currently installed in the ROW, the proposal is inspect, repair all catch basins and change out all catch basins tops and frames to new units. This may involve minor resetting of top elevations to match the final design profile for the paved roads. The storm piping system including the outfalls will be fully inspected and cleaned as necessary. Improvements are shown at the cross culverts at Areas B and C and the existing twin 48" culverts at Muddy Brook Area D will be removed and replaced with a box culvert and new concrete block end walls.

In response to the cease and desist order from the ACOE/CTDEEP, the developer has been working closely with those agencies to obtain a final permit to complete the project. As part of the review process, the main focus has been on the three watercourse culvert crossings, in particular the Muddy Brook culvert. While the twin 48" culvert installation could meet the hydraulic capacity required to generally meet town standards, it does not meet the current ACOE/CTDEEP stream crossing design criteria, a copy of which is attached. The proposed box culvert installation is designed to meet this criteria. To meet the requirements of the ACOE/CTDEEP application, a hydraulic analysis was completed for all three culvert crossings for the 100-year design storm. A copy of that analysis is attached. It was determined that the existing 36" and 48" culverts have sufficient capacity as will the proposed box culvert at Muddy Brook.

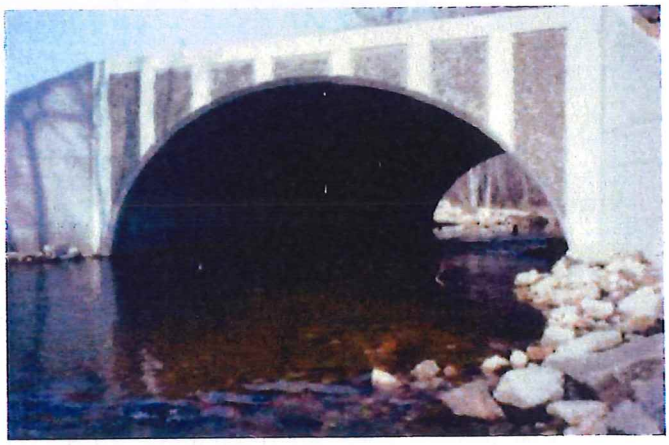
2. Hydrologic Analysis

A hydrologic analysis was conducted for both the proposed developed condition of the site to determine peak flow of runoff and culvert capacity using the Hydraflow Hydrographs 2007 computer software program modeling the 100-year storm event. The SCS TR-55 Method was used to determine peak flows and Tc for each of the three watersheds. The results of the modeling effort are attached.

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION

Inland Fisheries Division
Habitat Conservation and Enhancement Program

Stream Crossing Guidelines



February 26, 2008

I. INTRODUCTION

Inland Fisheries Division (IFD) Habitat Conservation and Enhancement (HCE) staff have been assessing fish passage and instream habitat needs at stream crossings across Connecticut since the late 1980's. The program was created in part to ensure that fish and other aquatic life as well as aquatic habitat needs would be effectively addressed during municipal, State and Federal regulatory permit review processes. These stream crossing guidelines are intended to provide government agencies, non-profit environmental groups and private landowners with the best technical guidance available to ensure unimpeded fish passage for resident and anadromous fishes and to minimize construction related impacts.

Guidelines focus primarily on fish and fish passage, but incorporating the suggested practices will also benefit other wildlife. This document is not intended to be a technical design manual. Readers should consult specific guidance documents provided by municipal, State, or Federal regulatory offices having permitting authority over a stream crossing project. Also, scientific and technical manuals produced by other agencies, including those of the States of Vermont (VDFW 2005), Washington (WDFW 2003), Oregon (Robison et. al. 1999) and California (CFGD 2003) can provide additional guidance on fish passage design and related issues.

Figure 1. Example of small stream in Connecticut that supports a fish community.

Along a stream continuum, stream flow, hydrology, physical habitat and water quality are factors that determine which fish species are present in a watershed and the abundance and diversity of those species. While Connecticut citizens may readily recognize the negative effects of existing dams on fish passage, many may not be aware that stream crossings, particularly culverts, can permanently block or seasonally impede upstream fish passage.

Fish passage needs are often unrecognized on small watercourses. Small streams account for most of the total stream miles within any watershed (Jackson 2003) with an estimated 70% of stream channel in the United States being comprised of small, headwater streams (Leopold et al. 1964). Many small streams in Connecticut support fish populations, often times a single

species such as native brook trout (Figure 1). Many "problem" or impassable stream crossings were installed before environmental regulations were in place to review stream crossing designs and before there was a full understanding of the negative impacts to fish passage. Consequently, fish populations can become "fragmented" and unable to reach critical spawning, nursery, feeding, or seasonal refuge habitats that are important to the completion of various life history phases. The fragmentation of stream habitat and fish populations can adversely impact fish community diversity, fish population levels and fish survival. The following section describes common steam crossing problems observed in Connecticut.

II. COMMON STREAM CROSSING PROBLEMS

➢ Perched Culverts

The most common stream crossing problems in Connecticut are perched culverts that are situated above the elevation of the stream bottom at the culvert outlet (downstream end) that present obvious physical barriers to upstream fish passage (Figure 2). Perched culvert conditions are the result of improper installation or are created over time by years of excessive scour and erosion of the streambed at the culvert outlet. Freeze-thaw conditions can also lead to culvert perching.

Figure 2. Example of culverts perched above streambed.

➢ Shallow Water Depth

Another common problem are culverts that create shallow water or sheetflow conditions, especially during seasonal low flow periods (Figure 3). Thus, fish cannot swim through these structures due to insufficient water depths.

➢ Excessive Water Velocity

Excessive water velocities can occur within the main body of a culvert at the inlet/outlet sections. Velocity problems are typically observed within smooth bottom concrete box culverts that do not contain natural streambed substrates and lack channel roughness. Excessive velocities or hydraulic jumps can sometimes occur in culverts placed at improper slopes. Many fish species may not be able to pass through culverts with excessive velocities due to exhaustion (Figure 4).

Figure 3. Example of shallow water conditions in a concrete box culvert.

➢ **Debris accumulation**

Debris accumulation is another condition that can block fish passage. Accumulation of debris most often occurs at undersized culvert or multiple culvert situations, usually at the culvert inlet (Figure 5). Debris blockage can cause damage to the crossing structure or possibly lead to flooding. If debris forms a logjam comprised of large woody debris (LWD), which is defined by biologists as logs with a minimum diameter of 4 inches and a minimum length of 6 feet, it may be possible to remove the logjam and re-introduce portions of LWD downstream of the roadway crossing where it does not present any hazard. Refer to Inland Fisheries Division management guidelines within the LWD Factsheet that can be obtained at the DEP website, http://www.ct.gov/dep/lib/dep/fishing/restoration/largewoodydebrisfactsheet.pdf.

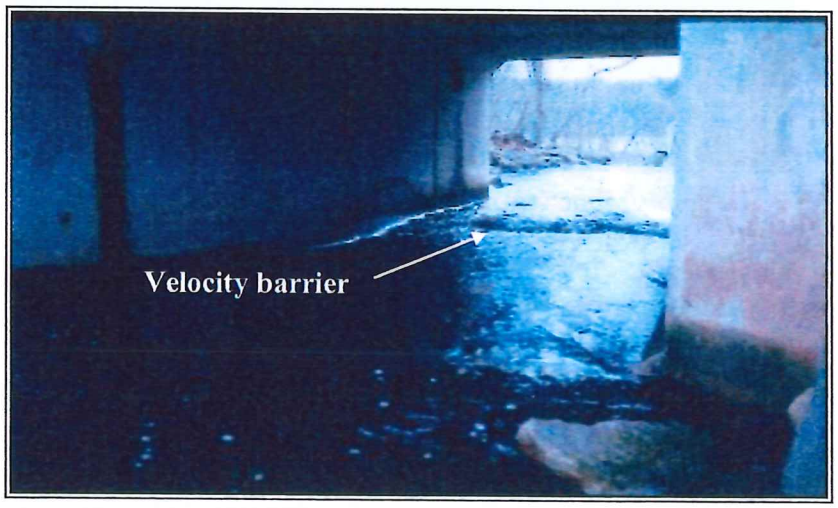


Figure 4. Example of excessive water velocities resulting in a barrier to fish passage.

Figure 5. Debris blockage at culvert inlets that blocks fish passage.

III. STREAM CROSSING GUIDELINES

Fish species in Connecticut streams vary greatly in size, and many adult fishes, e.g., blacknose dace, longnose dace and tessellated darter never exceed 4 inches in length. Thus, when designing fish passage at road crossings, consideration must be given to the entire fish community, not just the larger stream fish such as trout and white sucker.

Many of the standards in these guidelines have been adopted from and are consistent with U.S. Army Corps of Engineers Connecticut Programmatic General Permit guidance. Refer to http://www.nae.usace.army.mil/reg/ctpgp.pdf for more details relative to general permit requirements and also contact the DEP Inland Water Resources Division for permit guidance.

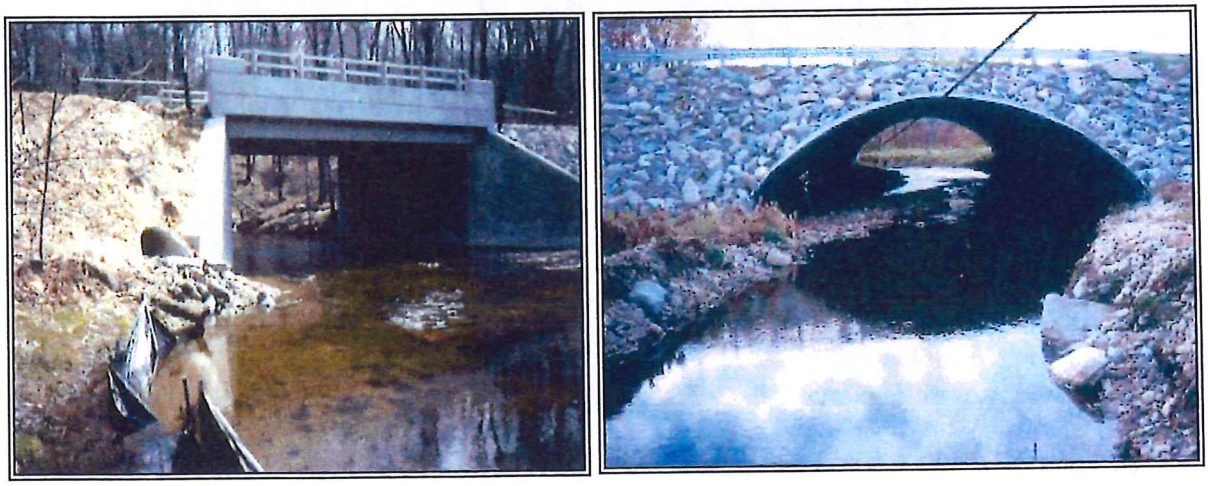


Figure 6. Clear span bridges and bottomless arch culverts are preferred stream crossing structures.

For new or replacement stream crossing projects, the Inland Fisheries Division (IFD) typically recommends the installation of **clear span bridges** or **bottomless arch culverts** for the crossing of perennial watercourses (Figure 6). These structures are "fish passage friendly" since they do not create barriers or impediments to fish migration and they best preserve physical instream habitats. Intermittent watercourses are evaluated for fish passage needs based upon the potential for seasonal utilization of the watercourses by fish.

In certain situations, the IFD has accepted the installation of culverts for stream crossings. However, several modifications to culvert design may be required to ensure fish passage and maintenance of aquatic resource integrity. The modifications recommended are as follows:

- **SINGLE CULVERT**
  The invert of a box culvert should be set no less than 1 foot below the existing streambed elevation. This installation technique is referred to as a sunken or embedded culvert. The invert of a round culvert less than 10 feet in diameter should be set 1 to 2 feet below the existing streambed elevation. For round pipe greater than 10 feet in diameter, the culvert invert should be set a minimum of 20% of the pipe diameter below the streambed elevation.

- **MULTIPLE CULVERTS**
  Multiple culverts are discouraged where design criteria can be met with a single culvert. For multiple culvert situations, one or more of the culverts should be installed as per the guidelines for single culverts (Figure 7). Deflectors may need to be installed in the stream to concentrate low streamflows into and through the recessed culvert. Recessed culvert(s) should be installed in the thalweg or deepest section of the channel and be in alignment with the low flow channel.

Figure 7. Culvert on left is sunken 1 foot below grade. Culvert at right, installed "at grade" accommodates high stream flows.

- **GRADIENT**
  The culvert gradient should be no steeper than the streambed gradient upstream or downstream of the culvert matching the overall stream gradient as closely as possible. Gradient for sunken culverts should not exceed 3%. Bottomless arch culverts or clear span bridges should be utilized in all cases where gradient exceeds 3%.

- **ALIGNMENT**
  Culvert alignment should be similar to that of the stream and not placed at a skew. This will ensure proper water conveyance and will protect against excessive channel erosion or scour.

- **LENGTH**
  Culvert length should be as short as possible. Vertical headwalls rather than fill slopes are recommended at the culvert inlet and outlet to reduce the total culvert length (Figure 8). Narrowing and lowering the roadway along with steepening embankments can also help reduce culvert length.

- **WIDTH**
  The culvert should have a width that spans an area 1.2 times the bankfull width of the stream. In Connecticut streams, bankfull width equates to the channel width wetted at the 1.5 to 2 year storm frequency flow. This standard also applies to arch (bottomless) culverts.

- **CORRUGATED CULVERTS**
  Corrugated culverts are preferred over smooth culverts since the corrugations create a roughness that aids in the retention of streambed material. Metal culverts are least preferred due to longevity concerns with rusting.

Figure 8. Example of vertical headwall that reduces length of culverts.

➢ **OPENNESS RATIO**

The culvert should have an Openness Ratio of ≥ 0.25. The Openness Ratio (OR) is calculated by dividing a culvert's cross sectional area (height x width) by its length. All measurements are in meters.

Embedded Culverts: $OR = \frac{[(\text{Cross-sectional culvert area pre-embedded}) - \text{Embedded area}]}{\text{Culvert length}}$

Arch Culverts (bottomless): $OR = \frac{\text{Height x Width}}{\text{Length}}$

➢ **PRESERVATION OF STREAMBED SUBSTRATES**

Native streambed material excavated for culvert placement should be stockpiled and replaced within the culvert following its installation. (Figure 9). Streambed material should be replaced in a manner replicating the original stream cross section with a well-defined low flow channel contiguous with that existing in the stream.

Figure 9. Streambed materials stockpiled for installation within sunken culverts.

IV. OTHER STREAM CROSSING AND HABITAT CONSIDERATIONS

In addition to offering recommendations for structure design, the IFD has developed the following measures to enhance and protect aquatic habitats and resources.

➢ **SEASONAL CONSTRUCTION WINDOWS**

Stream crossing construction projects can severely degrade stream fish habitat and water quality through the production of excessive turbidity and sedimentation levels. Negative impacts of sedimentation to fisheries resources have been well documented (Cordone and Kelley 1961; Reiser and Bjornn 1979; Ritchie 1972). Also, certain construction activities can prevent or delay the migratory movements of resident riverine and anadromous fishes through a project site. Consequently, seasonal construction windows, defined as "time periods during which construction should occur" are often recommended during times of the year when it is easier to control soil erosion and sedimentation and fewer fish are undergoing migrations.

Appropriate construction windows are typically determined on a case-by-case basis, but the following two windows are most often recommended.

1. INLAND RESIDENT FISH CONSTRUCTION WINDOW

In inland waters, unconfined[1] instream construction activities associated with either bridge/culvert installation and rehabilitation projects should only be **allowed** from the period **June 1 through September 30**, inclusive (Figure 10). Conversely this means a prohibition of unconfined instream construction activities from October 1 through May 30. Cofferdam installation may be allowed outside this window if construction techniques do not involve streambed excavation or sheetpile installation. This construction window pertains to perennial streams only. The use of construction windows to protect intermittent streams will be made on a case-by-case basis and their ability to seasonal support fish populations. Contact HCE fisheries biologists for guidance.

A June 1 through September 30 construction timeframe can be utilized as an effective measure for mitigating construction related disturbances for the following reasons: (1) it protects the spawning, egg incubation, and fry development periods of most resident fishes, (2) it does not interfere with seasonal migratory periods of resident fishes, and (3) it limits construction activities such as dewatering, excavation, trenching, and cofferdam placement to the period of low streamflow which coincides with the historic seasonal low rainfall period in Connecticut. In addition, during the June 1 through September 30 low flow period, erosion control measures are most effective and sediment transport can be more easily confined within the immediate construction area.

2. ANADROMOUS FISH CONSTRUCTION WINDOW

In both the tidal portions of rivers and streams and inland waters, elevated suspended sediment concentrations and sound levels produced by certain construction activities may prevent or delay spawning migrations of anadromous fish. The term anadromous refers to a species that lives in the ocean and returns to freshwater to spawn. Species of concern are alewife and blueback herring (collectively known as river herring), American shad and Atlantic salmon. Activities of particular concern are underwater pile driving, demolition of structures such as bridge piers using hoe rams and unconfined excavation and filing. All of these activities may affect the movement of fish through the project site[2]. Preventing migration would result in a complete failure of fish to spawn upstream of the site. If fish could not spawn anywhere below the site, it would cause the loss of an entire year class of fish that would have been produced in the stream. Delaying migration could reduce spawning stress, resulting in the production of fewer fish than would have been expected.

---

[1] Unconfined is defined as work not contained within a cofferdam or similar type water exclusion structure.

[2] Although outside the scope of this document, it should be noted that occasionally a project may require the use of equipment or methods that can generate pressure waves sufficient to injure or kill fish, such as the use of high energy pile drivers to drive large support piles, high energy hoe rams for demolition, and blasting. If a contractor requests to use these during a sensitive period, HCE staff recommend a plan be developed and submitted for review and approval that details how impacts to fish will be avoided or acceptably minimized.

Collectively, spawning migrations of river herring, American shad and Atlantic salmon occur between March 1 and June 30. Therefore to protect all of these migratory species, unconfined instream construction activities associated with either bridge/culvert installation and rehabilitation projects should only be **allowed** from **July 1 to February 28th**, inclusive[3]. Conversely this means a prohibition of unconfined instream construction activities from March 1 through June 30 (Figure 10).

Since the migratory period of each anadromous species is different and may vary from stream to stream and only one or two species occur in some streams, an appropriate construction window should be determined on a case-by-case basis and will depend upon: (1) location of the project, (2) which species are known to migrate through the project area, (3) the timing of migration in the system, and (4) the type of construction activities and manner in which they are conducted. IFD Habitat Conservation and Enhancement staff can be consulted to assist with determining the best construction window to protect anadromous fishes.

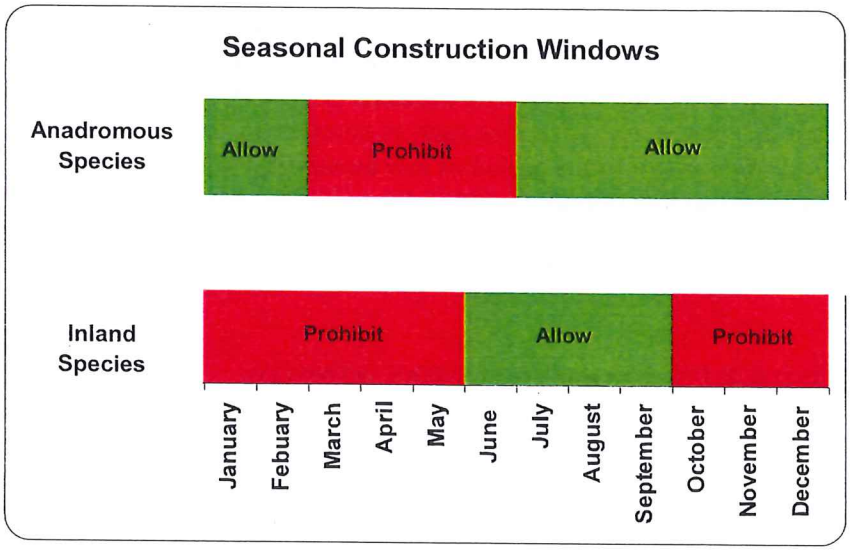


Figure 10. Recommended seasonal construction windows for inland and anadromous fish. *Note that the allowable unconfined work window in streams supporting both anadromous and inland fishes is restricted to the period from July 1 through September 30.*

➢ EROSION AND SEDIMENT CONTROLS

All appropriate erosion and sediment controls should be established prior to and be maintained through all phases of construction. Stream crossing projects should adhere to soil and erosion control best management practices as outlined in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control Manual (DEP Bulletin 34).

➢ SCOUR PROTECTION

The placement of scour protection measures should be minimized to the fullest extent possible and should match overall stream gradient as closely as possible. The

[3] Note that for projects in the freshwater portions of streams, where the June 1 through September 30 window might be appropriate, a modification of the window might be necessary if the stream supports a spawning run of one or more anadromous species.

placement of riprap in streams for scour protection is discouraged. If scour protection is required within the streambed, it is recommended that the surface layer of natural streambed substrates should be scraped from the existing streambed, saved and then placed back as a top layer over a "sublayer" of riprap. Typically, this top layer of substrates should be no less than 12 inches in depth. This strategy can satisfy both engineering concerns for scour protection as well as fisheries concerns for preserving and maintaining the habitat benefits of natural streambed substrates. In addition, it is recommended that cross sectional and longitudinal profiles of the channel protected for scour should match pre-construction profiles.

➢ RIPARIAN ZONE PROTECTION

Riparian vegetation disturbed during construction should be re-established in a timely manner upon project completion. The species of vegetation selected for reestablishment should be native to the immediate watershed and be non-invasive. Refer to the Connecticut Native Tree and Shrub Availability List for more information. This list is available on the DEP website at http://www.ct.gov/dep/lib/dep/wildlife/pdf_files/habitat/ntvtree.pdf. Where possible, retaining walls should be utilized in lieu of fill slopes along roadway approaches to stream crossing structures to minimize riparian habitat loss.

➢ HABITAT MITIGATION

Instream habitats can often be lost or modified due to culvert placement. For example, placement of a culvert within spawning habitats can directly impact fish population levels. As a consequence, HCE fisheries biologists assess habitat losses and alterations associated with stream crossings and may recommend installation of instream habitat enhancement structures such as rock vanes, rootwads or boulders to offset or minimize instream habitat impacts. Refer to Maryland Waterway Construction Guidelines Manual for a thorough description of some habitat mitigation practices (MDEWA 2000).

➢ FISHING ACCESS

Stream crossing locations can be popular areas for angling, especially on streams stocked with trout. Often times angler parking access is only available through informal pull-off areas along the roadside. Stream crossing replacements that include roadway improvements may also include the installation of guardrails, which will permanently block off these informal parking areas. While the IFD acknowledges the need for roadway and public safety, it is recommended that roadway improvement design plans consider the retention or improvement of public fishing access.

V. CULVERT RETROFITS

Existing culverts that are not scheduled for replacement but which block fish passage can sometimes be modified or retrofitted to provide effective upstream fish passage. There are several retrofit options that can include gradient control weirs, interior baffles/weirs and even the installation of a fishway. Gradient control weirs are usually constructed with large boulders (Figure 11). They are typically placed downstream of the culvert outlet and are used to back-up water through a culvert or reduce an excessive drop at a culvert outlet. Care must be exercised to ensure that gradient control weirs do not block fish passage during low flows. Baffles or weirs can be used to facilitate fish passage by creating a series of pools with drops to increase water depth and decrease water velocities (Figure 12). There are several different

baffle configuration designs (Robison et. al. 1999, VDFW 2005). Baffles can increase debris clogging and accumulation and therefore require periodic maintenance. Installation of an engineered fishway can be utilized where the above retrofit options are not viable (Figure 13). Culvert retrofit design can be complicated and will usually require the services of a qualified civil engineer as well as review by HCE fisheries biologists. Culvert retrofits are never a substitute for full replacement and in some cases, full replacement can be more cost effective.

Figure 11. Example of boulder weir installed at outlet to create backwater into a culvert.

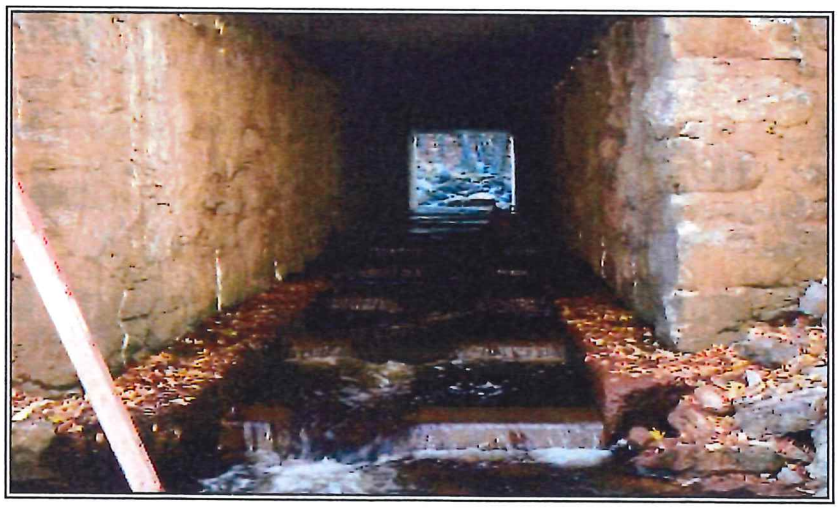


Figure 12. Example of concrete weir system.

Figure 13. Example of fishway installed within a culvert.

CONCLUSION

While this publication provides general stream crossing guidance, each stream crossing project may present certain challenges that have not been discussed. This document is not meant to be a technical design manual. Refer to the several design manuals that have been cited for more technical/engineering information, many of which are available on the internet. HCE staff are available to provide technical guidance relative to fish passage requirements for stream crossings; refer to contact information below.

CONTACT INFORMATION

Technical Guidance
Bureau of Natural Resources
Inland Fisheries Division
Habitat Conservation and Enhancement Program
Hartford Office: 860-424-3474
Eastern Connecticut: 860-295-9523
Western Connecticut: 860-567-8998
Coastal Connecticut: 860-434-6043

Regulatory Guidance
Bureau of Water Protection and Land Reuse
Inland Water Resources Division
Environmental Analysis Section: 860-424-3019

LITERATURE CITED

California Fish and Game Department. 2003. Fish Passage Evaluation at Stream Crossings. Part IX of the Salmonid Stream Restoration Manual. http://www.dfg.ca.gov/fish/Resources/HabitatManual.asp

Cordone, A. J., and D. W. Kelley. 1961. The Influences of Inorganic Sediment on the Aquatic Life of Streams. California Fish and Game 47:189-228.

CTDEP 2002. Connecticut Guidelines for Soil Erosion and Sediment Control Manual (DEP Bulletin 34).

Jackson, S. D. 2003. Ecological Considerations in the Design of River and Stream Crossings. In 2003 Proceedings of the International Conference on Ecology and Transportation. 10 pp.

Leopold, L.B., Wolman, M.G. and J.P. Miller 1964. Fluvial Processes in Geomorphology. San Francisco. W.H. Freeman.

Maryland Department of the Environment Water Management Administration. 2000. Maryland's Waterway Construction Guidelines. http://www.mde.state.md.us/assets/document/wetlandswaterways/mgwc.pdf

Reiser, D.W., and T.C. Bjornn. 1979. Influence of Forest and Rangeland Management on Anadromous Fish Habitat in the Western United States and Canada: 1. Habitat Requirements of Anadromous Salmonids. U.S. Forest Service General Technical Report PNW-96.

Ritchie, J. C. 1972. Sediment, fish, and fish habitat. Journal of Soil and Water Conservation 27: 124-125.

Robison, E.G., A. Mirati and M. Allen. 1999. Oregon Road/Stream Crossing Restoration Guide. Spring 1999. Oregon Department of Fish and Wildlife. http://www.ser.org/sernw/pdf/ODFW_stream_and_road_crossing_guide.pdf

Vermont Department of Fish and Wildlife. 2005. Interim Guidelines for Aquatic Organism Passage Through Stream Crossing Structures in Vermont. http://www.vtfishandwildlife.com/library/Reports_and_Documents/Fish_and_Wildlife/Interim_Guidelines_for_Aquatic_Organism_Passage_Through_Stream_Crossing_Structures_in_Vermont.pdf

Washington Department of Fish and Wildlife. 2003. Design of Road Culverts for Fish Passage. http://wdfw.wa.gov/hab/engineer/cm/culvert_manual_final.pdf.

REPORT

In support of
Connecticut Addendum
Army Corp of Engineers
General Permit State of Connecticut

HIGHLAND ESTATES – PHASE 4

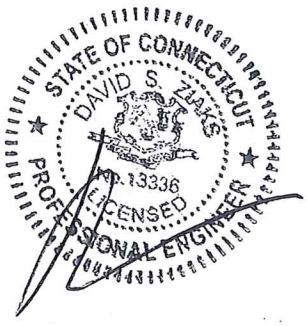
PROPERTY OWNED BY
BROOKS CROSSING DEVELOPERS, LLC
ELLINGTON, CT

Prepared by:

F. A. Hesketh
& Associates, Inc.

3 Creamery Brook
East Granby, CT 06026

860-653-8000



April 24, 2020
Revised 02-15-2021

FAHA Project #12162.00

Description of the Proposed Activities and Purpose

The subject parcel is 56.4+/- acres located west of Brook Crossing, a town road off of Jobs Hill Road in Ellington, CT. The parcel is zoned RAR for single family residential homes. The development of this parcel would be Phase 4 in the development of the subdivision known as Highland Estates. For the most part, the land is moderately wooded with several cleared open areas scattered throughout. There are four (4) wetland and watercourse areas identified on the property as shown on the attached plans (A, B, C & D). The Muddy Brook corridor (Area D) crosses through the eastern most portion of the property.

An east-west ROW was cleared through the property with the development of Phases 2 and 3 circa 2002-2004 to provide an emergency gravel drive from Phases 2/3 to Brook Crossing. With the construction of the gravel drive, cross culverts were installed at two intermittent watercourses (B & C) and a third culvert system was installed across Muddy Brook (D). Catch basins, storm drain piping and three (3) detention basins (DB #1,2,3) were also installed along the ROW in anticipation of constructing the future paved town road.

A second ROW was cleared from the intersection of Brook Crossing (west) to the abutting property line to the south where a fourth detention (DB #4) basin was constructed. Drainage piping from Phases 2/3 is piped to this basin. Additional work on the property has been halted since the enforcement notification was received from the ACOE to stop work.

The proposed activity includes modification to two of the existing culvert crossings, improvements to two of the existing detention basins and construction of two mitigation areas in order to obtain relief from current ACOE and DEEP development restrictions.

Specific activities related to the mitigation work include:

Crossing B – Remove existing riprap and restore natural stream substrate.

Crossing C - Installation of concrete headwall upstream and flared end section downstream to reduce culvert length by 30'; regrade adjacent areas as needed.

Detention Basin 2 – Clear existing vegetation and replant, rip-rap inlet, install stone check dam, new outlet pipe, and stone overflow.

Mitigation Area 2 – Clear vegetation, excavate and install new vegetation.

Crossing D - Removal of the existing twin 48" culverts and installation of an 8'x5' concrete box culvert to reduce culvert length by 75', regrade and revegetate upstream and downstream sections.

Detention Basin 3 – Clear existing vegetation and replant, relocate inlet pipe, rip-rap inlet, install stone check dam, and stone overflow.

Mitigation Area 3 – Clear vegetation, excavate and install in new vegetation.

Upon completion of the mitigation work and issuance of ACOE and DEEP permits, construction would resume on the roadways and development of the house lots. Roadway work would include; drainage and utility installation, paving and curbing, grading and seeding of shoulders. House lot development would include; clearing and grading, construction of the house, driveway and septic system, installation of utilities and landscaping.

Wetland and Watercourse Functions and Values

See LANDTECH Wetland Impact Mitigation Report dated March 15, 2020.

Direct and Secondary Impacts

See LANDTECH Wetland Impact Mitigation Report dated March 15, 2020.

Mitigation/Restoration

See LANDTECH Wetland Impact Mitigation Report dated March 15, 2020 and plans prepared by F. A. Hesketh & Assoc., Inc.

Mitigation plans were previously prepared in 2009. These are shown on the Restoration/Mitigation Plan, dated 04-27-2009, by Tarbell, Heintz & Assoc., Inc. and detailed in the September 24, 2009, report by REMA Ecological Services, LLC.

Subsequent to that time, and in consultation with the ACOE and DEEP, the more recent mitigation recommendations have been prepared. The principal difference is that the proposal now includes the replacement of the Muddy Brook culvert. This will mitigate the wetlands filling which took place in this area by removing the existing impediment to fish passage.

The current mitigation plans replace the dispersed mitigation areas in the earlier plan with two areas north of the proposed roadway, one near Muddy Brook and the other near the central intermittent watercourse. While both areas have some established vegetation, it appears to be primarily second growth of lesser value than some of the previously proposed areas.

It can also be noted that latest subdivision plan calls for an increase in dedicated open space surrounding the wetlands.

Stream Crossing Reconstruction

See LANDTECH Wetland Impact Mitigation Report dated March 15, 2020 and plans prepared by F. A. Hesketh & Assoc., Inc.

NDDB Review

See attached NDDB determination 202001418, dated February 28, 2020.

Culvert Invert Elevations

The box culvert that will be replacing the existing twin 48" culverts will be set 12" below the stream bed, with 12" of natural stream substrate in the bottom of the culvert. The section will include a 2' wide low flow channel. The stream bed upstream and downstream of the culvert will be reshaped to provide a uniform gradient.

Federal Wetland Delineations

See attached Wetlands Delineation Documentation – Wetlands Delineation Compilation Plan, June 2011 and REMA letters of September 24, 2009 and July 10, 2013.

State Wetland Delineations

See attached Wetlands Delineation Documentation – Wetlands Delineation Compilation Plan, June 2011 and REMA letters of September 24, 2009 and July 10, 2013.

Vernal Pools

There are no know vernal pools on the site.

Wetland Vegetation, Soils and Hydrology

See attached report, dated September 24, 2009, by REMA Ecological Services, LLC.

Buffer Zones

The lot layout for this subdivision is being revised to provide additional areas of dedicated open space as shown on sheet AC-8. Forty-nine percent of the subdivision area will in dedicated open space. This will encompass almost all of the mapped wetlands and provide a substantial buffer around those wetlands. Considering the size of the lots and the nature of the land adjacent to the wetlands it is likely that lot development will occur well within the lot and provide additional wetland buffer area.

Site Plans and Wetland Inundation

The development of this 56.4 acre site will include approximately 2,230 feet of 30' wide paved surface. All of this paved runoff will be directed to one of the four proposed detention basins and will therefor have no impact on wetland flooding. Eleven single family homes will be constructed. Based on previous phases of development it is estimates that each lot development will include about 6,000 s.f. of impervious surface, or a total of about 1.5 acres of impervious surface. The impervious development on each lot will runoff to the surrounding grass or wooded areas on the lot, or to the road and the detention basins. It appears clear that the proposed development will not measurably increase the extent of aerial inundation on the adjacent wetlands for even the largest storm events.

Temporary Water Handling

Of the three watercourses that pass through the site and under the proposed road, all have culverts previously installed. The two culverts at the intermittent watercourses will remain in place. One will be shortened. That will not require special water handling and there will be no impact on flooding. The replacement of the twin 48" culverts will include a temporary by-pass. That will eliminate any potential for flooding during construction. Erosion control measures will be in place at all work areas.

Erosion and Sedimentation Control

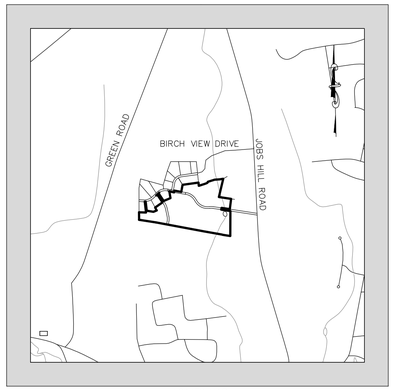
Soil erosion and sedimentation control measures for the proposed mitigation work are shown on the plans. Similar plans will be developed for the road construction and lot development prior to any construction in those areas.

Floodway/Floodplains

There are no mapped floodways or floodplains on the site.

Hydrologic Calculations

See attached Drainage Calculations prepared by F. A. Hesketh & Assoc., Inc.



VICINITY MAP
(NOT TO SCALE)

AREA MAP

HIGHFIELD ESTATES - PHASE IV

Brook Crossing
Ellington, Connecticut

Inland Wetlands Agency Application
Planning & Zoning Commission Application

April 20, 2021

DEVELOPMENT TEAM

Owner	Brooks Crossings, LLC.
Applicant	Brooks Crossings, LLC.
Civil Engineer & Traffic Engineer	F. A. Hesketh & Associates, Inc.
Landscape Architect	F. A. Hesketh & Associates, Inc.
Surveyor	F. A. Hesketh & Associates, Inc.
Soil Scientist/ Wetlands Consultant	Landtech

LIST OF DRAWINGS

	Title Sheet
SB-Index	Subdivision Index
SB-1 thru SB-5	Subdivision Plan
GR-1 thru GR-5	Grading & Soil Erosion and Sediment Control Plan
PP-1 thru PP-3	Plan and Profile
SD-1 thru SD-3	Site Details
NT-1	Notes & Details
PS-1	Property Survey
AC-1 thru AC-7	CT DEEP/ACOE Construction Plan
EC-1 & EC-2	Erosion Control Plan

Guy A Hesketh P.E. #19394

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 · Fax (860) 844-8600
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects www.fahesketh.com · mail@fahesketh.com

Approved by the Town Planning and Zoning Commission of the Town of Ellington on this___day of_____2021. In accordance with section 8-26c of the Connecticut General Statutes, all work in connection with subdivision must be completed by _____20__

Secretary chairman

Highfield Estates – IV

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers • Surveyors • Planners • Landscape Architects www.fahesketh.com • mail@fahesketh.com

Revisions:

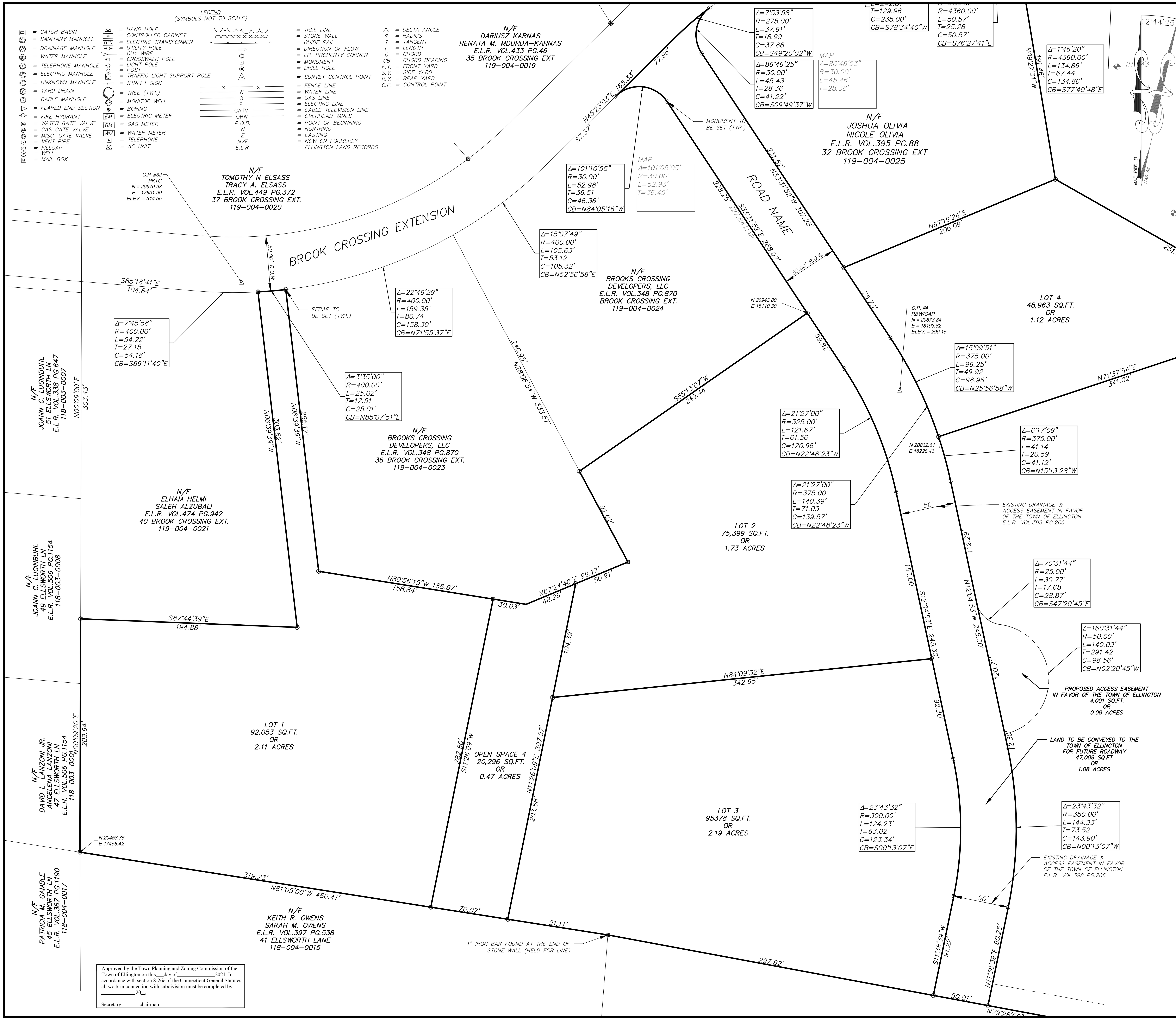
No.	Date	Description

SUBDIVISION PLAN – INDEX
PREPARED FOR
BROOKS CROSSING DEVELOPERS LLC
PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: 04-20-2021	Job no: 12162
Scale: 1" = 100'	Drawn by: CAD
	Checked by: TSH
	Sheet no: 1 OF 1

SB Index

O:\2012\12162-Highfield Estates\SURVEY\PHASE 4\HIG SB 1.dwg, SB – INDEX, Apr. 21, 2021 – 10:07:01 AM



VICINITY MAP
1"=1000'

NOTES:

1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

2. IT IS A SUBDIVISION PLAN INTENDED TO BE SUBMITTED AS PART OF AN APPLICATION TO THE ELLINGTION PLANNING AND ZONING COMMISSION.

3. THIS SURVEY FALLS INTO THE RESURVEY BOUNDARY DETERMINATION CATEGORY AND IS DEPENDENT IN NATURE AND BASED UPON MAP REFERENCE 2 AND 3 FOR THE PERIMETER AND ORIGINAL CATEGORY FOR PROPOSED LOTS.

4. THIS SURVEY CONFORMS TO CLASS A-2 HORIZONTAL ACCURACY STANDARDS.

5. THE SUBJECT PROPERTY (119-004-0000) IS CURRENTLY OWNED BY BROOKS CROSSING DEVELOPERS, LLC. ELLINGTON LAND RECORDS VOLUME 348 PAGE 870.

6. BEARINGS DEPICTED HEREON ARE BASED UPON MAP REFERENCE #1. COORDINATES ARE ASSUMED. CONTROL POINTS #2 AND #26 HAVE CONVERSION COORDINATES TO NAD83 BASED UPON OPUS RAPID STATIC OBSERVATIONS ON 03-06-2018 AND 09-07-2018.

7. ELEVATIONS DEPICTED HEREON (IF ANY) ARE BASED UPON OPUS RAPID STATIC OBSERVATIONS ON 03-06-2018 AND 09-07-2018 RESULTING IN THE FOLLOWING VALUES. CONTROL POINT #2, ELEV.=307.51 (NAVD88) AND CONTROL POINT #25 ELEV.=316.67 (NAVD88). NO ORIGINAL SITE BENCHMARKS WERE FOUND DURING THE CONDUCT OF THIS SURVEY. THE NAVD88 ELEVATIONS DEPICTED HEREON ARE APPROXIMATELY 1.1'± LOWER THAN THE EXISTING DEPICTED ON SHEET #5 OF MAP REFERENCE #1.

8. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS (IF ANY) DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING, PAROL TESTIMONY, VISIBLE FEATURES AND OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO THIS SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1-800-922-4455.

MAP REFERENCE:

1. BOUNDARY PLAN SUBDIVISION PLANS PREPARED FOR "HIGHFIELD ESTATES PHASE II", BIRCH VIEW DRIVE ELLINGTON, CONNECTICUT DATED 11-14-2000 REVISED 5-08-02, SHEETS 1 THRU 13 BY TARBELL, HEINTZ & ASSOCIATES, INC., 290 ROBERTS ST. SUITE 200, EAST HARTFORD, CT.

2. CONVEYANCE PLAN PERIMETER SURVEY PLAN PREPARED FOR BROOKS CROSSING, LLC BIRCH VIEW DRIVE & BROOK CROSSING, ELLINGTON, CONNECTICUT, SCALE 1"=100' SHEET 1 OF 1, DATE 01-18-05 BY TARBELL, HEINTZ & ASSOC., INC., EAST HARTFORD, CT.

3. BOUNDARY PLAN, SUBDIVISION PLANS PREPARED FOR HIGHFIELD ESTATES PHASE III, BROOK CROSSING, ELLINGTON, CONNECTICUT DATED 06-13-05 REVISED TO 1-31-07 SHEET 3 OF 11, BY TARBELL, HEINTZ & ASSOC., INC., EAST HARTFORD, CT.

4. HIGHFIELD ESTATES JOBS HILL ROAD, ELLINGTON CT. CLASS A-2 SURVEY RUSSELL & DAWSON ARCHITECTURE & ENGINEERING LAND PLANNING CONSULTANTS INC. 252 HAZARD AVE. ENFIELD, CONNECTICUT 06082, DATED 5-1-91, SCALE 1"=100, DRAWN BY: X-1 REVISION NO. 9-1-92.

5. IMPROVEMENT LOCATION PLAN - RECORD PREPARED FOR HIGHFIELD ESTATES PHASE II BIRCH VIEW DRIVE, ELLINGTON, CT DATED 08-31-2018 REVISED TO 02-27-2019, SCALE 1"=40' SHEETS 1-3 OF 3 BY F.A. HESKETH & ASSOCIATES, INC.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS MAP IS NOT VALID WITHOUT THE LIVE SIGNATURE AND IMPRESSION TYPE SEAL OF THE LAND SURVEYOR WHOSE NAME APPEARS HEREON.

TODD S. HESKETH LS 17945

Highfield Estates - IV

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects www.fahesketh.com · mail@fahesketh.com

Revisions:

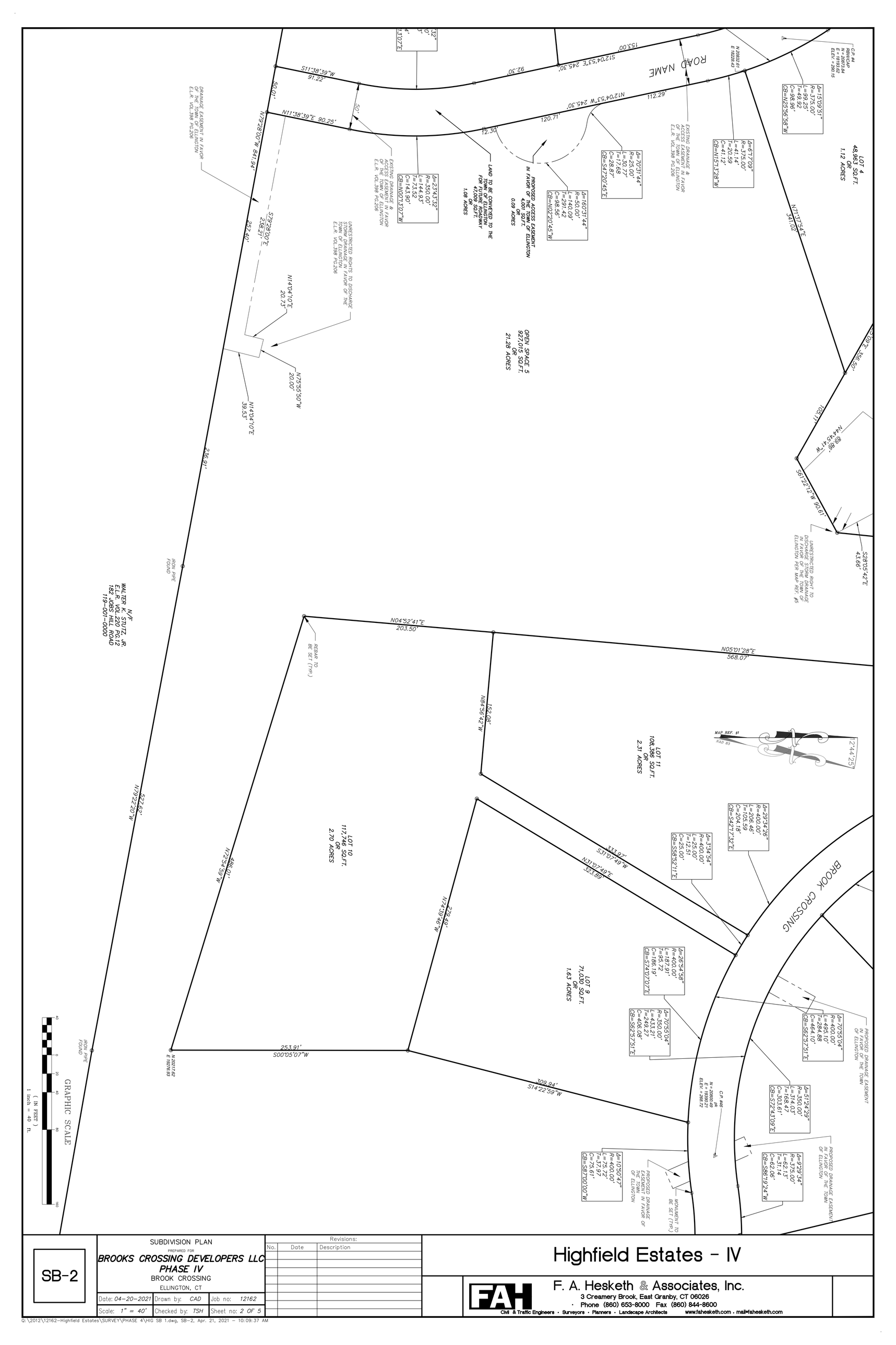
No.	Date	Description

SUBDIVISION PLAN
PREPARED FOR
BROOKS CROSSING DEVELOPERS LLC
PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: 04-20-2021	Drawn by: CAD	Job no: 12162
Scale: 1" = 40'	Checked by: TSH	Sheet no: 1 OF 5

SB-1

Q:\2012\12162-Highfield Estates\SURVEY\PHASE 4\HIG SB 1.dwg, SB-1, Apr. 21, 2021 - 10:08:20 AM



SB-2

SUBDIVISION PLAN
PREPARED FOR
BROOKS CROSSING DEVELOPERS LLC
PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: *04-20-2021* | Drawn by: *CAD* | Job no: *12162*
Scale: *1" = 40'* | Checked by: *TSH* | Sheet no: *2 OF 5*

Revisions:

No.	Date	Description

Highfield Estates - IV

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects
www.fahesketh.com - mail@fahesketh.com

Q:\2012\12162-Highfield Estates\SURVEY\PHASE 4\HIG SB 1.dwg, SB-2, Apr. 21, 2021 - 10:09:37 AM

BROOK CROSSING

BROOK CROSSING

C.P. #46
pk
N = 20800.49
E = 19390.21
ELEV. = 268.72

113.65'
N81°30'40"W 231.68'
133.65'

S81°30'40"E
40.02'

N10°32'48"E
45.03'

N10°32'48"E
45.03'

40.02'

DRAINAGE EASEMENT IN FAVOR OF THE TOWN OF ELLINGTON
E.L.R. VOL..398 PG.206

MUDDY BROOK

FLOODING RIGHTS ON LOT #10
IN FAVOR OF BROOK CROSSING LLC

REBAR TO BE SET (TYP.)

S08°29'20"W
50.00'

176.58'
N81°30'40"W 232.22'

231.68'
S81°30'40"E

94.35'

40.00'
S81°30'40"E 257.79'

123.44'

C.P. #75
RC
N = 20729.36
E = 20132.65
ELEV. = 267.28

12°44'25"

MAP REF. #1
NAD 83

Δ=26°54'58"
R=400.00'
L=187.91'
T=95.72
C=186.19'
CB=S74°07'07"E

Δ=70°55'04"
R=350.00'
L=433.21'
T=249.27
C=406.08'
CB=S62°57'51"E

MONUMENT TO BE SET (TYP.)

PROPOSED DRAINAGE EASEMENT IN FAVOR OF THE TOWN OF ELLINGTON

Δ=10°50'47"
R=400.00'
L=75.72'
T=37.97
C=75.61'
CB=S87°00'00"W

Δ=16°54'43"
R=325.00'
L=95.93'
T=48.32
C=95.58'
CB=S89°58'02"E

Δ=16°54'43"
R=375.00'
L=110.69'
T=55.75
C=110.29'
CB=N89°58'02"W

65.00'
S08°21'50"W

65.00'
S08°21'50"W

40.00'
N81°30'40"W

LOT 9
71,030 SQ.FT.
OR
1.63 ACRES

309.94'
S14°22'59"W

79.49'
39'46"W

OPEN SPACE 5
927,015 SQ.FT.
OR
21.28 ACRES

DRAINAGE EASEMENT IN FAVOR OF THE TOWN OF ELLINGTON
E.L.R. VOL..398 PG.206

UNRESTRICTED RIGHTS TO DISCHARGE STORM DRAINAGE IN FAVOR OF THE TOWN OF ELLINGTON
E.L.R. VOL..398 PG.206

N/F
KATIE L. ZAHNER
E.L.R. VOL.376 PG.1195
8 BROOK CROSSING
119-004-0006

253.91'
S00°05'07"W

698.10'
S00°17'18"W

N 20217.62
E 19276.93

IRON PIPE FOUND

MUDDY BROOK

498.47'
N80°03'50"W

NO POINT FOUND

N/F
WALTER K. STUTZ, JR.
E.L.R. VOL.220 PG.12
182 JOBS HILL ROAD
119-001-0000

N71°49'20"W
27.02'

IRON PIPE FOUND

214.57'
N81°04'10"W

N 20005.32
E 20005.98

IRON PIPE FOUND

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

Highfield Estates - IV

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers • Surveyors • Planners • Landscape Architects
www.fahesketh.com • mail@fahesketh.com

Revisions:

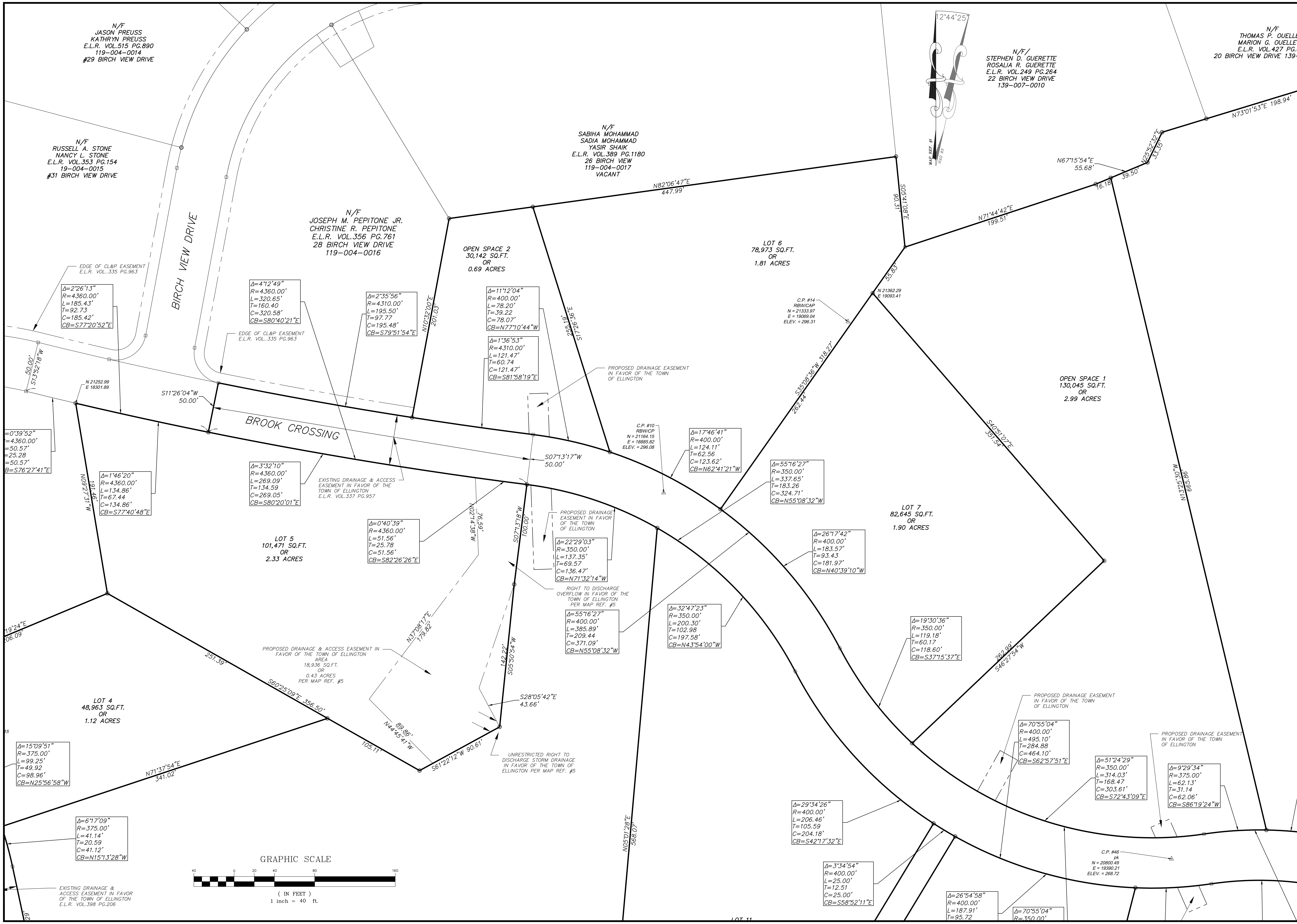
No.	Date	Description

SUBDIVISION PLAN
PREPARED FOR
BROOKS CROSSING DEVELOPERS LLC
PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: 04-20-2021 | Scale: 1" = 40'
Drawn by: CAD | Checked by: TSH
Job no: 12162 | Sheet no: 3 OF 5

SB-3

G:\2012\12162-Highfield Estates\SURVEY\PHASE 4\HIG SB 1.dwg, SB-3, Apr 21, 2021 - 10:15:15 AM


N/F
JASON PREUSS
KATHRYN PREUSS
E.L.R. VOL.515 PG.890
119-004-0014
#29 BIRCH VIEW DRIVE
N/F
RUSSELL A. STONE
NANCY L. STONE
E.L.R. VOL.353 PG.154
19-004-0015
#31 BIRCH VIEW DRIVE
BIRCH VIEW DRIVE
N/F
JOSEPH M. PEPITONE JR.
CHRISTINE R. PEPITONE
E.L.R. VOL.356 PG.761
28 BIRCH VIEW DRIVE
119-004-0016
N/F
SABIHA MOHAMMAD
SADIA MOHAMMAD
YASIR SHAIK
E.L.R. VOL.389 PG.1180
26 BIRCH VIEW
119-004-0017
VACANT
N/F/
STEPHEN D. GUERETTE
ROSALIA R. GUERETTE
E.L.R. VOL.249 PG.264
22 BIRCH VIEW DRIVE
139-007-0010
N/F
THOMAS P. OUELLETT
MARION G. OUELLETT
E.L.R. VOL.427 PG.83
20 BIRCH VIEW DRIVE 139-0
OPEN SPACE 2
30,142 SQ.FT.
OR
0.69 ACRES
LOT 6
78,973 SQ.FT.
OR
1.81 ACRES
OPEN SPACE 1
130,045 SQ.FT.
OR
2.99 ACRES
LOT 7
82,645 SQ.FT.
OR
1.90 ACRES
LOT 5
101,471 SQ.FT.
OR
2.33 ACRES
LOT 4
48,963 SQ.FT.
OR
1.12 ACRES
BROOK CROSSING
EDGE OF CL&P EASEMENT E.L.R. VOL..335 PG.963
PROPOSED DRAINAGE EASEMENT IN FAVOR OF THE TOWN OF ELLINGTON
EXISTING DRAINAGE & ACCESS EASEMENT IN FAVOR OF THE TOWN OF ELLINGTON E.L.R. VOL.337 PG.957
RIGHT TO DISCHARGE OVERFLOW IN FAVOR OF THE TOWN OF ELLINGTON PER MAP REF. #5
PROPOSED DRAINAGE & ACCESS EASEMENT IN FAVOR OF THE TOWN OF ELLINGTON AREA 18,936 SQ.FT. OR 0.43 ACRES PER MAP REF. #5
UNRESTRICTED RIGHT TO DISCHARGE STORM DRAINAGE IN FAVOR OF THE TOWN OF ELLINGTON PER MAP REF. #5
EXISTING DRAINAGE & ACCESS EASEMENT IN FAVOR OF THE TOWN OF ELLINGTON E.L.R. VOL.398 PG.206
N82°06'47"E 447.99'
N73°01'53"E 198.94'
N71°44'42"E 199.51'
N67°15'54"E 55.68'
S40°51'07"E 351.54'
S46°27'54"W 262.99'
S35°08'36"W 318.27'
N13°25'30"W 665.86'
N05°01'28"E 568.07'
S60°25'09"E 356.50'
N71°37'54"E 341.02'
S61°22'12"W 90.61'
N44°45'41"W 89.86'
S28°05'42"E 43.66'
S05°50'54"W 142.22'
S07°13'18"W 100.00'
N37°08'17"E 179.82'
S07°13'17"W 50.00'
S11°26'04"W 50.00'
S13°52'18"W 50.00'
N09°27'31"W 191.46'
N10°32'00"E 201.03'
S17°26'36"E 255.19'
Δ=2°26'13" R=4360.00' L=185.43' T=92.73 C=185.42' CB=S77°20'52"E
Δ=4°12'49" R=4360.00' L=320.65' T=160.40 C=320.58' CB=S80°40'21"E
Δ=2°35'56" R=4310.00' L=195.50' T=97.77 C=195.48' CB=S79°51'54"E
Δ=11°12'04" R=400.00' L=78.20' T=39.22 C=78.07' CB=N77°10'44"W
Δ=1°36'53" R=4310.00' L=121.47' T=60.74 C=121.47' CB=S81°58'19"E
Δ=3°32'10" R=4360.00' L=269.09' T=134.59 C=269.05' CB=S80°20'01"E
Δ=1°46'20" R=4360.00' L=134.86' T=67.44 C=134.86' CB=S77°40'48"E
Δ=0°40'39" R=4360.00' L=51.56' T=25.78 C=51.56' CB=S82°26'26"E
Δ=22°29'03" R=350.00' L=137.35' T=69.57 C=136.47' CB=N71°32'14"W
Δ=55°16'27" R=400.00' L=385.89' T=209.44 C=371.09' CB=N55°08'32"W
Δ=17°46'41" R=400.00' L=124.11' T=62.56 C=123.62' CB=N62°41'21"W
Δ=55°16'27" R=350.00' L=337.65' T=183.26 C=324.71' CB=N55°08'32"W
Δ=26°17'42" R=400.00' L=183.57' T=93.43 C=181.97' CB=N40°39'10"W
Δ=32°47'23" R=350.00' L=200.30' T=102.98 C=197.58' CB=N43°54'00"W
Δ=19°30'36" R=350.00' L=119.18' T=60.17 C=118.60' CB=S37°15'37"E
Δ=70°55'04" R=400.00' L=495.10' T=284.88 C=464.10' CB=S62°57'51"E
Δ=51°24'29" R=350.00' L=314.03' T=168.47 C=303.61' CB=S72°43'09"E
Δ=9°29'34" R=375.00' L=62.13' T=31.14 C=62.06' CB=S86°19'24"W
Δ=29°34'26" R=400.00' L=206.46' T=105.59 C=204.18' CB=S42°17'32"E
Δ=3°34'54" R=400.00' L=25.00' T=12.51 C=25.00' CB=S58°52'11"E
Δ=26°54'58" R=400.00' L=187.91' T=95.72
Δ=70°55'04" R=350.00'
Δ=15°09'51" R=375.00' L=99.25' T=49.92 C=98.96' CB=N25°56'58"W
Δ=6°17'09" R=375.00' L=41.14' T=20.59 C=41.12' CB=N15°13'28"W
C.P. #10 RBW/CP N = 21164.15 E = 18885.82 ELEV. = 296.08
C.P. #14 RBW/CAP N = 21333.97 E = 19069.04 ELEV. = 296.31
C.P. #46 pk N = 20800.49 E = 19390.21 ELEV. = 268.72
GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.
LOT 11

Highfield Estates – IV

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
www.fahesketh.com · mail@fahesketh.com
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects

No.	Date	Description

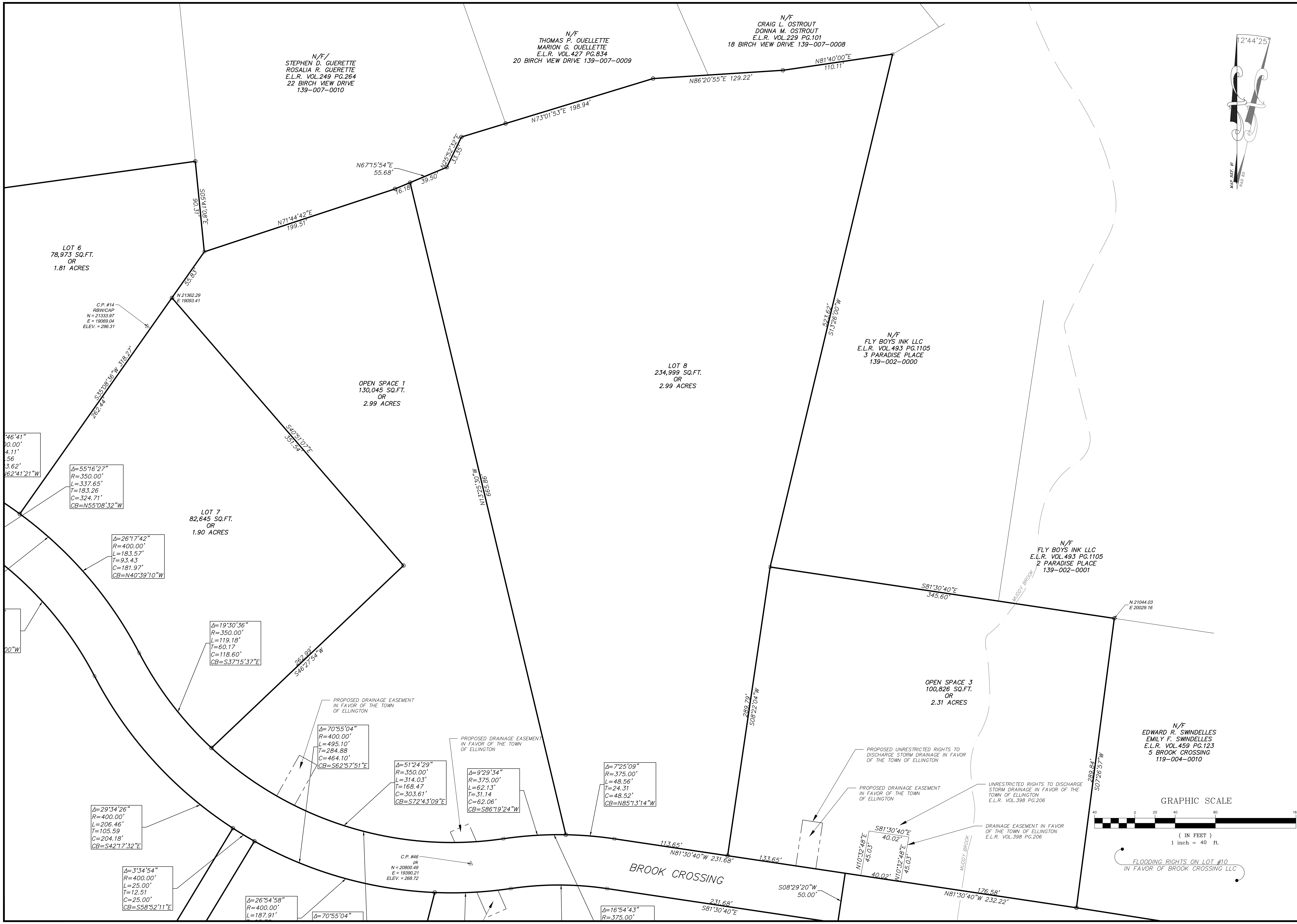
Revisions:

SUBDIVISION PLAN
PREPARED FOR
BROOKS CROSSING DEVELOPERS LLC
PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: 04-20-2021 | Drawn by: CAD | Job no: 12162
Scale: 1" = 40' | Checked by: TSH | Sheet no: 4 OF 5

SB-4

G:\2012\12162-Highfield Estates\SURVEY\PHASE 4\HS SB 1.dwg, SB-4, Apr. 21, 2021 – 10:16:46 AM



N/F/
STEPHEN D. GUERETTE
ROSALIA R. GUERETTE
E.L.R. VOL.249 PG.264
22 BIRCH VIEW DRIVE
139-007-0010
N/F
THOMAS P. OUELLETTE
MARION G. OUELLETTE
E.L.R. VOL.427 PG.834
20 BIRCH VIEW DRIVE 139-007-0009
N/F
CRAIG L. OSTROUT
DONNA M. OSTROUT
E.L.R. VOL.229 PG.101
18 BIRCH VIEW DRIVE 139-007-0008
N81°40'00"E
110.11'
N86°20'55"E 129.22'
N73°01'53"E 198.94'
N25°52'32"E
33.35'
N67°15'54"E
55.68'
39.50'
16.18'
N71°44'42"E
199.51'
S05°41'08"E
90.31'
LOT 6
78,973 SQ.FT.
OR
1.81 ACRES
55.83'
N 21362.29
E 19093.41
C.P. #14
RBW/CAP
N = 21333.97
E = 19069.04
ELEV. = 296.31
S35°08'36"W 318.27'
262.44'
OPEN SPACE 1
130,045 SQ.FT.
OR
2.99 ACRES
S40°51'07"E
351.54'
LOT 8
234,999 SQ.FT.
OR
2.99 ACRES
523.62'
S13°26'00"W
N/F
FLY BOYS INK LLC
E.L.R. VOL.493 PG.1105
3 PARADISE PLACE
139-002-0000
Δ=55°16'27"
R=350.00'
L=337.65'
T=183.26
C=324.71'
CB=N55°08'32"W
LOT 7
82,645 SQ.FT.
OR
1.90 ACRES
N13°25'30"W
665.86'
Δ=26°17'42"
R=400.00'
L=183.57'
T=93.43
C=181.97'
CB=N40°39'10"W
N/F
FLY BOYS INK LLC
E.L.R. VOL.493 PG.1105
2 PARADISE PLACE
139-002-0001
S81°30'40"E
345.60'
MUDDY BROOK
N 21044.03
E 20029.16
Δ=19°30'36"
R=350.00'
L=119.18'
T=60.17
C=118.60'
CB=S37°15'37"E
262.99'
S46°27'54"W
OPEN SPACE 3
100,826 SQ.FT.
OR
2.31 ACRES
289.79'
S08°22'04"W
N/F
EDWARD R. SWINDELLES
EMILY F. SWINDELLES
E.L.R. VOL.459 PG.123
5 BROOK CROSSING
119-004-0010
289.84'
S07°26'57"W
PROPOSED DRAINAGE EASEMENT
IN FAVOR OF THE TOWN
OF ELLINGTON
Δ=70°55'04"
R=400.00'
L=495.10'
T=284.88
C=464.10'
CB=S62°57'51"E
PROPOSED DRAINAGE EASEMENT
IN FAVOR OF THE TOWN
OF ELLINGTON
Δ=51°24'29"
R=350.00'
L=314.03'
T=168.47
C=303.61'
CB=S72°43'09"E
Δ=9°29'34"
R=375.00'
L=62.13'
T=31.14
C=62.06'
CB=S86°19'24"W
Δ=7°25'09"
R=375.00'
L=48.56'
T=24.31
C=48.52'
CB=N85°13'14"W
PROPOSED UNRESTRICTED RIGHTS TO
DISCHARGE STORM DRAINAGE IN FAVOR
OF THE TOWN OF ELLINGTON
PROPOSED DRAINAGE EASEMENT
IN FAVOR OF THE TOWN
OF ELLINGTON
UNRESTRICTED RIGHTS TO DISCHARGE
STORM DRAINAGE IN FAVOR OF THE
TOWN OF ELLINGTON
E.L.R. VOL.398 PG.206
DRAINAGE EASEMENT IN FAVOR
OF THE TOWN OF ELLINGTON
E.L.R. VOL.398 PG.206
S81°30'40"E
40.02'
N10°32'48"E
45.03'
N10°32'48"E
45.03'
40.02'
GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.
FLOODING RIGHTS ON LOT #10
IN FAVOR OF BROOK CROSSING LLC
Δ=29°34'26"
R=400.00'
L=206.46'
T=105.59
C=204.18'
CB=S42°17'32"E
Δ=3°34'54"
R=400.00'
L=25.00'
T=12.51
C=25.00'
CB=S58°52'11"E
C.P. #46
pk
N = 20800.49
E = 19390.21
ELEV. = 268.72
113.65'
N81°30'40"W 231.68'
133.65'
BROOK CROSSING
S08°29'20"W
50.00'
231.68'
S81°30'40"E
176.58'
N81°30'40"W 232.22'
Δ=26°54'58"
R=400.00'
L=187.91'
Δ=70°55'04"
Δ=16°54'43"
R=375.00'
12°44'25"
MAP REF. #1
NAD 83

Highfield Estates - IV

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects
www.fahesketh.com · mail@fahesketh.com

Revisions:

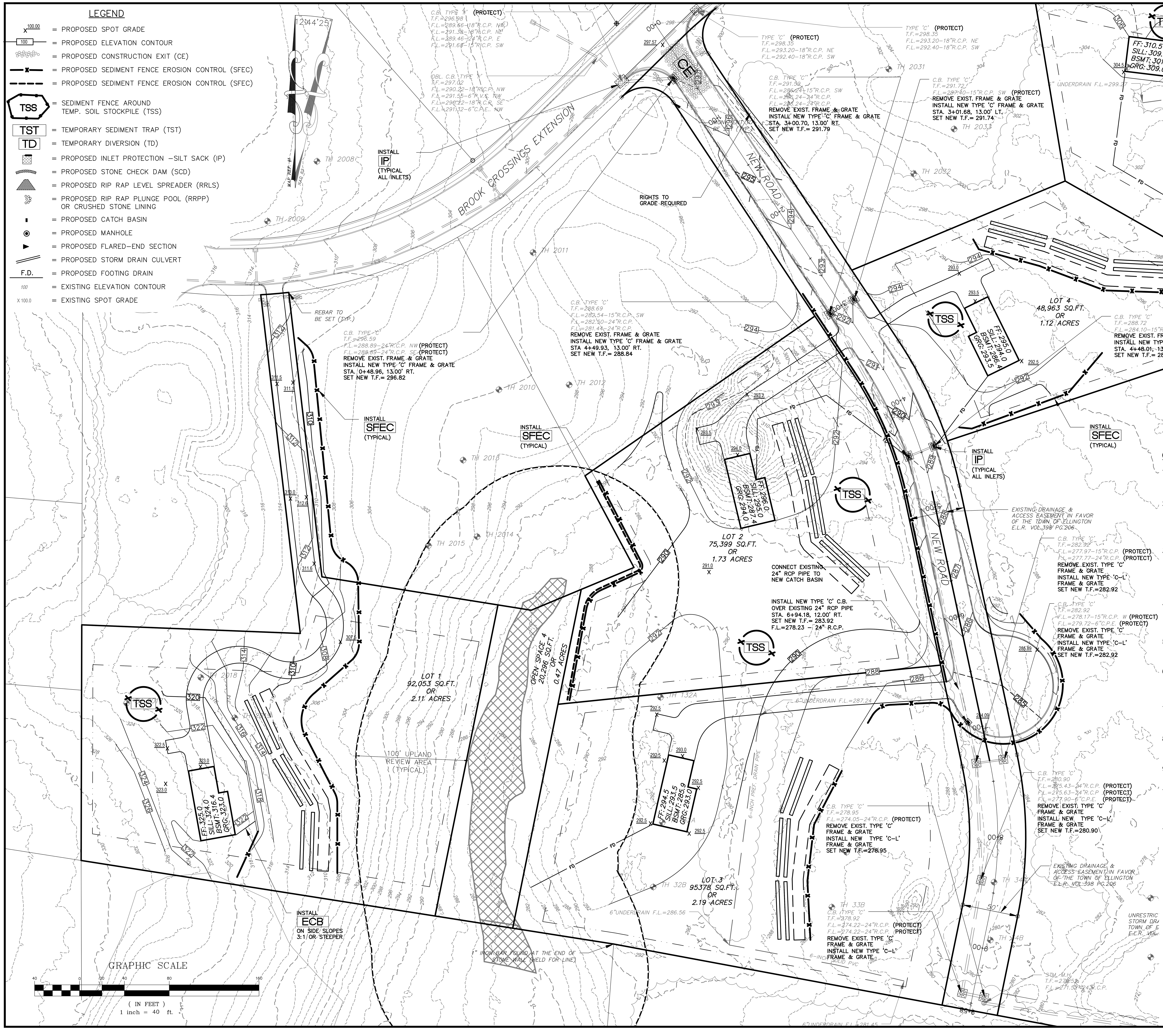
No.	Date	Description

SUBDIVISION PLAN
PREPARED FOR
BROOKS CROSSING DEVELOPERS LLC
PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: 04-20-2021	Drawn by: CAD	Job no: 12162
Scale: 1" = 40'	Checked by: TSH	Sheet no: 5 OF 5

SB-5

G:\2012\12162-Highfield Estates\SURVEY\PHASE 4\HG SB 1.dwg, SB-5, Apr. 21, 2021 - 10:18:17 AM



CURRENT WETLAND AREA

PROPOSED NEW WORK AREA

GENERAL EROSION AND SEDIMENT CONTROL NOTES

1. DISTURBANCE OF SOIL SURFACES IS REGULATED BY STATE LAW. ALL WORK SHALL COMPLY WITH AN APPROVED "EROSION AND SEDIMENT CONTROL PLAN" TO PREVENT OR MINIMIZE SOIL EROSION.
2. THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL DEVICES IS THE RESPONSIBILITY OF THE CONTRACTOR. TOWN OFFICIALS SHALL BE NOTIFIED IN WRITING OF THE NAME, ADDRESS AND TELEPHONE NUMBER OF THE INDIVIDUAL RESPONSIBLE FOR THIS WORK (INCLUDING ANY CHANGES) AT THE REQUIRED PRE–CONSTRUCTION CONFERENCE.
3. THE CONTRACTOR SHALL USE THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (2002), AS AMENDED AS A GUIDE IN CONSTRUCTING THE EROSION AND SEDIMENT CONTROLS INDICATED ON THESE PLANS. THE GUIDELINES MAY BE OBTAINED FROM THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION STORE, 79 ELM STREET, HARTFORD, CT 06106.
4. THE CONTRACTOR SHALL SCHEDULE ALL OPERATIONS TO LIMIT DISTURBANCE TO THE SMALLEST PRACTICAL AREA FOR THE SHORTEST POSSIBLE TIME. OVERALL SITE DISTURBANCE SHALL BE CONFINED TO THOSE LIMITS DELINEATED ON THE PLANS.
5. THE CONTRACTOR IS RESPONSIBLE FOR THE TIMELY INSTALLATION, INSPECTION, REPAIR OR REPLACEMENT OF EROSION CONTROL DEVICES TO INSURE PROPER OPERATION.
6. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER OF UNSATISFACTORY EROSION CONDITIONS NOT CONTROLLED BY THE EROSION AND SEDIMENT CONTROL PLAN AND SHALL INSTALL ADDITIONAL MEASURES AS REQUIRED.
7. ALL DISTURBED AREAS NOT COVERED BY BUILDINGS, PAVEMENT, MULCH, PERMANENT RIP RAP EROSION CONTROL, OR GROUND COVER PLANTINGS SHALL BE PLANTED WITH GRASS.
8. ACCUMULATED SEDIMENT REMOVED FROM EROSION CONTROL DEVICES IS TO BE SPREAD AND STABILIZED IN LEVEL, EROSION RESISTANT LOCATIONS AS GENERAL FILL.
9. SPECIAL ATTENTION SHALL BE GIVEN TO THE CONSTRUCTION SEQUENCE AND PHASING OUTLINED ON THESE PLANS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY CONSTRUCTION DEBRIS OR SEDIMENT FROM EXISTING ROADS AS ORDERED BY THE TOWN AND/OR STATE, IF ANY DEBRIS OR SEDIMENT FROM CONSTRUCTION ACTIVITIES ENTER ONTO THESE ROADWAYS.
11. ANY ADDITIONAL SEDIMENT/EROSION CONTROL MEASURES DEEMED NECESSARY BY THE TOWN OR STATE STAFF DURING CONSTRUCTION SHALL BE IMPLEMENTED BY THE CONTRACTOR. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE, REPAIR AND/OR REPLACEMENT OF ALL REQUIRED CONTROL MEASURES UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED TO THE SATISFACTION OF THE TOWN OR STATE.

NOTE: THESE PLANS SHOW TEMPORARY EROSION AND SEDIMENTATION CONTROLS FOR THE CONSTRUCTION OF THE ROADS AND ASSOCIATED DRAINAGE AND UTILITIES. INDIVIDUAL PLOT PLANS, INCLUDING EROSION AND SEDIMENTATION CONTROLS, WILL BE REQUIRED FOR EACH LOT.

CONCEPT HOUSE LOCATION, GRADING AND CLEARING LIMIT SHOWN. FUTURE PLOT PLAN TO BE SUBMITTED FOR EACH LOT. (TYPICAL)

SEE SHEETS PP–1 THRU PP–3 FOR TOP–OF FRAME AND FLOW LINE/INVERT ELEVATIONS FOR ALL STORM DRAIN, SANITARY SEWER IMPROVEMENTS IN THE R.O.W., AND UTILITY NOTES

SEE SHEETS AC–1 THRU AC–7 FOR TOP SPECIFIC ACOE/CT DEEP PERMIT REQUIREMENTS.

FAH
F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects
www.fahesketh.com · mail@fahesketh.com

Revisions:

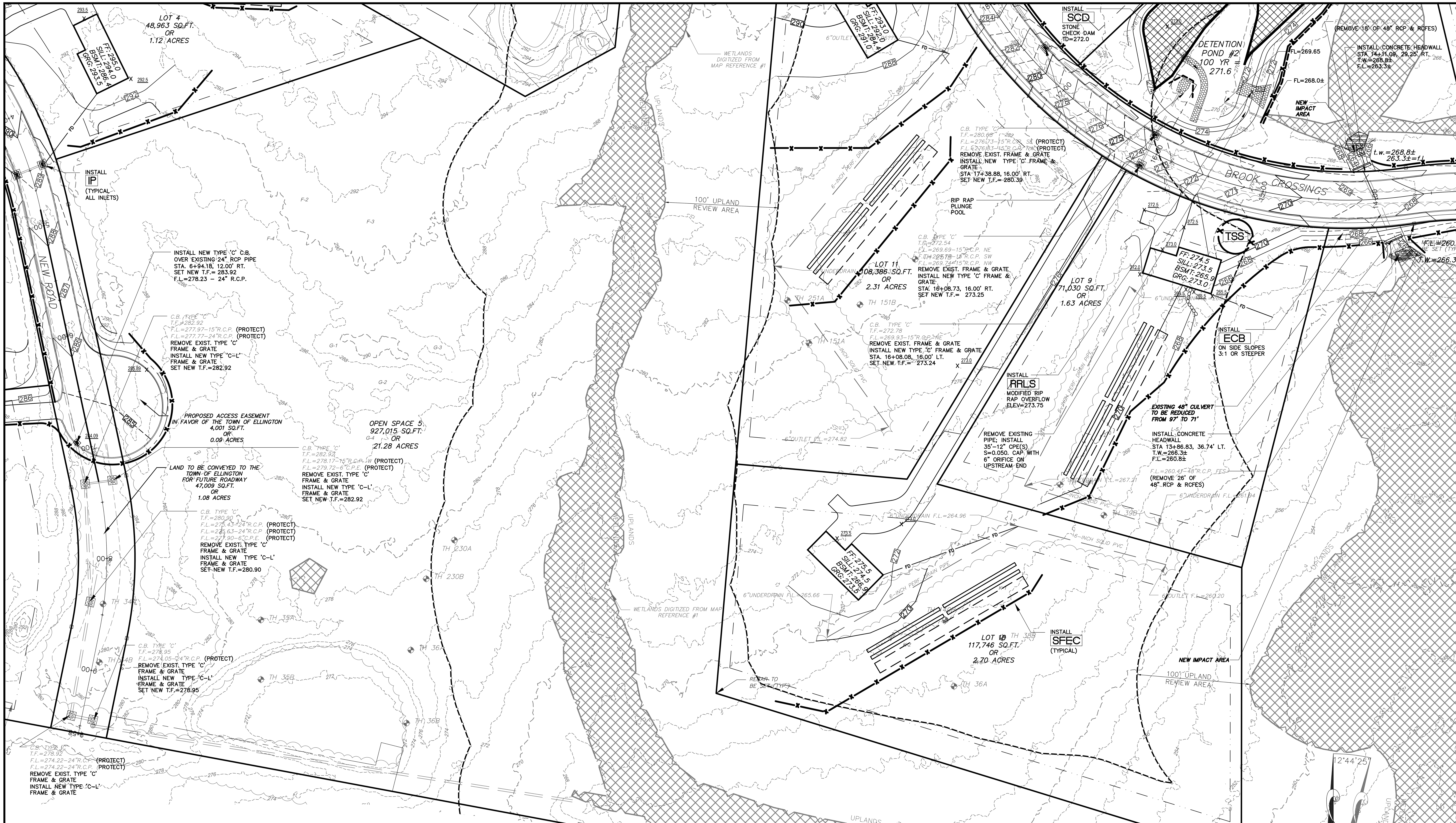
No.	Date	Description

GRADING PLAN AND SOIL EROSION & SEDIMENT CONTROL PLAN
PREPARED FOR
HIGHFIELD ESTATES – PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: 04–20–2021	Drawn by: DRT	Job no: 12162
Scale: 1" = 40'	Checked by: DSZ	Sheet no: 1 OF 5

GR-1

Q:\2012\12162–Highfield Estates\2021 wetlands and re–subd\2021–03–12\HIG SUBD GR 2021–03–12.dwg, GR–1, Apr. 22, 2021 – 7:23:16 AM



LEGEND

- = PROPOSED SPOT GRADE
- = PROPOSED ELEVATION CONTOUR
- = PROPOSED CONSTRUCTION EXIT (CE)
- = PROPOSED SEDIMENT FENCE EROSION CONTROL (SFEC)
- TSS = SEDIMENT FENCE AROUND TEMP. SOIL STOCKPILE (TSS)
- TST = TEMPORARY SEDIMENT TRAP (TST)
- TD = TEMPORARY DIVERSION (TD)
- = PROPOSED INLET PROTECTION –SILT SACK (IP)
- = PROPOSED STONE CHECK DAM (SCD)
- = PROPOSED RIP RAP LEVEL SPREADER (RRLS)
- = PROPOSED RIP RAP PLUNGE POOL (RRPP) OR CRUSHED STONE LINING
- = PROPOSED CATCH BASIN
- = PROPOSED MANHOLE
- = PROPOSED FLARED–END SECTION
- = PROPOSED STORM DRAIN CULVERT
- F.D. = PROPOSED FOOTING DRAIN
- = EXISTING ELEVATION CONTOUR
- = EXISTING SPOT GRADE

CURRENT WETLAND AREA

PROPOSED NEW WORK AREA

GENERAL EROSION AND SEDIMENT CONTROL NOTES

REFER TO SHEET GR–1 FOR COMPLETE NOTES

NOTE: THESE PLANS SHOW TEMPORARY EROSION AND SEDIMENTATION CONTROLS FOR THE CONSTRUCTION OF THE ROADS AND ASSOCIATED DRAINAGE AND UTILITIES. INDIVIDUAL PLOT PLANS, INCLUDING EROSION AND SEDIMENTATION CONTROLS, WILL BE REQUIRED FOR EACH LOT.

CONCEPT HOUSE LOCATION, GRADING AND CLEARING LIMIT SHOWN. FUTURE PLOT PLAN TO BE SUBMITTED FOR EACH LOT. (TYPICAL)

SEE SHEETS PP–1 THRU PP–3 FOR TOP–OF FRAME AND FLOW LINE/INVERT ELEVATIONS FOR ALL STORM DRAIN, SANITARY SEWER IMPROVEMENTS IN THE R.O.W., AND UTILITY NOTES

SEE SHEETS AC–1 THRU AC–7 FOR TOP SPECIFIC ACOE/CT DEEP PERMIT REQUIREMENTS.

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
www.fahesketh.com · mail@fahesketh.com
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects

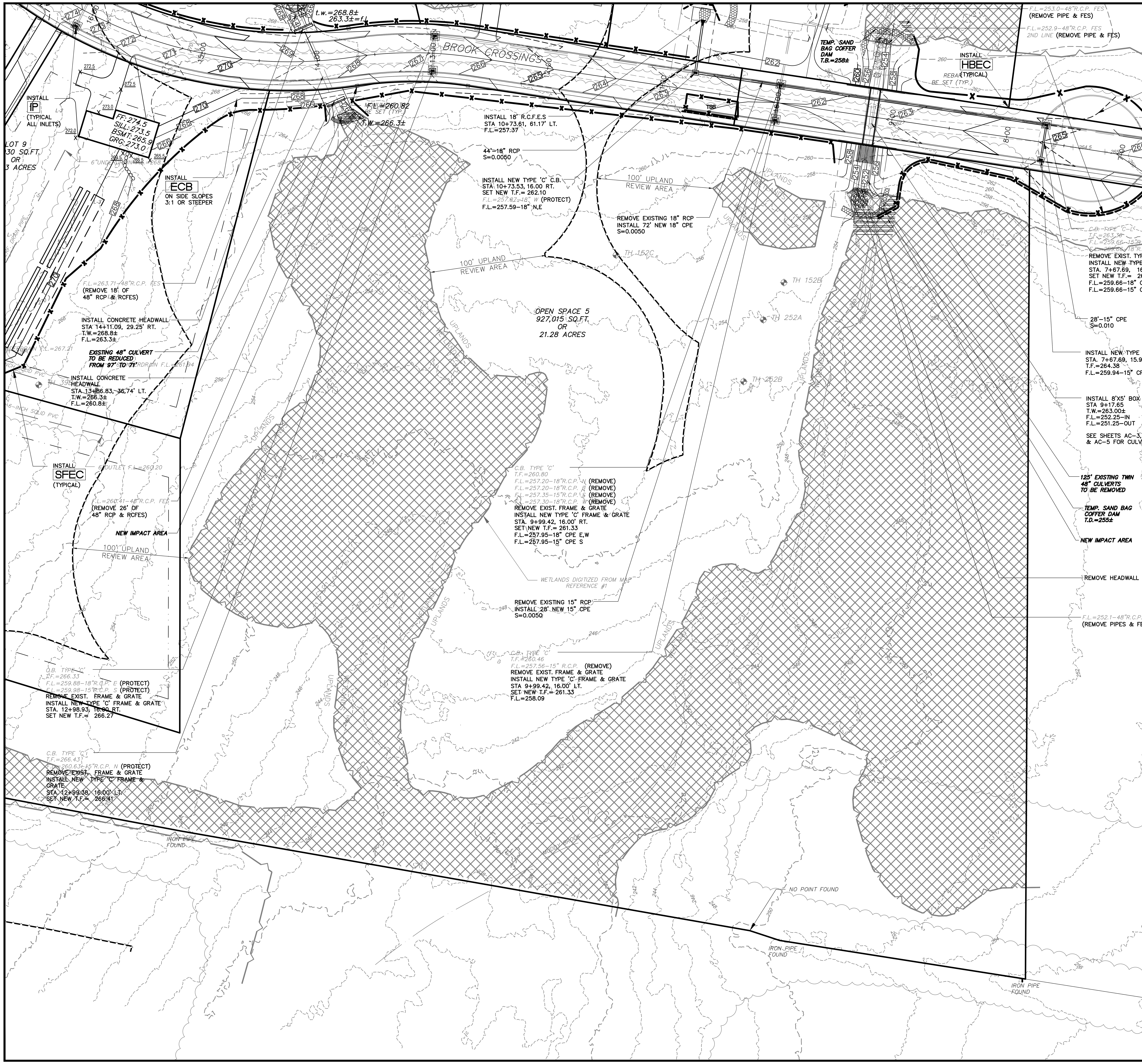
No.	Date	Description

Revisions:

GRADING PLAN AND SOIL EROSION & SEDIMENT CONTROL PLAN
PREPARED FOR
HIGHFIELD ESTATES – PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: 04-20-2021 | Drawn by: DRT | Job no: 12162
Scale: 1" = 40' | Checked by: DSZ | Sheet no: 2 OF 5

GR-2


BROOK CROSSINGS
INSTALL IP (TYPICAL ALL INLETS)
FF: 274.5
SILL: 273.5
BSMT: 265.9
GRG: 273.0
LOT 9
INSTALL ECB ON SIDE SLOPES 3:1 OR STEEPER
INSTALL 18" R.C.F.E.S STA 10+73.61, 61.17' LT. F.L.=257.37
44'-18" RCP S=0.0050
INSTALL NEW TYPE 'C' C.B. STA 10+73.53, 16.00' RT. SET NEW T.F.= 262.10
F.L.=257.59-18" N,E
100' UPLAND REVIEW AREA
REMOVE EXISTING 18" RCP INSTALL 72' NEW 18" CPE S=0.0050
OPEN SPACE 5
927,015 SQ.FT. OR 21.28 ACRES
TEMP. SAND BAG COFFER DAM T.B.=258±
INSTALL HBEC
REMOVE EXISTING PAVEMENT CREATING BULB AND CURBING. RESTORE WITH 6" TOPSOIL, SEED AND MULCH (TYP.)
SAWCUT & MATCH EXISTING PAVEMENT
CE
(REMOVE 18' OF 48" RCP & RCFES)
INSTALL CONCRETE HEADWALL STA 14+11.09, 29.25' RT. T.W.=268.8± F.L.=263.3±
EXISTING 48" CULVERT TO BE REDUCED FROM 97' TO 71'
INSTALL CONCRETE HEADWALL STA 13+86.83, 36.74' LT. T.W.=266.3± F.L.=260.8±
INSTALL SFEC (TYPICAL)
(REMOVE 26' OF 48" RCP & RCFES)
NEW IMPACT AREA
REMOVE EXIST. TYPE 'C-L' FRAME & GRATE INSTALL NEW TYPE 'C' FRAME & GRATE STA. 7+67.69, 16.10' RT. SET NEW T.F.= 264.38 F.L.=259.66-18" CPE W F.L.=259.66-15" CPE S
28'-15" CPE S=0.010
INSTALL NEW TYPE 'C' C.B. STA. 7+67.69, 15.90' LT. T.F.=264.38 F.L.=259.94-15" CPE
INSTALL 8'X5' BOX CULVERT STA 9+17.65 T.W.=263.00± F.L.=252.25-IN F.L.=251.25-OUT
SEE SHEETS AC-3, AC-4 & AC-5 FOR CULVERT DETAILS
125' EXISTING TWIN 48" CULVERTS TO BE REMOVED
TEMP. SAND BAG COFFER DAM T.D.=255±
NEW IMPACT AREA
REMOVE EXIST. FRAME & GRATE INSTALL NEW TYPE 'C' FRAME & GRATE STA. 9+99.42, 16.00' RT. SET NEW T.F.= 261.33 F.L.=257.95-18" CPE E,W F.L.=257.95-15" CPE S
WETLANDS DIGITIZED FROM MAP REFERENCE #1
REMOVE EXISTING 15" RCP INSTALL 28' NEW 15" CPE S=0.0050
REMOVE HEADWALL
(REMOVE PIPES & FES)
REMOVE EXIST. FRAME & GRATE INSTALL NEW TYPE 'C' FRAME & GRATE STA 9+99.42, 16.00' LT. SET NEW T.F.= 261.33 F.L.=258.09
REMOVE EXIST. FRAME & GRATE INSTALL NEW TYPE 'C' FRAME & GRATE STA. 12+98.93, 16.00' RT. SET NEW T.F.= 266.27
REMOVE EXIST. FRAME & GRATE INSTALL NEW TYPE 'C' FRAME & GRATE STA 12+99.38, 16.00' LT. SET NEW T.F.= 266.41
IRON PIPE FOUND
NO POINT FOUND

LEGEND

- = PROPOSED SPOT GRADE
- = PROPOSED ELEVATION CONTOUR
- = PROPOSED CONSTRUCTION EXIT (CE)
- = PROPOSED SEDIMENT FENCE EROSION CONTROL (SFEC)
- TSS = SEDIMENT FENCE AROUND TEMP. SOIL STOCKPILE (TSS)
- TST = TEMPORARY SEDIMENT TRAP (TST)
- TD = TEMPORARY DIVERSION (TD)
- = PROPOSED INLET PROTECTION -SILT SACK (IP)
- = PROPOSED STONE CHECK DAM (SCD)
- = PROPOSED RIP RAP LEVEL SPREADER (RRLS)
- = PROPOSED RIP RAP PLUNGE POOL (RRPP) OR CRUSHED STONE LINING
- = PROPOSED CATCH BASIN
- = PROPOSED MANHOLE
- = PROPOSED FLARED-END SECTION
- = PROPOSED STORM DRAIN CULVERT
- F.D. = PROPOSED FOOTING DRAIN
- = EXISTING ELEVATION CONTOUR
- = EXISTING SPOT GRADE

CURRENT WETLAND AREA

PROPOSED NEW WORK AREA

GENERAL EROSION AND SEDIMENT CONTROL NOTES

REFER TO SHEET GR-1 FOR COMPLETE NOTES

NOTE: THESE PLANS SHOW TEMPORARY EROSION AND SEDIMENTATION CONTROLS FOR THE CONSTRUCTION OF THE ROADS AND ASSOCIATED DRAINAGE AND UTILITIES. INDIVIDUAL PLOT PLANS, INCLUDING EROSION AND SEDIMENTATION CONTROLS, WILL BE REQUIRED FOR EACH LOT.

CONCEPT HOUSE LOCATION, GRADING AND CLEARING LIMIT SHOWN. FUTURE PLOT PLAN TO BE SUBMITTED FOR EACH LOT. (TYPICAL)

SEE SHEETS PP-1 THRU PP-3 FOR TOP-OF FRAME AND FLOW LINE/INVERT ELEVATIONS FOR ALL STORM DRAIN, SANITARY SEWER IMPROVEMENTS IN THE R.O.W., AND UTILITY NOTES

SEE SHEETS AC-1 THRU AC-7 FOR TOP SPECIFIC ACOE/CT DEEP PERMIT REQUIREMENTS.

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects
www.fahesketh.com · mail@fahesketh.com

Revisions:		
No.	Date	Description

GRADING PLAN AND SOIL EROSION & SEDIMENT CONTROL PLAN
PREPARED FOR
HIGHFIELD ESTATES – PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: 04-20-2021	Drawn by: DRT	Job no: 12162
Scale: 1" = 40'	Checked by: DSZ	Sheet no: 3 OF 5

GR-3

G:\2012\12162-Highfield Estates\2021 wetlands and re-subd\2021-03-12\HIG SUBD GR 2021-03-12.dwg, GR-3, Apr. 22, 2021 - 7:23:25 AM

LEGEND

- X 100.00 = PROPOSED SPOT GRADE
- 100 = PROPOSED ELEVATION CONTOUR
- = PROPOSED CONSTRUCTION EXIT (CE)
- = PROPOSED SEDIMENT FENCE EROSION CONTROL (SFEC)
- TSS = SEDIMENT FENCE AROUND TEMP. SOIL STOCKPILE (TSS)
- TST = TEMPORARY SEDIMENT TRAP (TST)
- TD = TEMPORARY DIVERSION (TD)
- = PROPOSED INLET PROTECTION –SILT SACK (IP)
- = PROPOSED STONE CHECK DAM (SCD)
- = PROPOSED RIP RAP LEVEL SPREADER (RRLS)
- = PROPOSED RIP RAP PLUNGE POOL (RRPP) OR CRUSHED STONE LINING
- = PROPOSED CATCH BASIN
- = PROPOSED MANHOLE
- = PROPOSED FLARED–END SECTION
- = PROPOSED STORM DRAIN CULVERT
- F.D. = PROPOSED FOOTING DRAIN
- 100 = EXISTING ELEVATION CONTOUR
- X 100.0 = EXISTING SPOT GRADE

GENERAL EROSION AND SEDIMENT CONTROL NOTES

REFER TO SHEET GR–1 FOR COMPLETE NOTES

NOTE: THESE PLANS SHOW TEMPORARY EROSION AND SEDIMENTATION CONTROLS FOR THE CONSTRUCTION OF THE ROADS AND ASSOCIATED DRAINAGE AND UTILITIES. INDIVIDUAL PLOT PLANS, INCLUDING EROSION AND SEDIMENTATION CONTROLS, WILL BE REQUIRED FOR EACH LOT.

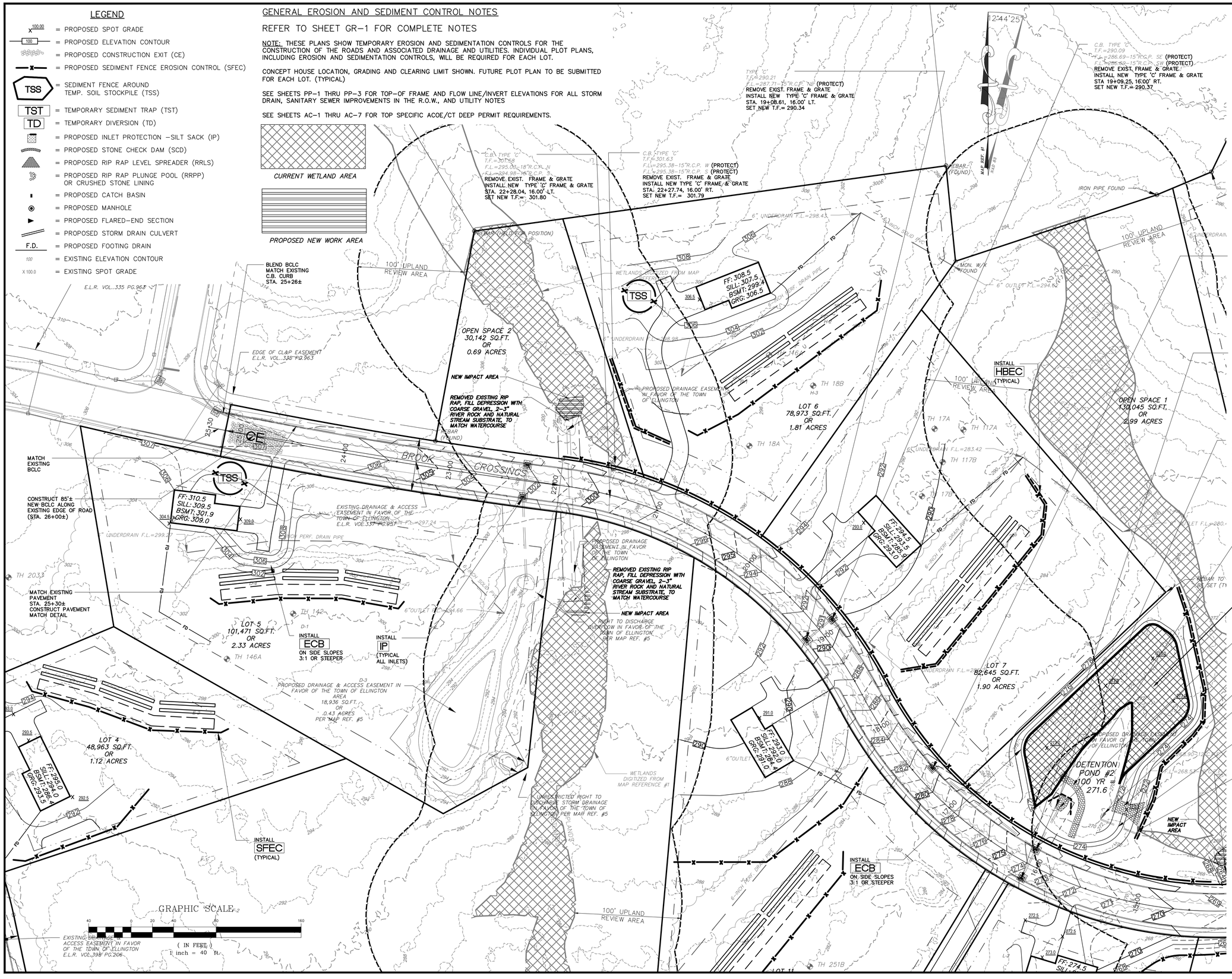
CONCEPT HOUSE LOCATION, GRADING AND CLEARING LIMIT SHOWN. FUTURE PLOT PLAN TO BE SUBMITTED FOR EACH LOT. (TYPICAL)

SEE SHEETS PP–1 THRU PP–3 FOR TOP–OF FRAME AND FLOW LINE/INVERT ELEVATIONS FOR ALL STORM DRAIN, SANITARY SEWER IMPROVEMENTS IN THE R.O.W., AND UTILITY NOTES

SEE SHEETS AC–1 THRU AC–7 FOR TOP SPECIFIC ACOE/CT DEEP PERMIT REQUIREMENTS.

CURRENT WETLAND AREA

PROPOSED NEW WORK AREA



F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
www.fahesketh.com - mail@fahesketh.com
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects

Revisions:

No.	Date	Description

GRADING PLAN AND SOIL EROSION & SEDIMENT CONTROL PLAN

PREPARED FOR

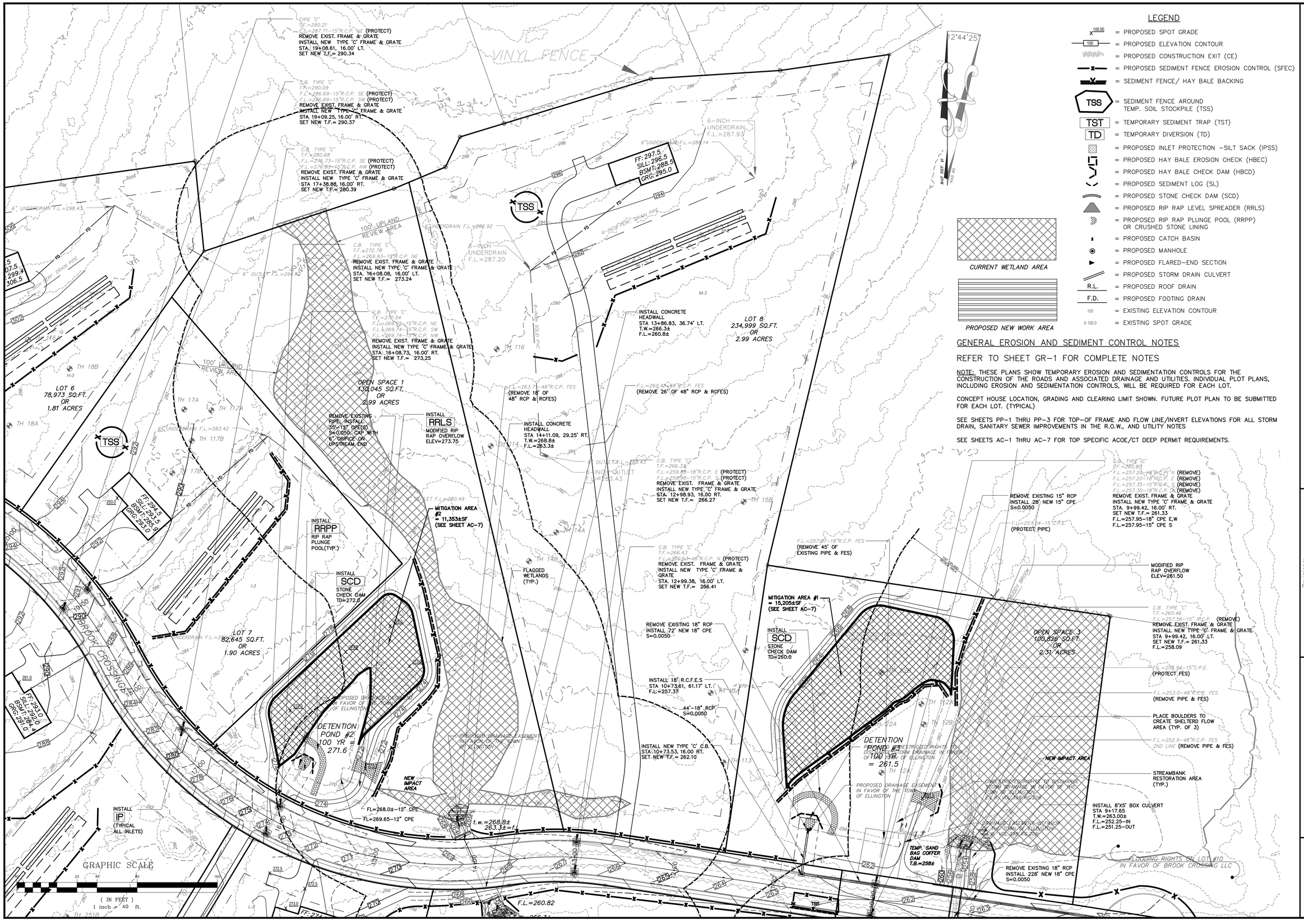
HIGHFIELD ESTATES – PHASE IV

BROOK CROSSING
ELLINGTON, CT

Date: 04–20–2021 | Drawn by: DRT | Job no: 12162 | Sheet no: 4 OF 5
Scale: 1" = 40' | Checked by: DSZ

GR–4

G:\2012\12162–Highfield Estates\2021 wetlands and re–subs\2021–03–12\VHG SUBD GR 2021–03–12.dwg, GR–4, Apr. 22, 2021 – 7:23:30 AM



LEGEND

x 100.00	= PROPOSED SPOT GRADE
100	= PROPOSED ELEVATION CONTOUR
⁘	= PROPOSED CONSTRUCTION EXIT (CE)
—x—	= PROPOSED SEDIMENT FENCE EROSION CONTROL (SFEC)
═X═	= SEDIMENT FENCE/ HAY BALE BACKING
TSS	= SEDIMENT FENCE AROUND TEMP. SOIL STOCKPILE (TSS)
TST	= TEMPORARY SEDIMENT TRAP (TST)
TD	= TEMPORARY DIVERSION (TD)
▨	= PROPOSED INLET PROTECTION –SILT SACK (IPSS)
	= PROPOSED HAY BALE EROSION CHECK (HBEC)
	= PROPOSED HAY BALE CHECK DAM (HBCD)
	= PROPOSED SEDIMENT LOG (SL)
	= PROPOSED STONE CHECK DAM (SCD)
▲	= PROPOSED RIP RAP LEVEL SPREADER (RRLS)
	= PROPOSED RIP RAP PLUNGE POOL (RRPP) OR CRUSHED STONE LINING
▪	= PROPOSED CATCH BASIN
◉	= PROPOSED MANHOLE
▶	= PROPOSED FLARED–END SECTION
//	= PROPOSED STORM DRAIN CULVERT
R.L.	= PROPOSED ROOF DRAIN
F.D.	= PROPOSED FOOTING DRAIN
100	= EXISTING ELEVATION CONTOUR
X 100.0	= EXISTING SPOT GRADE

▨ CURRENT WETLAND AREA

▤ PROPOSED NEW WORK AREA

GENERAL EROSION AND SEDIMENT CONTROL NOTES

REFER TO SHEET GR–1 FOR COMPLETE NOTES

NOTE: THESE PLANS SHOW TEMPORARY EROSION AND SEDIMENTATION CONTROLS FOR THE CONSTRUCTION OF THE ROADS AND ASSOCIATED DRAINAGE AND UTILITIES. INDIVIDUAL PLOT PLANS, INCLUDING EROSION AND SEDIMENTATION CONTROLS, WILL BE REQUIRED FOR EACH LOT.

CONCEPT HOUSE LOCATION, GRADING AND CLEARING LIMIT SHOWN. FUTURE PLOT PLAN TO BE SUBMITTED FOR EACH LOT. (TYPICAL)

SEE SHEETS PP–1 THRU PP–3 FOR TOP–OF FRAME AND FLOW LINE/INVERT ELEVATIONS FOR ALL STORM DRAIN, SANITARY SEWER IMPROVEMENTS IN THE R.O.W., AND UTILITY NOTES

SEE SHEETS AC–1 THRU AC–7 FOR TOP SPECIFIC ACOE/CT DEEP PERMIT REQUIREMENTS.

FAH
F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
· Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects www.fahesketh.com · mail@fahesketh.com

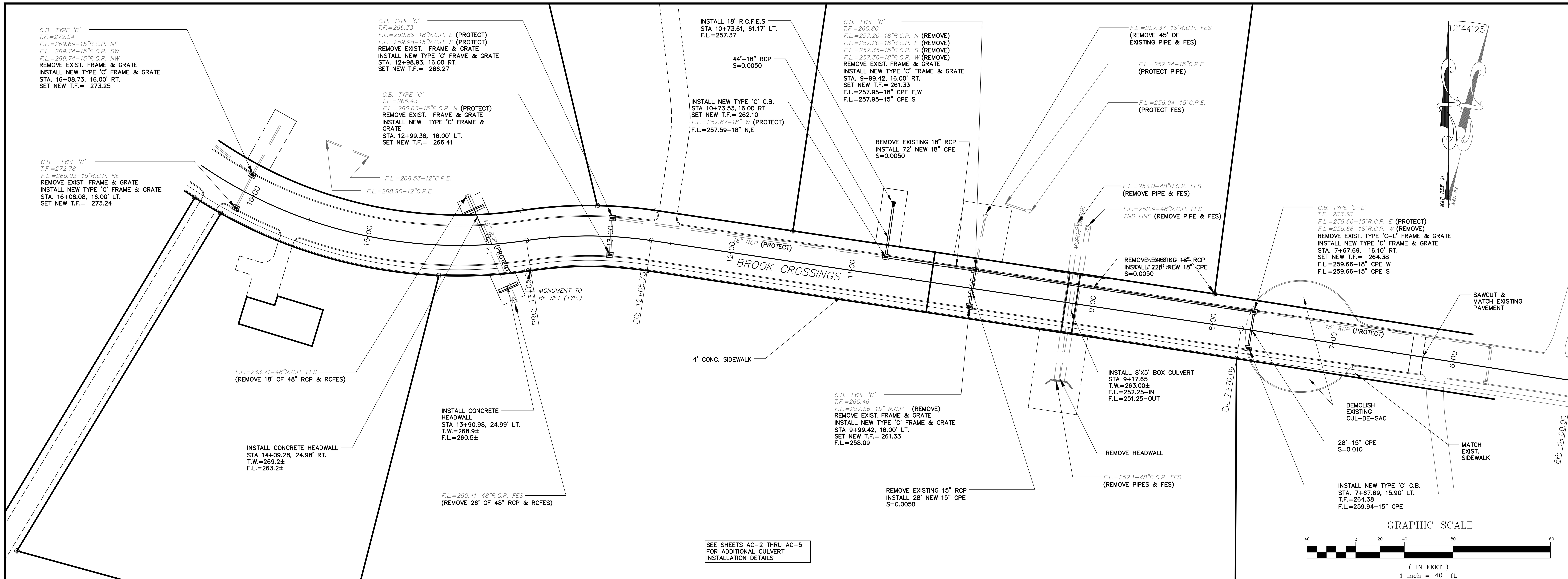
Revisions:		
No.	Date	Description

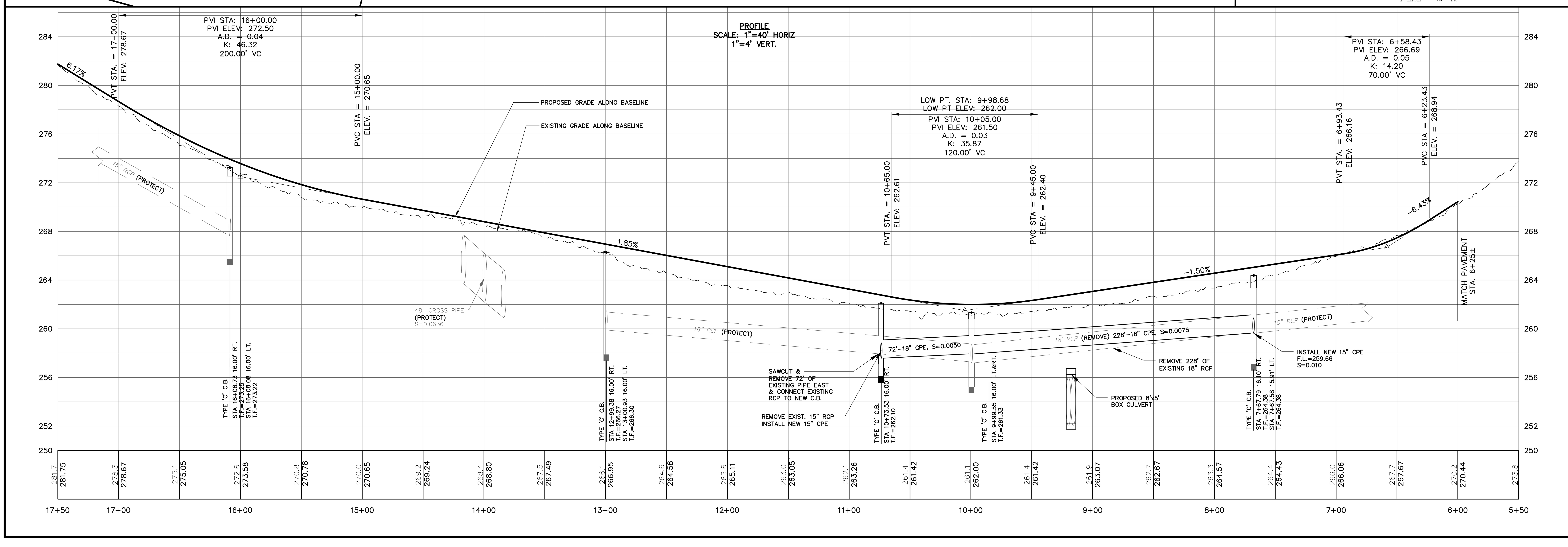
GRADING PLAN AND SOIL EROSION
& SEDIMENT CONTROL PLAN
PREPARED FOR
HIGHFIELD ESTATES – PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: 04–20–2021	Drawn by: DRT	Job no: 12162
Scale: 1" = 40'	Checked by: DSZ	Sheet no: 5 OF 5

GR-5

Q:\2012\12162–Highfield Estates\2021 wetlands and re–subd\2021–03–12\HIG SUBD GR 2021–03–12.dwg, GR–5, Apr. 22, 2021 – 7:23:35 AM


C.B. TYPE 'C'
T.F.=272.54
F.L.=269.69–15"R.C.P. NE
F.L.=269.74–15"R.C.P. SW
F.L.=269.74–15"R.C.P. NW
REMOVE EXIST. FRAME & GRATE
INSTALL NEW TYPE 'C' FRAME & GRATE
STA. 16+08.73, 16.00' RT.
SET NEW T.F.= 273.25
C.B. TYPE 'C'
T.F.=272.78
F.L.=269.93–15"R.C.P. NE
REMOVE EXIST. FRAME & GRATE
INSTALL NEW TYPE 'C' FRAME & GRATE
STA. 16+08.08, 16.00' LT.
SET NEW T.F.= 273.24
C.B. TYPE 'C'
T.F.=266.33
F.L.=259.88–18"R.C.P. E (PROTECT)
F.L.=259.98–15"R.C.P. S (PROTECT)
REMOVE EXIST. FRAME & GRATE
INSTALL NEW TYPE 'C' FRAME & GRATE
STA. 12+98.93, 16.00 RT.
SET NEW T.F.= 266.27
C.B. TYPE 'C'
T.F.=266.43
F.L.=260.63–15"R.C.P. N (PROTECT)
REMOVE EXIST. FRAME & GRATE
INSTALL NEW TYPE 'C' FRAME & GRATE
STA. 12+99.38, 16.00' LT.
SET NEW T.F.= 266.41
F.L.=268.53–12"C.P.E.
F.L.=268.90–12"C.P.E.
INSTALL 18' R.C.F.E.S
STA 10+73.61, 61.17' LT.
F.L.=257.37
44'–18" RCP
S=0.0050
INSTALL NEW TYPE 'C' C.B.
STA 10+73.53, 16.00 RT.
SET NEW T.F.= 262.10
F.L.=257.87–18" W (PROTECT)
F.L.=257.59–18" N,E
C.B. TYPE 'C'
T.F.=260.80
F.L.=257.20–18"R.C.P. N (REMOVE)
F.L.=257.20–18"R.C.P. E (REMOVE)
F.L.=257.35–15"R.C.P. S (REMOVE)
F.L.=257.30–18"R.C.P. W (REMOVE)
REMOVE EXIST. FRAME & GRATE
INSTALL NEW TYPE 'C' FRAME & GRATE
STA. 9+99.42, 16.00' RT.
SET NEW T.F.= 261.33
F.L.=257.95–18" CPE E,W
F.L.=257.95–15" CPE S
REMOVE EXISTING 18" RCP
INSTALL 72' NEW 18" CPE
S=0.0050
F.L.=257.37–18"R.C.P. FES
(REMOVE 45' OF EXISTING PIPE & FES)
F.L.=257.24–15"C.P.E.
(PROTECT PIPE)
F.L.=256.94–15"C.P.E.
(PROTECT FES)
F.L.=253.0–48"R.C.P. FES
(REMOVE PIPE & FES)
F.L.=252.9–48"R.C.P. FES
2ND LINE (REMOVE PIPE & FES)
C.B. TYPE 'C–L'
T.F.=263.36
F.L.=259.66–15"R.C.P. E (PROTECT)
F.L.=259.66–18"R.C.P. W (REMOVE)
REMOVE EXIST. TYPE 'C–L' FRAME & GRATE
INSTALL NEW TYPE 'C' FRAME & GRATE
STA. 7+67.69, 16.10' RT.
SET NEW T.F.= 264.38
F.L.=259.66–18" CPE W
F.L.=259.66–15" CPE S
12°44'25"
BROOK CROSSINGS
18" RCP (PROTECT)
15" RCP (PROTECT)
MONUMENT TO BE SET (TYP.)
PRC 13+76
PC 12+65.75
PI 7+76.09
BP 5+00.00
REMOVE EXISTING 18" RCP
INSTALL 228' NEW 18" CPE
S=0.0050
SAWCUT & MATCH EXISTING PAVEMENT
F.L.=263.71–48"R.C.P. FES
(REMOVE 18' OF 48" RCP & RCFES)
4' CONC. SIDEWALK
INSTALL 8'X5' BOX CULVERT
STA 9+17.65
T.W.=263.00±
F.L.=252.25–IN
F.L.=251.25–OUT
DEMOLISH EXISTING CUL-DE-SAC
28'–15" CPE
S=0.010
MATCH EXIST. SIDEWALK
INSTALL CONCRETE HEADWALL
STA 13+90.98, 24.99' LT.
T.W.=268.9±
F.L.=260.5±
INSTALL CONCRETE HEADWALL
STA 14+09.28, 24.98' RT.
T.W.=269.2±
F.L.=263.2±
C.B. TYPE 'C'
T.F.=260.46
F.L.=257.56–15" R.C.P. (REMOVE)
REMOVE EXIST. FRAME & GRATE
INSTALL NEW TYPE 'C' FRAME & GRATE
STA 9+99.42, 16.00' LT.
SET NEW T.F.= 261.33
F.L.=258.09
REMOVE HEADWALL
F.L.=252.1–48"R.C.P. FES
(REMOVE PIPES & FES)
INSTALL NEW TYPE 'C' C.B.
STA. 7+67.69, 15.90' LT.
T.F.=264.38
F.L.=259.94–15" CPE
REMOVE EXISTING 15" RCP
INSTALL 28' NEW 15" CPE
S=0.0050
F.L.=260.41–48"R.C.P. FES
(REMOVE 26' OF 48" RCP & RCFES)
SEE SHEETS AC–2 THRU AC–5 FOR ADDITIONAL CULVERT INSTALLATION DETAILS
GRAPHIC SCALE
40 0 20 40 80 160
(IN FEET)
1 inch = 40 ft.


PROFILE
SCALE: 1"=40' HORIZ
1"=4' VERT.
PVI STA: 16+00.00
PVI ELEV: 272.50
A.D. = 0.04
K: 46.32
200.00' VC
PVT STA = 17+00.00
ELEV. 278.67
PVC STA = 15+00.00
ELEV. 270.65
6.17%
1.85%
-1.50%
-6.43%
PROPOSED GRADE ALONG BASELINE
EXISTING GRADE ALONG BASELINE
15" RCP (PROTECT)
48" CROSS PIPE (PROTECT) S=0.0636
18" RCP (PROTECT)
LOW PT. STA: 9+98.68
LOW PT ELEV: 262.00
PVI STA: 10+05.00
PVI ELEV: 261.50
A.D. = 0.03
K: 35.87
120.00' VC
PVT STA. = 10+65.00
ELEV. 262.61
PVC STA. = 9+45.00
ELEV. = 262.40
PVI STA: 6+58.43
PVI ELEV: 266.69
A.D. = 0.05
K: 14.20
70.00' VC
PVT STA. = 6+93.43
ELEV. 266.16
PVC STA = 6+23.43
ELEV. = 268.94
MATCH PAVEMENT STA. 6+25±
72'–18" CPE, S=0.0050
18" RCP (REMOVE) 228'–18" CPE, S=0.0075
15" RCP (PROTECT)
SAWCUT & REMOVE 72' OF EXISTING PIPE EAST & CONNECT EXISTING RCP TO NEW C.B.
REMOVE EXIST. 15" RCP
INSTALL NEW 15" CPE
REMOVE 228' OF EXISTING 18" RCP
INSTALL NEW 15" CPE
F.L.=259.66
S=0.010
PROPOSED 8'x5' BOX CULVERT
TYPE 'C' C.B. STA 16+08.73 16.00' RT. T.F.=273.25 STA 16+08.08 16.00' LT. T.F.=273.22
TYPE 'C' C.B. STA 12+99.38 16.00' RT. T.F.=266.27 STA 13+00.93 16.00' LT. T.F.=266.30
TYPE 'C' C.B. STA 10+73.53 16.00' RT. T.F.=262.10
TYPE 'C' C.B. STA 9+99.55 16.00' LT.&RT. T.F.=261.33
TYPE 'C' C.B. STA 7+67.79 16.10' RT. T.F.=264.78 STA 7+67.58 15.91' LT. T.F.=264.38
284 280 276 272 268 264 260 256 252 250
281.7 281.75
278.3 278.67
275.1 275.05
272.6 273.58
270.8 270.78
270.0 270.65
269.2 269.24
268.4 268.80
267.5 267.49
266.1 266.95
264.6 264.58
263.6 265.11
263.0 263.05
262.1 263.26
261.4 261.42
261.1 262.00
261.4 261.42
261.9 263.07
262.7 262.67
263.3 264.57
264.4 264.43
266.0 266.06
267.7 267.67
270.2 270.44
273.8
17+50 17+00 16+00 15+00 14+00 13+00 12+00 11+00 10+00 9+00 8+00 7+00 6+00 5+50

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
www.fahesketh.com • mail@fahesketh.com
Civil & Traffic Engineers • Surveyors • Planners • Landscape Architects

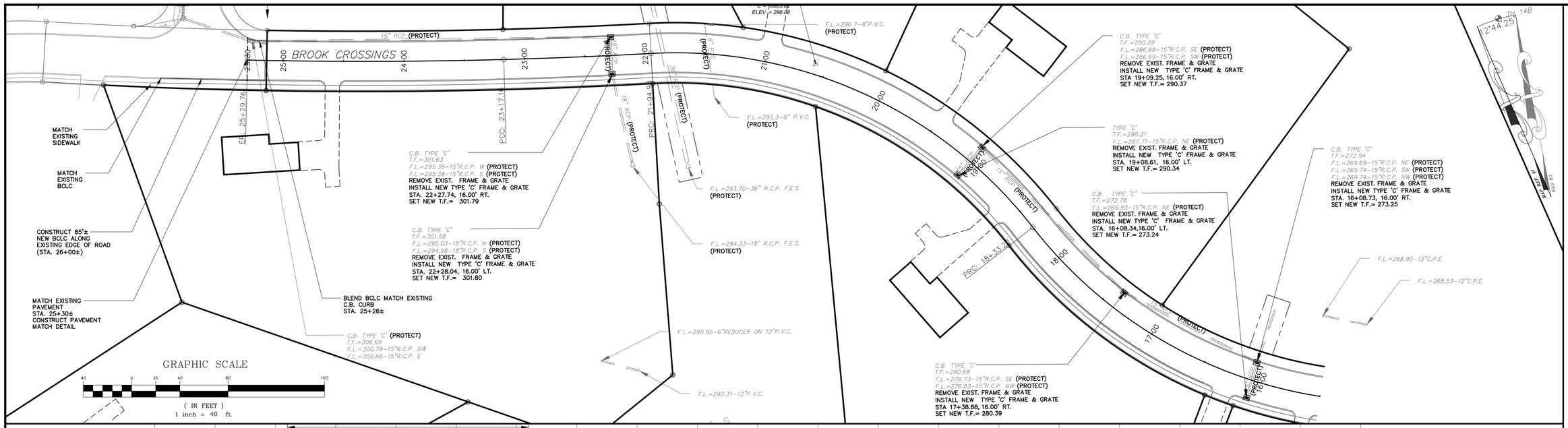
No.	Date	Revisions: Description

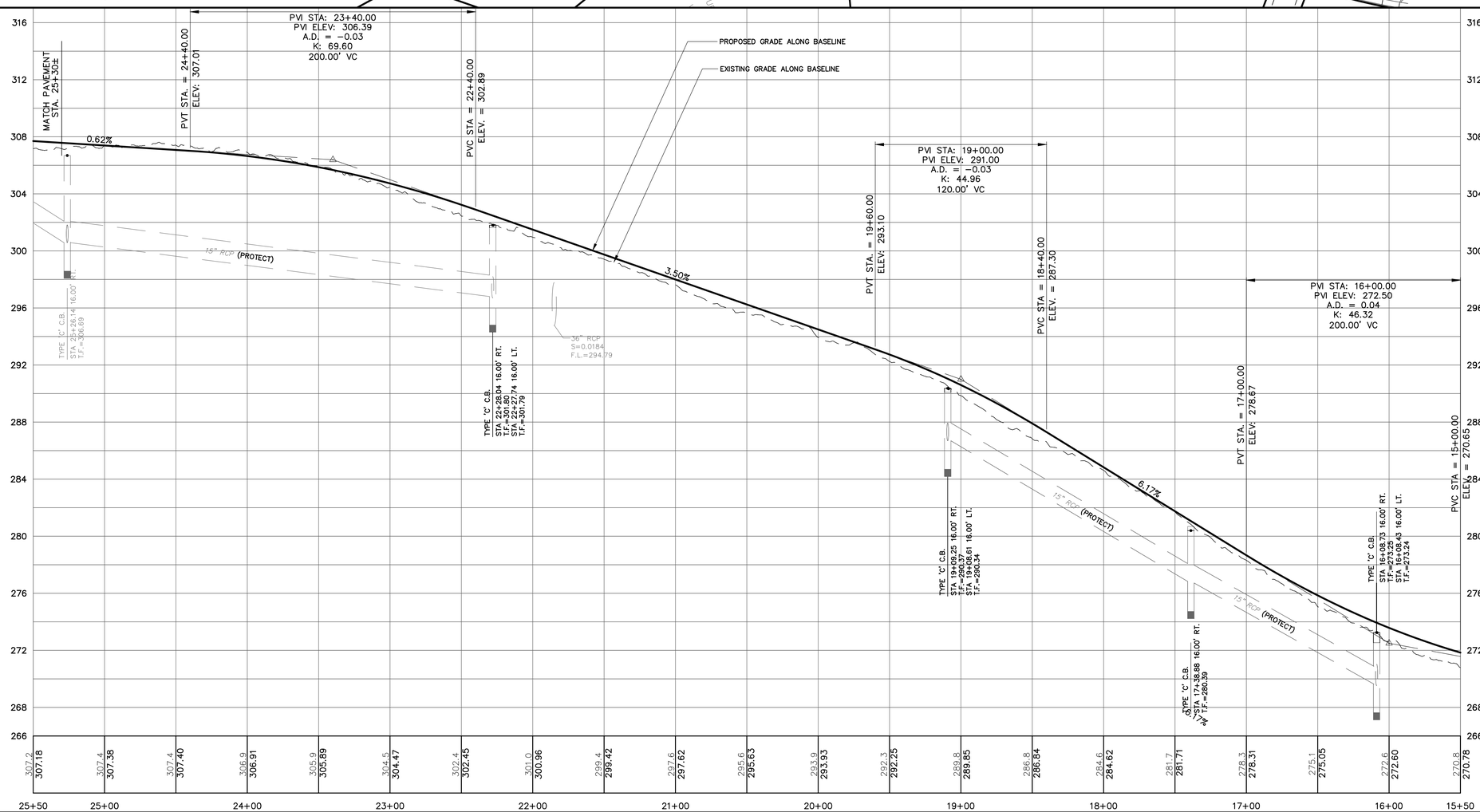
PLAN AND PROFILE
PREPARED FOR
HIGHFIELD ESTATES – PHASE IV
BROOK CROSSING
ELLINGTON, CT

Date: 04-20-2021 | Drawn by: DRT | Job no: 12162
Scale: 1" = 40' | Checked by: DSZ | Sheet no: 1 OF 3

PP-1

G:\2012\12162-Highfield Estates\2021 wetlands and re-subd\2021-03-12\HIG SUBD PP 2021-03-25.dwg, PP-1, Apr. 22, 2021 – 7:28:44 AM





PROFILE
SCALE: 1"=40' HORIZ
1"=4' VERT.

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects
www.fahesketh.com · mail@fahesketh.com

Revisions:

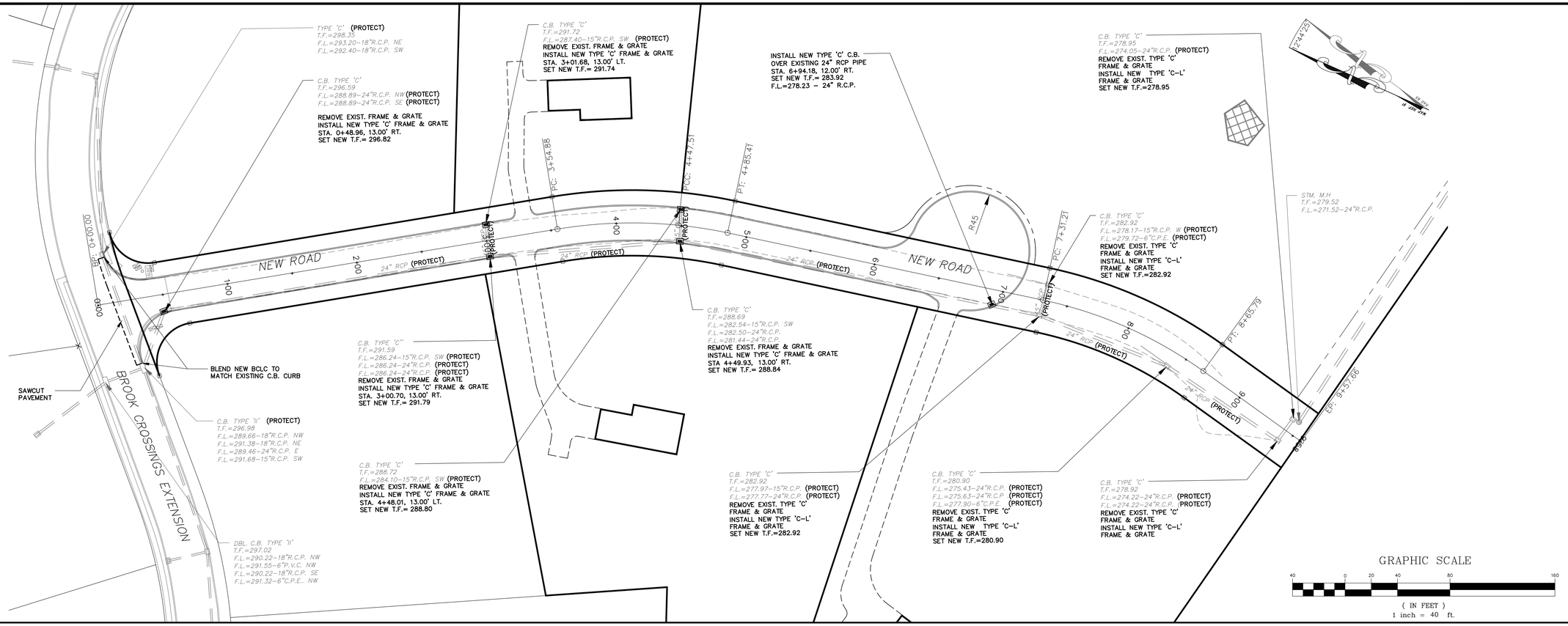
No.	Date	Description

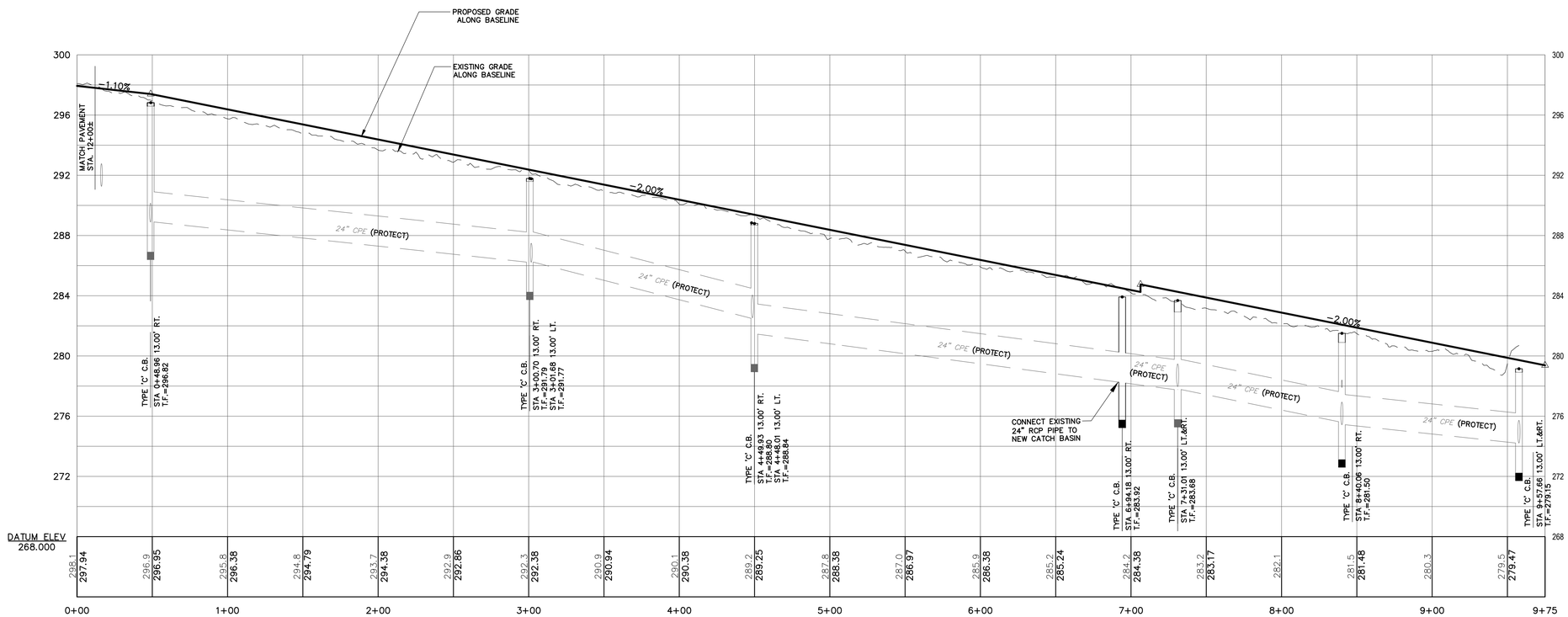
PLAN AND PROFILE
PREPARED FOR:
HIGHFIELD ESTATES – PHASE IV
BROOK CROSSING
ELLINGTON, CT

Job no: 12162 | Sheet no: 2 OF 3
Drawn by: DRT | Checked by: DSZ
Date: 04-20-2021 | Scale: 1" = 40'

PP-2

G:\2012\12162-Highfield Estates\2021 wetlands and re-subs\2021-03-12\HIG SUBD PP 2021-03-25.dwg, PP-2, Apr 22, 2021 - 7:27:37 AM





PROFILE
SCALE: 1"=40' HORIZ
1"=4' VERT.

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects
www.fahesketh.com - mail@fahesketh.com

Revisions:

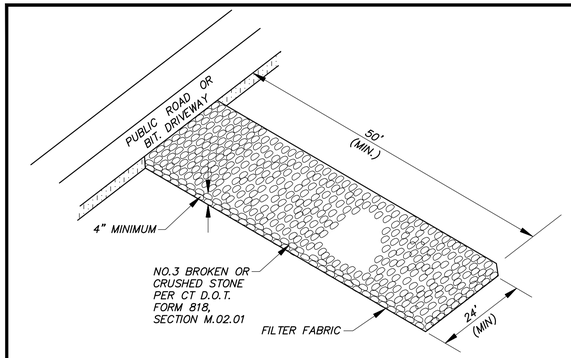
No.	Date	Description

PLAN AND PROFILE
PREPARED FOR:
HIGHFIELD ESTATES – PHASE IV
NEW ROAD
ELLINGTON, CT

Date: 04-20-2021 | Drawn by: DRT | Job no: 12162
Scale: 1" = 40' | Checked by: DSZ | Sheet no: 3 OF 4

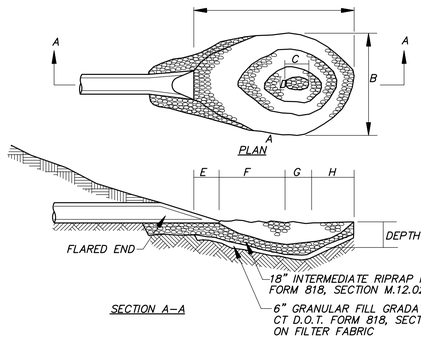
PP-3

G:\2012\12162-Highfield Estates\2021 wetlands and re-subs\2021-03-12\HIS SUBD PP 2021-03-25.dwg, PP-3, Apr 20, 2021 - 1:28:28 PM



CONSTRUCTION EXIT (CE)

N.T.S.

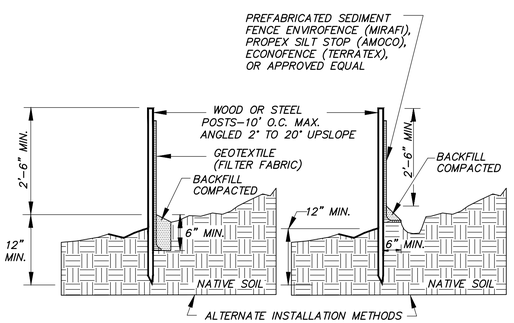


SECTION A–A

PIPE SIZE	A	B	C	D	E	F	G	H	WT. RIPRAP TONS.	DEPTH
12"	8'	6'	1 1/2'	1'	1'	3 1/2'	1 1/2'	2'	4.5	1'–0"
15"	10'	7'	1 1/2'	1'	1'	4 1/2'	1 1/2'	3'	6	1'–0"
18"	12'	8'	2'	1'	1'	5'	2'	4'	8	1'–4"
21"	15'	9'	2 1/2'	1 1/2'	1'	7'	2 1/2'	4 1/2'	12	1'–6"
24"	17'	10'	2 1/2'	1 1/2'	1'	8'	2 1/2'	5 1/2'	15	1'–10"

RIPRAP PLUNGE POOL (RRPP)

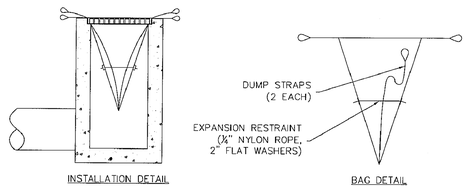
N.T.S.

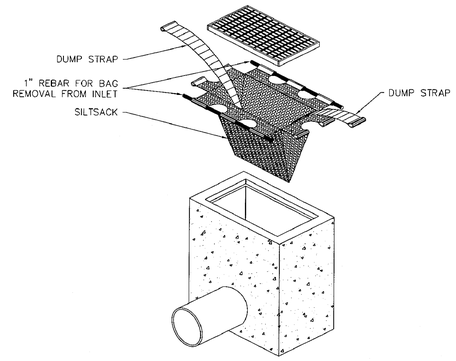


NOTE:
1. WOOD POSTS SHALL BE HARDWOOD 1 1/2" x 1 1/2" x 48" MIN. STEEL POST SHALL BE A MINIMUM OF 0.5 POUNDS PER LINEAR FOOT X 48".
2. JOINTS, WHEN REQUIRED, SHALL BE SPLICED & SECURELY SEALED TOGETHER, AT POST LOCATIONS ONLY, WITH A MINIMUM 6" OVERLAP.

SEDIMENT FENCE EROSION CONTROL (SFEC)

N.T.S.

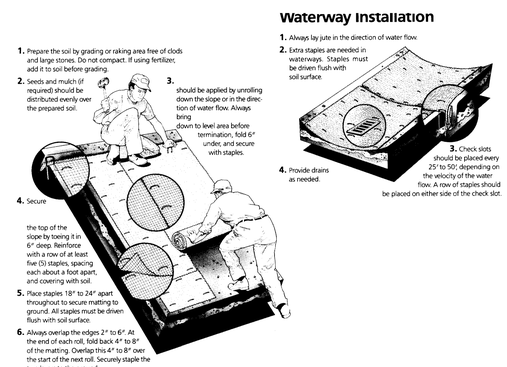




1. INSTALL AND MAINTAIN IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

INLET PROTECTION (IP) [SILT SACK INSERT]

N.T.S.



Specifications

Property	Results
Fabric structure	Woven
Yarn	Jute, undyed and unbleached
Fabric width	48"
Weight	92 lbs./yd²*
Yarn count-Warp	78 per width, minimum
Weft	42 per linear yard, minimum
Water Absorption	>450% of fabric weight
Open Area	60-65%
Durability	1-2 years
Coverage	approximately 50 rolls per acre. (using 100 yd² rolls)

*Smolder treatment adds approximately .05 lb./yd²

Staples

Type
11 gauge 6"
8 gauge 6"
8 gauge 8"

Typical usage: Approximately 200 staples per roll.

Roll Packaging Available in regular and smolder resistant treated rolls. (Call or write for current product data sheet on smolder resistant fabric)

Width x length	Type	Sq. Yards	Weight
48" x 225'	Regular	100	92 lbs.
48" x 225'	Smolder-resistant	100	97 lbs.
48" x 147'	UPS size roll	65	60 lbs.

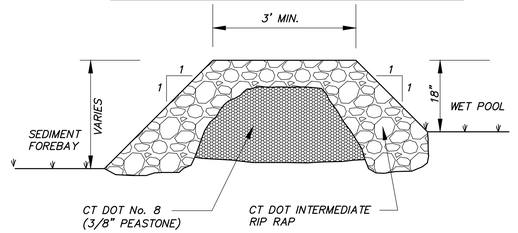
NOTES:
1. MUST BE CERTIFIED WEED FREE.

1. USE ANTI–WASH/GEOJUTE PRODUCT OR APPROVED EQUAL

EROSION CONTROL BLANKET (ECB)

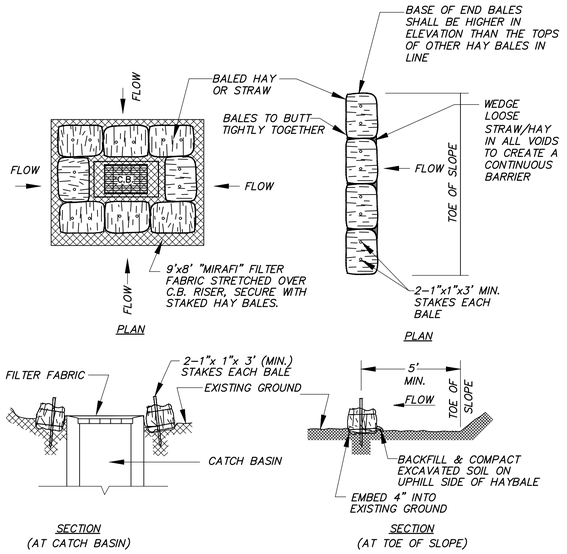
N.T.S.

NOTES:
1. INSTALL BETWEEN SEDIMENT FOREBAY AND WET POOL IN ALL WATER QUALITY BASINS.



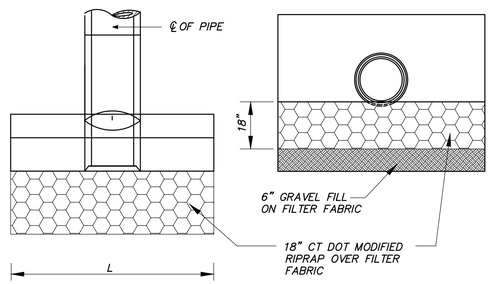
STONE CHECK DAM (SCD)

N.T.S.



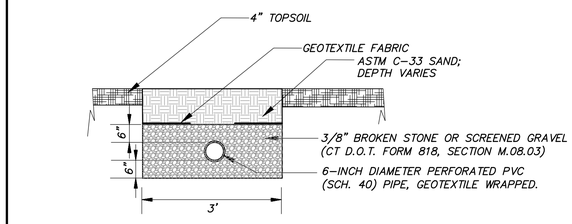
HAYBALE EROSION CONTROL (HBEC)

N.T.S.



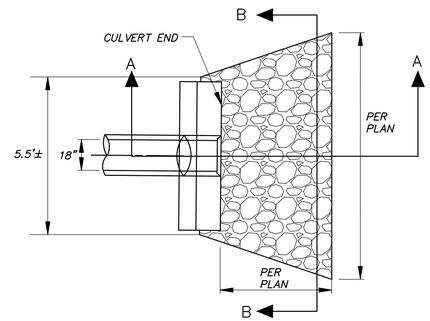
CONCRETE HEADWALL RIPRAP INLET PROTECTION (RRIP)

N.T.S.

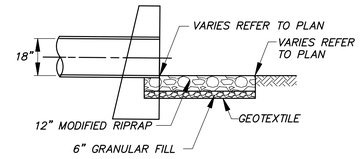


6–INCH PERFORATED UNDERDRAIN SECTION

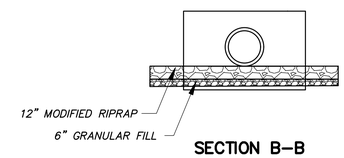
N.T.S.



PLAN VIEW



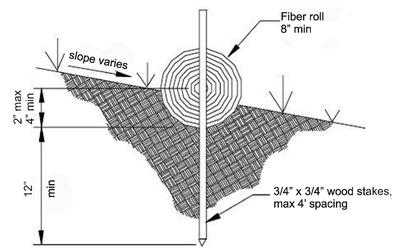
SECTION A–A



SECTION B–B

OUTLET LEVEL SPREADER

N.T.S.



NOTES:
1. USE SEDIMENT LOG BY AMERICAN EXCELSIOR, OR APPROVED EQUAL
2. MUST BE CERTIFIED WEED FREE.

SEDIMENT LOG SECTION

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects
www.faheskteth.com · mail@fahesketh.com

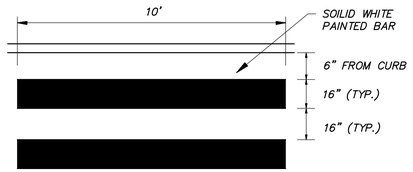
Revisions:

No.	Date	Description

SITE DETAILS
PREPARED FOR
HIGHFIELD ESTATES – PHASE IV
BROOK CROSSING
ELLINGTON, CT

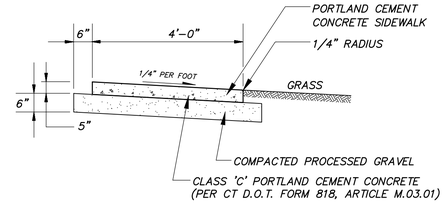
Job no: 12162 | Sheet no: 1 OF 3
Drawn by: DRT | Checked by: DSZ
Date: 04–20–2021 | Scale: 1" = 40'

SD–1

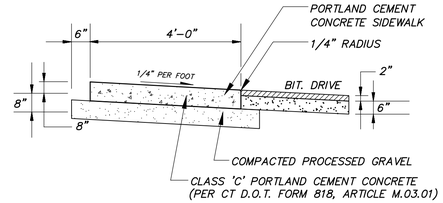


PAINTED PEDESTRIAN CROSSWALK

N.T.S.

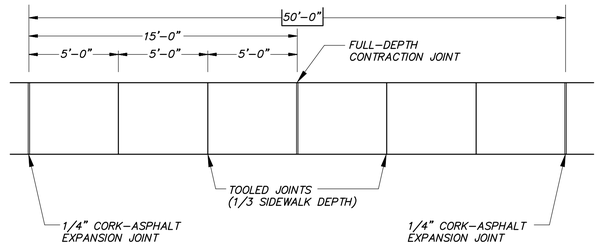


CONCRETE SIDEWALK – STANDARD SECTION



CONCRETE SIDEWALK – SECTION AT DRIVEWAYS

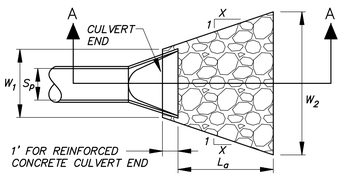
EXPANSION JOINTS AT 20 FT. O.C.
DUMMY JOINTS AT 5 FT. O.C.
UNLESS OTHERWISE SPECIFIED



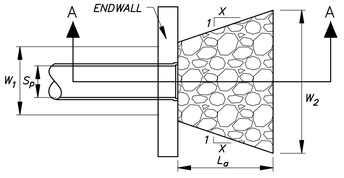
EXPANSION/CONTRACTION JOINT PLAN

SIDEWALK DETAILS

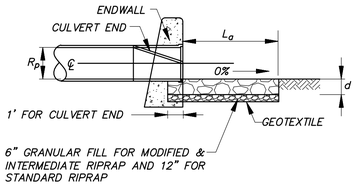
N.T.S.



CULVERT END PLAN VIEW



END WALL PLAN VIEW



SECTION A–A CULVERT END AND END WALL

LEGEND

S_P { MAX. INSIDE PIPE SPAN (NON CIRCULAR SECTIONS) / INSIDE PIPE DIAMETER (CIRCULAR SECTION)

R_P { MAX. INSIDE PIPE RISE (NON CIRCULAR SECTIONS) / INSIDE PIPE DIAMETER (CIRCULAR SECTION)

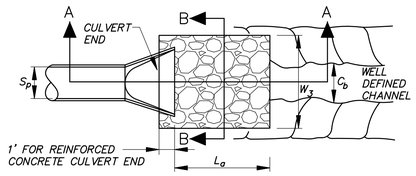
L_a { LENGTH OF RIPRAP APRON MEASURED FROM THE END OF CULVERT END SECTION OR FACE OF ENDWALL

d { 12" FOR MODIFIED RIPRAP / 18" FOR INTERMEDIATE RIPRAP / 36" FOR STANDARD RIPRAP

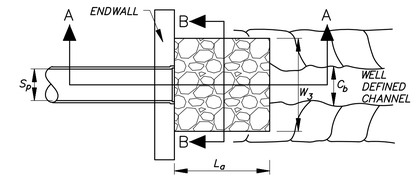
	X	W_1	W_2
TYPE A RIPRAP APRON	3	3Sp	3Sp+0.7 La
TYPE B RIPRAP APRON	5	3Sp	3Sp+0.4 La

TYPE A & B RIPRAP APRON

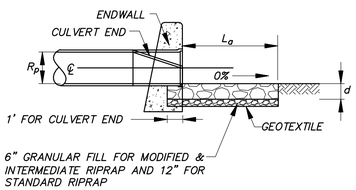
N.T.S.



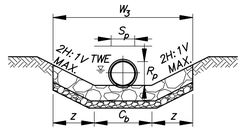
CULVERT END PLAN VIEW



END WALL PLAN VIEW



SECTION A–A CULVERT END AND END WALL



SECTION B–B CULVERT END AND END WALL

LEGEND

C_b { CHANNEL BOTTOM

TWE { TAILWATER ELEVATION

S_P { MAX. INSIDE PIPE SPAN (NON CIRCULAR SECTIONS) / INSIDE PIPE DIAMETER (CIRCULAR SECTION)

R_P { MAX. INSIDE PIPE RISE (NON CIRCULAR SECTIONS) / INSIDE PIPE DIAMETER (CIRCULAR SECTION)

L_a { LENGTH OF RIPRAP APRON MEASURED FROM THE END OF CULVERT END SECTION OR FACE OF ENDWALL

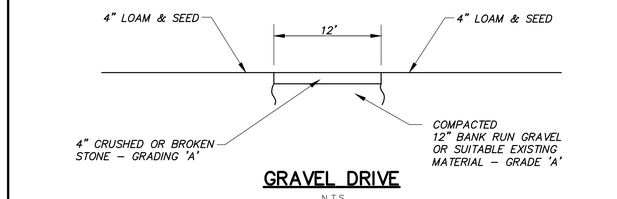
d { 12" FOR MODIFIED RIPRAP / 18" FOR INTERMEDIATE RIPRAP / 36" FOR STANDARD RIPRAP

W_3 { USE WHATEVER IS GREATER { 3Sp / 2(Z) (TWE+1') + Cb / 2(Z) (0.7 Rb) + Cb

Z	CHANNEL SIDE SLOPE
2	2H : 1V
3	3H : 1V
4	4H : 1V
5	5H : 1V
6	6H : 1V

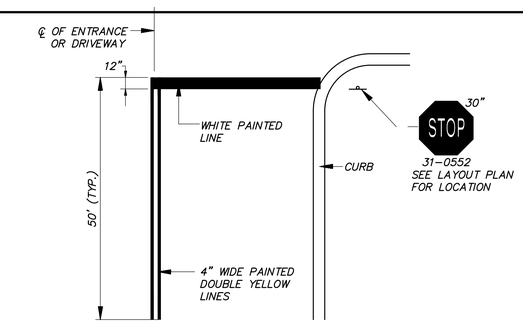
TYPE C RIPRAP APRON

N.T.S.



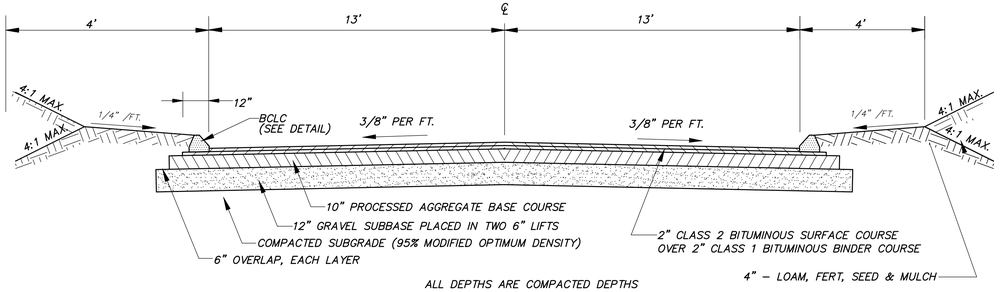
GRAVEL DRIVE

N.T.S.



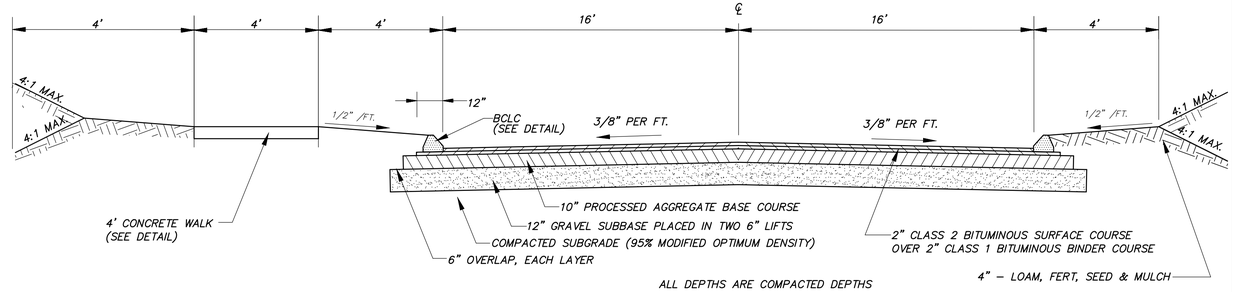
TYPICAL PAVEMENT MARKINGS AT STOP BAR

N.T.S.



TYPICAL 26'–WIDE ROADWAY SECTION

N.T.S.



TYPICAL 32'–WIDE ROADWAY SECTION

N.T.S.

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
Civil & Traffic Engineers - Surveyors - Planners - Landscape Architects
www.fahesketh.com

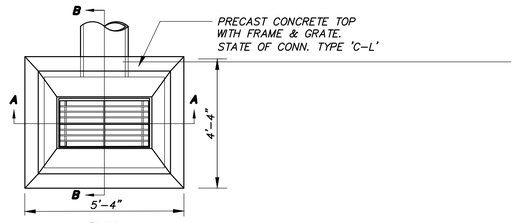
Revisions:

No.	Date	Description

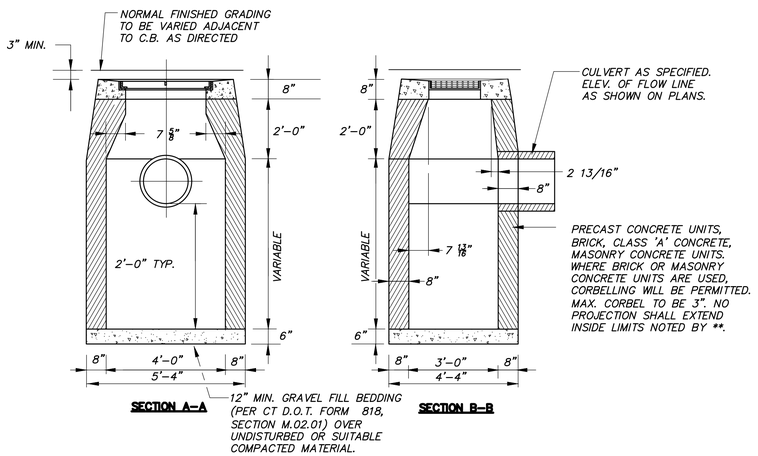
SITE DETAILS
PREPARED FOR
HIGHFIELD ESTATES – PHASE IV
BROOK CROSSING
ELLINGTON, CT

Job no: 12162 | Sheet no: 2 OF 3
Drawn by: DRT | Checked by: DSZ
Date: 04–20–2021 | Scale: 1" = 40'

SD-2

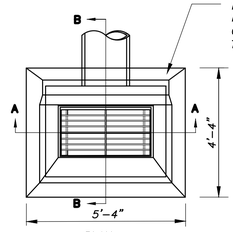


PLAN



TYPE 'C-L' CATCH BASIN

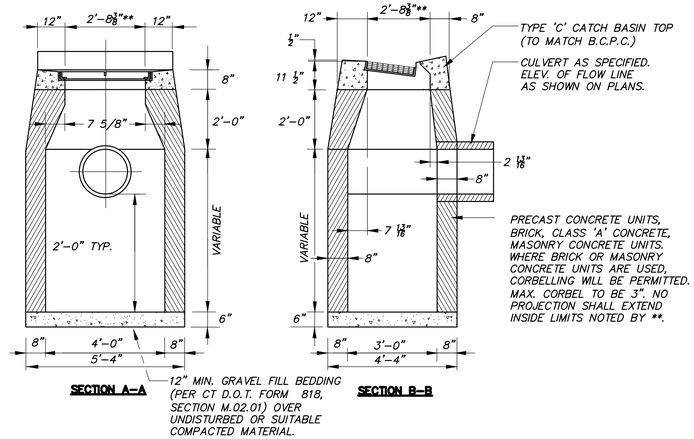
N.T.S.



PLAN

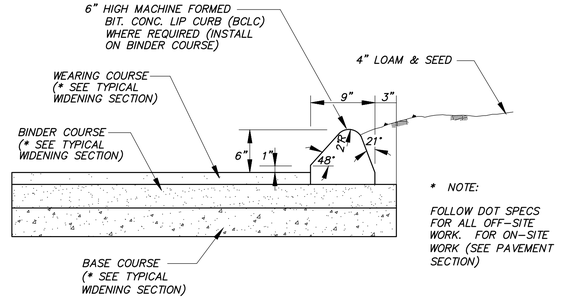
NOTES:

1. ALL MATERIALS SHALL CONFORM TO CT D.O.T. FORM 818, SECTION M.08.02
2. PRECAST CONCRETE TOP TO MATCH PROPOSED BITUMINOUS CONCRETE MOUNTABLE CURB.



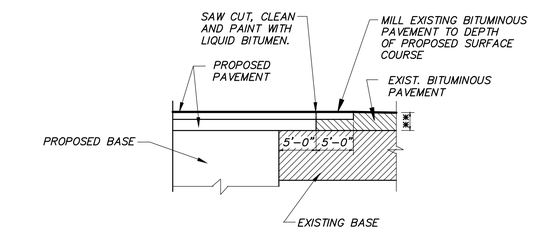
TYPE 'C' CATCH BASIN

N.T.S.



BITUMINOUS CONCRETE LIP CURBING (BCLC)

N.T.S.

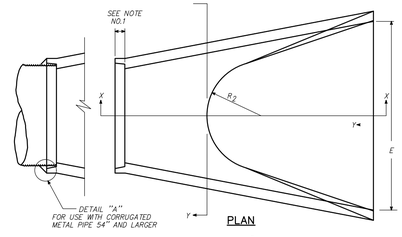


1. OVERLAP BOTH PROPOSED BITUMINOUS CONCRETE COURSES (CLASS 1 AND CLASS 2) OVER EXISTING SUBBASE.
2. ** MINIMUM THICKNESS TO BE SAME AS PROPOSED BITUMINOUS CONCRETE OR MATCH THICKNESS OF EXISTING PAVEMENT, WHICH EVER IS GREATER.

PAVEMENT MATCH TREATMENT

N.T.S.

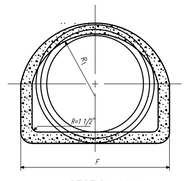
DETAIL "A"



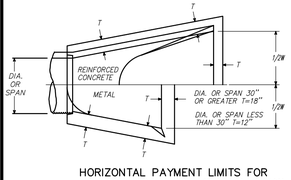
PLAN

NOTES

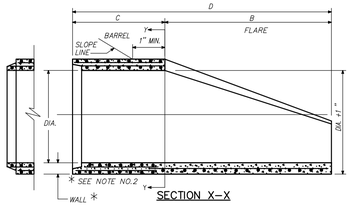
1. JOINTS SHALL BE TONGUE AND GROOVE OR BELL AND SPIGOT AS REQUIRED TO CONFORM TO PIPE INSTALLED.
2. WALL THICKNESS SHALL CONFORM TO PIPE THICKNESS.



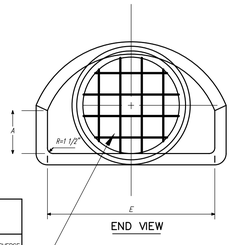
SECTION Y-Y



HORIZONTAL PAYMENT LIMITS FOR TRENCH EXCAVATION-CULVERT ENDS



SECTION X-X



END VIEW

INSTALL BAR GRATE ON PIPES 36" DIA. OR GREATER (3/8" BARS WELDED AT 6"O.C. EACH WAY)

DIMENSIONS FOR REINFORCED CONCRETE CULVERT END									FLARE REINFORCEMENT ONE LAYER ONLY IN CENTER OF WALL	
DIA.	A	B	C	D	E	F	R_1	R_2	MIN. AREA OF LONGITUDINALS SQ. IN. PER FT.	MIN. AREA OF TRANSVERSE STEEL SQ. IN. PER FT.
12"	4"	2'-0"	4'-0 3/8"	6'-0 3/8"	2'-0"	1'-7 15/16"	10 1/4"	9"	0.048	0.048
15"	6"	2'-3"	3'-10"	6'-1"	2'-6"	2'-0 5/16"	1'-0 1/2"	11"	0.054	0.054
18"	9"	2'-3"	3'-10"	6'-1"	3'-0"	2'-5"	1'-3 1/2"	1'-0"	0.060	0.060
21"	9"	2'-11"	3'-2"	6'-1"	3'-6"	2'-7 1/2"	1'-4"	1'-1"	0.066	0.066
24"	9 1/2"	3'-1 1/2"	2'-6"	6'-1 1/2"	4'-0"	2'-9 3/16"	1'-4 13/16"	1'-2"	0.072	0.072
30"	1'-0"	4'-6"	1'-7 3/4"	6'-1 3/4"	5'-0"	3'-1"	1'-6 1/2"	1'-3"	0.084	0.084
36"	1'-3"	5'-3"	2'-10 3/4"	8'-1 3/4"	6'-0"	3'-11 13/16"	2'-0 5/16"	1'-8"	0.096	0.096
42"	1'-9"	5'-3"	2'-11"	8'-2"	6'-6"	4'-5 7/8"	2'-3 1/2"	1'-10"	0.108	0.108
48"	2'-0"	6'-0"	2'-2"	8'-2"	7'-0"	4'-8 1/2"	2'-4 1/2"	1'-10"	0.120	0.120
54"	2'-3"	5'-6"	2'-11"	8'-4"	7'-6"	5'-5 1/2"	2'-9 1/8"	2'-0"	0.132	0.132
60"	2'-9"	5'-0"	3'-3"	8'-3"	8'-0"	6'-0 1/2"	3'-0 11/16"	2'-0"	0.144	0.144

REINFORCED CONCRETE CULVERT END

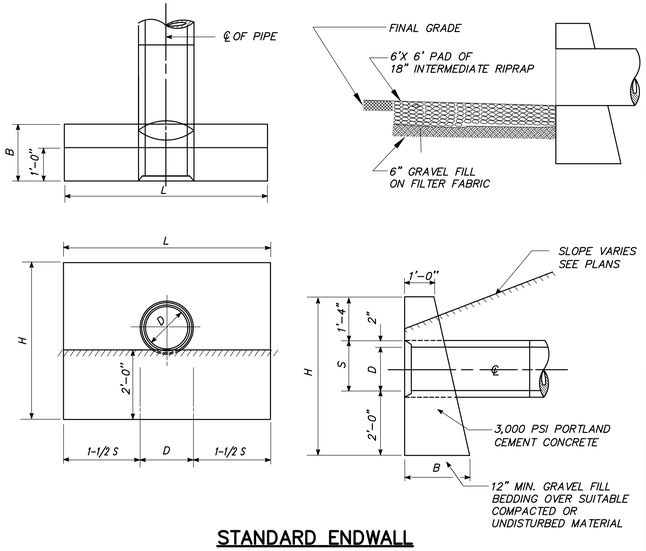
REINFORCED CONCRETE CULVERT END

N.T.S.

NOTES:

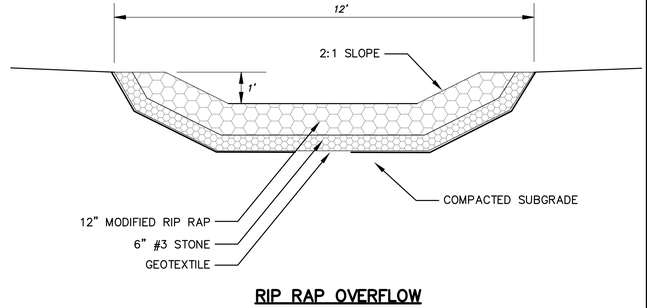
1. CONCRETE STRUCTURES SHALL CONFORM TO CT D.O.T. FORM 818, SECTION 5.06
2. GRAVEL FILL PER CT D.O.T. FORM 818, SECTION M.02.01

DIMENSIONS					
D	S	H	L	BATTER	B
INS.	FT.& INS.	FT.& INS.	FT.& INS.	INS/FT	FT.& INS.
12"	1'-2"	4'-6"	4'-6"	2 1/2"	1'-11 1/4"
15"	1'-5"	4'-9"	5'-6"	2 1/2"	1'-11 7/8"



STANDARD ENDWALL

N.T.S.



RIP RAP OVERFLOW

N.T.S.

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
www.fahesketh.com - mail@fahesketh.com
Civil & Traffic Engineers - Surveyors - Planners - Landscape Architects

Revisions:

No.	Date	Description

STANDARD DETAILS
PREPARED FOR
HIGHFIELD ESTATES - PHASE IV
BROOK CROSSING
ELLINGTON, CT

Job no: 12162 | Sheet no: 3 OF 3
Date: 04-20-2021 | Drawn by: DRT | Checked by: DSZ
Scale: 1" = 40'

SD-3

G:\2012\12162-Highfield Estates\2021 wetlands and re-subs\2021-03-12\VIG SUBD SD.dwg, SD-3, Apr 20, 2021 - 11:21:53 PM

PROJECT DESCRIPTION:

The project consists of subdividing a 55.94 acre parcel, known as Phase 4 of the Highfield Estates Subdivision into 10, single family lots and four open space lots. The area to be subdivided is located between existing public roads, Brook Crossing, Birch View Drive and Brook Crossing Extension, in Ellington, Connecticut. The existing Brook Crossing will be extended through the property and a new road will be developed off Brook Crossing Extension to provide access to the ten new lots.

The lots will be served by individual potable water wells and septic system. Electric and communications services will be extended from existing services on the adjacent roads.

Portions of the subdivision were constructed during earlier phases. Those include gravel drives in the area of proposed roads, and the roadway drainage system including pipes, catch basins and three water quality basins.

New work includes modification to two waterway crossings, construction of two wetland mitigation areas, and completion of the roadways with bituminous concrete pavement, curbs and sidewalks. Residential lots will be developed concurrently with the roadway installation.

CONSTRUCTION SEQUENCE/PHASING:

In general, the overall project will follow the sequence below:

Roadway and associated work

1. Contact "call before you dig" at 1-800-922-4455 at least 48 hours prior to start of construction to have existing utilities marked.
2. Attend pre-construction meeting.
3. Install sediment fence, construction exits, and other soil erosion and sedimentation control (SE&SC) measures.
4. Stake construction limits.
5. Clear vegetation along edge of existing gravel drive.
6. Rough grade roadway and prepare subgrade and subbase.
7. Complete modification of waterway crossings.
8. Complete wetland mitigation area work.
9. Modify existing storm drainage system.
10. Install electric and communication conduit.
11. Installation of processed aggregate base on roadways.
12. Construct curbs and sidewalks.
13. Pave roadway.
14. Install topsoil and roadway landscaping.
15. Install signs, striping and other misc., work.
16. Remove erosion controls after disturbed areas are landscaped and mulched or new lawn areas stabilize.
17. Complete final cleaning of storm sewer system.

House construction will begin as the roadwork is being completed and will generally follow this sequence:

18. Install sediment fence, construction exits, and other soil erosion and sedimentation control (SE&SC) measures.
19. Stake construction limits.
20. Remove vegetation and strip topsoil from construction area. Stockpile and save for re-use on the lot.
21. Rough grade lot.
22. Begin building construction.
23. Install on-site sewage disposal system and well.
24. Install other utility lines.
25. Install driveway and sidewalk.
26. Install topsoil and landscaping.

As roadway and house lots are completed:

27. Remove erosion controls after disturbed areas are landscaped and mulched or new lawn areas stabilize.

GENERAL NOTES:

1. Survey information is taken from a plan entitled "Property Survey" Brook Crossing Ellington, CT, Prepared for Brooks Crossing Developers LLC, dated 04-20-2021, prepared by F. A. Hesketh & Assoc., Inc., 1"=80'.
2. All work and materials to conform to Town of Ellington standard specifications, Connecticut D.O.T. Form 818, custodial utility company standards and specifications, or the details shown on these plans, as applicable.
3. All work on this project shall be completed in conformance with the requirements of the various federal, State, and local permits issued for this project.
4. All work on this project shall be completed in conformance with the requirements of the various federal, state and local permits issued for this project.
5. A pre-construction meeting and authorization to proceed will be required prior to start of any construction, including removal of trees or stripping of land. Procedures for such pre-construction meeting and authorization to proceed shall be in accordance with Town requirements. The contractor is responsible for arranging this meeting with Town officials, as applicable.
6. Prior to any excavation the contractor shall verify all underground utilities by calling 1-800-922-4455 at least 48 hours in advance.
7. The location of all utilities shown is approximate and is based on available as-built information from utility company records, the property owner, and limited survey data. All existing utilities may not be shown. The contractor is responsible for determining the exact location of all utilities on the site prior to the start of any construction activity and notifying the design site engineer of any adjustments to the plans which are necessary. Test pits will be required at all proposed utility crossings in order to determine underground utility locations and to identify potential conflicts with vertical and horizontal alignments shown on the plans. Test pits shall be completed by the contractor at his expense.
8. All utilities to be installed in accordance with governing utility company applicable requirements. Final location of utility connections is subject to revision by individual utility companies prior to the installation. The contractor is responsible for coordinating the work with the custodial utility companies.
9. Erosion and sedimentation control measures shall be installed and maintained in accordance with the plans, specifications, the Soil Erosion and Sedimentation Control Plan and notes, and in accordance with any Town and State requirements.
10. Trees shall be flagged and approved, prior to removal.
11. No stumps, logs, brush, construction debris, or deleterious materials are to be buried on site.
12. The contractor shall maintain the site in a neat and orderly manner throughout the construction period. All debris shall be removed from the site by the contractor, and properly disposed, off site, in accordance with applicable laws.
13. Drainage shall be maintained throughout the project so as not to cause flooding of roadways or damage to private property.
14. All new site utilities are to be installed underground.
15. Trees and vegetation identified to be saved shall be protected from construction equipment by suitable means approved by Town staff.
16. Removal of trees or other vegetation, or re-grading substantially different from that shown on the approved site plan, will not be permitted without prior authorization by the Town or State, as applicable.
17. All construction vehicles, equipment and materials are to enter the site via the construction entrance/exit directly to Brook Crossing.

EROSION AND SEDIMENT CONTROL NOTES

1. Disturbance of soil surfaces is regulated by State Law. All work shall comply with an approved "Soil Erosion and Sediment Control Plan" to prevent or minimize soil erosion.
2. The installation and maintenance of erosion control devices is the responsibility of the land owner, developer, and the excavation contractor. Town officials shall be notified in writing of the name, address and telephone number of the individual responsible for this work (including any changes) at the required pre-construction conference.
3. The contractor shall use the "Connecticut Guidelines For Soil Erosion And Sediment Control" (2002), as amended as a guide in construction the erosion and sediment controls indicated of the plans. The guidelines may be obtained from the Connecticut DEEP, 79 Elm Street, Hartford, CT, 06106-5127.
4. The contractor shall schedule operations to limit disturbance to the smallest practical area for the shortest possible time. Overall site disturbance shall be confined to those limits delineated on the plans.
5. The contractor shall schedule operations to limit disturbance to the smallest practical area for the shortest possible time. Overall site disturbance shall be confined to those limits delineated on the plans.
6. The contractor is responsible for the timely installation, inspection, repair or replacement of erosion control devices to insure proper operation.
7. The contractor shall notify the design engineer of unsatisfactory erosion conditions not controlled by the Soil Erosion and Sediment Control Plan and shall install additional measures as required.
8. All disturbed areas not covered by buildings, pavement, mulch or ground cover plantings shall be planted with grass.
9. Accumulated sediment removed from erosion control devices is to be spread and stabilized in level, erosion resistant locations as general fill.
10. Special attention shall be given to the construction sequence outlined on Grading and Erosion Control Plan.
11. The developer shall be responsible for cleaning any construction debris or sediment from existing roads as ordered by the Town and/or State, if any debris or sediment from construction activities enter onto these roadways.
12. Limit work within wetland areas to the least disturbance necessary for construction. Restore disturbed areas as closely as possible to their original natural state.
13. Additional dust control measures as specified in D.O.T. 818 Section 9.39, Section 9.42 and Section 9.43 shall be furnished by the contractor as site conditions warrant or as directed by Town or State officials.
14. The contractor is responsible for cleaning and removal of sediment and/or debris from the storm drainage system throughout the duration of the project (i.e. silt sacks, sumps, WQ basin sediment fore-bays, etc.)

EROSION CONTROL DEVICES:

Refer to the "Connecticut Guidelines For Soil Erosion And Sediment Control – 2002" (see Erosion and Sediment Control Note 3) when constructing erosion control devices shown on this plan.

HBEC – HAYBALE EROSION CHECKS shall be staked a minimum of five (5) feet from the base of disturbed slopes exceeding eight (8) feet in height, or at locations shown on the plans. Place haybales before starting a fill slope and after digging a cut slope. Heel haybales 4" into the soil. Stake haybales around the perimeter of all catch basins. Remove all sediment when deposits reach 1/2 bale height. Haybales must be replaced periodically.

SFEC – SEDIMENT FENCE EROSION CHECK: a synthetic textile barrier designed to filter sediment from surface water runoff. Placement shall be similar to HBEC and installation requires anchoring the fence bottom to prevent bypass. All sediment shall be removed if deposits reach one (1) foot in depth. Additional support (such as snow fence or wire fence) on the downhill face may be required to strengthen sediment fence in high flow locations.

CE – CONSTRUCTION EXIT: a broken stone pad providing a hard surface points where vehicles will leave the site. The construction exits reduce tracking of sediment into adjacent pavement. Excess sediment should be periodically removed from the stone surface.

GRSW – GRASSED SWALE: a shaped shallow earth drainage way used to convey excess surface runoff. Grass vegetation should be well established before use. Stabilization with netting or mulch may be required.

IP – INLET PROTECTION: a sediment control device used during construction that mounts under the grate of a catch basin, residing inside the structure. It is made of permeable geotextile that allows water to pass, but traps silt and sediment. (Silt Sack or approved equal.) The silt sack must be removed when silt/sediment reaches one half the height of the device. Remove sediments and deposit on stable area of site and rinse devise for reuse. Replace when damaged.

RRLS – RIP RAP LEVEL SPREADER: a riprap lined apron installed at a zero percent grade to absorb the initial impact of stormwater discharge from the storm drainage system and further reduce flow velocities to prevent erosion downstream.

RRPP – RIP RAP PLUNGE POOL: a riprap dissipation device installed at the ends of drainage culverts creating a pool with bottom below the culvert. Water in the pool reduces velocity and the pool collects heavy sediment. Riprap plunge pools require periodic removal of accumulated deposits. RRPP is designed per the "Connecticut Department of Transportation, Drainage Manual – 2000"

SL – SEDIMENT LOGS: a sediment control device consisting of an outside, open weave containment fabric filled with fibers. It is designed to provide a flexible, lightweight, porous, sediment control device with the ability to conform to the terrain upon which it is installed. It is designed to dissipate velocity of flow and filter and trap sediments upgradient and within the device.

SPECIAL INLAND WETLAND PROVISION

1. Coordinate all work within 100-foot wetlands-regulated area with Town's Wetlands Officer prior to start of work.
2. Install all erosion control devices adjacent to wetlands prior to any earth disturbance.
3. Rough grade areas within wetlands-regulated areas and immediately stabilize all areas to not receive further work by topsoiling, seeding and mulching. Use erosion control blankets on all unstable, disturbed slopes 3:1 and steeper.
4. Except where shown on the plans o specifically approved, do not stockpile any topsoil of other earthen materials within 100-foot regulated areas, or any areas up-gradient of wetlands.

WETLANDS MITAGATION PLAN

In accordance with the Army Corp. of Engineers permit issued for this project a detailed Wetland Mitigation Plan has been developed and shall be strictly adhered to by the developer and contractor.

SCHEDULE AND DESCRIPTION OF RESPONSIBILITY FOR MAINTENANCE OF THE ON-SITE STORM WATER MANAGEMENT SYSTEMS:

1. Maintenance of the on-site storm water system will be the responsibility of the Town of Ellington. This includes all catch basins, system piping, manholes, detention basins, outlets and associated piping.
2. In general, good housekeeping practices shall be incorporated into the routine site and facility maintenance plan to minimize deposition of sediment, litter and contaminants into the storm drainage system.

The following schedule of maintenance shall be followed:

Annually (in late spring):

A. Visually inspect all drainage structures. Structures consist of catch basins, manholes, and all other site drainage facilities, including the detention basins, outlets and discharge piping and rip rap erosion controls at the outfalls. Note any deficiencies and make repairs.

B. Clean the catch basins, and all other site drainage site facilities of any accumulation of sediment and/or debris.

B.1. All cleaning and removal of sediment and debris to be performed by a licensed contractor.

B.2. Cleaning to be done with a vacuum truck so that direct access into the drainage structures is not required.

B.3. All material removed shall be disposed according to the requirements of the State of Connecticut and local regulations. If any repair work is required for the stormwater management system, the work involved shall be conducted according to Federal, State and Local Regulations.

Semi-annually: (late spring, after winter sanding operations and mid fall, after leaf litter):

A. Sweep all roadways to remove accumulated sediment. Dispose of materials at licensed facility.

Annually:

A. Inspect water quality/infiltration basins.

A.1. Cut trim and remove woody vegetation growth in sideslopes, berms and basin bottom.

A.2. Inspect sediment forebays for accumulated sediment, remove as necessary.

A.3. Inspect stone check dams and replace/repair as necessary.

A.4. Verify that basins drain within 24 hours following a storm event. If required, remove fine sediments from surface of bottom of basin to restore permeability.

A.5. Verify that the outlet structures for the water quality basins are free of debris and litter. Clean, as necessary.

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
www.fahesketh.com - mail@fahesketh.com
Civil & Traffic Engineers - Surveyors - Planners - Landscape Architects

Revisions:

No.	Date	Description

NOTES
PREPARED FOR
HIGHFIELD ESTATES – PHASE IV
BROOK CROSSING
ELLINGTON, CT

Job no: 12162
Sheet no: 1 OF 1
Date: 04-20-2021
Drawn by: RJK
Checked by: DSZ
Scale: N/A

NT-1

Q:\2012\12162-Highfield Estates\2021 wetlands and re-subs\2021-03-12\HHD SUBD NT.dwg, NT-1, Apr 26, 2021 - 1:37:10 PM

LEGEND
(SYMBOLS NOT TO SCALE)

= CATCH BASIN
= SANITARY MANHOLE
= DRAINAGE MANHOLE
= WATER MANHOLE
= TELEPHONE MANHOLE
= ELECTRIC MANHOLE
= UNKNOWN MANHOLE
= YARD DRAIN
= CABLE MANHOLE
= FLARED END SECTION
= FIRE HYDRANT
= WATER GATE VALVE
= GAS GATE VALVE
= MISC. GATE VALVE
= VENT PIPE
= FLOWCAP
= WELL
= MAIL BOX

= HAND HOLE
= CONTROLLER CABINET
= ELECTRIC TRANSFORMER
= UTILITY POLE
= GUY WIRE
= CROSSWALK POLE
= LIGHT POLE
= POST
= TRAFFIC LIGHT SUPPORT POLE
= STREET SIGN
= TREE (TYP.)
= MONITOR WELL
= BORING
= ELECTRIC METER
= GAS METER
= WATER METER
= TELEPHONE
= AC UNIT

= TREE LINE
= STONE WALL
= GUIDE RAIL
= DIRECTION OF FLOW
= I.P. PROPERTY CORNER
= MONUMENT
= DRILL HOLE
= SURVEY CONTROL POINT
= FENCE LINE
= WATER LINE
= GAS LINE
= ELECTRIC LINE
= CABLE TELEVISION LINE
= OVERHEAD WIRES
= POINT OF BEGINNING
= NORTHING
= EASTING
= NOW OR FORMERLY
= ELLINGTON LAND RECORDS

= DELTA ANGLE
= RADIUS
= TANGENT
= LENGTH
= CHORD
= CHORD BEARING
= FRONT YARD
= SIDE YARD
= REAR YARD
= CONTROL POINT

N/F
JOSEPH M. PEPITONE JR.
CHRISTINE R. PEPITONE
E.L.R. VOL.356 PG.761
28 BIRCH VIEW DRIVE
119–004–0016

C.P. #26
PK
N = 21706.94 N=900,828.83 NAD83
E = 18698.95 E=1,071,724.89
ELEV. = 321.55

N/F
JEFF T. MCKNIGHT
JOHN E. MCNIGHT
JUDITH ANN SIBLEY
E.L.R. VOL.405 PG.673
138–009–0000
GREEN ROAD

N/F
RUSSELL A. STONE
NANCY L. STONE
E.L.R. VOL.353 PG.154
19–004–0015
#31 BIRCH VIEW DRIVE

N/F
MARLON O. TAFFE
NGOZI OBIOCHA–TAFFE
E.L.R. VOL.480 PG.484
119–004–0014
#29 BIRCH VIEW DRIVE

BIRCH VIEW DRIVE

N/F
SABIHA MOHAMMAD
SADIA MOHAMMAD
YASIR SHAIK
E.L.R. VOL.389 PG.1180
26 BIRCH VIEW
119–004–0017
VACANT

N/F
CRAIG L. OSTROUT
DONNA M. OSTROUT
E.L.R. VOL.229 PG.101
18 BIRCH VIEW DRIVE
139–007–0008

N/F
THOMAS P. OUELLETTE
MARION G. OUELLETTE
E.L.R. VOL.427 PG.834
20 BIRCH VIEW DRIVE
139–007–0009

N/F/
STEPHEN D. GUERETTE
ROSALIA R. GUERETTE
E.L.R. VOL.249 PG.264
22 BIRCH VIEW DRIVE
139–007–0010

VINYL FENCE
STONEWALL
REBAR (HELD FOR POSITION)
REBAR FOUND
MON. W/ X FOUND
IRON PIPE FOUND
MON. FOUND

N 82°56'47" E 447.99'
N 71°44'47" E 199.51'
S 54°19'13" E 90.31'
N 25°52'32" E 33.35'
N 73°15'53" E 198.94'
N 67°15'54" E 55.68'
N 86°20'55" E 129.22'
N 81°40'0" E 110.11'

MAP REF. #4
MAP REF. #3

GREEN ROAD
BIRCH VIEW DRIVE
JOBS HILL ROAD
VICINITY MAP
(NOT TO SCALE)

N/F
FARM HOLDINGS LLC
E.L.R. VOL.469 PG.155
GREEN ROAD
118–002–0000

N/F
LAURENCE J. DESIMONE III
JAMIE A. DESIMONE
E.L.R. VOL.448 PG.916
119–004–0018
33 BROOK CROSSING EXT.

N/F
KARNAS DARIUSZ
RENATA M. MDURDA–KARNAS
E.L.R. VOL.433 PG.46
35 BROOK CROSSING EXT
119–004–0019

N/F
TOMOTHY N ELSASS
TRACY A. ELSASS
E.L.R. VOL.449 PG.372
37 BROOK CROSSING EXT.
119–004–0020

C.P. #32
PKTC
N = 20970.98 N=898,868.95 NAD83
E = 17801.99 E=1,070,817.18
ELEV. = 314.55

EDGE OF CL&P EASEMENT
E.L.R. VOL.335 PG.963

C.P. #2
PK
N = 21285.44 N=900,338.98 NAD83
E = 18342.54 E=1,071,470.15
ELEV. = 307.51

BROOK CROSSING EXTENSION

PROPOSED 30' TOWN ROAD

TOTAL CURVE:
Δ = 06°39'03"
R = 4,310.00'
T = 250.44'
L = 500.31'
C = 500.03'
CB = S 79°27'14" E

DRAINAGE & ACCESS EASEMENT IN FAVOR OF THE TOWN OF ELLINGTON
E.L.R. VOL.337 PG.957

ACCESS EASEMENT OVER LAND OF BROOKS CROSSING LLC IN FAVOR OF THE TOWN OF ELLINGTON
E.L.R. VOL.337 PG.959

RIGHT TO DISCHARGE OVERFLOW IN FAVOR OF THE TOWN OF ELLINGTON PER MAP REF. #5

UNRESTRICTED RIGHTS TO DISCHARGE STORM DRAINAGE IN FAVOR OF THE TOWN OF ELLINGTON PER MAP REF. #5

PROPOSED DRAINAGE & ACCESS EASEMENT IN FAVOR OF THE TOWN OF ELLINGTON
AREA
18,936 SQ.FT.
OR
0.43 ACRES
PER MAP REF. #5

GRAVEL ROAD

N/F
JOSHUA OLIVIA
NICOLE OLIVIA
E.L.R. VOL.395 PG.88
32 BROOK CROSSING EXT
119–004–0025

N/F
BROOKS CROSSING DEVELOPERS, LLC
E.L.R. VOL.348 PG.870
BROOK CROSSING EXT.
119–004–0024

N/F
BROOKS CROSSING DEVELOPERS, LLC
E.L.R. VOL.348 PG.870
36 BROOK CROSSING EXT.
119–004–0023

N/F
ELHAM HELMI
SALEH ELHAM
E.L.R. VOL.474 PG.942
40 BROOK CROSSING EXT.
119–004–0021

N/F
JOANN C. LUGINBUHL
E.L.R. VOL.338 PG.647
GREEN RD
118–003–0000

N/F
BROOKS CROSSING DEVELOPERS, LLC
E.L.R. VOL.348 PG.870
34 BROOK CROSSING EXT.
119–004–0000

AREA
2,436,702 SQ.FT.
OR
55.94 ACRES

N/F
WENDY GONDAROWSKI
E.L.R. VOL.466 PG.1169
240 JOBS HILL RD
139–002–0000

N 21044.03 N=900,475.47 NAD83
E 20029.16 E=1,073,168.48

UNRESTRICTED RIGHTS TO DISCHARGE STORM DRAINAGE IN FAVOR OF THE TOWN OF ELLINGTON
E.L.R. VOL.398 PG.206

DRAINAGE EASEMENT IN FAVOR OF THE TOWN OF ELLINGTON
E.L.R. VOL.398 PG.206

FLOODING RIGHTS ON LOT #10 IN FAVOR OF BROOK CROSSING LLC

C.P. #75
RC
N = 20729.36 N=900,191.37 NAD83
E = 20132.85 E=1,073,338.82
ELEV. = 267.26

LAND CONVEYED TO THE TOWN OF ELLINGTON PER MAP REFERENCE #2
NO RECORDED DEED FOUND

N/F
EDWARD R. SWINDELLES
EMILY F. SWINDELLES
E.L.R. VOL.459 PG.123
119–004–0010

N/F
KATIE L. ZAHNER
E.L.R. VOL.376 PG.1195
8 BROOK CROSSING
119–004–0006

N/F
WALTER K. STUTZ, JR.
E.L.R. VOL.220 PG.12
182 JOBS HILL ROAD
119–001–0000

N/F
PATRICIA M. GAMBLE
45 ELLSWORTH LN
E.L.R. VOL.367 PG.1190
118–004–0017

N/F
KEITH R. OWENS
SARAH M. OWENS
E.L.R. VOL.397 PG.538
41 ELLSWORTH LANE
118–004–0015

N=899,337.51 NAD83 N 20458.75
E=1,070,788.11 E 17456.42

1" IRON PIPE END OF STONE WALL
REBAR (HELD FOR LINE)

IRON PIPE FOUND
NO POINT FOUND

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

NOTES:

1. THIS SURVEY HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20–300b–1 THROUGH 20–300b–20 AND THE STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

2. IT IS A PROPERTY SURVEY INTENDED TO BE USE FOR PLANNING PURPOSES.

3. THIS SURVEY FALLS INTO THE RESURVEY BOUNDARY DETERMINATION CATEGORY AND IS DEPENDENT IN NATURE AND BASED UPON MAP REFERENCE 2 AND 3.

4. THIS SURVEY CONFORMS TO CLASS A–2 ACCURACY STANDARDS.

5. THE SUBJECT PROPERTY (119–004–0000) IS CURRENTLY OWNED BY BROOKS CROSSING DEVELOPERS, LLC. ELLINGTON LAND RECORDS VOLUME 348 PAGE 870.

6. BEARINGS DEPICTED HEREON ARE BASED UPON MAP REFERENCE #1. COORDINATES ARE ASSUMED. CONTROL POINTS #2 AND #26 HAVE CONVERSION COORDINATES TO NAD83 BASED UPON OPUS RAPID STATIC OBSERVATIONS ON 03–06–2018 AND 09–07–2018.

7. ELEVATIONS DEPICTED HEREON (IF ANY) ARE BASED UPON OPUS RAPID STATIC OBSERVATIONS ON 03–06–2018 AND 09–07–2018 RESULTING IN THE FOLLOWING VALUES. CONTROL POINT #2, ELEV.=307.51 (NAVD88) AND CONTROL POINT #25 ELEV.=316.67 (NAVD88). NO ORIGINAL SITE BENCHMARKS WERE FOUND DURING THE CONDUCT OF THIS SURVEY. THE NAVD88 ELEVATIONS DEPICTED HEREON ARE APPROXIMATELY 1.1'± LOWER THAN THE EXISTING DEPICTED ON SHEET #5 OF MAP REFERENCE #1.

NOTES CONTINUED:

7. UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS (IF ANY) DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING, PAROL TESTIMONY, VISIBLE FEATURES AND OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED AS APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE. THE EXISTENCE OF WHICH ARE UNKNOWN TO THIS SURVEYOR. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG 1–800–922–4455.

MAP REFERENCE:

1. BOUNDARY PLAN SUBDIVISION PLANS PREPARED FOR "HIGHFIELD ESTATES PHASE II", BIRCH VIEW DRIVE ELLINGTON, CONNECTICUT DATED 11–14–2000 REVISED 5–08–02, SHEETS 1 THRU 13 BY TARBELL, HEINTZ & ASSOCIATES, INC., 290 ROBERTS ST. SUITE 200, EAST HARTFORD, CT.

2. CONVEYANCE PLAN PERIMETER SURVEY PLAN PREPARED FOR BROOKS CROSSING, LLC BIRCH VIEW DRIVE & BROOK CROSSING, ELLINGTON, CONNECTICUT, SCALE 1"=100' SHEET 1 OF 1, DATE 01–18–05 BY TARBELL, HEINTZ & ASSOC., INC., EAST HARTFORD, CT.

3. BOUNDARY PLAN, SUBDIVISION PLANS PREPARED FOR HIGHFIELD ESTATES PHASE III, BROOK CROSSING, ELLINGTON, CONNECTICUT DATED 06–13–05 REVISED TO 1–31–07 SHEET 3 OF 11, BY TARBELL, HEINTZ & ASSOC., INC., EAST HARTFORD, CT.

4. HIGHFIELD ESTATES JOBS HILL ROAD, ELLINGTON CT. CLASS A–2 SURVEY RUSSELL & DAWSON ARCHITECTURE & ENGINEERING LAND PLANNING CONSULTANTS INC. 252 HAZARD AVE. ENFIELD, CONNECTICUT 06082, DATED 5–1–91, SCALE 1"=100, DRAWN BY: X–1 REVISION NO. 9–1–92.

5. IMPROVEMENT LOCATION PLAN – RECORD PREPARED FOR HIGHFIELD ESTATES PHASE II BIRCH VIEW DRIVE, ELLINGTON, CT DATED 08–31–2018 REVISED TO 02–27–2019, SCALE 1"=40' SHEETS 1–3 OF 3 BY F.A. HESKETH & ASSOCIATES, INC.

TO MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

THIS MAP IS NOT VALID WITHOUT THE LIVE SIGNATURE AND IMPRESSION TYPE SEAL OF THE LAND SURVEYOR WHOSE NAME APPEARS HEREON.

TODD S. HESKETH LS 17945

F. A. Hesketh & Associates, Inc.
3 Creamery Brook, East Granby, CT 06026
Phone (860) 653-8000 Fax (860) 844-8600
www.fahesketh.com - mail@fahesketh.com
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects

Revisions:
No. | Date | Description

PROPERTY SURVEY
PREPARED FOR
BROOKS CROSSING DEVELOPERS LLC
BROOK CROSSING
ELLINGTON, CT

Job no: 12162
Sheet no: 1 OF 1
Date: 04–20–2021
Drawn by: CAD
Checked by: TSH
Scale: 1" = 100'

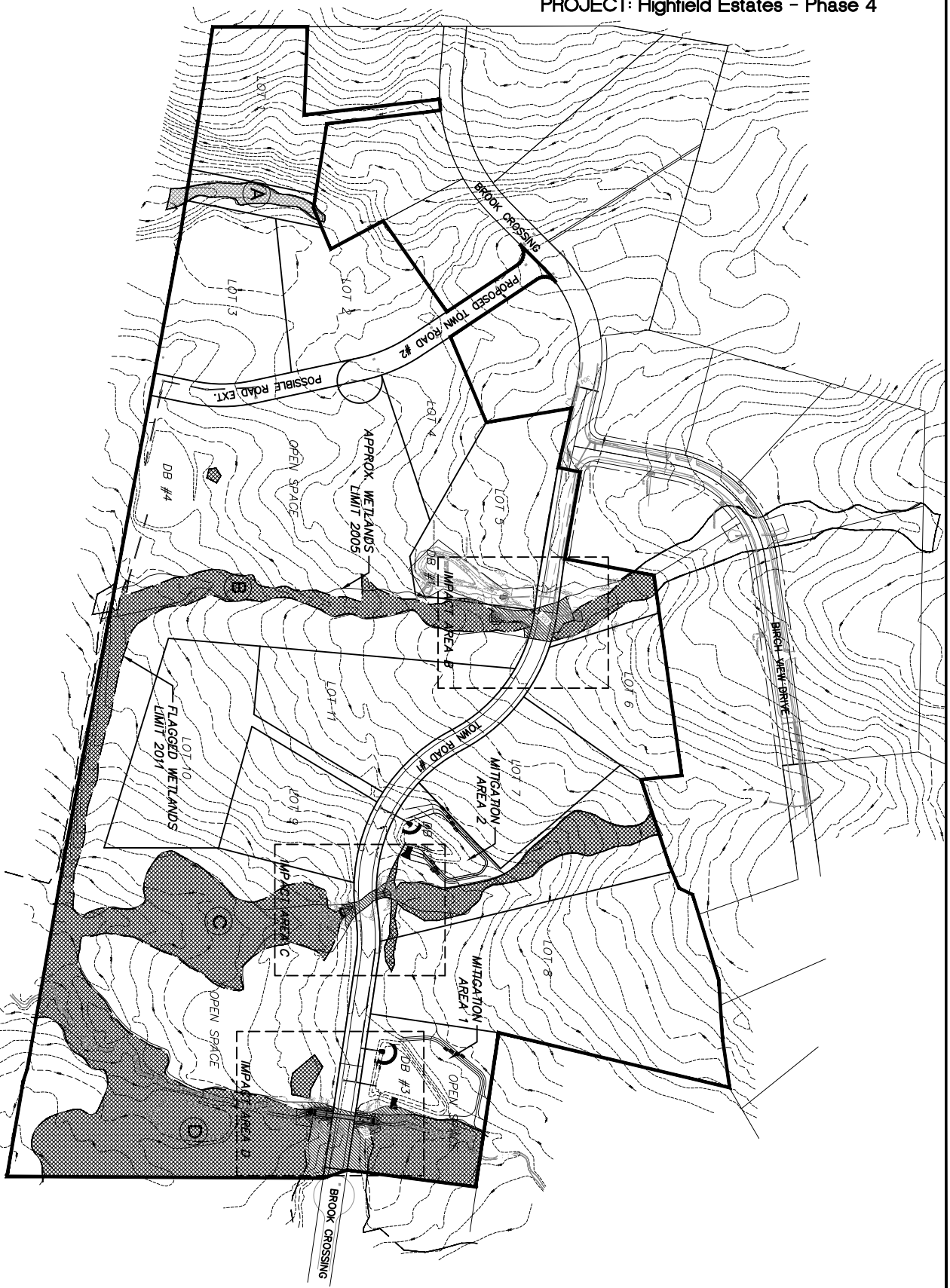
PS–1

G:\2012\12162–Highfield Estates\SURVEY\PHASE 4\DEPENDENT–RESURVEY–PHASE–4 REVI.dwg, PS–1, Apr 21, 2021 – 1:53:14 PM

Plan View Index

APPLICANT: Brooks Crossing Developers, LLC

PROJECT: Highfield Estates - Phase 4



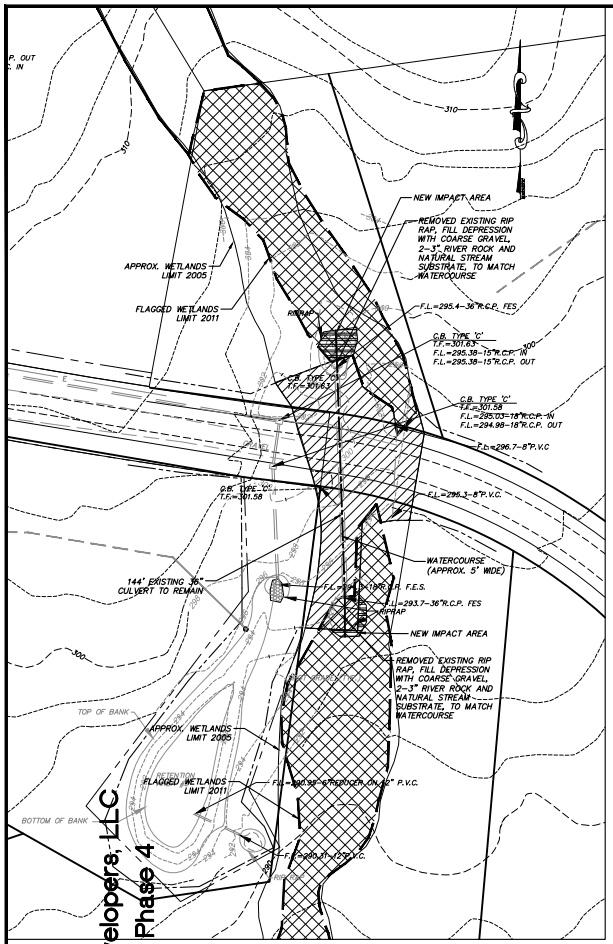
AC-1	ACOE WETLAND IMPACT PLAN PREPARED FOR *HIGHFIELD ESTATES PHASE IV* BIRCH VIEW DRIVE ELLINGTON, CT	Revisions: 1 09-18-2013 Cond. of Wetlands Approval 2 07-25-2014 Cut-off Trench As-built 3 03-29-2019 ACOE Submission 4 01-26-2020 ACOE NWP PCN 5 12-21-2020 DEEP Comments 6 02-15-2021 ACOE update
	Date: *07-10-2013* Drawn by: *RJK* Job no: *12162* Scale: *1" = 100'* Checked by: *DSZ* Sheet no: *1 OF 5*	

F. A. Hesketh & Associates, Inc.
6 Creamery Brook, East Granby, CT 06026 · 146 N W Broad Street, Southern Pines, NC 28387
Phone (860) 653-8000 · Fax (860) 844-8800 · Phone (910) 692-2844 Fax (910) 692-3356
Civil Traffic Engineers · Surveyors · Planners · Landscape Architects www.fahesketh.com · mail@fahesketh.com

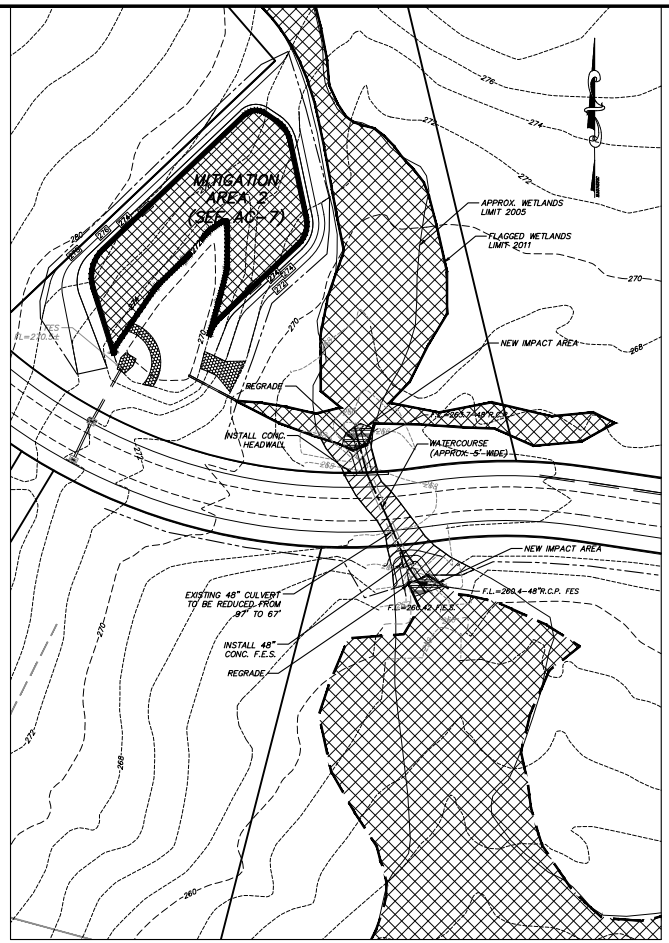
Plan View

APPLICANT: Brooks Crossing Developers, LLC

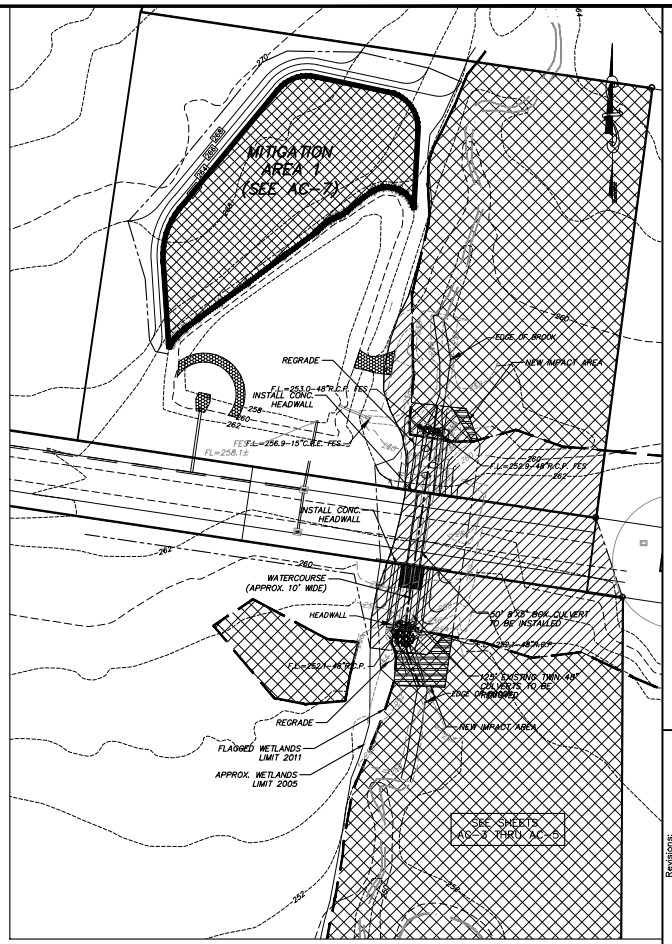
PROJECT: Highfield Estates – Phase 4



IMPACT AREA B
1" = 40'



IMPACT AREA C
1" = 40'



IMPACT AREA D
1" = 40'

SEE SHEET AC–5 FOR SPECIAL NDDB REQUIREMENTS

Wetland Impact

Direct Impact

Area B		Area C		Area D		Sub-total		TOTAL	
initial	new	initial	new	initial	new	initial	new		
9057	615	2720	415	22741	1043	34518	2073	36591	sf
								0.84	ac

Watercourse Impact

Direct Impact

Area B		Area C		Area D		Sub-total		TOTAL	
initial	new	initial	new	initial	new	initial	new		
180	25	100	20	166	25	446	70	516	lf
900	125	500	100	1660	250	3060	475	3535	sf
								0.08	ac

ORIGINAL WETLAND IMPACT AREA

CURRENT WETLAND AREA

PROPOSED NEW WORK AREA

F.A. Hesketh & Associates, Inc.
6 Creamery Brook, East Granby, CT 06026 · 140 N.W. Broad Street, Southern Pines, NC 28387
Phone (860) 653-9000 · Fax (860) 844-8800 · Phone (910) 692-2844 · Fax (910) 692-2846
Civil Structural Engineers · Surveyors · Planners · Landscape Architects
www.fahesketh.com · mail@fahesketh.com

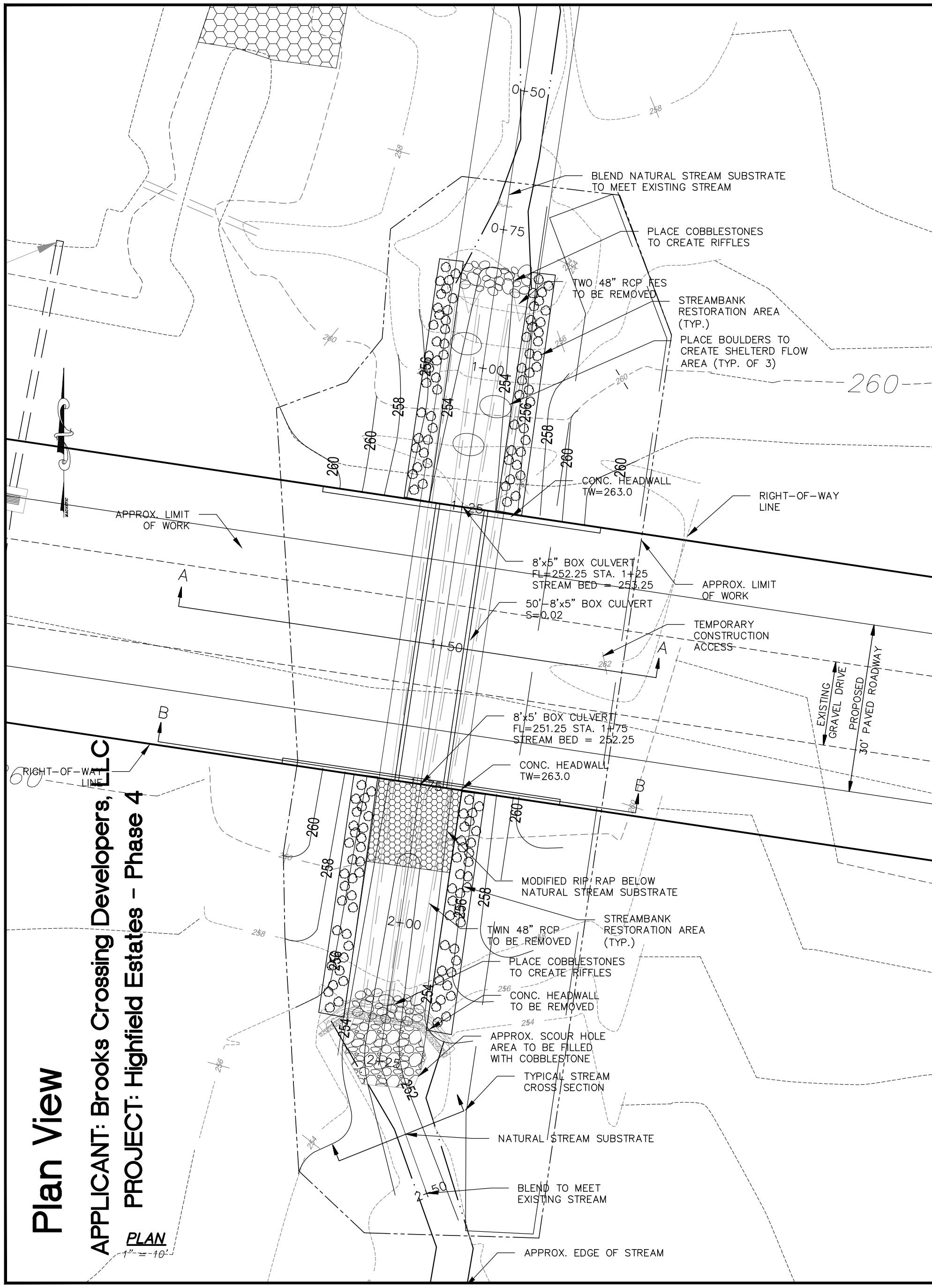
No.	Date	Revisions: Description
1	09–18–2013	Cond. of Wetlands Approval
2	07–25–2014	Cut–off Trench As–built
3	01–28–2020	ACOE & NNP Revision
4	12–03–2020	DEEP comments
5	12–21–2020	DEEP Comments
6	02–15–2021	ACOE update

ACOE WETLAND IMPACT PLAN
PREPARED FOR
HIGHFIELD ESTATES PHASE IV
BIRCH VIEW DRIVE
ELLINGTON, CT

Date: 07–10–2013 | Drawn by: RJK | Job no: 12162
Scale: 1" =40' | Checked by: DSZ | Sheet no: 2 OF 5

AC–2

G:\2012\12162–Highfield Estates\ACOE\2021 updated package\VHS ACOE–10.dwg, AC–2, Feb. 07, 2021 – 12:02:23 PM



PLANTING NOTES FOR MITIGATION AREA #1

1. ALL RESTORATION PLANTING SHALL BE COMPLETED WITH OVERSIGHT BY WETLAND SCIENTIST.
2. INSTALL PLANTS AND SEED MIX PER PLANTING NOTES AND AS DIRECTED BY WETLAND SCIENTIST.
3. INVASIVE SPECIES CONTROL TO BE IMPLEMENTED AND MONITORED IN ACCORDANCE WITH SUBMTTED INVASIVE SPECIES CONTROL PLAN.
4. ALL DISTURBED SOIL AREAS TO BE SEEDED WITH NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES.

MITIGATION AREA #1 PLANT TABLE

SPECIES	COMMON NAME	SIZE	SPACING	QUANTITY
ACER RUBRUM	RED MAPLE	5-6'	AS SHOWN	3
BETULA NIGRA	RIVER BIRCH	5-6'	AS SHOWN	2
CLETHRA ALNIFOLIA	SWEET PEPPER	3-4'	10' O.C	5
CORNUS RACEMOSA	GRAY DOGWOOD	3-4'	10' O.C	5
PHOTINIA MELANOCARPA	BLACK CHOKEBERRY	3-4'	10' O.C	5
MORELLA PENNSYLVANICA	BAYBERRY	3-4'	10' O.C.	5
NYSSA SYLVATICA	BLACK GUM	5-6'	AS SHOWN	1
ULMUS AMERICANA	AMERICAN ELM	5-6'	AS SHOWN	1

New England Erosion Control/Restoration Mix For Detention Basins and Moist Sites

The New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites contains a selection of native grasses and wildflowers designed to colonize generally moist, recently disturbed sites where quick growth of vegetation is desired to stabilize the soil surface. It is an appropriate seed mix for ecologically sensitive restorations that require stabilization as well as long-term establishment of native vegetation.

Many of the plants in this mix can tolerate infrequent inundation, but not constant flooding. The mix may be applied by hand, by mechanical spreader, or by hydro-seeder. After sowing, lightly rake, roll or cultipack to insure good seed to soil contact. Best results are obtained with a Spring or late Summer seeding. Late Fall and Winter dormant seeding requires an increase in the application rate. A light mulching of clean, weed-free straw is recommended.

APPLICATION RATE: 35 lbs/acre | 1250 sq ft/lb

SPECIES: Riverbank Wild Rye (Elymus riparius), Creeping Red Fescue (Festuca rubra), Little Bluestem (Schizachyrium scoparium), Big Bluestem (Andropogon gerardii), Switch Grass (Panicum virgatum), Upland Bentgrass (Agrostis perennans), Nodding Bur Marigold (Bidens cernua), Hollow-Stem Joe Pye Weed (Eupatorium fistulosum/Eutrochium fistulosum), New England Aster (Aster novae-angliae), Boneset (Eupatorium perfoliatum), Blue Vervain (Verbena hastata), Soft Rush (Juncus effusus), Wool Grass (Scirpus cyperinus).

PLANTING NOTES FOR STREAMBANK RESTORATION

1. ALL RESTORATION PLANTING AND PLACEMENT OF IN-STREAM HABITAT STRUCTURES SHALL BE COMPLETED WITH OVERSIGHT BY WETLAND SCIENTIST.
2. INSTALL LIVE STAKES/TUBELINGS AND SEED MIX PER PLANTING NOTES AND AS DIRECTED BY WETLAND SCIENTIST.
3. INVASIVE SPECIES CONTROL TO BE IMPLEMENTED AND MONITORED IN ACCORDANCE WITH SUBMTTED INVASIVE SPECIES CONTROL PLAN.
4. ALL DISTURBED SOIL AREAS TO BE SEEDED WITH NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES.

STREAMBANK RESTORATION PLANT TABLE

SPECIES	COMMON NAME	SIZE	SPACING	QUANTITY
BETULA NIGRA	RIVER BIRCH	TUBELING	18" O.C	25
CORNUS AMOMUM	SILKY DOGWOOD	TUBELING	18" O.C	25
CORNUS SERICEA	RED OSIER DOGWOOD	TUBELING	18" O.C	25
PHOTINIA MELANOCARPA	BLACK CHOKEBERRY	TUBELING	18" O.C	25
SALIX DISCOLOR	PUSSY WILLOW	LIVE STAKE	18" O.C	25
SALIX NIGRA	BLACK WILLOW	LIVE STAKE	18" O.C	25

New England Erosion Control/Restoration Mix For Detention Basins and Moist Sites

The New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites contains a selection of native grasses and wildflowers designed to colonize generally moist, recently disturbed sites where quick growth of vegetation is desired to stabilize the soil surface. It is an appropriate seed mix for ecologically sensitive restorations that require stabilization as well as long-term establishment of native vegetation.

Many of the plants in this mix can tolerate infrequent inundation, but not constant flooding. The mix may be applied by hand, by mechanical spreader, or by hydro-seeder. After sowing, lightly rake, roll or cultipack to insure good seed to soil contact. Best results are obtained with a Spring or late Summer seeding. Late Fall and Winter dormant seeding requires an increase in the application rate. A light mulching of clean, weed-free straw is recommended.

APPLICATION RATE: 35 lbs/acre | 1250 sq ft/lb

SPECIES: Riverbank Wild Rye (Elymus riparius), Creeping Red Fescue (Festuca rubra), Little Bluestem (Schizachyrium scoparium), Big Bluestem (Andropogon gerardii), Switch Grass (Panicum virgatum), Upland Bentgrass (Agrostis perennans), Nodding Bur Marigold (Bidens cernua), Hollow-Stem Joe Pye Weed (Eupatorium fistulosum/Eutrochium fistulosum), New England Aster (Aster novae-angliae), Boneset (Eupatorium perfoliatum), Blue Vervain (Verbena hastata), Soft Rush (Juncus effusus), Wool Grass (Scirpus cyperinus).

PLANTING NOTES FOR MITIGATION AREA #2

1. ALL RESTORATION PLANTING SHALL BE COMPLETED WITH OVERSIGHT BY WETLAND SCIENTIST.
2. INSTALL PLANTS AND SEED MIX PER PLANTING NOTES AND AS DIRECTED BY WETLAND SCIENTIST.
3. INVASIVE SPECIES CONTROL TO BE IMPLEMENTED AND MONITORED IN ACCORDANCE WITH SUBMTTED INVASIVE SPECIES CONTROL PLAN.
4. ALL DISTURBED SOIL AREAS TO BE SEEDED WITH NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DETENTION BASINS AND MOIST SITES.

MITIGATION AREA #2 PLANT TABLE

SPECIES	COMMON NAME	SIZE	SPACING	QUANTITY
ACER RUBRUM	RED MAPLE	5-6'	AS SHOWN	3
CLETHRA ALNIFOLIA	SWEET PEPPER	3-4'	10' O.C	5
CORNUS RACEMOSA	GRAY DOGWOOD	3-4'	10' O.C	5
PHOTINIA MELANOCARPA	BLACK CHOKEBERRY	3-4'	10' O.C	5
NYSSA SYLVATICA	BLACK GUM	5-6'	AS SHOWN	1
ULMUS AMERICANA	AMERICAN ELM	5-6'	AS SHOWN	1

New England Erosion Control/Restoration Mix For Detention Basins and Moist Sites

The New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites contains a selection of native grasses and wildflowers designed to colonize generally moist, recently disturbed sites where quick growth of vegetation is desired to stabilize the soil surface. It is an appropriate seed mix for ecologically sensitive restorations that require stabilization as well as long-term establishment of native vegetation.

Many of the plants in this mix can tolerate infrequent inundation, but not constant flooding. The mix may be applied by hand, by mechanical spreader, or by hydro-seeder. After sowing, lightly rake, roll or cultipack to insure good seed to soil contact. Best results are obtained with a Spring or late Summer seeding. Late Fall and Winter dormant seeding requires an increase in the application rate. A light mulching of clean, weed-free straw is recommended.

APPLICATION RATE: 35 lbs/acre | 1250 sq ft/lb

SPECIES: Riverbank Wild Rye (Elymus riparius), Creeping Red Fescue (Festuca rubra), Little Bluestem (Schizachyrium scoparium), Big Bluestem (Andropogon gerardii), Switch Grass (Panicum virgatum), Upland Bentgrass (Agrostis perennans), Nodding Bur Marigold (Bidens cernua), Hollow-Stem Joe Pye Weed (Eupatorium fistulosum/Eutrochium fistulosum), New England Aster (Aster novae-angliae), Boneset (Eupatorium perfoliatum), Blue Vervain (Verbena hastata), Soft Rush (Juncus effusus), Wool Grass (Scirpus cyperinus).

FAH
F. A. Hesketh & Associates, Inc.
6 Creamery Brook, East Granby, CT 06026 · 146 N W Broad Street, Southern Pines, NC 28387
Phone (860) 653-8000 · Fax (860) 844-8600 · Phone (910) 692-2844 Fax (910) 692-3356
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects www.fahesketh.com . mail@fahesketh.com

Revisions:

No.	Date	Description
1	09-18-2013	Cond. of Wetlands Approval
2	07-25-2014	Cut-off Trench As-built
3	03-29-2019	ACOE Submission
4	01-26-2020	ACOE NWP PCN
5	08-20-2020	DEEP comments
6	02-15-2021	ACOE update

ACOE WETLAND IMPACT PLAN
PREPARED FOR
HIGHFIELD ESTATES PHASE IV
BIRCH VIEW DRIVE
ELLINGTON, CT

Date: 07-10-2013 | Drawn by: RJK | Job no: 12162
Scale: 1" =40' | Checked by: DSZ | Sheet no: 3 OF 5

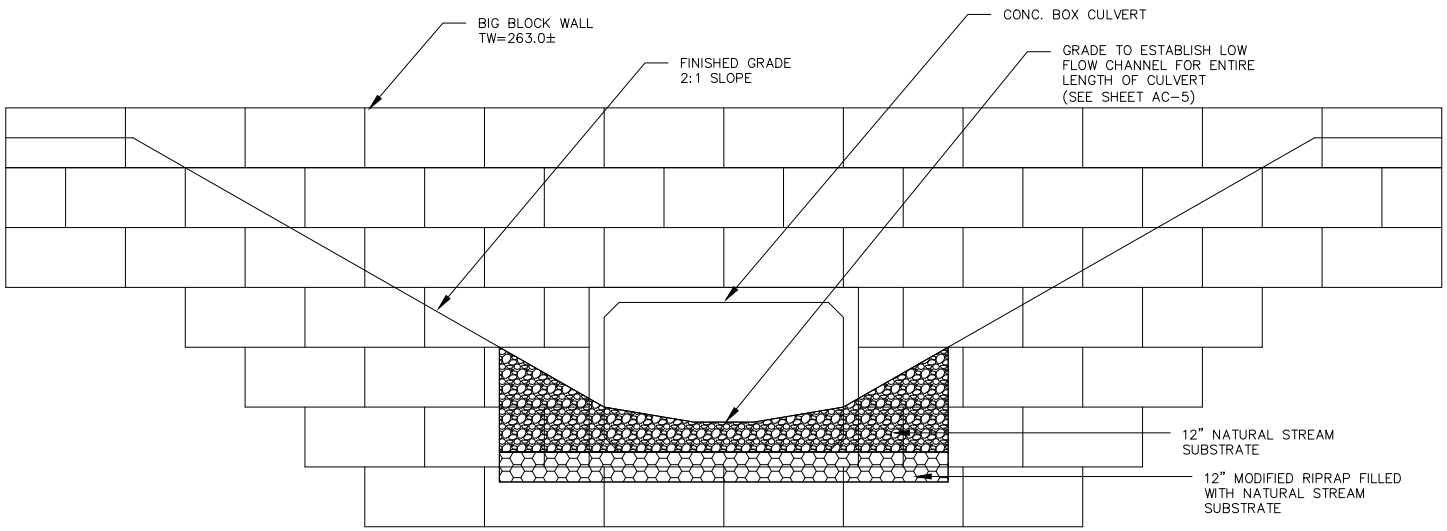
AC-3

Q:\2012\12162-Highfield Estates\ACOE\2021 updated package\HIG ACOE-10.dwg, AC-3, Feb. 07, 2021 - 12:02:48 PM

Typical Cross-Section

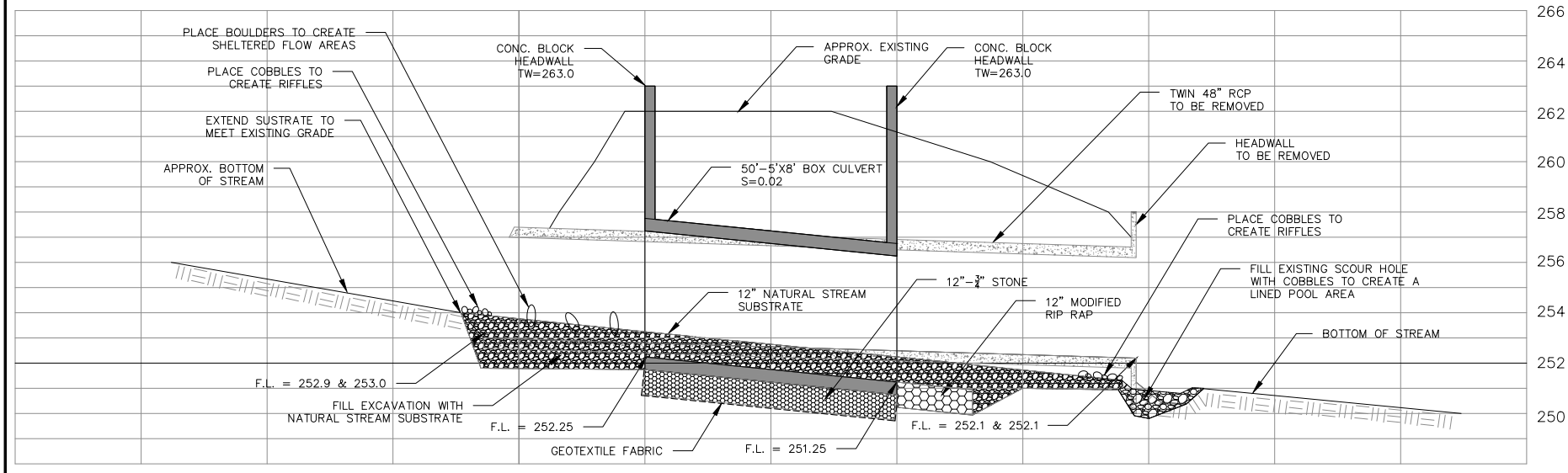
APPLICANT: Brooks Crossing Developers, LLC

PROJECT: Highfield Estates - Phase 4



SECTION B-B AT DOWNSTREAM HEADWALL

1" = 1'



PROFILE

1" = 10' H

1" = 2' V

F. A. Heseth & Associates, Inc.

6 Creamery Brook, East Granby, CT 06026 · Phone (860) 653-9000 · Fax (860) 844-8800

140 N.W. Broad Street, Southern Pines, NC 28387 · Phone (910) 692-2844 · Fax (910) 692-2856

Civil · Water Engineers · Surveyors · Planners · Landscape Architects

www.fahesketh.com · mail@fahesketh.com

No.	Date	Revisions: Description
1	09-18-2013	Cond. of Wetlands Approval
2	07-25-2014	Cut-off Trench As-built
3	10-24-2019	ACOE Submission
4	01-28-2020	ACOE NWP PCN
5	12-03-2020	DEEP comments
6	02-15-2021	ACOE update

ACOE WETLAND IMPACT PLAN

PREPARED FOR

HIGHFIELD ESTATES PHASE IV

BIRCH VIEW DRIVE

ELLINGTON, CT

Date: *07-10-2013* | Drawn by: *RJK* | Job no: *12162*

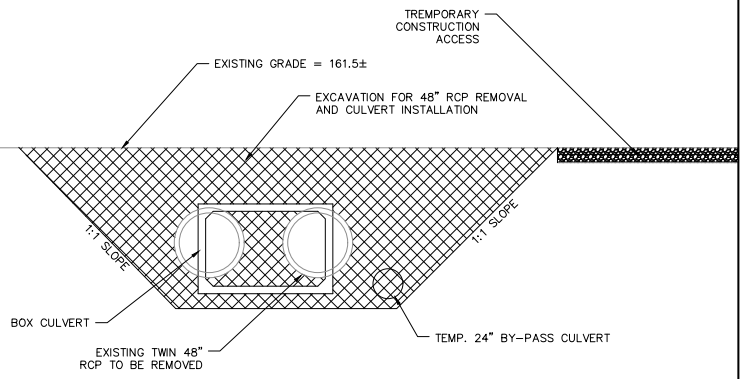
Scale: *AS NOTED* | Checked by: *DSZ* | Sheet no: *4 OF 5*

AC-4

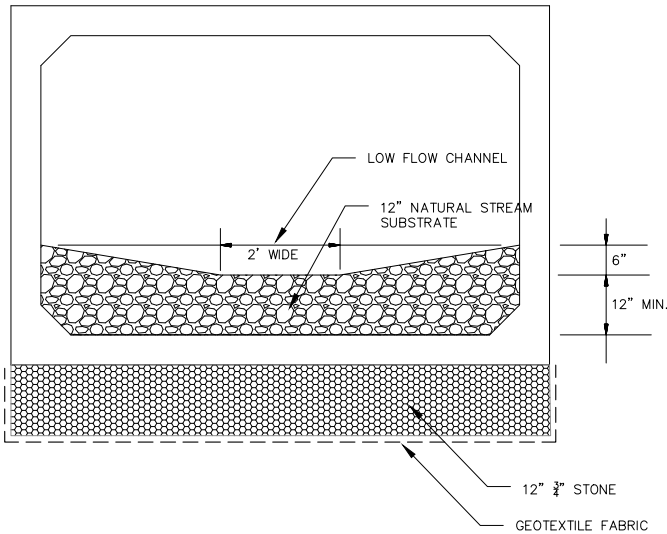
G:\2012\12162-Highfield Estates\ACOE\2021 updated package\VMS\ ACOE-10.dwg, AC-4, Feb. 07, 2021 - 12:53:46 PM

Typical Cross-Section

APPLICANT: Brooks Crossing Developers, LLC
PROJECT: Highfield Estates – Phase 4



SECTION A–A
EXCAVATION SECTION
1" = 2'



SECTION THROUGH CULVERT
1" = .5'

Connecticut Department of ENERGY & ENVIRONMENTAL PROTECTION
79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

February 28, 2020

David Zieks
F. A. Hesketh & Associates, INC
9 Creamery Brk
East Granby, CT 06026
dzieks@fahesketh.com

NDDB DETERMINATION NUMBER: 202001418

Project: Residential subdivision; Highfield Estates Phase 4, Brook Crossing in Ellington, CT

Expiration: February 28, 2022

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding this project. According to our records, there are State-listed species (RCSA Sec. 26-306) documented nearby the proposed project area.

Whip-poor-will (*Caprimulgus vociferus*)- State Special Concern
Brown thrasher (*Toxostoma rufum*)-State Special Concern
Eastern box turtle (*Terrapene carolina carolina*)- State Special Concern

Turtle recommendations:
In Connecticut, this terrestrial turtle inhabits a variety of habitats, including woodlands, field edges, thickets, marshes, bogs, and stream banks. Typically, however, box turtles are found in well-drained forest bottomlands and a matrix of open deciduous forests, early successional habitat, fields, gravel pits, and or powerlines.
The greatest threat to this species is habitat loss, fragmentation, and degradation due to development. This species is very sensitive to adult mortality because of late maturity (10 years old) and long life span (50-100years). Vehicular traffic, heavy equipment used for farming, and ATV use in natural areas are implicated specifically in adult mortality through collisions. Illegal collection by the pet trade and unknowing public for home pets exacerbates mortality rates and removes important individuals from the population. Predation rates are also unnaturally high because of increased predator populations (e.g. skunks, foxes, raccoons, and crows) that surround developed areas.

Land disturbance activities that will crush adult turtles or unearth hibernating turtles or turtle nests need to consider local habitat features and apply fencing and/or time of year restrictions as appropriate. We recommend you consult with a herpetologist familiar with preferred habitats to assist you with proper techniques and training to ensure the best protection strategies are employed for your site.
If land disturbance will occur in forested habitat you will need to take precautions to avoid crushing hibernating adults. This can be achieved by using either of the 2 recommendations:

- Restrict your land disturbance activities in forested habitat to the turtle active season (conduct land disturbance activites between April 1- November 1 and apply active season precautions described below).
- Before November 1: Install Exclusionary fencing nd conduct a turtle sweep to remove any adults and to prevent turtles from accessing and hibernating in forested habitat that will be disturbed.

In general, between April 1- November 1, during the turtle active season:

- Exclusionary practices will be used to prevent any turtle access into disturbance areas. These measures will need to be installed at the limits of disturbance as shown on the plans.

- Exclusionary fencing be at least 20 in tall and must be secured to and remain in contact with the ground and be regularly maintained (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through.
- All staging and storage areas, outside of previously paved locations, regardless of the duration of time they will be utilized, must be reviewed to remove individuals and exclude them from re-entry.
- All construction personnel working within the turtle habitat must be apprised of the species description and the possible presence of a listed species.
  - You can find information on Eastern Box Turtle here:
    - http://www.ct.gov/deep/cwp/view.asp?a=2723&q=416520
- The Contractor search the work area each morning prior to any work being done.
- Any turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and fencing should be inspected to identify and remove access point. This animal is protected by law and should not be relocated off-site.
- In areas where silt fence is used for exclusion, it shall be removed as soon as the area is stable and disturbance is finished to allow for reptile and amphibian passage to resume.

Birds recommendations
Whip-poor-will
The whip-poor-will is a bird that nests in forest habitat with an open understory, often adjacent to areas of shrubby or herbaceous habitat. They are ground-nesting birds that breed between April 20- July 30. They consume aerial invertebrates, especially Lepidoptera and Coleoptera. Whip-poor-will will benefit from protection of unfragmented forested blocks, which serve as insulation to development subsidized predators, invasive plants, and forest disturbance.

Brown thrasher
This bird nests in shrubs, thickets, and brush. Especially hedgerows adjacent to open fields. Their breeding season is approximately from April through August and it is during this period that the species is most susceptible to disturbances in its feeding or nesting habitat.

Develop a building façade and site design strategy to make the building and site structures visible barriers to birds. Limit interior and exterior night lighting. Security lighting should always be down-shielded to keep light within the boundaries of the site. Take steps necessary to assure that construction is designed, built, and operated in accordance with the standards and requirements of the LEED Green Building Rating System Pilot Credit #55. The USGBC releases revised versions of the LEED Building Rating System on a regular basis, and you should refer to the most current version when beginning a new building or construction project or renovation.

Plan natural landscaping: Avoid use of pesticides that will affect invertebrate food source (hymenoptera, coleoptera, diptera, lepidoptera, orthoptera). Protect native vegetation to promote insect availability and diversity.

Please submit an updated NDDB Request for Review if the scope of the proposed work changes.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Bureau of Natural Resources and cooperating units of DEEP, Independent conservation groups, and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDB should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated in the NDDB as it becomes available.

Please contact me if you have any questions (shannon.kearney@ct.gov). Thank you for consulting with the Natural Diversity Data Base and continuing to work with us to protect State-listed species.

Sincerely,

/s/ Shannon B. Kearney
Wildlife Biologist

NDDB DETERMINATION

No.	Date	Revisions: Description
1	09–18–2013	Cond. of Wetlands Approval
2	07–25–2014	Cul-de-sac Trench As-built
3	01–28–2020	ACOE Submission
4	01–28–2020	ACOE NWP PCN
5	08–20–2020	DEEP comments
6	12–03–2020	DEEP comments
7	12–21–2020	DEEP comments
8	02–15–2021	ACOE update

ACOE WETLAND IMPACT PLAN
PREPARED FOR
HIGHFIELD ESTATES PHASE IV
BIRCH VIEW DRIVE
ELLINGTON, CT

Date: 07–10–2013 | Drawn by: RJK | Job no: 12162
Scale: AS NOTED | Checked by: DSZ | Sheet no: 5 OF 5

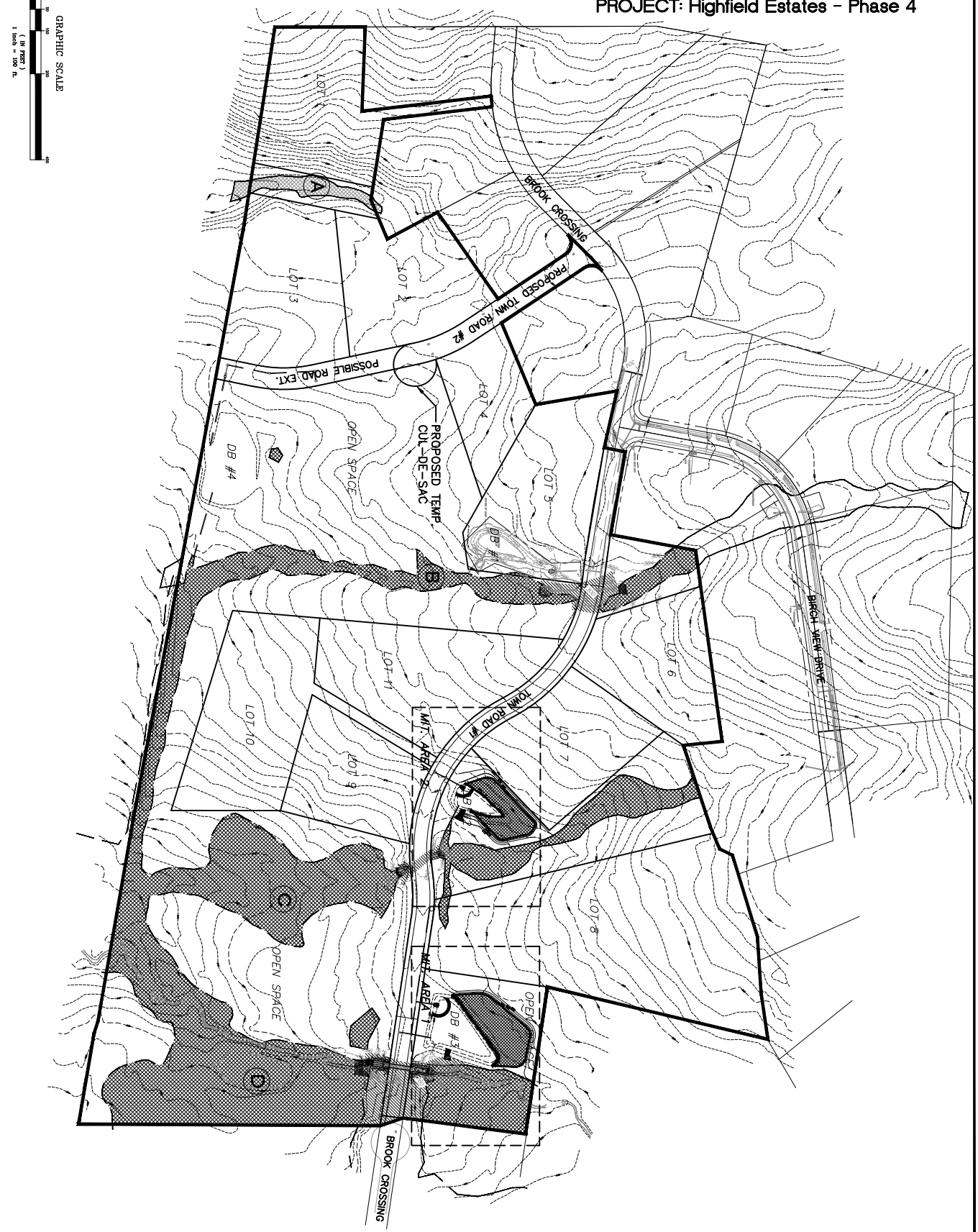
AC-5

F. A. Hesketh & Associates, Inc.
6 Creamery Brook, East Granby, CT 06026 • 140 N.W Broad Street, Southern Pines, NC 28387
Phone (860) 653-9000 • Fax (860) 844-8800 • Phone (910) 692-2844 Fax (910) 692-2856
Civil Structural Engineers • Surveyors • Planners • Landscape Architects www.fahesketh.com • mail@fahesketh.com

Plan View Index

APPLICANT: Brooks Crossing Developers, LLC

PROJECT: Highfield Estates – Phase 4



AC-6

ACOE MITIGATION PLAN INDEX

PREPARED FOR

HIGHFIELD ESTATES PHASE IV

BIRCH VIEW DRIVE

ELLINGTON, CT

Date: *07-10-2013* | Drawn by: *RJK* | Job no: *12162*

Scale: *1" = 100'* | Checked by: *DSZ* | Sheet no: *6 OF 8*

Revisions:

No.	Date	Description
1	09-18-2013	Cond. of Wetlands Approval
2	07-25-2014	Cut-off Trench As-built
3	03-29-2019	ACOE Submission
4	10-30-2019	Review comments
5	01-26-2020	ACOE NWP PCN
6	12-21-2020	DEEP Comments
7	02-15-2021	ACOE update

F. A. Hesketh & Associates, Inc.

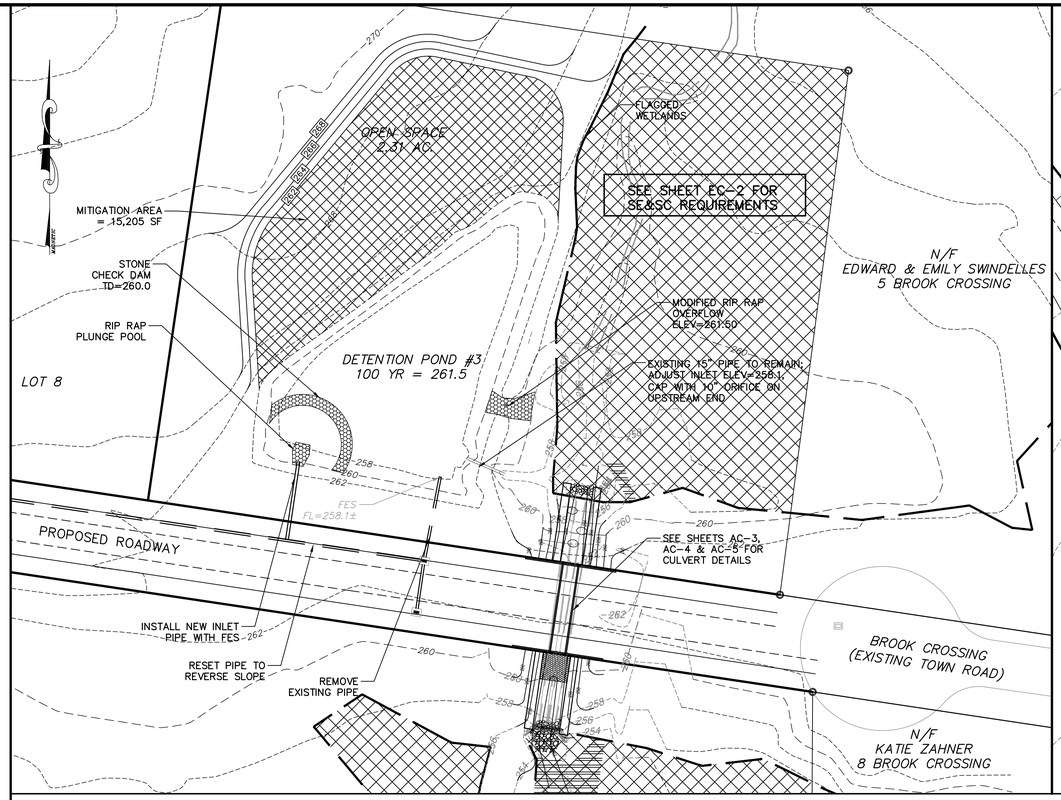
6 Creamery Brook, East Granby, CT 06026 · 146 N W Broad Street, Southern Pines, NC 28387

Phone (860) 653-8000 · Fax (860) 844-8800 · Phone (910) 692-2844 Fax (910) 692-3356

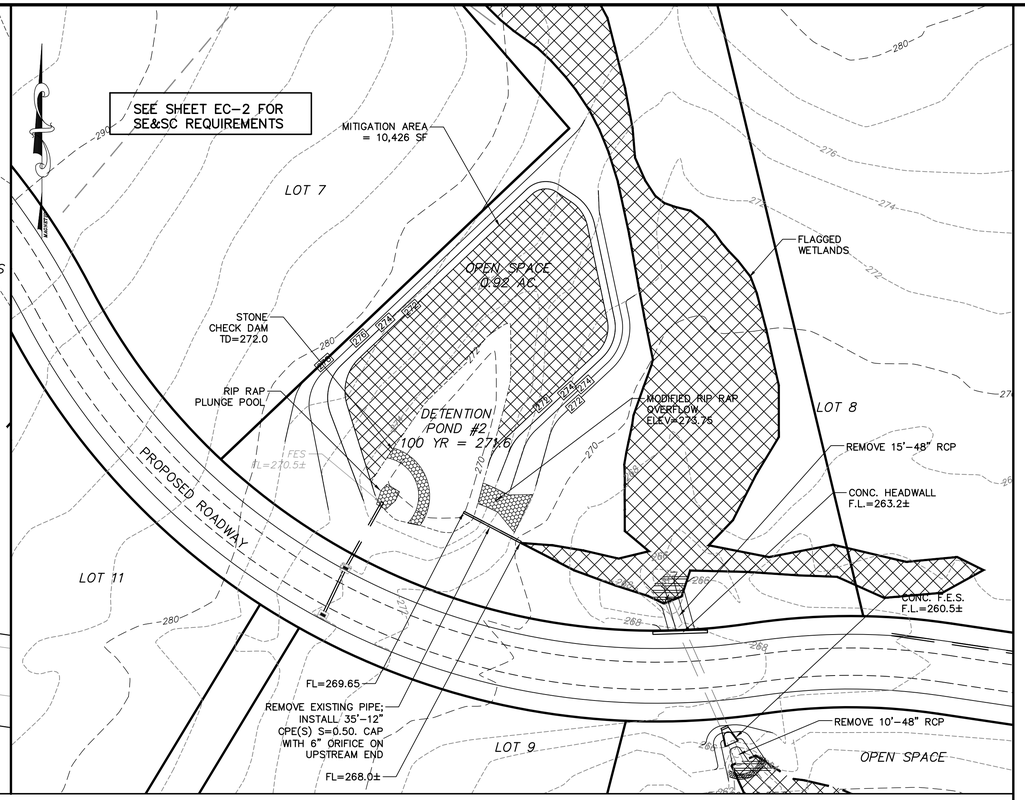
Civil Traffic Engineers · Surveyors · Planners · Landscape Architects www.fahesketh.com · mail@fahesketh.com

Plan View

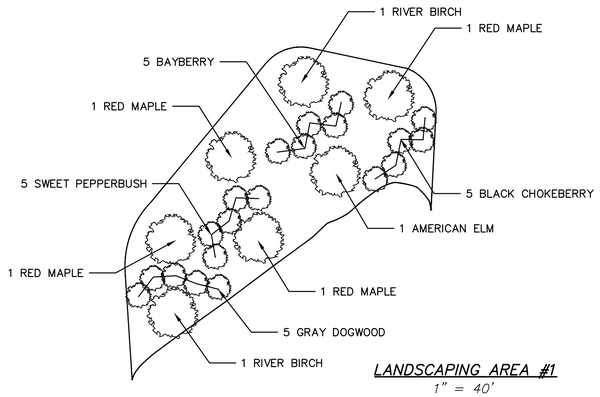
APPLICANT: Brooks Crossing Developers, LLC
PROJECT: Highfield Estates – Phase 4



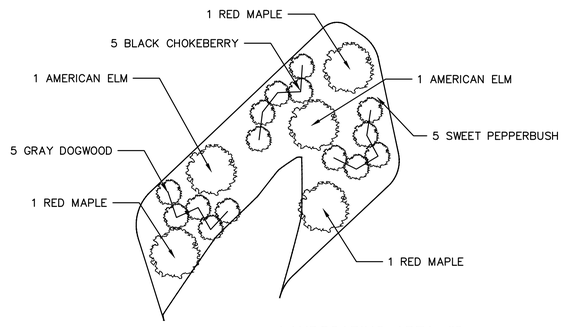
MITIGATION AREA #1
1" = 40'



MITIGATION AREA #2
1" = 40'



LANDSCAPING AREA #1
1" = 40'



LANDSCAPING AREA #2
1" = 40'

GROUNDWATER INFORMATION

The Highfield subdivision area has been studied thoroughly over the past few years relative to the design of on-site septic systems. That has given us considerable groundwater information

Standpipes were installed on thirteen lots in 2018 and groundwater monitored ten times from 3/20/2018 to 6/1/2018. There were at least three standpipes on each lot.

Looking at the data from the six lots closest to the proposed mitigation areas, the depth to groundwater was generally consistent throughout those lots. The averages for the six lots ranged from 20.3 inches below grade to 39.5 inches below grade, with the overall average being 31.7 inches or 2.6 feet below grade.

Looking at mitigation area #1 the ground water approaching the area would be at elevation 275.4. We are cutting into that slope and creating a flat area at elevation 272.0. Likewise for mitigation area #2 the ground water approaching the area would be at elevation 265.4 and we are cutting into that slope and creating a flat area at elevation 262.0.

We believe in both areas we will clearly intercept normal ground water flow and a wet mitigation area conducive to the establishment of a wetland plant regime.

INVASIVE SPECIES CONTROL PLAN

Following restoration of disturbed areas associated with the culvert replacement in Area D and planting of the created Wetland Mitigation Areas 1 & 2, measures will be needed to prevent the colonization of invasive plant species. Based on our site evaluation, there are sources of multi-flora rose, phragmites, Japanese barberry, Japanese stilt grass and autumn olive that could potentially colonize the restored areas. The best way to prevent the establishment of invasive plants is to densely vegetate the restored areas with native seed mix and plantings immediately following restoration.

See Landtech, March 16, 2020, Wetland Impact Mitigation Report for guidelines for the removal of invasive plants.

WETLAND MITIGATION AREA MONITORING

Each of the planted wetland mitigation areas will be monitored annually for a period of three years. These areas will be monitored for establishment of mitigation wetland plantings and the control of invasive plant species.

A biologist/wetland scientist will monitor the project site after mitigation planting has been completed. The monitored areas will include the disturbed and restored areas along the banks of the Muddy Brook and as well as the two other Wetland Mitigation Areas.

The primary goals of this monitoring will be to evaluate planting survival and to identify invasive species early so that control measures can be implemented that will not interfere with establishment of a dense stand of native, non-invasive vegetation.

The Site will be most vulnerable to re-invasion immediately following placement of the final growth medium, so monitoring efforts will be concentrated in that time period, and will be reduced in frequency as the installed plant community becomes fully established.

- During the first growing season, following completion of mitigation plantings, the site will be monitored monthly from May through September,
- During the second and third growing seasons the site will be monitored during the early, mid and late growing season (May, July, September).

SUCCESS CRITERIA

At the end of the three year monitoring period, the planted areas will be evaluated against the following success criteria:

- 80% herbaceous and woody vegetative cover;
- 80% survival of planted trees and shrubs;
- Owner can demonstrate that invasive plants within the wetland mitigation areas were aggressively managed to maximize reestablishment of a native plant community;
- Vegetation within the wetland mitigation areas possess no more than 15 percent cover of invasive plants.

MONITORING AND REPORTING

At the end of the third year after placement of the final growth medium, the owner's biologist will evaluate the Site for performance against these Success Criteria. If the Success Criteria are satisfied, the Wetland Mitigation/Invasive Species Control Plan will be deemed completed. If the Success Criteria are not met, then annual monitoring will continue for successive one-year increments until the Success Criteria are satisfied.

Interim evaluations as specified above will be performed to measure progress towards these Success Criteria. For the three year monitoring period, the following information will be collected and reported:

- Estimates of percent cover of installed vegetation, volunteer non-invasive vegetation, and invasive species;
- Inventory of planted and volunteer plant species.
- Recommended management practices, including replacement of lost plantings, including substitution of selected plant species based on observed mortality and site condition, and management of invasive plant species in accordance with the Invasive Species Control Plan;
- Summary of management activities performed during the prior year to attain success criteria.
- Summary of the effectiveness of any controls that were implemented during the prior years.
- The status of the vegetative cover against the Success Criteria.

A summary wetland mitigation area monitoring report, containing the information described above for the relevant year, will be prepared and submitted annually to the ACOE Regulatory Division no later than December 15 of each year being monitored. A self-certification form will be completed, signed, and submitted as the transmittal cover sheet for each annual summary and will include the permit number and the reporting year (i.e. 1st year, 2nd year, 3rd year).

F. A. Hesketh & Associates, Inc.
6 Creamery Brook, East Granby, CT 06026 . 146 N W Broad Street, Southern Pines, NC 28387
Phone (860) 653-8000 . Fax (860) 844-8600 . Phone (910) 692-2844 Fax (910) 692-3356
Civil & Traffic Engineers . Surveyors . Planners . Landscape Architects www.fahesketh.com - mail@fahesketh.com

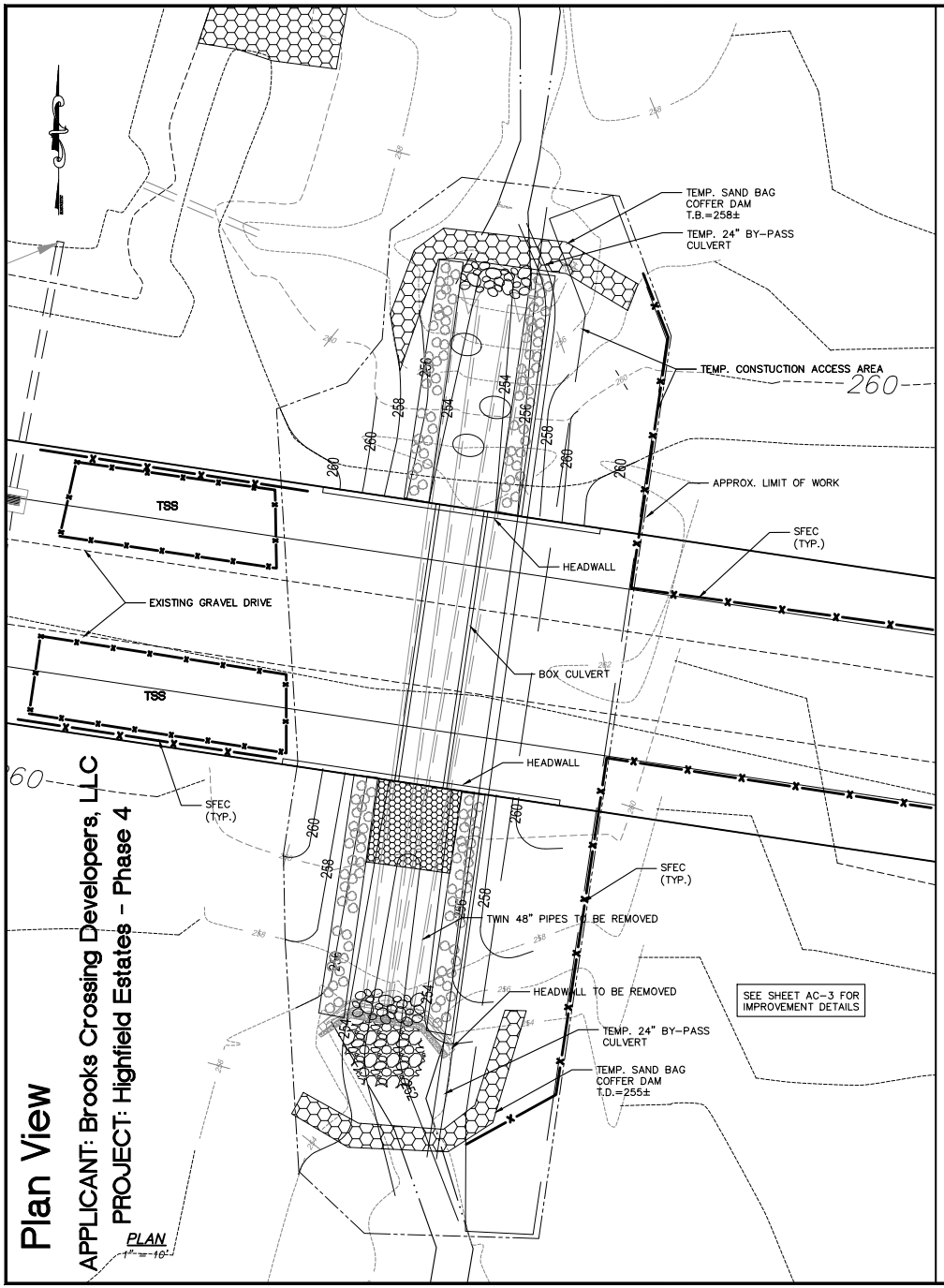
No.	Date	Revisions: Description
1	09-18-2013	Cond. of Wetlands Approval
2	07-25-2014	Cut-off Trench As-built
3	03-29-2019	ACOE Submission
4	10-30-2019	Review comments
5	01-26-2020	ACOE NWP PCN
6	12-03-2020	DEEP comments
7	02-15-2021	ACOE update

DETENTION POND MITIGATION
PREPARED FOR
HIGHFIELD ESTATES PHASE IV
BIRCH VIEW DRIVE
ELLINGTON, CT

Date: 07-10-2013 | Drawn by: RJK | Job no: 12162
Scale: 1" =40' | Checked by: DSZ | Sheet no: 7 OF 8

AC-7

Q:\2012\12162-Highfield Estates\ACOE\2021 updated package\HIG ACOE-10.dwg, AC-7, Apr 15, 2021 - 7:13:56 AM



Plan View

APPLICANT: Brooks Crossing Developers, LLC

PROJECT: Highfield Estates - Phase 4

PLAN

1" = 10'

LEGEND – TEMPORARY SE&SC MEASURERS

- = CONSTRUCTION EXIT (CE)
- = HAYBALE CHECK DAM (HBCD)
- = HAYBALE EROSION CONTROL (HBEC)
- = INLET PROTECTION – SILT SACK (CBEC)
- = SEDIMENT FENCE EROSION CONTROL (SFEC)
- = SEDIMENT FENCE/ HAY BALE BACKING (SFEC/HBB)
- TSS = SEDIMENT FENCE AROUND TEMP. SOIL STOCKPILE (TSS)
- = SAND BAG COFFER DAM

CONSTRUCTION SEQUENCE:

In general, the overall project will follow the sequence below:

1. Install temporary construction exit at end of existing paved portion of Brook Crossing.
2. Install silt fence erosion control.
3. Strip and remove vegetation from construction area.
4. Remove soil above twin 48" pipes.
5. Construct temporary upstream and downstream sand bag coffer dams and install 24" CPE by-pass culvert.
6. Remove downstream headwall.
7. Remove existing twin 48" pipe starting downstream.
8. Install geotextile and crushed stone base for box culvert as each section of culvert is removed.
9. Remove existing 48" FES's.
10. Install box culvert starting upstream.
11. Complete upstream and downstream channel grading.
12. Install upstream channel improvements.
13. Install downstream channel improvements.
14. Remove temporary by-pass culvert and coffer dams.
15. Install upstream and downstream headwalls.
16. Complete grading and surface restoration.
17. Install plantings (see sheet AC-3).

WATER HANDLING

- Work to be done during dry weather and period of low stream flow.
- Construct temporary upstream and downstream sand bag coffer dams and install 24" CPE by-pass culvert.
- Contractor to adjust construction schedule and methods to ensure water of passage without soil erosion.

EROSION AND SEDIMENT CONTROL NOTES

1. Disturbance of soil surfaces is regulated by State Law. All work shall comply with an approved "Erosion and Sediment Control Plan" to prevent or minimize soil erosion.

2. The installation and maintenance of erosion control devices is the responsibility of the land owner, developer, and the excavation contractor. Town officials shall be notified in writing of the name, address and telephone number of the individual responsible for this work (including any changes) at the required pre-construction conference.

3. The contractor shall use the "Connecticut Guidelines for Soil Erosion and Sediment Control" (2002), as amended as a guide in constructing the erosion and sediment controls indicated on these plans. The guidelines may be obtained from the Connecticut Department of Environmental Protection store, 79 Elm Street, Hartford, CT 06106-5127.

4. The contractor shall schedule operations to limit disturbance to the smallest practical area for the shortest possible time. Overall site disturbance shall be confined to these limits delineated on the plans.

5. The contractor is responsible for the timely installation, inspection, repair or replacement of erosion control devices to insure proper operation.

6. The contractor shall notify the design engineer of unsatisfactory erosion conditions not controlled by the erosion and sediment control plan and shall install additional measures as required.

7. All disturbed areas not covered by buildings, pavement, mulch or ground cover plantings shall be planted with grass.

8. Accumulated sediment removed from erosion control devices is to be spread and stabilized in level, erosion resistant locations as general fill.

9. Special attention shall be given to the construction sequence outlined on the erosion and sediment control plan.

10. The developer shall be responsible for cleaning any construction debris or sediment from existing roads as ordered by the Town and/or State, if any debris or sediment from construction activities enter onto these roadways.

11. Limit work within wetland areas to the least disturbance necessary for construction. Restore disturbed areas as closely as possible to their original natural state.

12. Additional dust control measures as specified in D.O.T. 814-A Section 9.39, Section 9.42 and Section 9.43 shall be furnished by the contractor as site conditions warrant or as directed by Town or State officials.

13. The contractor is responsible for cleaning and removal of sediment and/or debris from the storm drainage system throughout the duration of the project (i.e. sumps, plunge pools, etc.)

EROSION CONTROL DEVICES:

Refer to the "Connecticut Guidelines For Soil Erosion And Sediment Control – 1985" (see Erosion and Sediment Control Note 3) when constructing erosion control devices shown on this plan.

HBEC – HAYBALE EROSION CHECKS shall be staked a minimum of five (5) feet from the base of disturbed slopes exceeding eight (8) feet in height, or at locations shown on the plans. Place haybales before starting a fill slope and after digging a cut slope. Heel haybales 4" into the soil. Stake haybales around the perimeter of all catch basins. Remove all sediment when deposits reach 1/2 bale height. Haybales must be replaced periodically.

SFEC – SEDIMENT FENCE EROSION CHECK: a synthetic textile barrier designed to filter sediment from surface water runoff. Placement shall be similar to HBEC and installation requires anchoring the fence bottom to prevent bypass. All sediment shall be removed if deposits reach one (1) foot in depth. Additional support (such as snow fence or wire fence) on the downhill face may be required to strengthen sediment fence in high flow locations.

CE – CONSTRUCTION EXIT: a broken stone pad providing a hard surface points where vehicles will leave the site. The construction exits reduce tracking of sediment into adjacent pavement. Excess sediment should be periodically removed from the stone surface.

RPPP – RIPRAP PLUNGE POOL: a riprap dissipation device installed at the ends of drainage culverts creating a pool with bottom below the culvert. Water in the pool reduces velocity and the pool collects heavy sediment. Riprap plunge pools require periodic removal of accumulated deposits.

FES – FLARED END SECTION: a precast concrete culvert end Structure designed to spread runoff to greater width of flow.

GRSW – GRASSED SWALE: a shaped shallow earth drainage way used to convey excess surface runoff. Grass vegetation should be well established before use. Stabilization with netting or mulch may be required.

RRSW – RIPRAP SWALE: a shaped shallow drainage way lined with modified riprap used to convey excess surface runoff.

TSS – TEMPORARY SOIL STOCKPILE: Temproray location of stockpiled topsoil. Locations shall generally be on level ground away from drainageways and shall be ringed with silt fence and/or haybales. Staockpile shall be seeded if it remains in place for more than 30 days.

F. A. Hesketh & Associates, Inc.
6 Creamery Brook, East Granby, CT 06026 · 140 N.W. Broad Street, Southern Pines, NC 28387
Phone (860) 653-8000 · Fax (860) 844-8600 · Phone (910) 692-2844 · Fax (910) 692-2856
Civil & Public Engineers · Surveyors · Planners · Landscape Architects
www.fahesketh.com · mail@fahesketh.com

No.	Date	Revisions: Description
1	08-20-2020	DEEP comments
2	12-03-2020	DEEP comments
3	01-26-2021	DEEP Comments
4	02-15-2021	ACOE update
5		

EROSION CONTROL PLAN

PREPARED FOR

HIGHFIELD ESTATES PHASE IV

BIRCH VIEW DRIVE

ELLINGTON, CT

Date: 08-20-2020 | Drawn by: RJK | Job no: 12162 | Sheet no: 1 OF 2

Scale: 1" = 40' | Checked by: DSZ

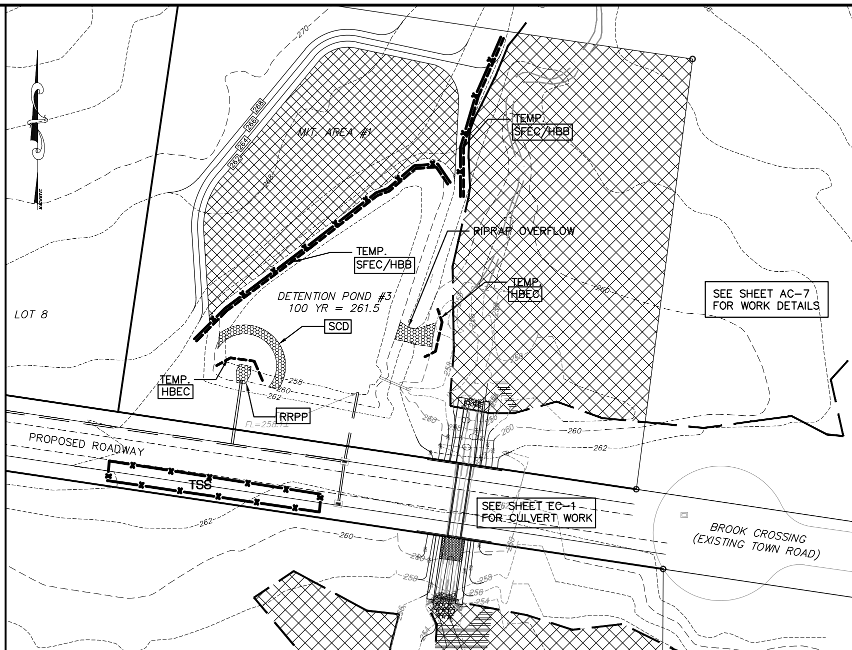
EC-1

Plan View

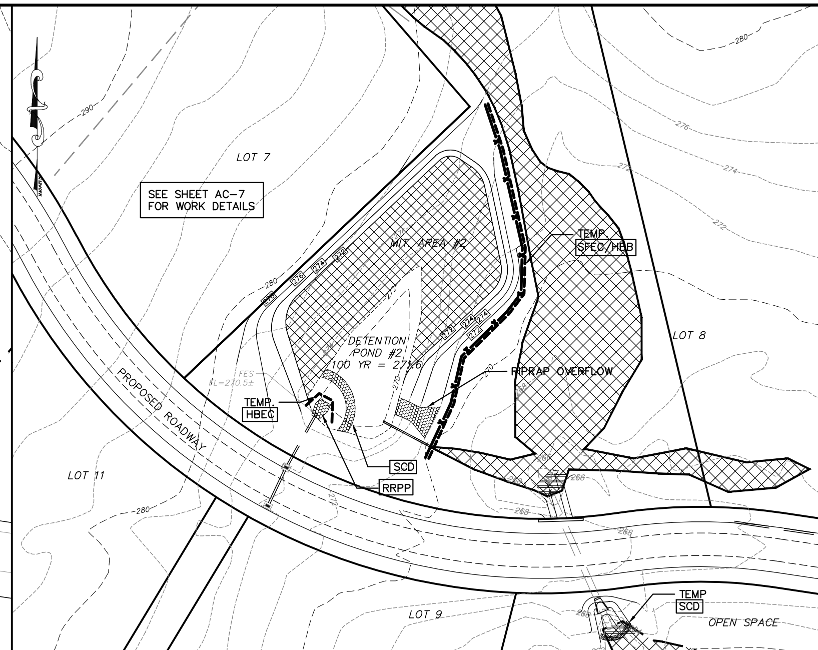
APPLICANT: Brooks Crossing Developers, LLC

PROJECT: Highfield Estates – Phase 4

SEE SHEET EC-1 FOR EROSION CONTROL NOTES AND DEVICE DESCRIPTIONS



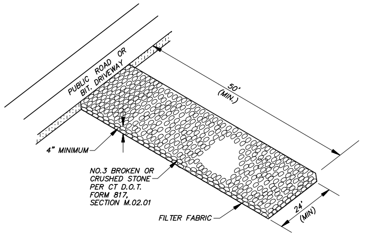
MITIGATION AREA #1
1" = 40'



MITIGATION AREA #2 AND WATERCOURSE
1" = 40'

LEGEND – TEMPORARY SE&SC MEASURERS

- = CONSTRUCTION EXIT (CE)
- = HAYBALE CHECK DAM (HBCD)
- = HAYBALE EROSION CONTROL (HBEC)
- = INLET PROTECTION – SILT SACK (CBEC)
- = SEDIMENT FENCE EROSION CONTROL (SFEC)
- = SEDIMENT FENCE/ HAY BALE BACKING (SFEC/HBB)
- TSS = SEDIMENT FENCE AROUND TEMP. SOIL STOCKPILE (TSS)
- TST # = TEMPORARY SEDIMENT TRAP (TST)
- = DIVERSION BERM OR SWALE (DB)
- = STONE CHECK DAM (SCD) AND TEMP. STONE FILTER BERM
- = RIP RAP PLUNGE POOL (RRPP)

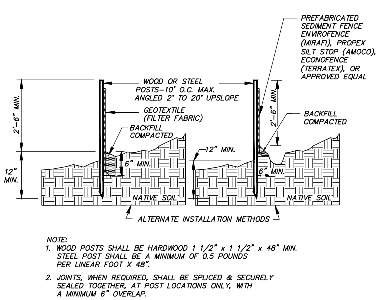


CONSTRUCTION EXIT (CE)
N.T.S.

CONSTRUCTION SEQUENCE MIT. AREA #1:

In general, the overall project will follow the sequence below:

1. Install Silt Fence Erosion Control with Hay Bale Backing at locations shown.
2. Install riprap overflow.
3. Install new culvert.
4. Install stone check dams in detention ponds.
5. Remove vegetation from Mitigation areas.
6. Remove topsoil from Mitigation areas and grade area.
7. Topsoil and see all disturbed areas.
8. Install plantings (see sheet AC-7).
9. Remove temporary SE&SC measures when vegetation established.



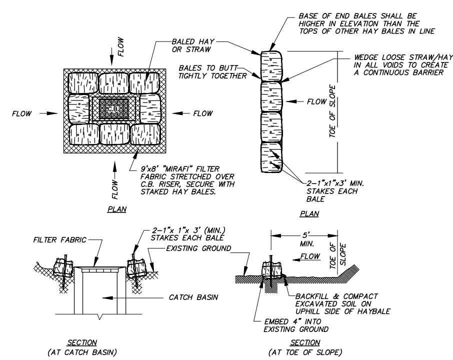
NOTE:
1. WOOD POSTS SHALL BE HARDWOOD 1 1/2" x 1 1/2" x 48" MIN. STEEL POST SHALL BE A MINIMUM OF 0.5 POUNDS PER LINEAR FOOT X 48".
2. JOINTS, WHEN REQUIRED, SHALL BE SPLICED & SECURELY SEALED TOGETHER, AT POST LOCATIONS ONLY, WITH A MINIMUM 6" OVERLAP.

SEDIMENT FENCE EROSION CONTROL (SFEC)
N.T.S.

CONSTRUCTION SEQUENCE AREA #2 WATERCOURSE:

In general, the overall project will follow the sequence below:

1. Install downstream temporary stone check dam.
2. Remove portion of downstream culvert.
3. Install new flared end section.
4. Remove portion of upstream culvert.
5. Install concrete headwall.
6. Topsoil, seed and mulch disturbed areas.
7. Remove temporary SE&SC measures when vegetation established.

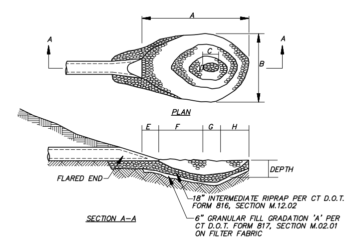


HAYBALE EROSION CONTROL (HBEC)
N.T.S.

CONSTRUCTION SEQUENCE MIT. AREA #2:

In general, the overall project will follow the sequence below:

1. Install Silt Fence Erosion Control with Hay Bale Backing at locations shown.
2. Install riprap overflow.
3. Install new culvert.
4. Install stone check dams in detention ponds.
5. Remove vegetation from Mitigation areas.
6. Remove topsoil from Mitigation areas and grade area.
7. Topsoil and see all disturbed areas.
8. Install plantings (see sheet AC-7).
9. Remove temporary SE&SC measures when vegetation established.



PIPE SIZE	A	B	C	D	E	F	G	H	WT. RIPRAP TONS.	DEPTH
12"	8'	6'	1 1/2'	1'	1'	3 1/2'	1 1/2'	2'	4.5	1'–0"
15"	10'	7'	1 1/2'	1'	1'	4 1/2'	1 1/2'	3'	6	1'–0"
18"	12'	8'	2'	1'	1'	5'	2'	4'	8	1'–4"
21"	15'	9'	2 1/2'	1 1/2'	1'	7'	2 1/2'	4 1/2'	12	1'–6"
24"	17'	10'	2 1/2'	1 1/2'	1'	8'	2 1/2'	5 1/2'	15	1'–10"
30"	20'	13'	3'	2'	2'	9'	3'	6'	22	2'–0"
36"	24'	16'	3 1/2'	2'	2'	9 1/2'	3 1/2'	7	33	2'–4"

RIPRAP PLUNGE POOL (RRPP)
N.T.S.

F. A. Hesketh & Associates, Inc.
6 Creamery Brook, East Granby, CT 06026 · 146 N W Broad Street, Southern Pines, NC 28387
Phone (860) 653-8000 · Fax (860) 844-8600 · Phone (910) 692-2844 Fax (910) 692-3356
Civil & Traffic Engineers · Surveyors · Planners · Landscape Architects www.fahesketh.com · mail@fahesketh.com

Revisions:

No.	Date	Description
1	08-20-2020	DEEP comments
2	12-03-2020	DEEP comments
3	02-15-2021	ACOE update

EROSION CONTROL PLAN
PREPARED FOR
HIGHFIELD ESTATES PHASE IV
BIRCH VIEW DRIVE
ELLINGTON, CT

Date: 08-20-2020 | Drawn by: RJK | Job no: 12162
Scale: 1" =40' | Checked by: DSZ | Sheet no: 2 OF 2

EC-2

Q:\2012\12162-Highfield Estates\ACOE\2021 updated package\HIG ACOE-10.dwg, EC-2, Feb. 07, 2021 – 12:05:32 PM

IW 202107

NOTIFICATION OF TIMBER HARVEST

Town: ELLINGTON **Date:** 5/20/2021

Property Location: Between Jobs Road, Pinney Road, Elderberry Lane, and Lanz Lane

List all parcels:

Assessor's Info:

Map	Block	Lot

OR:

Unique ID
160 056 0000, 179 022 000, 179 023 0000
179 025 0000, 180 003 0000, 180 004 0000
180 005 0000, 180 006 0000, 180 007 0000
188 002 0000

Total acreage of property(s): 132.23 **Total acreage of harvest area:** Approximately 50.00

Landowner(s) of Record: Wysocki Edward B + Alice R
Mailing Address: 337 Jobs Hill Road
Town: Ellington **Zip** 06029
Phone (860)803-0777
E-mail: jameswyso@aol.com

Primary Contact: James Wysocki
Mailing Address: 62 Eagle Brook Drive
Town: Somers **Zip** 06071
Phone (860)803-0777
E-mail: jameswyso@aol.com

Note: Timber harvesting is a ***Permitted as of Right Activity*** pursuant to the Inland Wetlands and Watercourses Act, except for those practices regulated under Section 22a-36 through 22a-45 of the Connecticut General Statutes.

Is there a current forest management/stewardship plan for this property? Yes x No

This timber harvest has been prepared by a State of Connecticut certified:
(Check one): X **Forester** **OR** . **Supervising Forest Products Harvester**
Forest Practitioner Certificate #: F000984
Name: Nathaniel J. Gosselin
Address: 11 Olympia Street, Easthampton, MA 01027; PO Box 150, Rockfall, CT 06481
E-mail: nate@connwood.com
Phone #: (Business) 860-349-9910 (Cell) 203-907-7015

Property Boundaries:
Bounds are marked: x Yes ¨ No

Timber Harvest Boundaries:
Have been marked or flagged: x Yes ¨ No

Have owners of all lands within 100 feet of the harvest area been notified via first-class mail prior to filing this "*Notification of Timber Harvest*"? Yes x No
Estimated starting date of timber harvesting operations: 07 /01 /2021

Description of Timber Harvest:
Objective: A first phase shelterwood had been completed in 2007. During that harvest, white pine and oak regeneration was establishjed in 1/4 acre gaps. Due to the drought and gypsy moth defoliation, many reserve trees are at risk of being standing dead.
Treatment: By removing the residual overstory with some reserves in a final phase shelterwood, regeneration can be released, forest regeneration can be released, and standing dead trees creating safety hazards can be removed. This forest is actively managed by the owner; therefore, this harvest will maintain the early successional bird habitat desired. Some conversion to agricultural field in being considered.

Amount of forest products to be harvested:
Appx 150mbf Board feet _____ Cords _____ Cubic feet _____ Tons

How have the trees to be harvested been designated?
x They have been marked with paint at eye level and at ground level. **Paint color(s):** Blue horizontal lines
. They have not been marked

This is not an official CT DEP form but it has been endorsed for town usage by: CT Farm Bureau Assoc., CT Forest & Park Assoc., CT Professional Timber Producers, Society of American Foresters - CT Chapter, and others.

IW 202107

NOTIFICATION OF TIMBER HARVEST

Town: Ellington **Date:** 5/20/2021

Property Location: 17 Elderberry Lane, Egypt Road

List all parcels:

Assessor's Info:

Map	Block	Lot

OR:

Unique ID
189 004 0000, 188 001 0000, 180 017 0000
181 015 0000

Total acreage of property(s): 34.8 **Total acreage of harvest area:** Appx. 30

Landowner(s) of Record: Wysocki James E
Mailing Address: 62 Eagle Brook Drive
Town: Somers **Zip** 06071
Phone (860)803 0777
E-mail: jameswyso@aol.com

Primary Contact: James Wysocki
Mailing Address: 62 Eagle Brook Drive
Town: Somers **Zip** 06071
Phone (860)803 0777
E-mail: jameswyso@aol.com

Note: Timber harvesting is a ***Permitted as of Right Activity*** pursuant to the Inland Wetlands and Watercourses Act, except for those practices regulated under Section 22a-36 through 22a-45 of the Connecticut General Statutes.

Is there a current forest management/stewardship plan for this property? Yes X No

This timber harvest has been prepared by a State of Connecticut certified:
(Check one): X **Forester** **OR** . **Supervising Forest Products Harvester**
Forest Practitioner Certificate #: F000984
Name: Nathaniel J Gosselin
Address: 11 Olympia Street, Easthampton, MA, 01027
E-mail: nate@connwood.com
Phone #: (Business) 860-349-9910 (Cell) 203-907-7015

Property Boundaries:
Bounds are marked: X Yes ¯ No

Timber Harvest Boundaries:
Have been marked or flagged: X Yes ¯ No

Have owners of all lands within 100 feet of the harvest area been notified via first-class mail prior to filing this "*Notification of Timber Harvest*"? Yes X No
Estimated starting date of timber harvesting operations: 05 / 26 / 2021

Description of Timber Harvest:
Objective: Early successional forest habitat for roughed grouse/woodcock; varying forest structure across the landscape; hunting; firewood; salvage existing value; regenerate oak
Treatment: Irregular Shelterwood with reserves.

Amount of forest products to be harvested:
Appx. 100mbf Board feet _____ Cords _____ Cubic feet _____ Tons

How have the trees to be harvested been designated?
x They have been marked with paint at eye level and at ground level. **Paint color(s):** Orange dots
. They have not been marked

This is not an official CT DEP form but it has been endorsed for town usage by: CT Farm Bureau Assoc., CT Forest & Park Assoc., CT Professional Timber Producers, Society of American Foresters - CT Chapter, and others.

SOIL, WATER AND INLAND WETLANDS RESOURCES

Actions Being Performed On This Land

(Check all that apply and locate on attached Timber Harvest Area map -- see information below on maps.)

Crossings / Clearing	Erosion and Sedimentation Control Measures:
_ Temporary stream/drainage crossing _ Temporary wetlands crossing _ Removal of trees in wetlands _ Removal of trees in upland review area	X Installation of water bars _ Grading X Seeding _ Other (describe below)
Log landing area:	**Roads**
X anti-tracking pad _ curb cut	Are new roads, other than skid trails, to be constructed for transport of logs or other activities associated with this harvest? Yes X No

Describe in further detail as necessary:

ALL ACTIVITY WILL BE IN ACCORDANCE WITH THE CONNECTICUT FORESTRY BEST MANAGEMENT PRACTICES "2007 CONNECTICUT FIELD GUIDE." THERE ARE NO FOREST ACTIVITIES WITHIN WETLANDS OR WATERCOURSES. FINAL STABILIZATION WILL INCLUDE BUT NOT BE LIMITED TO STRAW MULCH, CONSERVATION MIX SEED ON TRAILS, WATERBARS AND BROAD BASED DIPS.

The following maps are attached to this "Notification" (Check all that apply)

X Copy of USGS topographic map with property outlined
X Copy of Assessor's map with property outlined
X Timber Harvest Area map showing outline of harvest area, main skid road locations, log landing area, truck access roads, inland wetlands, watercourses and any crossings

The undersigned hereby swear that the information contained in this application is true, accurate and complete to the best of my (our) knowledge and belief and that the timber harvest will be conducted in accordance with the specifications outlined in this "Notification of Timber Harvest."

Signature of Landowner(s): By James D Wysocki Date: 05·28·2021

Print/Type Name: JAMES WYSOCKI

Signature of Landowner(s): — Date: —

Print/Type Name: —

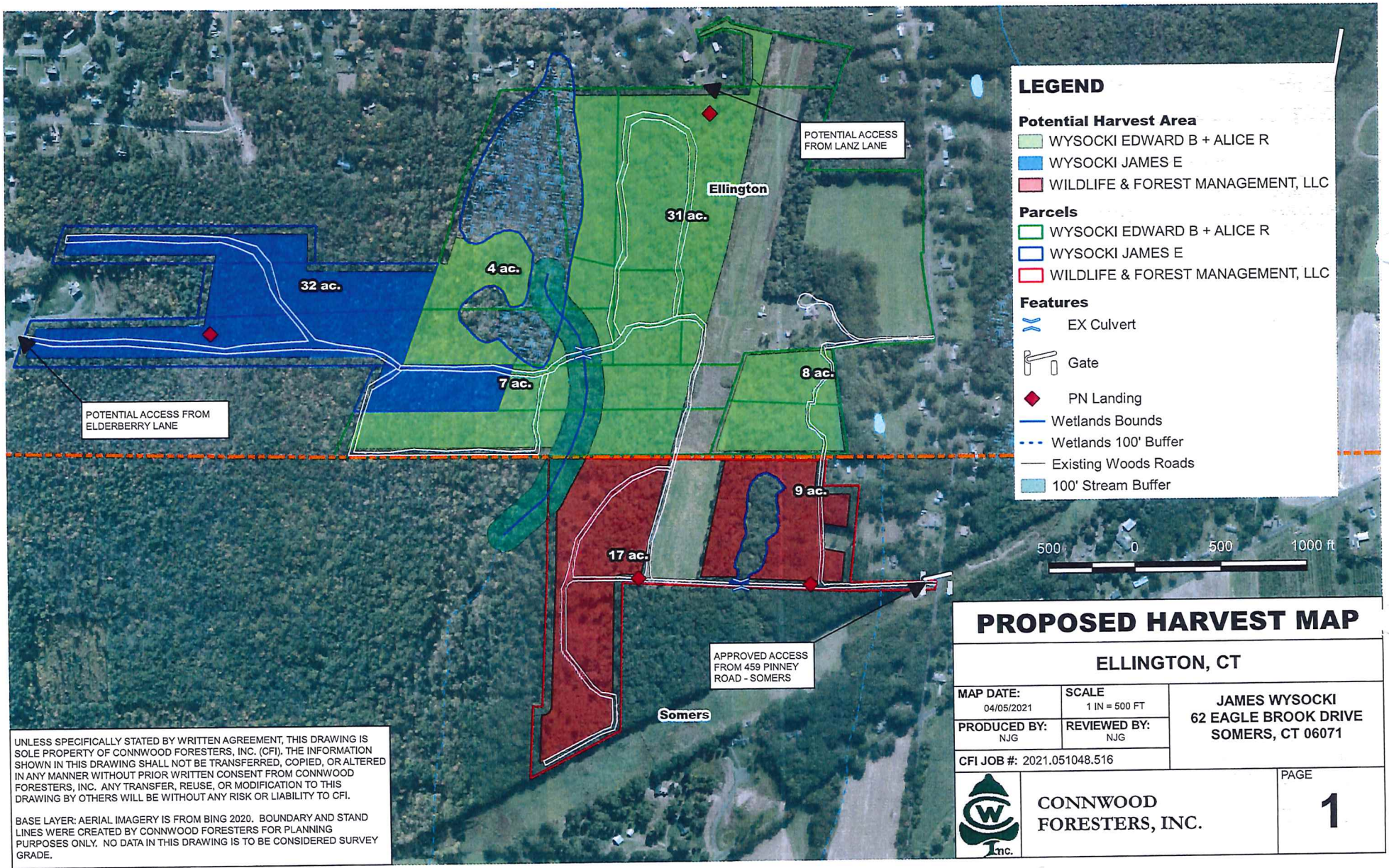
Signature of Certified Forest Practitioner: Nathaniel J Gosselin Date: 05/26/2021

Print Name: Nathaniel J Gosselin

Certificate #: F000984 Expiration Date: 11 /01 /2022

Complete and Submit to:
- The Municipal Inland Wetlands Agency/ies in which the property is located, and
- A courtesy copy of this Notification Form should also be sent to The Department of Environmental Protection, Division of Forestry 79 Elm Street, Hartford, CT, Tel: (860) 424-3630

This is not an official CT DEP form but it has been endorsed for town usage by: CT Farm Bureau Assoc., CT Forest & Park Assoc., CT Professional Timber Producers, Society of American Foresters - CT Chapter, and others.



PROPOSED HARVEST MAP

ELLINGTON, CT

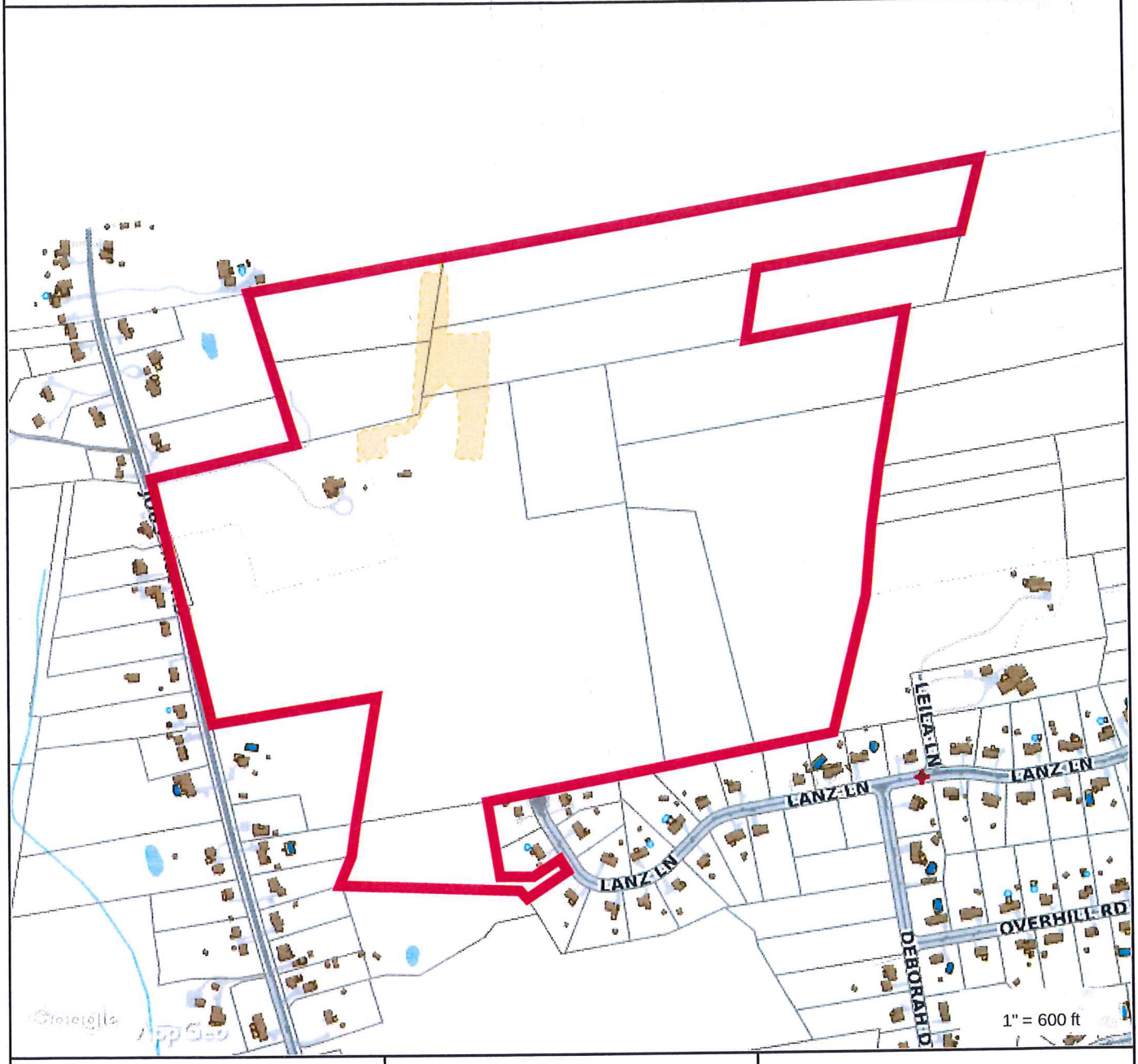
MAP DATE: 04/05/2021	SCALE 1 IN = 500 FT	JAMES WYSOCKI 62 EAGLE BROOK DRIVE SOMERS, CT 06071
PRODUCED BY: NJG	REVIEWED BY: NJG	
CFI JOB #: 2021.051048.516		

CONNWOOD FORESTERS, INC.

PAGE 1

BASE LAYER: AERIAL IMAGERY IS FROM BING 2020. BOUNDARY AND STAND LINES WERE CREATED BY CONNWOOD FORESTERS FOR PLANNING PURPOSES ONLY. NO DATA IN THIS DRAWING IS TO BE CONSIDERED SURVEY GRADE.

Property of Edward and Alice Wysocki



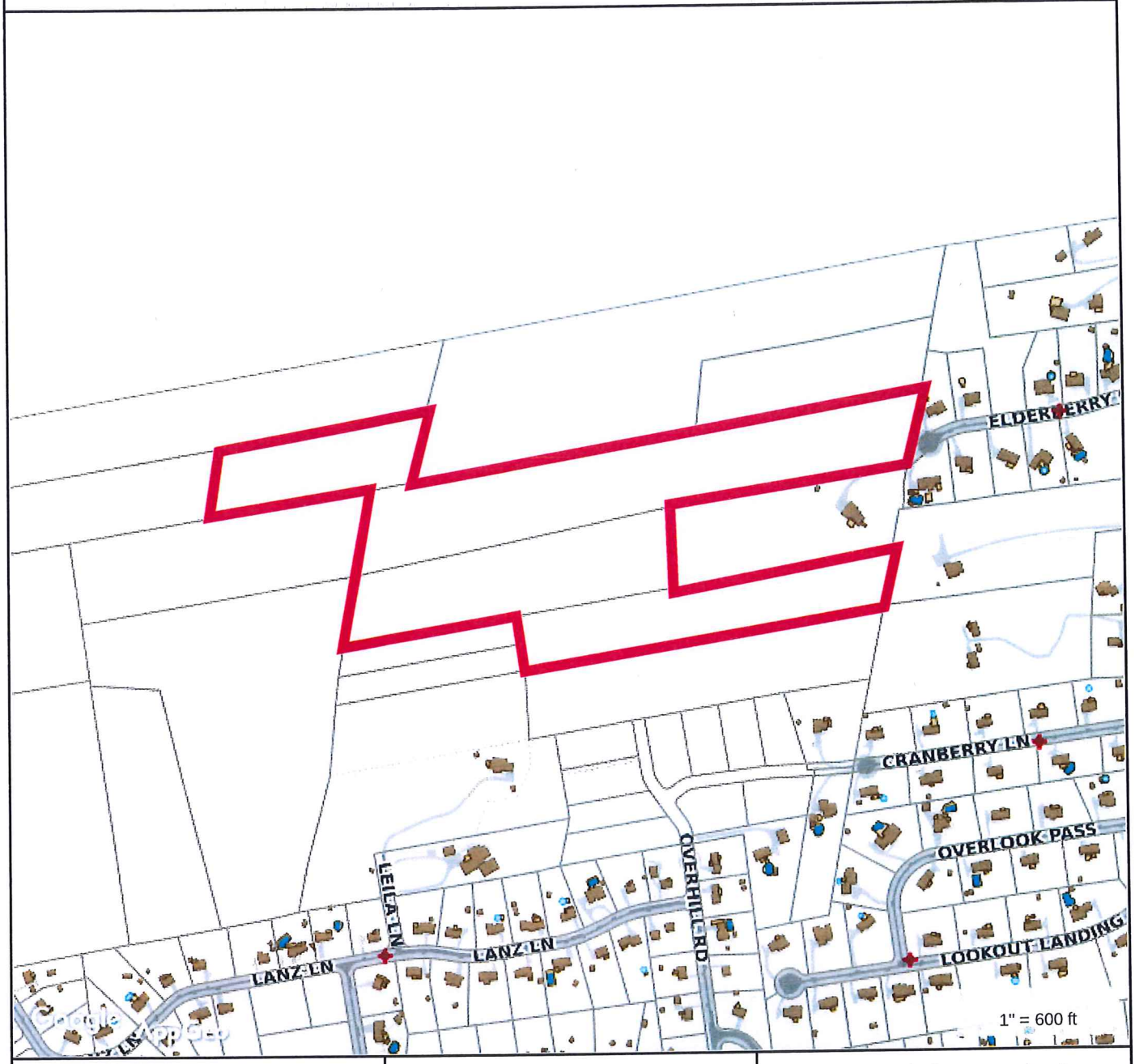
MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

Town of Ellington, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 7/23/2020
Data updated 7/23/2020

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.

Property of James E Wysocki - Timber Sale 2021

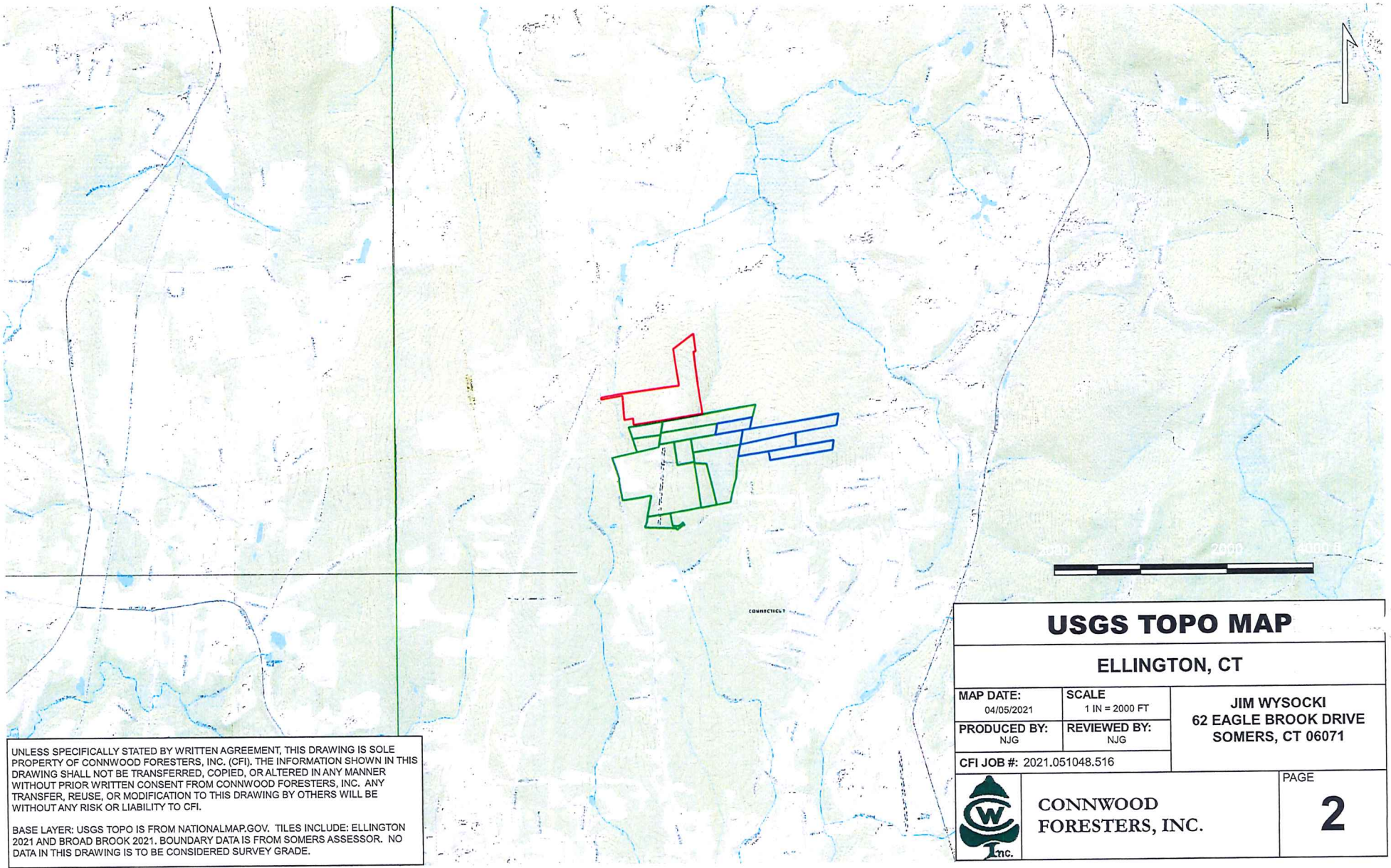


MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

Town of Ellington, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 7/23/2020
Data updated 7/23/2020

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.



USGS TOPO MAP

ELLINGTON, CT

MAP DATE: 04/05/2021	SCALE 1 IN = 2000 FT	JIM WYSOCKI 62 EAGLE BROOK DRIVE SOMERS, CT 06071
PRODUCED BY: NJG	REVIEWED BY: NJG	
CFI JOB #: 2021.051048.516		

CONNWOOD FORESTERS, INC.

PAGE 2

BASE LAYER: USGS TOPO IS FROM NATIONALMAP.GOV. TILES INCLUDE: ELLINGTON 2021 AND BROAD BROOK 2021. BOUNDARY DATA IS FROM SOMERS ASSESSOR. NO DATA IN THIS DRAWING IS TO BE CONSIDERED SURVEY GRADE.

Barbra Galovich

From: Barbra Galovich
Sent: Friday, June 04, 2021 12:30 PM
To: jameswyso@aol.com
Cc: John Colonese
Subject: FW: Staff Review IW202107 - James Wysocki Timber harvest multiple parcels

Good Afternoon,

Hope you are doing well. Please see the below comments from Tim Webb, Public Works Director.

Thank you,
Barbra

Barbra Galovich, CZET
Land Use Assistant
Town of Ellington
55 Main Street
Ellington, CT 06029
(860) 870-3120

From: Timothy Webb
Sent: Thursday, June 03, 2021 1:19 PM
To: Barbra Galovich <bgalovich@ELLINGTON-CT.GOV>
Subject: RE: Staff Review IW202107 - James Wysocki Timber harvest multiple parcels

At this time, no DPW concerns, unless the harvester needs to construct a drive to enter property off of a town road. Then a ROW permit will be required.

From: Barbra Galovich
Sent: Thursday, June 03, 2021 1:10 PM
To: James York <JYork@ELLINGTON-CT.GOV>; Kim Bechard <KBechard@ELLINGTON-CT.GOV>; Lori Spielman <lspielman@ELLINGTON-CT.GOV>; Mike Caronna <mcaronna@ncdhd.org>; Raymond Martin <Rmartin@ELLINGTON-CT.GOV>; Sydney Kern <skern@ELLINGTON-CT.GOV>; Timothy Webb <twebb@ELLINGTON-CT.GOV>; Westford Lirot <wlirot@ncdhd.org>
Cc: John Colonese <jcolonese@ELLINGTON-CT.GOV>
Subject: Staff Review IW202107 - James Wysocki Timber harvest multiple parcels

Hi,

Hope you are doing well. Please see the attached documentation with Staff Review Sheet. This application will be discussed at the IWA meeting on Monday, June 14, 2021.
Please provide your comments/concerns on or before June 10, 2021.

Thank you in advance for your review.
Barbra

STATE OF CONNECTICUT – COUNTY OF TOLLAND
INCORPORATED 1786

TOWN OF ELLINGTON

55 MAIN STREET – PO BOX 187
ELLINGTON, CONNECTICUT 06029-0187
www.ellington-ct.gov

TEL. (860) 870-3120 **TOWN PLANNER'S OFFICE** FAX (860) 870-3122

INLAND WETLANDS AGENCY
REGULAR MEETING MINUTES
MONDAY, MAY 10, 2021, 7:00 P.M.
TOWN HALL ANNEX MEETING ROOM, 57 MAIN ST, ELLINGTON, CT

IN-PERSON PUBLIC ATTENDANCE LIMITED DUE TO COVID19 RESTRICTIONS AND ZOOM MEETING ATTENDANCE

PRESENT: Acting Chairman Steve Hoffman, Jean Burns, Hocine Baouche and Katherine Heminway; Present via ZOOM meeting: Alternate Francis Hann

ABSENT: Chairman Ken Braga, Vice Chairman Ron Brown and Art Aube

STAFF PRESENT: John Colonese, Assistant Town Planner/Zoning Enforcement Officer; Present via ZOOM meeting: Barbra Galovich, Land Use Assistant/Recording Clerk

I. CALL TO ORDER: Acting Chairman Steve Hoffman called the Ellington Inland Wetlands Agency meeting to order at 7:02 pm.

II. PUBLIC COMMENTS (on non-agenda items)**: None**

III. PUBLIC HEARING(S):

1. IW201803 – Cathy Pinard owner/applicant, request for modification to a permit to conduct regulated activity for a deck expansion at lake edge, relocation of existing paved water runoff area, and site improvements associated the demolition and reconstruction of a single family home at 12 East Shore Road, APN 149-098-0000.

   Time: 7:03 pm

   Seated: Hoffman, Burns, Baouche, Heminway and Hann

   Cathy Pinard, 65 Sandy Beach Road, Ellington, CT was present to represent the application. Ms. Pinard stated she was previously granted a permit in 2018 to demolish and reconstruct her single family home with associated site improvements. She said that none of the work has started, and since her approval she acquired a piece of land next to her. She explained she would like to expand the size of the garage from 26' x 27' to 38' x 26' and relocate the existing paved runoff to the left side of the garage. Ms. Pinard also noted from her project narrative that a trench drain will be installed, the deck will be expanded an additional 25' parallel to the existing deck, and rip-rap stone will be placed

to help aid drainage on the site. She added that Design Professionals completed the drainage plan for her property, and no decking will be going into the lake.

Acting Chairman Hoffman inquired about the Town Engineer's comments being addressed. Mr. Colonese noted the revised plans dated April 27, 2021 addressed the Town Engineer's comments dated April 26, 2021. He noted the Planning Department also received a letter dated April 28, 2021 from neighbors at 10 East Shore Road whom have no objection to the project. Mr. Colonese read the Town Engineer's follow up comments dated May 7, 2021. Acting Chairman Hoffman asked the applicant if she had any issues with the comments. Ms. Pinard agreed that the Town Engineer's comments seem reasonable. No one from the public commented on the application.

MOVED (BURNS) SECONDED (HEMINWAY) AND PASSED UNANIMOUSLY TO MAKE A DETERMINATION OF A NON-SIGNIFICANT ACTIVITY FOR IW201803.

MOVED (HEMINWAY) SECONDED (BURNS) AND PASSED UNANIMOUSLY TO CLOSE THE PUBLIC HEARING FOR IW201803.

MOVED (HEMINWAY) SECONDED (BAOUCHE) AND PASSED UNANIMOUSLY TO APPROVE WITH CONDITIONS IW201803 – Cathy Pinard owner/applicant, request for modification to a permit to conduct regulated activity for a deck expansion at lake edge, relocation of existing paved water runoff area, and site improvements associated the demolition and reconstruction of a single family home at 12 East Shore Road, APN 149-098-0000.

Conditions of Approval:

1. Silt fence shall be installed then inspected by the Wetlands Agent prior to activity, and remain fully operational until the site is stabilized.
2. Subject to compliance with Town Engineer comments dated May 7, 2021.
3. Conditions of prior permit approval still apply.

IV. OLD BUSINESS: None

V. NEW BUSINESS:

1. Sunset Valley Farm, LLC owner/ David Moser, applicant, pursuant to Conn. Gen. Stat. 8-26(e), request for positive referral to the Planning & Zoning Commission on a two (2) lot re-subdivision application (S202101) involving land regulated as an inland wetland or watercourse at property located at 55 Kreyssig Road, APN 156-004-0001.

   David Moser, 29 Sadds Mill Road, and Daniel Jameson, P.E., Design Professionals. 21 Jeffrey Drive, South Windsor, CT were present to represent the request for a positive referral

   Mr. Colonese stated the applicant is looking for a positive referral to the Planning & Zoning Commission. Mr. Jameson said there are no wetlands on the proposed lot and all work to be conducted will not fall within a regulated area.

Acting Chairman Hoffman asked when the wetlands delineations were completed. Mr. Colonese responded that according to a map referenced by Design Professionals the delineation was signed for in December of 2010. Mr. Jameson referred to the map that was submitted to the Agency showing where the 100ft upland review area was located in relation to the proposed lot.

MOVED (BURNS) SECONDED (HEMINWAY) AND PASSED UNANIMOUSLY TO GRANT A POSITIVE REFERRAL TO THE PLANNING & ZONING COMMISSION PURSUANT TO CONN. GEN. STAT. 8-26(e) – Sunset Valley Farm, LLC owner/ David Moser, applicant, for a two (2) lot re-subdivision application (S202101) involving land regulated as an inland wetland or watercourse at property located at 55 Kreyssig Road, APN 156-004-0001.

2. Mary Ellen H. Trueb, owner/applicant, pursuant to Conn. Gen. Stat. 8-26(e), request for positive referral to the Planning & Zoning Commission on a two (2) lot re-subdivision application (S202102) involving land regulated as an inland wetland or watercourse at property located at 80 Tripp Road, APN 023-001-0004.

   Katelyn and Alex Trueb, 80 Tripp Road were present to represent the request for positive referral.

   Ms. Trueb stated her in-laws currently have 13.93 acre parcel of land and are proposing to re-subdivide to create a separate 1.49 acre parcel. She noted they would like to construct a single family dwelling on the 1.49 piece. She said there are no wetlands on the proposed area, and they are looking for a positive referral to the Planning & Zoning Commission. Acting Chairman Hoffman asked when the wetlands delineations were completed. Ms. Trueb said that according to the plans and letter provided by Russ Heintz dated May 3, 2021 there are no wetlands on the proposed lot.

   MOVED (BURNS) SECONDED (HEMINWAY) AND PASSED UNANIMOUSLY TO GRANT A POSITIVE REFERRAL TO THE PLANNING & ZONING COMMISSION PURSUANT TO CONN. GEN. STAT. 8-26(e) – Mary Ellen H. Trueb, owner/applicant, for a two (2) lot re-subdivision application (S202102) involving land regulated as an inland wetland or watercourse at property located at 80 Tripp Road, APN 023-001-0004.

3. IW202106 – Brooks Crossing Developers LLC owners/applicants, request for a permit to conduct regulated activity to construct a town road for an eleven (11) lot subdivision (Highfield Estates Phase 4) and associated site improvements at property located off of Jobs Hill Road between Brook Crossing and Brook Crossing Extension, APN 119-004-0000.

   BY CONSENSUS, THE AGENCY ADDED TO THE AGENDA, RECEIVED, AND SCHEDULED A PUBLIC HEARING FOR THE NEXT REGULAR MEETING ON JUNE 14, 2021 AT 7PM AT THE TOWN HALL ANNEX MEETING ROOM, 57 MAIN STREET FOR IW202106 – Brooks Crossing Developers LLC owners/applicants, request for a permit to conduct regulated activity to construct a town road for an eleven (11) lot subdivision (Highfield Estates Phase 4) and associated site improvements at property

located off of Jobs Hill Road between Brook Crossing and Brook Crossing Extension, APN 119-004-0000.

VI. ADMINISTRATIVE BUSINESS:

1. Approval of the April 12, 2021 Regular Meeting Minutes.

   MOVED (BAOUCHE) SECONDED (HEMINWAY) AND PASSED UNANIMOUSLY TO APPROVE THE APRIL 12, 2021 MEETING MINUTES AS WRITTEN.

2. Correspondence/Discussion:
   a. Letter from Pullman & Comley for CTEC Solar, LLC, dated April 13, 2021, submittal of a Petition for Declaratory Ruling to the Connecticut Siting Council for two solar-based electric generating facilities at 277 Sadds Mill Road, Ellington, CT.

      Mr. Colonese reviewed the proposed solar project at 277 Sadds Mill Road. C-Tec Solar, LLC is looking to develop approximately 30 acres of the land near the existing composting business. The project is under the jurisdiction of the Connecticut Siting Council, and they have filed a petition for a Declaratory Ruling. Mr. Colonese showed the Agency maps as provided in the petition.

VII. ADJOURNMENT:

MOVED (BURNS) SECONDED (HEMINWAY) AND PASSED UNANIMOUSLY TO ADJOURN THE MAY 10, 2021 REGULAR MEETING OF THE INLAND WETLANDS AGENCY AT 7:35 PM.

Respectfully submitted,

_____

Barbra Galovich, Recording Clerk