EAST HAMPTON PLANNING & ZONING COMMISSION
NOTICE OF REGULAR MEETING

Date: **June 3, 2020**
Place: **Virtual Meeting – See instructions below**
Time: **7:00 p.m.**

AGENDA

1. **Call to Order and Seating of Alternates**
2. **Approval of Minutes**:
   A. May 6, 2020 Regular Meeting
3. **Communications, Liaison Reports, and Public Comments**
4. **Read Legal Notice for June 3, 2020:**
5. **Public Hearings for June 3:**
   A. Application PZC-20-001: Sports on 66, LLC., 265 West High St., for a Special Permit to sell Alcohol as an accessory use. (Sec. 8.4.B). Map 6/Block 12/Lot 20.
   B. Application PZC-20-002: Stanislaw Oleksenko, 11 Cone Road, 4 lot subdivision of 14.766 acres parcel. Map 6/Block 36/Lot 6A.
   C. Application PZC-20-004: Lisa Sherman, 50 Main St., for a Zone Change: R-1 to PO/R. Map 02A/Block 47/Lot 25
6. **New Business:**
   A. Application PZC-20-010: Edgewater Hill Enterprises, East High St., for a Re-Subdivision for 2 lots. Map 10A/Block 85/Lot 5C
   B. Application PZC-20-011: Edgewater Hill Enterprises, East High St., for a site plan review for a new mixed use building in accordance with the MUDD Zone Master Plan. Map 10A/Block 85/Lot 5C
   C. Application PZC-20-012: Theater Square, 11 North Main St., for a Site Plan Modification for a 25 x 25 deck and a crosswalk with stop sign. Map 01A/Block 39A/Lot 28A
7. **Old Business:**
   A. Application PZC-20-003: Lisa Sherman, for an Amendment to Zoning Regulation 5.4.A PO/R Zone.
   B. Discussion: Update Sign Regulation to Include PO/R Zone Sign Standards.
   C. Discussion: Home Based Occupations
   D. Updates to Sec. 3.1 Lake Pocotopaug Protection Zone
   E. Updates to the Official East Hampton Zoning Map
8. **Planner's Report**
9. **Set Public Hearing(s) for July 1, 2020**
10. **Adjournment**

ZOOM MEETING INSTRUCTIONS:
Join from a PC, Mac, iPad, iPhone or Android device:
Please click this URL to join. https://us02web.zoom.us/j/84420693915
Description: June 3, 2020 Regular Meeting
Or join by phone:
Dial(for higher quality, dial a number based on your current location):
US: +1 301 715 8592 or +1 312 626 6799 or +1 646 558 8656 or +1 253 215 8782 or +1 346 248 7799 or +1 669 900 9128
Webinar ID: 844 2069 3915
International numbers available: https://us02web.zoom.us/u/kd8k4dq15q

Town of East Hampton

Planning and Zoning Commission

Regular Meeting

May 6, 2020 – 7:00 P.M.

Virtual Meeting

DRAFT MINUTES

1. **Call to Order and Seating of Alternates:**
   Chairman Zatorski called the meeting to order at 7:00 p.m.
   Present: Chairman Zatorksi, Vice-Chairman Kuhr, Regular Members Roy Gauthier, Roland Rux, Meg Wright, James Sennett and Angelus Tammaro, Alternate Members Mike Kowalczyk, Tim Puglielli, Ted Hintz, Jr. and Zoning Official Jeremy DeCarli.
   No Alternates were seated at this time.

2. **Approval of Minutes:**
   A. **April 1, 2020 Regular Meeting Minutes –** Mr. Sennett made a motion to approve the April 1, 2020 minutes as written. The motion was seconded by Ms. Wright. ***Vote: 6-Yes; 0-No; 1-Abstention*** (Angelus Tammaro). The motion passed.

3. **Communications, Liaison Reports, and Public Comments:**
   Communications: No communications.

   Liaison Reports:
   Mr. Gauthier reported that the East Hampton High School Building Committee is waiting for the final meeting to close out the project and to submit a final report. He added that the project came in under budget but did not have exact numbers to share.
   Mr. Kowalczyk reported that RPC had a ZOOM meeting: they discussed the details of the presentations to the various towns and how it will work. They plan to start scheduling next month.
   Mr. Sennett reported that ZBA did not have an April meeting.
   Chairman Zatorski stated that IWWA items will be covered under agenda items 5D & 5E.
   Mr. Rux, Ms. Wright, Mr. Tammaro and Vice-Chairman Kuhr did not have reports. The Alternates did not have reports either.

4. **Read Legal Notice for May 6, 2020:** Staff read the legal notice for the record.

At this time, Chairman Zatorski asked if there were any public comments pertaining to anything other than Agenda item numbers 5A, 5B, 5C, 5D or 5E. Mr. DeCarli unmuted the public attendees. Susan Lowe asked if the questions she submitted were received by the Commission. Mary Ann Dostaler of 56 Williams Drive advocated for the Home Based Occupations opportunity and the forthcoming discussion. There were no further public comments.

5. **Public Hearings for May 6, 2020:**
   A. **Application PZC-20-001: Sports on 66, LLC., 265 West High St.,** for a Special Permit to sell Alcohol as an accessory use. (Sec. 8.4.B). Map 6/Block 12/Lot 20. The applicant requested an extension to the June 3, 2020 meeting. Mr. Sennett made a motion to continue the public hearing for Application PZC-20-001: Sports on 66, LLC., 265 West High St., for a Special Permit to sell Alcohol as an accessory use Sec. 8.4.B Map 6/Block 12/Lot 20 to the next regularly scheduled meeting on June 3, 2020. Mr. Tammaro seconded the motion. Vice-Chairman Kuhr added to the motion: "per the applicant's request". Mr. Sennett seconded the motion with the change. ***Vote: 7-0.***
   Vice-Chairman Kuhr made a motion to continue the Application PZC-20-001: Sports on 66, LLC., 265 West High St., for a Special Permit to sell Alcohol as an accessory use. (Sec. 8.4.B) Map 6/Block 12/Lot 20 to the next regularly scheduled meeting on June 3, 2020 per the applicant's request. Mr.

Tammaro seconded the motion. ***Vote: 7-0***

B. Application PZC-20-002: Stanislaw Oleksenko, 11 Cone Road, 4 lot subdivision of 14.766 acres parcel. Map 6/Block 36/Lot 6A. The applicant requested an extension to the June 3, 2020 meeting. Vice-Chairman Kuhr made a motion to continue the public hearing for Application PZC-20-002: Stanislaw Oleksenko. 11 Cone Road, 4 lot subdivision of 14.766 acres parcel Map 6/Block 36/Lot 6A to the next regularly scheduled meeting on June 3, 2020 per the applicant's request. The motion was seconded by Mr. Sennett. ***Vote: 7-0***. Mr. Gauthier made a motion to continue the Application PZC-20-002: Stanislaw Oleksenko, 11 Cone Road, 4 lot subdivision of 14.766 acres parcel Map 6/Block 36/Lot 6A to the next regularly scheduled meeting on June 3, 2020 per the applicants's request. The motion was seconded by Mr. Rux. ***Vote: 7-0***

Mr. Gauthier stated for the record that Chairman Zatorski was referring to Agenda items 5A and 5B as 6 A and 6B in error.

C. Application PZC-20-004: Lisa Sherman, 50 Main St., for a Zone Change: R-1 to PO/R. Map 02A/Block 47/Lot 25. The applicant was not on the ZOOM call. Chairman Zatorski felt it would be prudent to continue the application to the next meeting because the applicant was not present, the public hearing hasn't been opened yet and no decision has been made for agenda item 7A. Mr. Gauthier made a motion to continue Application PZC-20-004: Lisa Sherman, 50 Main St., for a Zone Change: R-1 to PO/R Map 02A/Block 47/Lot 25 to the next regularly scheduled meeting on June 3, 2020. The motion was seconded by Mr. Tammaro. ***Vote: 7-0.***

D. Application PZC-20-008: Town of East Hampton, Edgemere Condominium Beach Property, for a Special Permit to locate Lake Aeration Compressor, Sec. 4.1.D Map 19/Block 63B/Lot 27. Mr. DeCarli stated that he spoke with DEEP and after reviewing the application documents, they felt that the project is fully under the jurisdiction of the Planning and Zoning Commission. John Tucci (system designer) presented. The housing for the compressor and control units for the system will be in a custom built 8' x 8' shed. The area will be excavated and placed on a gravel bed and concrete deck footers for support with ground anchors to hold it in place. The shed will be small and custom built to fit in with the character of the Town. It will be made of 2 x 6 construction, will be insulated, it will have a 4' double door and there will be no windows. The primary function of the shed is to create a weatherproof and sound insulated enclosure for the compressor that drives the aeration system. Mr. Tammaro inquired about the noise level from the generator. The noise has an ambient level from 10' with a decibel level of approximately 38. Sound testing will be done after construction is complete. Going into the shed, there will be 200 Amp underground power. Coming out on the lake side, there will be a 2" central air pipe from the compressor that will be buried under ground into an air manifold into splits it into individual lines that go into the lake. The air manifold will be housed in a custom box that will look like a 2' high custom made bench with the 2" line entering underneath. The 27 individual air lines will be bundled and run underground out to the lake approximately 150'. The lines are made up of PVC and are flexible and dense so it will sink and stay in place. The members discussed liability responsibilities. Mr. Rux suggesting reaching out to Pocotopaug Water Power Company and informing them of the project. Vice-Chairman Kuhr inquired about flexibility with the permit for any future changes that may occur within reason. Alternate Ted Hintz, Jr. stated for the record that he feels that Vice-Chairman Kuhr should recuse himself from this Application and Agenda #5E. Vice-Chairman Kuhr stated that he wants to be available to answer any questions and that he will abstain from voting. Chairman Zatorski asked for public comments at this time. There were no comments. Mr. Tammaro made a motion to close the public hearing for Application PZC-20-008: Town of East Hampton, Edgemere Condominium Beach Property, for a Special Permit to locate Lake Aeration Compressor, Sec. 4.1.D Map 19/Block 63B/Lot27. The motion was seconded by Mr. Rux. ***Vote: 6-Yes; 1-Abstention (Vice-Chairman Kuhr).*** Mr. Rux made a motion to approve Application PZC-20-008: Town of East Hampton, Edgemere Map 19/Block 63B/Lot 27 for the following reason: the project is for the betterment of the lake and it meets the Regulations and with the following conditions: final plans be submitted to Town Staff for approval prior to the start of construction. The motion was seconded by Mr. Sennett. ***Vote: 6-Yes; 1-Abstention (Vice-Chairman Kuhr).***

E. Application PZC-20-009: Town of East Hampton, 60 Spellman Point Rd., for a Special Permit to locate Lake Aeration Compressor, Sec. 4.1.D Map 09A/Block 70/Lot 11. Vice-Chairman Kuhr stated that he will not be recusing himself and will not be voting on this application but that he would like to be available for questions. Chairman Zatorski seated Mr. Kowalczyk at this time. Mr. DeCarli stated that this project is similar to 5D, it is further away from the street, closer to the lake and has a 15' wide access easement that will not be paved. John Tucci stated that the narration and details from 5D apply to this application. The shed at this location will be bigger (10'x16') with a sound proof section and storage space. The shed size meets the setback requirements. Chairman Zatorski asked for public comments at this time. Mr. Tammaro made a motion to close the public hearing for Application PZC-20-009: Town of East Hampton, 60 Spellman Point Rd., for a Special Permit to locate Lake Aeration Compressor, Sec. 4.1.D Map 09A/Block 70/Lot 11. The motion was seconded by Mr. Rux. ***Vote: 7-Yes; 0-No.*** Mr. Sennett made a motion to approve Application PZC-20-009: Town of East Hampton, 60 Spellman Point Rd., for a Special Permit to locate Lake Aeration Compressor, Sec. 4.1.D Map 09A/Block 70/Lot 11 for the following reason: the project is for the betterment of the lake and it meets all requirements and with the following condition: final plans be submitted to Town Staff for approval prior to the start of construction. The motion was seconded by Mr. Gauthier. ***Vote: 7-0*** At this time (8:02 p.m.), Chairman Zatorski unseated Mr. Kowalczyk and Vice-Chairman Kuhr resumed his position**.**

6. New Business:

A. Application PZC-19-011: Roncalli Institute, 49 Oakum Dock, for an extension to file the Special Permit and Site Plan approval that was issued on February 5, 2020 for an Assembly Hall. Map 02/Block 9A/Lot 4. Mr. DeCarli explained that the applicant is waiting for final details from the Dept. of Public Health before they can finalize the final site plan which means they cannot file the Mylar within the 90 days per the State Statute. Vice-Chairman Kuhr made a motion to approve an extension for Application PZC-19-011: Roncalli Institute, 49 Oakum Dock, for an extension to file the Special Permit and Site Plan approval that was issued on February 5, 2020 for an Assembly Hall Map 02/Block 9A/Lot 4 for the reason: the Commission has the statutory right to do so. The motion was seconded by Mr. Rux who offered the following correction: to omit "the Commission has the statutory right to do so" and to add "per the Applicant's request". Vice-Chairman Kuhr amended his motion to omit "the Commission has the statutory right to do so" and to add "per the Applicant's request". The amended motion was seconded by Mr. Tammaro. ***Vote: 7-0***

B. Discussion: Update Sign Regulation to Include PO/R Zone Sign Standards. Mr. DeCarli explained that the PO/R Regulation (Sec. 5.4.A) refers to Sec. 7.2 in the Regulations for details about signage for PO/R zones. The issue is that Sec. 7.2 does not have standards specific to the PO/R zone therefore it needs to be updated. The members agreed to continue the discussion at the next regularly scheduled meeting on June 3, 2020.

C. Discussion: Home Based Occupations – Mr. DeCarli prepared an information packet for the members that includes Home Based Occupation Regulations from surrounding towns. He explained that there was a Home Based Occupations Section in our Regulations but was removed in 1990 when the Regulations were updated and that it would be prudent to discuss drafting a Regulation for it since the COVID-19 pandemic and the overall changes in technology in the 21st century. The members agreed to add the discussion for home based occupations to the next meeting agenda for June 3, 2020.

D. Discussion and Possible Action: Outdoor only seating at Restaurants during COVID-19 pandemic. There is discussion at the State level about an upcoming executive order for possibly re-opening restaurants by May 20th for outdoor dining only. Mr. DeCarli prepared a draft resolution to expedite the process for restaurants. The resolution would give Mr. DeCarli the power to review site plans and grant a temporary permit on an administrative level with an effective and expiration date. The site plan review will have the oversight of the Chatham Health District, the Fire Marshal, the Police Chief and the Building Official (if applicable). The members agreed to extend the expiration date to August 5th (90 days) in the event of unpredictable changes. Chairman Zatorski made a motion for the following resolution: The Planning and Zoning Commission of the Town of East Hampton approves the following: The Planning and Zoning Official of the Town of East Hampton, acting as the Zoning Enforcement Officer (ZEO), is permitted to review and approve where otherwise permissible Zoning Regulations of the Town of East Hampton, temporary Site Plan modifications for sit- down restaurants to allow for outdoor seating in accordance with any Executive

Orders or other orders that may be issued by the Office of the Governor of the State of CT in reaction to the COVID-19 pandemic. Said Site Plan Modifications may only be issued to restaurants specified in any orders from the State and shall be temporary in nature with an effective and expiration date set by the ZEO. Said temporary approvals may be extended beyond the set expiration date only if the ZEO is given the authority to do so by this body and any orders from the State determine the necessity of such extension. This resolution is for site plan changes only for a temporary duration. The authority granted to the Zoning Enforcement Officer in this resolution expires August 5, 2020 unless extended to a later date by this body at its regular meeting on August 5, 2020. Any site plan modifications issued by the ZEO in accordance with this resolution are temporary in nature and shall include an effective and expiration date. Any and all site plan modification issued by the ZEO must adhere to all other requirements of the Zoning Regulations of the Town of East Hampton and any other applicable State and local laws, regulations or permit approvals. This authority shall not extend to other business ventures or Special Permit approvals. If any restaurant owner wishes to make said changes permanent, an application must be submitted to the Planning and Zoning Commission for review in accordance with the Zoning Regulations. The motion was seconded by Mr. Rux who added that temporary structures be included in the review process for the safety of the residents. ***Vote: 7-0***

7. **Old Business:**
   - **A. Application PZC-20-003: Lisa Sherman, for an Amendment to Zoning Regulation 5.4.A PO/R Zone.** The applicant was not present for the meeting. Mr. Rux made a motion to continue Application PZC-20-003: Lisa Sherman, for an Amendment to Zoning Regulations 5.4.A PO/R Zone to the next regularly scheduled meeting on June 3, 2020. The motion was seconded by Mr. Tammaro. ***Vote: 7-0***
   - **B. Updates to Sec. 3.1 Lake Pocotopaug Protection Zone – *The vote was unanimous to continue Updates to Sec. 3.1 Lake Pocotopaug Protection Zone to the next regularly scheduled meeting on June 3, 2020.***
   - **C. Updates to the Official East Hampton Zoning Map. *The vote was unanimous to continue Updates to the Official East Hampton Zoning Map to the next regularly scheduled meeting on June 3, 2020.***

8. **Planner's Report –** There was no report. Mr. Gauthier stated that the EDC did a presentation many years ago regarding home based occupations and that the information may be helpful to Mr. DeCarli.

9. **Set Public Hearing(s) for June 3, 2020 –** Public hearings were continued for agenda items 5A, 5B and 5C. No public hearings were set.

Adjournment – Mr. Rux made a motion to adjourn at 9:11 p.m. Ms. Wright seconded the motion. The vote was unanimous in favor.

Respectfully submitted,

Christine Castonguay
Recording Secretary

Hey Jeremy,

Please push our meeting off for another month as we are still not open as of yet.

Thanks
Brian

Get Outlook for Android

From: Jeremy DeCarli <no-reply@zoom.us>
Sent: Friday, May 29, 2020 10:03:18 AM
To: Brian Cutler <brian@sportson66.com>
Subject: Panelist for Planning and Zoning Commission

Hi Brian Cutler,

You are invited to a Zoom webinar.

Date Time: Jun 3, 2020 07:00 PM Eastern Time (US and Canada)
Topic: Planning and Zoning Commission

Join from a PC, Mac, iPad, iPhone or Android device:
Click Here to Join
Note: This link should not be shared with others; it is unique to you.
Add to Calendar Add to Google Calendar Add to Yahoo Calendar
Description: June 3, 2020 Regular Meeting

Or iPhone one-tap:
US: +13017158592,,84420693915# or +13126266799,,84420693915#

Or Telephone:
Dial(for higher quality, dial a number based on your current location):
US: +1 301 715 8592 or +1 312 626 6799 or +1 646 558 8656 or +1 253 215 8782 or +1 346 248 7799 or +1 669 900 9128

Office Use Only

Project ID# PZC-20-002

Address: 11 Cone Rd.

MBL: 06/37/6A

PLANNING & ZONING COMMISSION
TOWN OF EAST HAMPTON

Minimum Requirements for Submission of Application to Planning and Zoning Commission

This form must be submitted with your application.

Application Requirements are based on the application type selected on application form.

___Site Plan Review/Modification (See Section 9.1 for details)

- ✓ Pre-Application Meeting – Date of Meeting 1-27-2020
- ✓ Complete Application Form
- ✓ Complete Chatham Health District Application Form
- ✓ Fee Paid
- ✓ Site Plan (11 Copies) – See Section 9.2.C.2 for specifications (subdivision)
- ✓ Drainage Calculations in Compliance with Section 7.5
- ? ___Report from Fire Marshal
- N/A ___Bond Estimates As Required, See Section 9.2.C.2

___Special Permit (See Section 9.2 for details)

- ___Pre-Application Meeting – Date of Meeting _____
- ___Complete Application Form
- ___Complete Chatham Health District Application Form
- ___Fee Paid
- ___Site Plan (11 Copies) - See Section 9.2.C.2 for specifications
- ___Pending Approval from IWWA
- ___Drainage Calculations in Compliance with Section 7.5
- ___Pending Approval or report from Fire Marshal
- ___Pending Approval or report from Public Works
- ___Traffic Study (As Required)
- ___Bond Estimates (As Required)
- ___Public Hearing Requirements

___Zone Change (See Section 9.3 for details)

- ___Complete Application Form
- ___Fee Paid
- ___A-2 Survey of Property showing surrounding properties and respective zone (10 Copies)
- ___Reports from Chatham Health District, Fire Marshal, Police Dept. and Public Works
- ___Public Hearing Requirements

___Amendment to Zoning Regulations (See Section 9.3 for details)

- ___Complete Application Form
- ___Fee Paid
- ___Existing Regulation with proposed Amendments (10 Copies)
- ___Rationale for Amendment (10 Copies)
- ___Reports from Chatham Health District, Fire Marshal, Police Dept. and Public Works
- ___Public Hearing Requirements

I certify that this application is complete.
Signature of Applicant: S Hebert **Date:** 1-27-2020

The Commission reserves the right to add additional requirements in accordance with the Regulations.

Only Complete Application Packages Will Be Accepted

TOWN OF EAST HAMPTON
Planning and Zoning Commission
1-860-267-7450
www.easthamptonct.gov

RECEIVED
JAN 30 2020
TIME

PZC PZC-20-002
Date 1/30/2020

Fee Paid $950.00
Check # 419
Rec'd. By CC

LOCATION #11 Cone Road
MAP 6 BLK 36 LOT 6A
PROJECT NAME Subdivision - Property of Stanislaw Oleksenko
ZONE R-2 Residential
APPLICANT Stanislaw Oleksenko
ADDRESS 84 Churchhill Drive - Newington, CT 06111
PHONE 860-830-2196
EMAIL NAB_STAN@YAHOO.COM
CONTACT PERSON Frank Magnotta, P.E.
PHONE 860-342-2191
EMAIL FRANKCMAGNOTTAPE@AOL.COM
OWNER Same as applicant
ADDRESS —
PHONE —
EMAIL
SURVEYOR/ENGINEER Frank Magnotta P.E.
ADDRESS 395 Main St - Portland CT 06480
PHONE 860-342-2191
EMAIL same as above
ATTORNEY NONE
ADDRESS —
PHONE —
EMAIL

APPLICATION TYPE ***(application must be completed in FULL in order to be accepted)***

X 1. SUBDIVISION /RESUBDIVISION /CONSERVATION SUBDIVISION NO. OF LOTS 3
___3. SITE PLAN_____MODIFICATION_____Residential_____Commercial_____
___4. SPECIAL PERMIT---SECTION_____OF THE ZONING REGS. FOR_____
___5. ZONE CHANGE---FROM_____TO_____
___6. AMENDMENT TO ZONING REGULATIONS
___7. LAKE POCOTOPAUG PROTECTION AREA _____
___8. ACTIVE ADULT NO OF UNITS_____
___7. OTHER (DESCRIBE)_____

APPLICATION REQUIREMENTS: This application and 10 sets of plans shall be submitted to the Planning Office and shall be received by the Commission at the next regularly scheduled meeting. *(see meeting schedule for deadline dates)*

A complete application shall consist of an application, fees, maps /plans(A-2 survey) ,engineers report including drainage calculations and watershed calculations(pre and post), bond estimates, hydrology report, environmental studies, waiver requests and traffic study where applicable

Preliminary discussions are highly recommended for subdivisions 5 lots & over and for larger Special Permit Applications
Abutters notice receipts (green cards)must be handed in to the Planning Office prior to the meeting

APPLICANTS SIGNATURE S Oleksenko DATE 1-22-2020

OWNER'S SIGNATURE S Oleksenko DATE 1-22-2020

The owner and applicant hereby grant the East Hampton Planning and Zoning Commission and/or it's agents permission to enter upon the property to which the application is requested for the purpose of inspection and enforcement of the Zoning Regulations and Subdivision Regulations of the Town of East Hampton.

APPLICATION REVIEW
Subdivision of Property of Stanislaw Oleksenko
11 Cone Road
East Hampton, CT
May 26, 2020

Review Comments prepared by:
Anchor Engineering Services, Inc.

Documents Reviewed:

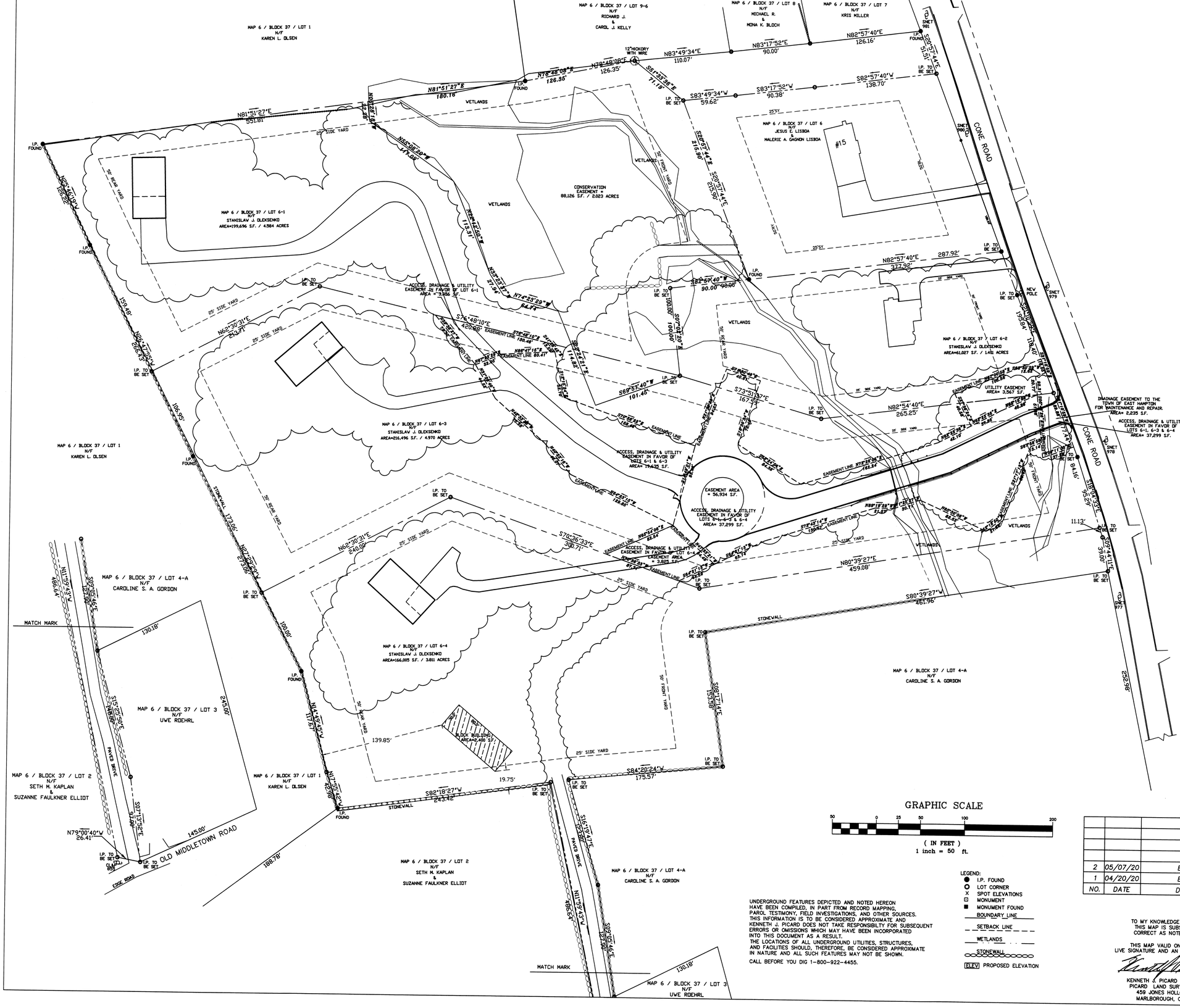
Application Drawings:	"Property Survey Showing the Proposed Subdivision of the Parcel Shown on Assessor's Map 6/Block 37/Lot 6A Prepared For Stanislaw J. Oleksenko #11 Cone Road & Old Middletown Road East Hampton, Connecticut" Sheet 1 Dated: March 25, 2020 and revised to 5/7/20 and is prepared by Picard Land Surveying, LLC "Subdivision Property of Stanislaw Oleksenko #11 Cone Road East Hampton, CT.". Dated: Jan. 27, 2020 and revised through 5/15/20, Sheets 2-6, Frank C. Magnotta, P.E. PC Consulting Engineer
Stormwater Analysis:	Prepared by Frank C. Magnotta, P.E., PC 395 Main Street, Portland, CT 06480: dated January 25, 2020 and revised February 29, 2020 and May 15, 2020. Watershed Map dated May 15, 2020.
Response to Comments:	Letter dated May 15, 2020 from Frank C. Magnotta, P.E., PC 395 Main Street, Portland, CT 06480

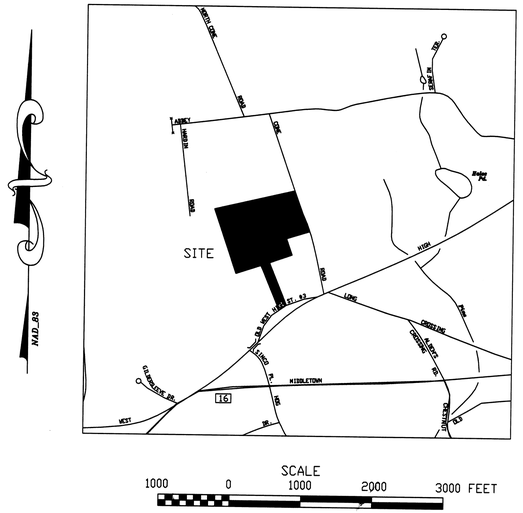
Anchor Engineering has reviewed the revised documents listed. Based upon this review, we have the following comments:

1. The note that has been added to the plans regarding any proposed changes to the individual lot detention basins during construction should be revised to include only detention basins #2, #5 and #6 since these are the only basins that have a complete design included with this submission. If any revisions are proposed for these basins, submission of revised drainage computations will be required.
2. A separate note should be added that the individual lot detention basins #3 and #4 shown on lots 3 and 4 are conceptual only and that a detailed design and associated drainage computations demonstrating zero increase in pre-development flows for these areas must be submitted to the town at the time of development of these lots. A similar note should also be added on the subdivision survey plan. It may be best to include this note within the boundaries of lot 3 and lot 4 to make this requirement clear to any future lot owner.
3. The proposed underdrain is still shown at an elevation above the bottom of Detention Basin #1. If groundwater is encountered in the test pits to be conducted in basin #1, it is recommended that the underdrain be installed deep enough to allow proper functioning of the current detention

basin design. It may be desirable to install a standpipe in the proposed basin area to monitor the level of the groundwater after the installation of the proposed underdrain to ensure adequacy of the current design of the detention basin. The last site development note should be revised to include that the design engineer must review the existing site conditions to ensure adequacy of their current design and submit their findings to the Town.

4. For the Erosion and Sedimentation Control Bond Estimate, we recommend increasing the unit price for the silt fence and hay bales to $5/LF and the catch basin silt sacks to $120/EA.





NOTES:

1. THIS SURVEY AND MAP 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. THIS MAP SHOWS A PROPERTY SURVEY DEPICTING THE PROPOSED EASEMENTS IN RELATION TO THE EXISTING BOUNDARY LINES UNDER THE PROPERTY/BOUNDARY SURVEY CATEGORY.
3. BOUNDARY DETERMINATION/OPINION IS A DEPENDENT RESURVEY AS NOTED. SEE NOTE 9.
4. THIS SURVEY CONFORMS TO A CLASS A-2.
5. THE HORIZONTAL DATUM IS NAD 83 WITH 1996 ADJUSTMENTS. THE VERTICAL DATUM IS NAVD 88.
6. THIS PROPERTY IS IN AN "R-2" ZONE.
7. THE EXISTING LOT 6A AREA = 643,224 S.F. / 14.766 ACRES.
   THE NEW LOT 6-1 AREA = 199,696 S.F. / 4.584 ACRES.
   THE NEW LOT 6-2 AREA = 61,027 S.F. / 1.401 ACRES.
   THE NEW LOT 6-3 AREA = 216,496 S.F. / 4.970 ACRES.
   THE NEW LOT 6-4 AREA = 166,005 S.F. / 3.811 ACRES.
8. THIS PROPERTY IS NOT WITHIN ANY FLOOD ZONE.
9. REFERENCE IS MADE TO THE FOLLOWING MAPS:
   A. LOT SPLIT "FIRST CUT" FOR STANISLAW J. OLEKSENKO
      LOT 6 BLOCK 37 15 CONE ROAD EAST HAMPTON, CONNECTICUT
      SCALE: 1" = 50' DATED: 1-15-17
      PREPARED BY: JOHN L. THOMPSON
      MAP ON FILE VOL. 83 PAGE 57 AT THE EAST HAMPTON TOWN CLERKS OFFICE.
   B. SITE DEVELOPMENT PLAN PREPARED FOR STANISLAW J. OLEKSENKO
      LOT 6A CONE ROAD EAST HAMPTON, CT
      SCALE: 1" = 20' DATED: 1-26-19
      PREPARED BY: FRANK C. MAGNOTTA
      MAP ON FILE IN THE EAST HAMPTON BUILDING DEPT.
   C. PROPERTY SURVEY PREPARED FOR STANISLAW J. OLEKSENKO
      CONE ROAD & OLD MIDDLETOWN ROAD
      ASSESSOR'S MAP 6 / BLOCK 37 / LOT 6 EAST HAMPTON, CONNECTICUT
      SCALE: 1" = 50' DATED: MARCH 15, 2019
      PREPARED BY: KENNETH J. PICARD
      MAP ON FILE IN THE EAST HAMPTON BUILDING DEPT.
10. THE STONEWALLS AND/OR THE WIRE FENCES SHOWN AS BOUNDARIES MAY HAVE IRREGULARITIES OF COURSE BETWEEN THE PRINCIPAL POINTS OF COURSE INDICATED.

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

LEGEND:
- I.P. FOUND
- LOT CORNER
- SPOT ELEVATIONS
- MONUMENT
- MONUMENT FOUND
- BOUNDARY LINE
- SETBACK LINE
- WETLANDS
- STONEWALL
- ELEV PROPOSED ELEVATION

UNDERGROUND FEATURES DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART FROM RECORD MAPPING, PAROL TESTIMONY, FIELD INVESTIGATIONS, AND OTHER SOURCES. THIS INFORMATION IS TO BE CONSIDERED APPROXIMATE AND KENNETH J. PICARD DOES NOT TAKE RESPONSIBILITY FOR SUBSEQUENT ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THIS DOCUMENT AS A RESULT.
THE LOCATIONS OF ALL UNDERGROUND UTILITIES, STRUCTURES, AND FACILITIES SHOULD, THEREFORE, BE CONSIDERED APPROXIMATE IN NATURE AND ALL SUCH FEATURES MAY NOT BE SHOWN.

CALL BEFORE YOU DIG 1-800-922-4455.

REVISIONS

NO.	DATE	DESCRIPTION	BY
2	05/07/20	EASEMENTS	KJP
1	04/20/20	EASEMENTS	KJP

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

THIS MAP VALID ONLY WITH A LIVE SIGNATURE AND AN EMBOSSED SEAL.

KENNETH J. PICARD L.S. 18143
PICARD LAND SURVEYING, LLC
459 JONES HOLLOW ROAD
MARLBOROUGH, CT 06447

STATE OF CONNECTICUT
KENNETH J. PICARD
18143
LICENSED LAND SURVEYOR

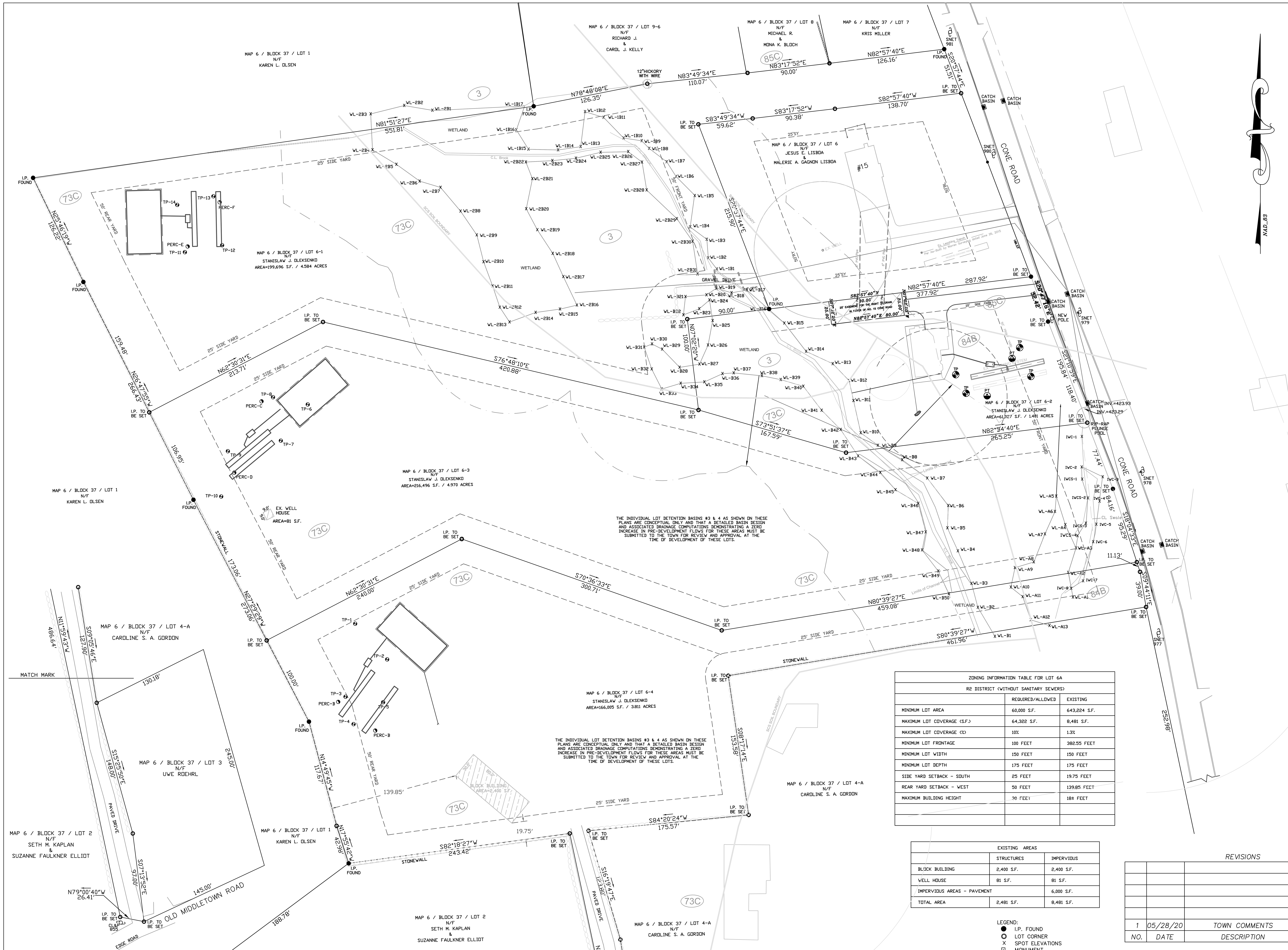
LIMITED PROPERTY/BOUNDARY SURVEY
SHOWING THE PROPOSED EASEMENTS OF THE PARCEL SHOWN ON ASSESSOR'S MAP 6 / BLOCK 37 / LOT 6A

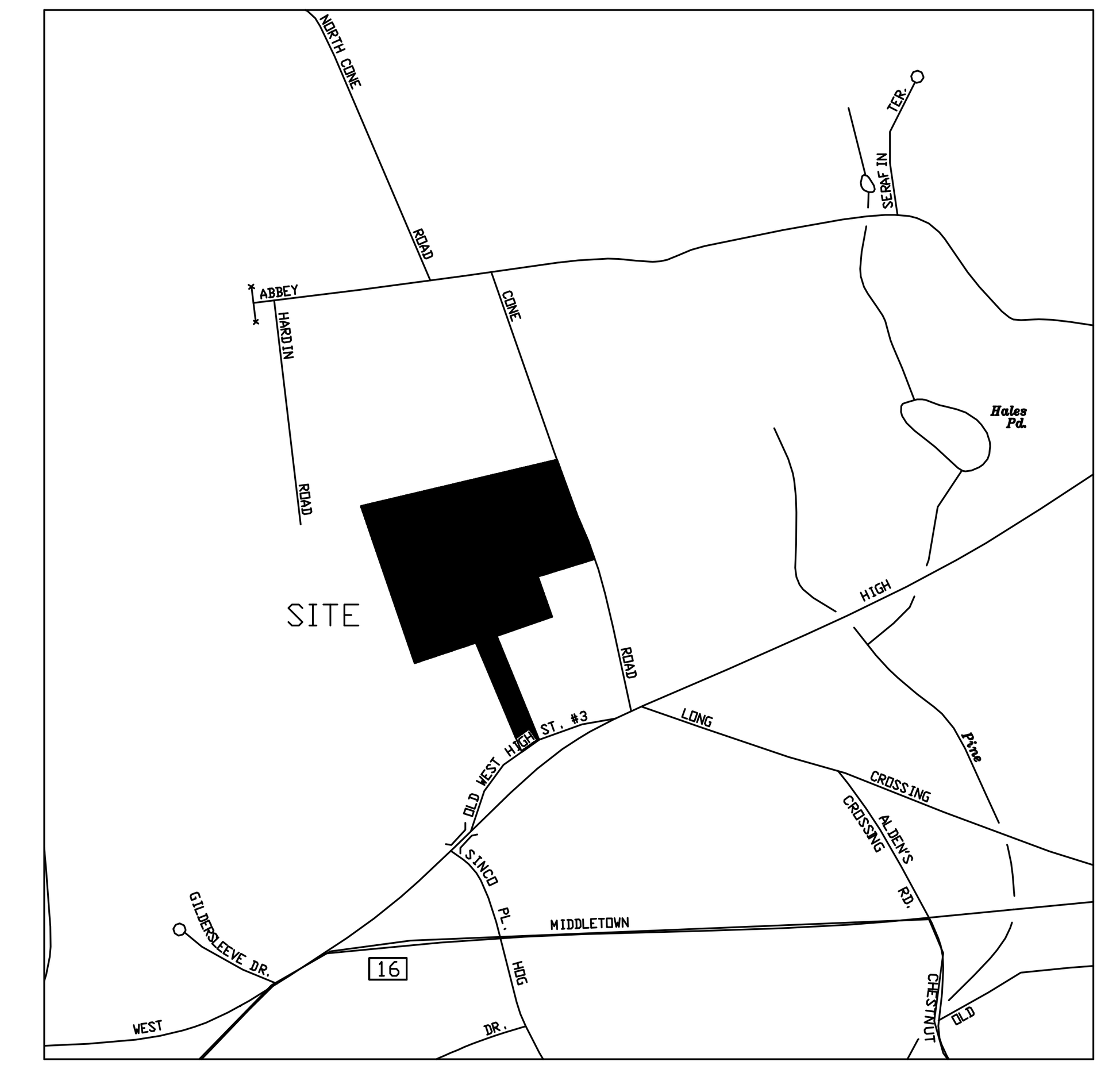
PREPARED FOR

STANISLAW J. OLEKSENKO

CONE ROAD & OLD MIDDLETOWN ROAD
EAST HAMPTON, CONNECTICUT

DRAWN BY: K.J.P.	CHECKED BY:
SCALE: 1 INCH = 50 FEET	
DATE: MARCH 25, 2020	
PROPOSED EASEMENTS	SHEET: 1 OF 1





SCALE

1000 0 1000 2000 3000 FEET

GRAPHIC SCALE

50 0 25 50 100 200

(IN FEET)
1 inch = 50 ft.

NOTES:

1. THIS SURVEY AND MAP 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. THIS MAP SHOWS A PROPERTY SURVEY DEPICTING THE PROPOSED SUBDIVISION IN RELATION TO THE EXISTING BOUNDARY LINES UNDER THE PROPERTY/BOUNDARY SURVEY CATEGORY.
3. BOUNDARY DETERMINATION/OPINION IS A DEPENDENT RESURVEY AS NOTED. SEE NOTE 9.
4. THIS SURVEY CONFORMS TO A CLASS A–2.
5. THE HORIZONTAL DATUM IS NAD 83 WITH 1996 ADJUSTMENTS. THE VERTICAL DATUM IS NAVD 88.
6. THIS PROPERTY IS IN AN "R–2" ZONE.
7. THE EXISTING LOT 6A AREA = 643,224 S.F. / 14.766 ACRES.
   THE NEW LOT 6–1 AREA = 199,696 S.F. / 4.584 ACRES.
   THE NEW LOT 6–2 AREA = 61,027 S.F. / 1.401 ACRES.
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   A. LOT SPLIT "FIRST CUT" FOR STANISLAW J. OLEKSENKO
      LOT 6 BLOCK 37 15 CONE ROAD EAST HAMPTON, CONNECTICUT
      SCALE: 1" = 50' DATED: 1–15–17
      PREPARED BY: JOHN L. THOMPSON
      MAP ON FILE VOL. 83 PAGE 57 AT THE EAST HAMPTON TOWN CLERKS OFFICE.
   B. SITE DEVELOPMENT PLAN PREPARED FOR STANISLAW J. OLEKSENKO
      LOT 6A CONE ROAD EAST HAMPTON, CT
      SCALE: 1" = 20' DATED: 1–26–19
      PREPARED BY: FRANK C. MAGNOTTA
      MAP ON FILE IN THE EAST HAMPTON BUILDING DEPT.
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ZONING INFORMATION TABLE FOR LOT 6A

R2 DISTRICT (WITHOUT SANITARY SEWERS)

	REQUIRED/ALLOWED	EXISTING
MINIMUM LOT AREA	60,000 S.F.	643,224 S.F.
MAXIMUM LOT COVERAGE (S.F.)	64,322 S.F.	8,481 S.F.
MAXIMUM LOT COVERAGE (%)	10%	1.3%
MINIMUM LOT FRONTAGE	100 FEET	382.55 FEET
MINIMUM LOT WIDTH	150 FEET	150 FEET
MINIMUM LOT DEPTH	175 FEET	175 FEET
SIDE YARD SETBACK - SOUTH	25 FEET	19.75 FEET
REAR YARD SETBACK - WEST	50 FEET	139.85 FEET
MAXIMUM BUILDING HEIGHT	30 FEET	18± FEET

EXISTING AREAS

	STRUCTURES	IMPERVIOUS
BLOCK BUILDING	2,400 S.F.	2,400 S.F.
WELL HOUSE	81 S.F.	81 S.F.
IMPERVIOUS AREAS - PAVEMENT		6,000 S.F.
TOTAL AREA	2,481 S.F.	8,481 S.F.

LEGEND:
- ● I.P. FOUND
- ○ LOT CORNER
- X SPOT ELEVATIONS
- ⊡ MONUMENT
- ■ MONUMENT FOUND
- BOUNDARY LINE
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CALL BEFORE YOU DIG 1–800–922–4455.

THE WETLAND, WATERCOURSE, AND CHANNEL BOUNDARIES SHOWN ON THIS MAP WERE DELINEATED BY WILLIAM A. JACKSON AT VARIOUS DATES IN 2018 AND 2019. THE WETLAND BOUNDARIES IDENTIFIED ON THIS PLAN ARE SUBSTANTIALLY CORRECT.

WILLIAM A. JACKSON, R.S., L.E.P.
REGISTERED SOIL SCIENTIST

Approved by the East Hampton Inland Wetland & Watercourse Agency

Final Approval ____________________
Chairman Date

Date of Approval ____________________

Expiration Date ____________________

REVISIONS

NO.	DATE	DESCRIPTION	BY
1	05/28/20	TOWN COMMENTS	KJP

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KENNETH J. PICARD L.S. 18143
PICARD LAND SURVEYING, LLC
459 JONES HOLLOW ROAD
MARLBOROUGH, CT 06447

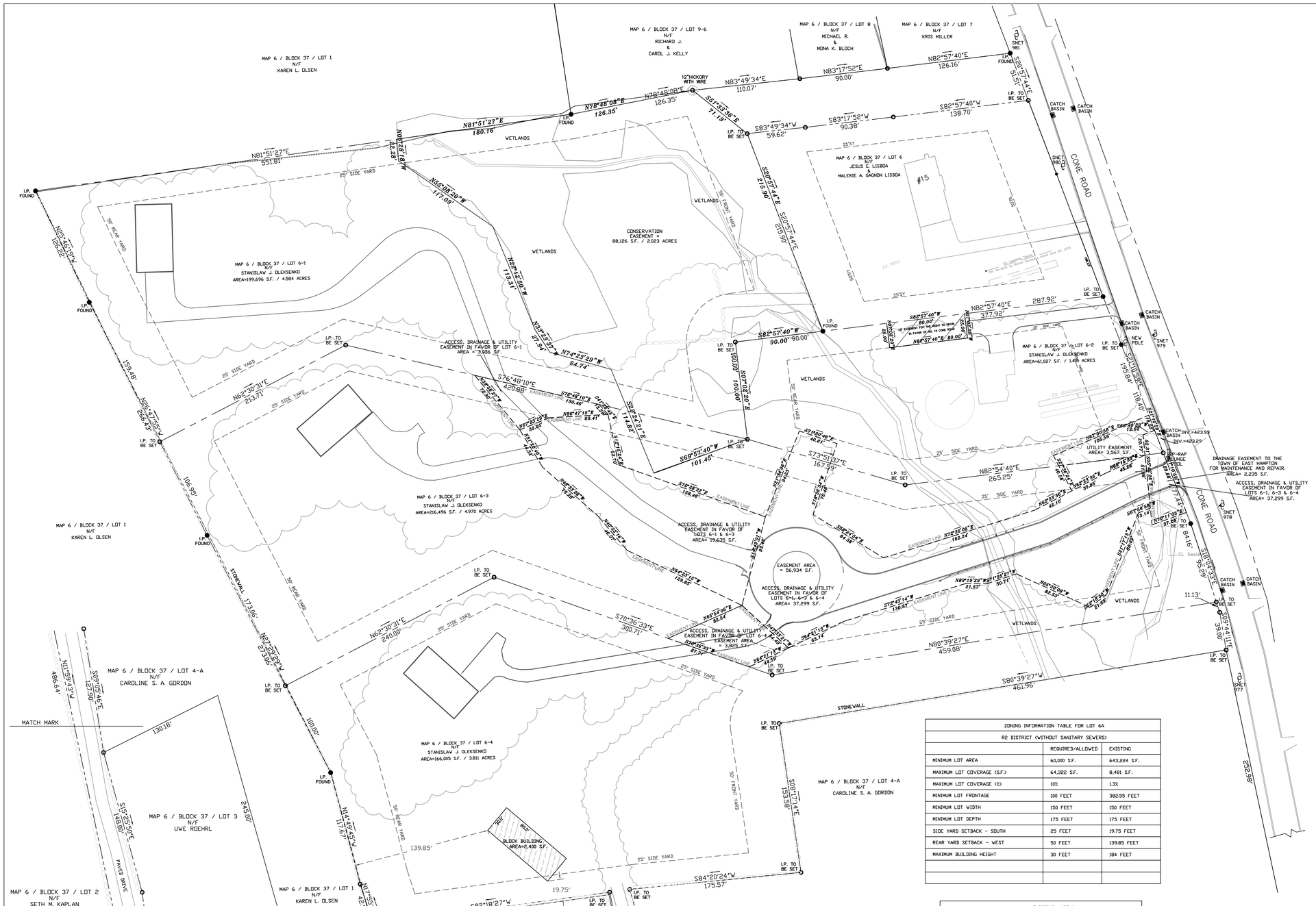
PROPERTY SURVEY
SHOWING THE PROPOSED SUBDIVISION OF THE PARCEL SHOWN ON ASSESSOR'S MAP 6 / BLOCK 37 / LOT 6A

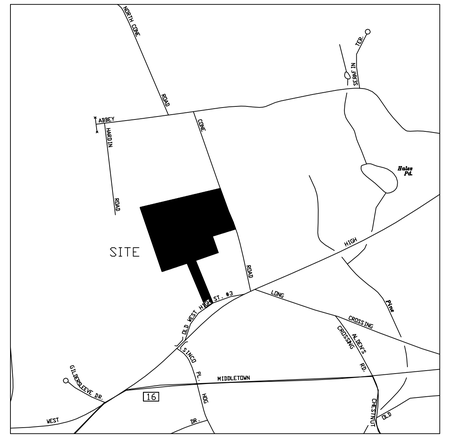
PREPARED FOR

STANISLAW J. OLEKSENKO

CONE ROAD & OLD MIDDLETOWN ROAD
EAST HAMPTON, CONNECTICUT

DRAWN BY: K.J.P.	CHECKED BY:
SCALE: 1 INCH = 50 FEET	
DATE: JANUARY 24, 2020	
PROPOSED SUBDIVISION	SHEET: 1 OF 1





SCALE

1000 0 1000 2000 3000 FEET

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REVISIONS

NO.	DATE	DESCRIPTION	BY
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459 JONES HOLLOW ROAD
MARLBOROUGH, CT 06447

LIMITED PROPERTY/BOUNDARY SURVEY

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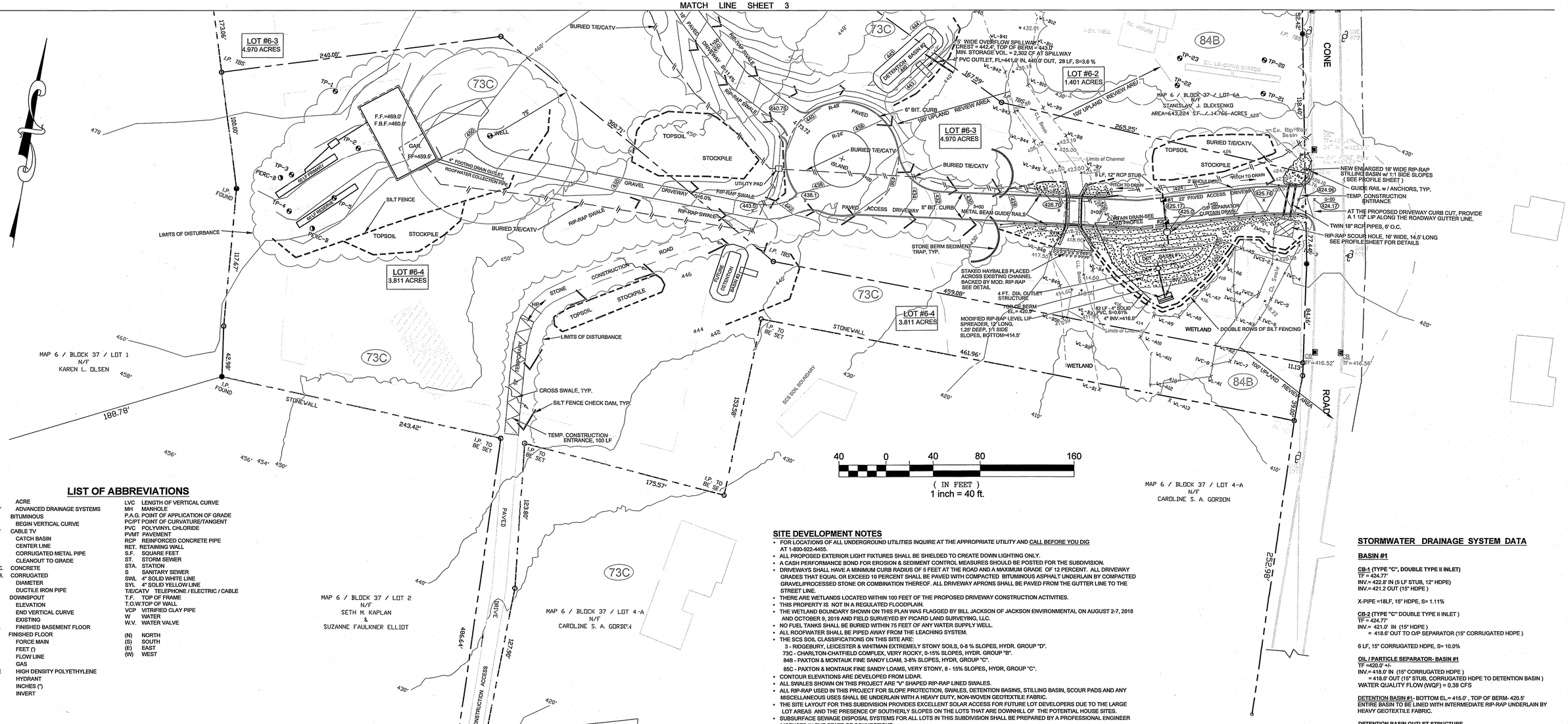
PREPARED FOR

STANISLAW J. OLEKSENKO

CONE ROAD & OLD MIDDLETOWN ROAD
EAST HAMPTON, CONNECTICUT

DRAWN BY: K.J.P.	CHECKED BY:
SCALE: 1 INCH = 50 FEET	
DATE: MARCH 25, 2020	
PROPOSED EASEMENTS	SHEET: 1 OF 1

MATCH LINE SHEET 3



LIST OF ABBREVIATIONS

AC	ACRE	LVC	LENGTH OF VERTICAL CURVE
"ADS"	ADVANCED DRAINAGE SYSTEMS	MH	MANHOLE
BIT.	BITUMINOUS	P.A.G.	POINT OF APPLICATION OF GRADE
BVC	BEGIN VERTICAL CURVE	PC/PT	POINT OF CURVATURE/TANGENT
CATV	CABLE TV	PVC	POLYVINYL CHLORIDE
C.B.	CATCH BASIN	PVMT	PAVEMENT
CL	CENTER LINE	RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE	RET.	RETAINING WALL
C.O.	CLEANOUT TO GRADE	S.F.	SQUARE FEET
CONC.	CONCRETE	ST.	STORM SEWER
CORR.	CORRUGATED	STA.	STATION
DIA.	DIAMETER	S	SANITARY SEWER
DIP	DUCTILE IRON PIPE	SWL	4" SOLID WHITE LINE
D.S.	DOWNSPOUT	SYL	4" SOLID YELLOW LINE
EL.	ELEVATION	T/E/CATV	TELEPHONE / ELECTRIC / CABLE
EVC	END VERTICAL CURVE	T.F.	TOP OF FRAME
EX.	EXISTING	T.O.W.	TOP OF WALL
F.B.F.	FINISHED BASEMENT FLOOR	VCP	VITRIFIED CLAY PIPE
F.F.	FINISHED FLOOR	W	WATER
F.M.	FORCE MAIN	W.V.	WATER VALVE
FT.	FEET (')		
FL.	FLOW LINE	(N)	NORTH
G	GAS	(S)	SOUTH
HDPE	HIGH DENSITY POLYETHYLENE	(E)	EAST
HYD.	HYDRANT	(W)	WEST
IN.	INCHES (")		
INV.	INVERT		

"I hereby certify that this plan is in compliance with the Town of East Hampton Soil Erosion and Sedimentation Control Regulations and the Connecticut Guidelines for Soil Erosion and Sedimentation Control dated 2002, as amended."

P.E. No. 11,699

FRANK C. MAGNOTTA, P.E.

The Planning and Zoning Commission of East Hampton, Connecticut certifies that the Soil Erosion and Sedimentation Control Plan complies with the requirements of The Town of Portland Regulations and the Connecticut Guidelines for Soil Erosion and Sedimentation Control dated 2002, as amended.

Signature _____
(Commission Chairman)

Date of Approval _____

APPROVED BY THE EAST HAMPTON PLANNING AND ZONING COMMISSION

CONDITIONAL APPROVAL _____
CHAIRMAN / SECRETARY

DATE: _____
EXPIRATION DATE: _____

FINAL APPROVAL _____
CHAIRMAN / SECRETARY

DATE: _____
EXPIRATION DATE: _____

Per Section 8-26c of the Connecticut General Statutes, as amended, approval automatically expires _____ if all physical public improvements required by this plan are not completed by that date.

SITE DEVELOPMENT NOTES

- FOR LOCATIONS OF ALL UNDERGROUND UTILITIES INQUIRE AT THE APPROPRIATE UTILITY AND CALL BEFORE YOU DIG AT 1-800-922-4455.
- ALL PROPOSED EXTERIOR LIGHT FIXTURES SHALL BE SHIELDED TO CREATE DOWN LIGHTING ONLY.
- A CASH PERFORMANCE BOND FOR EROSION & SEDIMENT CONTROL MEASURES SHOULD BE POSTED FOR THE SUBDIVISION.
- DRIVEWAYS SHALL HAVE A MINIMUM CURB RADIUS OF 5 FEET AT THE ROAD AND A MAXIMUM GRADE OF 12 PERCENT. ALL DRIVEWAY GRADES THAT EQUAL OR EXCEED 10 PERCENT SHALL BE PAVED WITH COMPACTED BITUMINOUS ASPHALT UNDERLAIN BY COMPACTED GRAVEL/PROCESSED STONE OR COMBINATION THEREOF. ALL DRIVEWAY APRONS SHALL BE PAVED FROM THE GUTTER LINE TO THE STREET LINE.
- THERE ARE WETLANDS LOCATED WITHIN 100 FEET OF THE PROPOSED DRIVEWAY CONSTRUCTION ACTIVITIES.
- THIS PROPERTY IS NOT IN A REGULATED FLOODPLAIN.
- THE WETLAND BOUNDARY SHOWN ON THIS PLAN WAS FLAGGED BY BILL JACKSON OF JACKSON ENVIRONMENTAL ON AUGUST 2-7, 2018 AND OCTOBER 9, 2019 AND FIELD SURVEYED BY PICARD LAND SURVEYING, LLC.
- NO FUEL TANKS SHALL BE BURIED WITHIN 75 FEET OF ANY WATER SUPPLY WELL.
- ALL ROOFWATER SHALL BE PIPED AWAY FROM THE LEACHING SYSTEM.
- THE SCS SOIL CLASSIFICATIONS ON THIS SITE ARE:
  - 3 - RIDGEBURY, LEICESTER & WHITMAN EXTREMELY STONY SOILS, 0-8 % SLOPES, HYDR. GROUP "D".
  - 73C - CHARLTON-CHATFIELD COMPLEX, VERY ROCKY, 0-15% SLOPES, HYDR. GROUP "B".
  - 84B - PAXTON & MONTAUK FINE SANDY LOAM, 3-8% SLOPES, HYDR, GROUP "C".
  - 85C - PAXTON & MONTAUK FINE SANDY LOAMS, VERY STONY, 8 - 15% SLOPES, HYDR, GROUP "C".
- CONTOUR ELEVATIONS ARE DEVELOPED FROM LIDAR.
- ALL SWALES SHOWN ON THIS PROJECT ARE "V" SHAPED RIP-RAP LINED SWALES.
- ALL RIP-RAP USED IN THIS PROJECT FOR SLOPE PROTECTION, SWALES, DETENTION BASINS, STILLING BASIN, SCOUR PADS AND ANY MISCELLANEOUS USES SHALL BE UNDERLAIN WITH A HEAVY DUTY, NON-WOVEN GEOTEXTILE FABRIC.
- THE SITE LAYOUT FOR THIS SUBDIVISION PROVIDES EXCELLENT SOLAR ACCESS FOR FUTURE LOT DEVELOPERS DUE TO THE LARGE LOT AREAS AND THE PRESENCE OF SOUTHERLY SLOPES ON THE LOTS THAT ARE DOWNHILL OF THE POTENTIAL HOUSE SITES.
- SUBSURFACE SEWAGE DISPOSAL SYSTEMS FOR ALL LOTS IN THIS SUBDIVISION SHALL BE PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT.
- THE PROPOSED ARCH CULVERT SHALL REQUIRE A COMPLETE DESIGN PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT TO BE SUBMITTED TO THE TOWN FOR APPROVAL PRIOR TO THE DEVELOPMENT OF THE LOTS.
- THE LIMITS OF THE VEHICLE GUIDE RAILS AND LOCATION OF END ANCHORAGES AT THE PROPOSED ACCESS DRIVEWAY ENTRANCE SHALL BE DETERMINED IN THE FIELD AND APPROVED BY THE TOWN PRIOR TO INSTALLATION.
- ANY PROPOSED CHANGES TO THE SIZES OR DESIGNS OF DETENTION BASINS #2, 3, 4, 5 & 6 AS SHOWN ON THESE PLANS AT THE TIME OF THE INDIVIDUAL LOT DEVELOPMENT SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF THE TOWN. DETAILED BASIN DESIGNS SHALL BE PREPARED TO MAINTAIN THE PRE-DEVELOPMENT RUNOFF RATES FOR 2, 10 AND 100 YEAR RAINFALL EVENTS.
- SEE THE PROPERTY SURVEY RECORD SUBDIVISION MAP FOR THE LOCATION OF PUBLIC AND PRIVATE EASEMENTS FOR PERMANENT CONSTRUCTION OF INFRASTRUCTURE SITE IMPROVEMNTS.
- TWO TEST PITS SHALL BE EXCAVATED WITHIN BASIN #1 AT THE BEGINING OF CONSTRUCTION TO DETERMINE THE USE OF A CURTAIN DRAIN UNDER THE ACCESS DRIVE.(SEE BASIN DETAIL).

STORMWATER DRAINAGE SYSTEM DATA

BASIN #1

CB-1 (TYPE "C", DOUBLE TYPE II INLET)
TF = 424.77'
INV.= 422.8' IN (5 LF STUB, 12" HDPE)
INV.= 421.2 OUT (15" HDPE)

X-PIPE =18LF, 15" HDPE, S= 1.11%

CB-2 (TYPE "C" DOUBLE TYPE II INLET)
TF = 424.77'
INV.= 421.0' IN (15" HDPE)
= 418.6' OUT TO O/P SEPARATOR (15" CORRUGATED HDPE)

6 LF, 15" CORRUGATED HDPE, S= 10.0%

OIL / PARTICLE SEPARATOR- BASIN #1
TF =420.0' +/-
INV.= 418.0' IN (15" CORRUGATED HDPE)
= 418.0' OUT (15" STUB, CORRUGATED HDPE TO DETENTION BASIN)
WATER QUALITY FLOW (WQF) = 0.38 CFS

DETENTION BASIN #1- BOTTOM EL.= 415.0' , TOP OF BERM- 420.5'
ENTIRE BASIN TO BE LINED WITH INTERMEDIATE RIP-RAP UNDERLAIN BY HEAVY GEOTEXTILE FABRIC.

DETENTION BASIN OUTLET STRUCTURE
4' DIA. CONCRETE RISER
5" DIA. INLET PORT, INV. = 415.5'
8" DIA. INLET PORT, INV. = 417.4'
12" DIA. HDPE, OUTLET PIPE, INV.= 415.0'
25 LF TO DISCHARGE POINT, INV.= 414.5', S= 2.00%
TOP OF CONCRETE RISER, WEIR EL. = 420.0'

TWIN 18" RCP CULVERT
SEE PROFILE SHEET FOR DETAILS

LEGEND

EXISTING		PROPOSED
450	SPOT ELEVATION	502.0
450 / 102	CONTOUR ELEVATION	450 / 102
	LIMITS OF DISTURBANCE	
	TEST HOLE	
	PERCOLATION TEST	
	UTILITY POLE	
	LIGHT POLE	
	CHECK DAM– HAYBALE	
	–SILT FENCE	
	CHECK DAM (STONE)	

VALID ONLY WITH LIVE SEAL AND SIGNATURE

STATE OF CONNECTICUT · FRANK C. MAGNOTTA · REGISTERED PROFESSIONAL ENGINEER · NO. 11699

OWNER / APPLICANT
STANISLAW J. OLEKSENKO
84 CHURCHHILL DRIVE
NEWINGTON, CT 06111

ASSESSOR MAP 6, BK 37 , LOT 6A

REVISIONS			
NO.	DESCRIPTION	BY	DATE
1	P&Z DATA	FCM	1-30-2020
2	IWWA COMMENTS	FCM	2-24-2020
3	IWWA & ENGINEERING COMMENTS	FCM	3-6-2020
4	P&Z ENGINEERING COMMENTS	FCM	5-15-2020

SUBDIVISION PROPERTY OF

STANISLAW J. OLEKSENKO

#11 CONE ROAD
EAST HAMPTON, CT.

Date: JAN. 27 , 2020
Scale: 1" = 40'

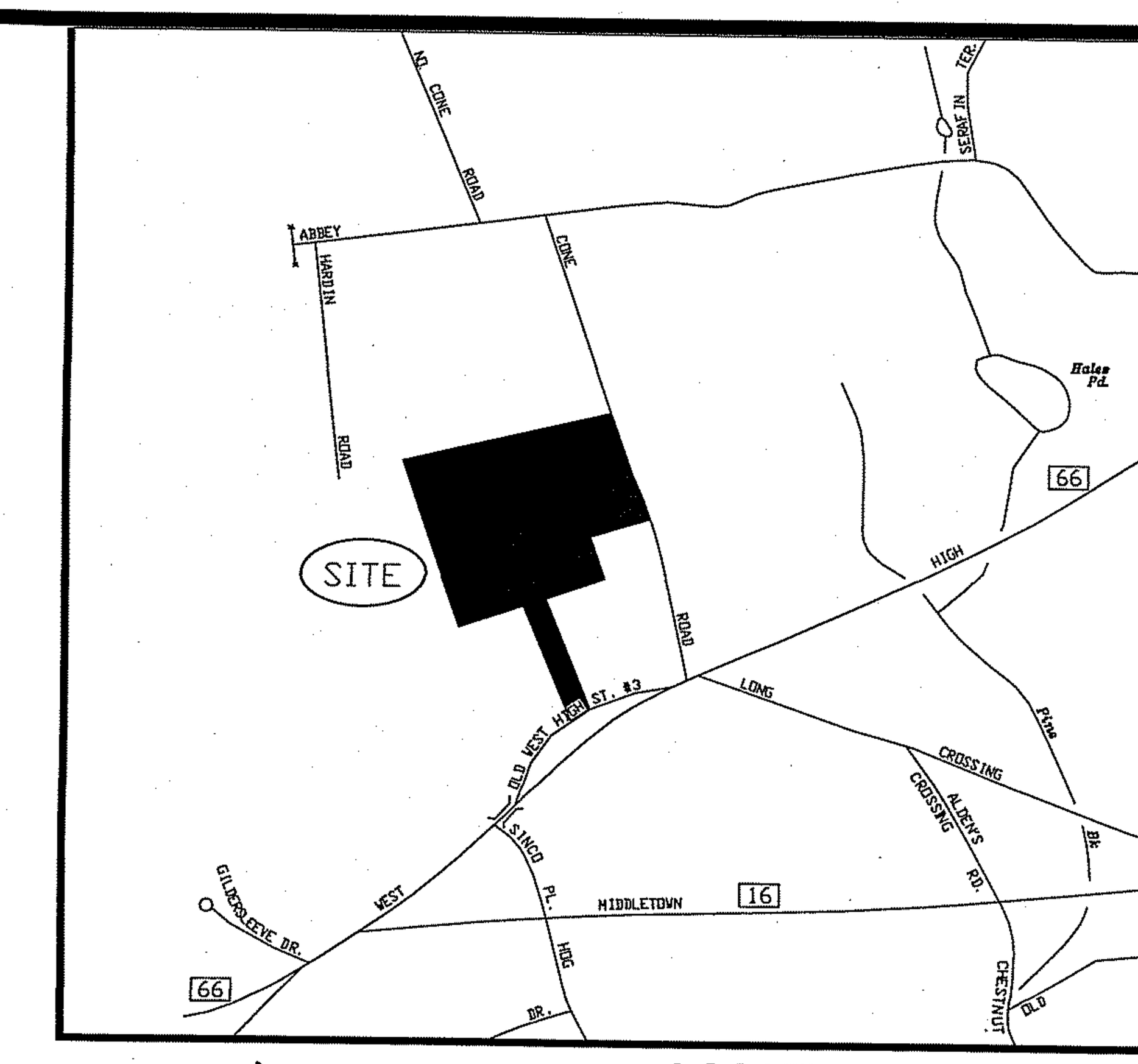
SITE DEVELOPMENT & EROSION CONTROL PLAN

Project No.
Sheet No. 2 of 6

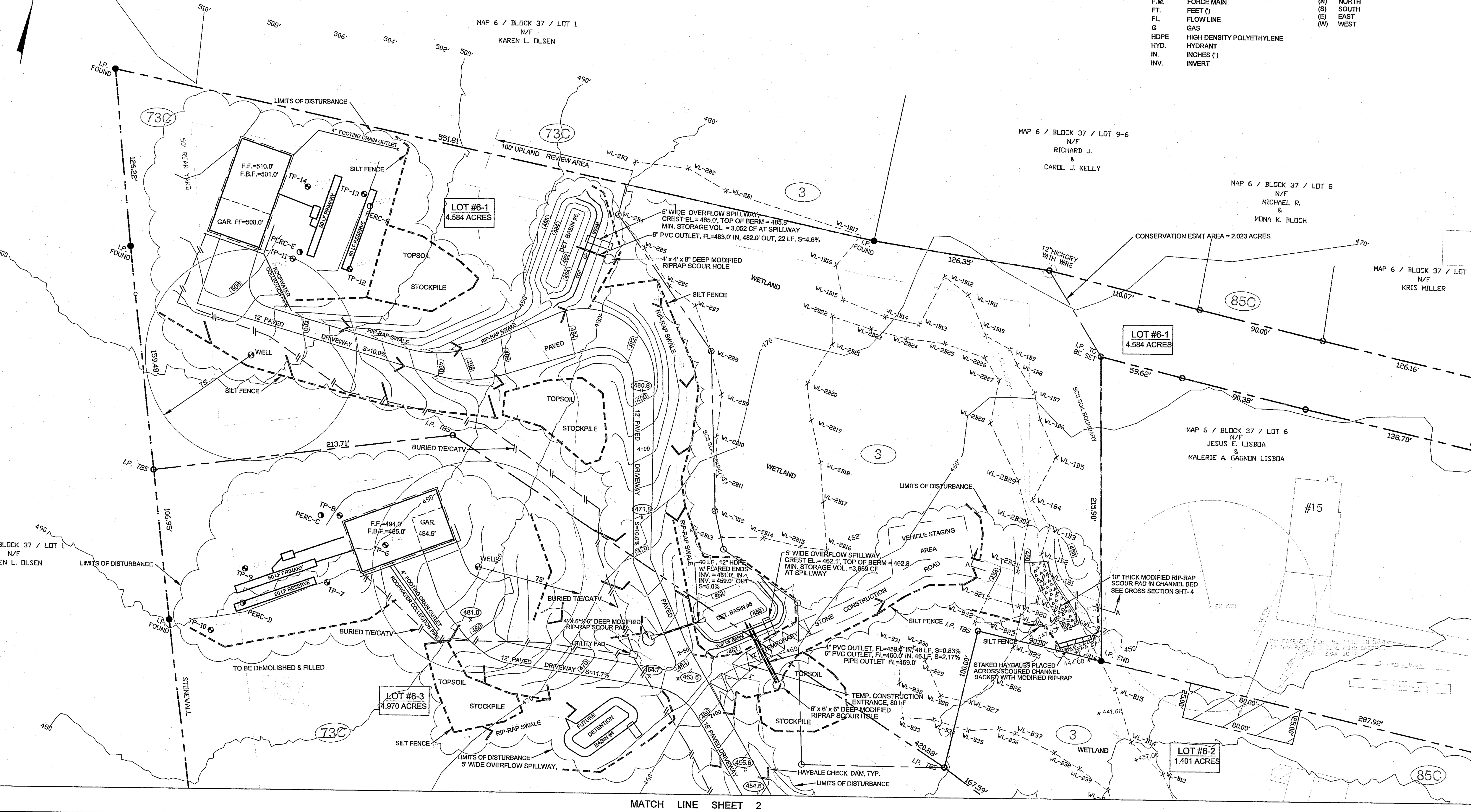
FRANK C. MAGNOTTA, P.E. PC
CONSULTING ENGINEER
FrankCMagnottaPE@Aol.Com
395 MAIN STREET, PORTLAND, CT 06480
TEL. 860-342-2191

LIST OF ABBREVIATIONS

AC	ACRE	LVC	LENGTH OF VERTICAL CURVE
"ADS"	ADVANCED DRAINAGE SYSTEMS	MH	MANHOLE
BIT.	BITUMINOUS	P.A.G.	POINT OF APPLICATION OF GRADE
BVC	BEGIN VERTICAL CURVE	PC/PT	POINT OF CURVATURE/TANGENT
CATV	CABLE TV	PVC	POLYVINYL CHLORIDE
C.B.	CATCH BASIN	PVMT	PAVEMENT
CL	CENTER LINE	RCP	REINFORCED CONCRETE PIPE
CMP	CORRUGATED METAL PIPE	RET.	RETAINING WALL
C.O.	CLEANOUT TO GRADE	S.F.	SQUARE FEET
CONC.	CONCRETE	ST.	STORM SEWER
CORR.	CORRUGATED	STA.	STATION
DIA.	DIAMETER	S	SANITARY SEWER
DIP	DUCTILE IRON PIPE	SWL	4" SOLID WHITE LINE
D.S.	DOWNSPOUT	SYL	4" SOLID YELLOW LINE
EL.	ELEVATION	T/E/CATV	TELEPHONE / ELECTRIC / CABLE
EVC	END VERTICAL CURVE	T.F.	TOP OF FRAME
EX.	EXISTING	T.O.W.	TOP OF WALL
F.B.F.	FINISHED BASEMENT FLOOR	VCP	VITRIFIED CLAY PIPE
F.F.	FINISHED FLOOR	W	WATER
F.M.	FORCE MAIN	W.V.	WATER VALVE
FT.	FEET (')	(N)	NORTH
FL.	FLOW LINE	(S)	SOUTH
G	GAS	(E)	EAST
HDPE	HIGH DENSITY POLYETHYLENE	(W)	WEST
HYD.	HYDRANT		
IN.	INCHES (")		
INV.	INVERT		



LOCATION MAP 1"=1000'



40 0 40 80 160
(IN FEET)
1 inch = 40 ft.

APPROVED BY THE EAST HAMPTON PLANNING AND ZONING COMMISSION

CONDITIONAL APPROVAL ______________________
CHAIRMAN / SECRETARY

DATE: ______________________
EXPIRATION DATE: ______________________

FINAL APPROVAL ______________________
CHAIRMAN / SECRETARY

DATE: ______________________
EXPIRATION DATE: ______________________

Per Section 8-26c of the Connecticut General Statutes, as amended, approval automatically expires __________________ if all physical public improvements required by this plan are not completed by that date.

The Planning and Zoning Commission of East Hampton, Connecticut certifies that the Soil Erosion and Sedimentation Control Plan complies with the requirements of The Town of Portland Regulations and the Connecticut Guidelines for Soil Erosion and Sedimentation Control dated 2002, as amended.

Signature ______________________
(Commission Chairman)

Date of Approval ______________________

"I hereby certify that this plan is in compliance with the Town of East Hampton Soil Erosion and Sedimentation Control Regulations and the Connecticut Guidelines for Soil Erosion and Sedimentation Control dated 2002, as amended."

P.E. No. 11,699

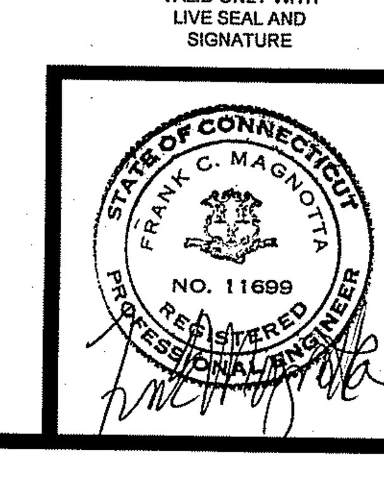
FRANK C. MAGNOTTA, P.E.

SPOT ELEVATION
CONTOUR ELEVATION
TREE LINE
LIMITS OF CLEARING
TEST HOLE
PERCOLATION TEST
IRON PIPE TO BE SET

OWNER / APPLICANT
STANISLAW J. OLEKSENKO
84 CHURCHHILL DRIVE
NEWINGTON, CT 06111

ASSESSOR MAP 6, BK 37, LOT 6A

VALID ONLY WITH LIVE SEAL AND SIGNATURE



REVISIONS

NO.	DESCRIPTION	BY	DATE
1	P&Z DATA	FCM	1-30-2020
2	IWWA COMMENTS	FCM	2-24-2020
3	IWWA & ENGINEERING COMMENTS	FCM	3-6-2020
4	P&Z ENGINEERING COMMENTS	FCM	5-15-2020

SUBDIVISION PROPERTY OF

STANISLAW J. OLEKSENKO

#11 CONE ROAD
EAST HAMPTON, CT.

Date: JAN. 27, 2020

Scale: 1" = 40'

SITE DEVELOPMENT & EROSION CONTROL PLAN

Project No.

Sheet No. 3 of 6

FRANK C. MAGNOTTA, P.E. PC
CONSULTING ENGINEER
FrankCMagnottaPE@Aol.Com
395 MAIN STREET, PORTLAND, CT 06480
TEL. 860-342-2191

SEQUENCE OF CONSTRUCTION - ACCESS DRIVEWAY & ARCH CULVERT BROOK CROSSING

	TYPICAL CONSTRUCTION SCHEDULE START	COMPLETION
• INSTALL A TEMPORARY CONSTRUCTION ENTRANCE AT THE DRIVEWAY CURB CUT ON CONE ROAD INITIATE TURTLE PROTECTION STRATEGIES.CUT AND CHIP ALL VEGETATION WITHIN THE LIMITS OF DISTURBANCE OF THE ACCESS DRIVE FROM CONE ROAD TO THE BROOK. THE INSTALL ALL PERIMETER SILT FENCING SHOWN FOR THIS CLEARED AREA AND HAYBALE / SILT FENCING ALONG THE EDGES OF THE BROOK CHANNEL FOR BOTH PROPOSED FOOTINGS FOR THE ARCH CULVERT AND WINGWALLS. SEE THE NOTE ON THE SILT FENCE DETAIL FOR PROPER INSTALLTION FOR BOX TURTLE PROTECTION.	MAY 15th, 2020	MAY 30th
• STRIP AND STOCKPILE TOPSOIL AND SECURE WITH SILT FENCE. DISPOSE OF STUMPS AND DEBRIS OFF SITE IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.	MAY 20th	MAY 30th
• INSTALL A TEMPORARY CONSTRUCTION ENTRANCE AS SHOWN ON THE PLAN ON LOT #4. CUT AND CHIP ALL VEGETATION WITHIN THE LIMITS OF DISTURBANCE FOR THE TEMPORARY CONSTRUCTION ACCESS ROAD RUNNING THRU LOT #4, THE CIRCULAR TURN AROUND AND ACCESS DRIVE TO THE PROPOSED BROOK CROSSING. INSTALL STONE CHECK DAMS AND ALL SILT FENCING SHOWN ALONG THESE ACCESS ROADS. STRIP AND STOCKPILE TOPSOIL AND SECURE WITH SILT FENCE. DISPOSE OF STUMPS AND DEBRIS OFF SITE IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS. INITIATE VISIBLE SCREENING FOR BOX TURTLE PRESENCE.	MAY 20th	JUNE 5th
• INSTALL THE TWIN 18" DRIVEWAY CULVERTS AND ABUTTING RIP-RAP STILLING BASINS NEAR CONE ROAD. FINAL GRADE DRIVEWAY AND INSTALL STONE AGGREGATE FROM CONE ROAD TO STATION 1+75. INSTALL O/P SEPARATOR AND CATCH BASINS 1 AND 2 WITHOUT THE CROSS PIPE. SET E&S SILT SACKS IN CATCH BASINS. FINAL GRADE AND INSTALL THE STONE AGGREGATE BASE FOR THE CIRCULAR TURN AROUND, TEMPORARY ACCESS ROADS AND SECTION OF ACCESS DRIVEWAY WITHIN 30 FT OF THE BROOK. INSTALL CONNECTING STORM DRAIN PIPES BETWEEN THE CATCH BASINS AND O/P SEPARATOR. EXCAVATE THE AREA FOR BASIN #1, INSTALL THE OUTLET STRUCTURE, OUTLET PIPE AND RIP-RP LEVEL LIP SPREADER. FINAL GRADE DISTURBED SLOPES, SPREAD TOPSOIL, PLACE EROSION CONTROL BLANKETS ON ALL SLOPES, SEED, MULCH, FERTILIZE AND STABILIZE. PLACE RIP-RAP SLOPE PROTECTION WITHIN, ABOVE AND AROUND BASIN #1. INSTALL BURIED UTILITY LINES FROM CONE ROAD PAST THE END OF THE CIRCULAR TURN AROUND.	MAY 20th	JULY 20th
• INSPECT THE CONDITION OF ALL EROSION AND SEDIMENT CONTROL MEASURES AND MODIFY AS NEEDED THROUGHOUT CONSTRUCTION.	MAY 15th	MARCH 2021
• CONSTRUCT THE STONE AGGREGATE WORKING PADS ON BOTH SIDES OF THE ARCH CULVERT FOOTING AREA. EXCAVATE FOR THE ARCH STRUCTURE FOOTINGS AND INSTALL THE CONCRETE AND STEEL REINFORCING.	MAY 15th	MAY 25th
• ERECT AND ASSEMBLE ALL SECTIONS OF THE ALUMINUM PLATE BROOK CULVERT, INCLUDING ALL END WALLS AND WING WALLS. EVENLY PLACE AND COMPACT THE STRUCTURAL FILL AGAINST BOTH SIDES OF THE ARCH CULVERT, INCLUDING THE WING WALLS. FINAL GRADE THE ACCESS DRIVEWAY AND PLACE STONE AGGREGATE CONNECTING THE DRIVEWAY WORK ON BOTH SIDES OF THE BROOK. FINISH GRADE AND PLACE THE STONE AGGREGATE FOR THE REMAINING LENGTH OF THE ACCESS DRIVE, UP TO AND INCLUDING THE CIRCULAR TURN AROUND. BEFORE PLACING ANY HEAVY EQUIPMENT OR TRAFFIC OVER THE ARCH CULVERT, PLACE 3 INCHES OF BITUMINOUS PAVING THE ENTIRE WIDTH OF THE ACCESS DRIVE BETWEEN STATIONS 1+50 AND 3+00. INSTALL THE METAL BEAM GUIDERAIL SYSTEM ALONG THIS SECTION OF THE ACCESS DRIVE. SPREAD TOPSOIL, PLACE EROSION CONTROL BLANKETS ON ALL SLOPES, SEED, MULCH AND STABILIZE ALL AREAS DISTURBED BY THE ABOVE CONSTRUCTION. PLACE THE BITUMINOUS BINDER COURSE AND CURBING FROM CONE ROAD TO THE CIRCULAR TURN AROUND.	JUNE 7th	OCTOBER 1st
• INSPECT THE CONDITION OF ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND MODIFY AS NEEDED THROUGHOUT CONSTRUCTION. REMOVE TEMPORARY EROSION CONTROL MEASURES 3 MONTHS AFTER PERMANENT STABILIZATION OF THE ENTIRE SITE HAS OCCURRED.ENSURE PERMANENT STABILIZATION OF ALL DISTURBED AREAS.	SEPTEMBER 1st	MARCH 2021
• INSTALL THE FINAL WEARING COURSE OF BITUMINOUS PAVEMENT OVER THE ENTIRE LENGTH OF THE ACCESS DRIVEWAYS.		APRIL 2021

SEQUENCE OF CONSTRUCTION - REMOVAL & WETLAND RESTORATION OF THE EX. BROOK CROSSING

• INITIATE BOX TURTLE PROTECTION STRATEGIES. CUT AND CHIP ALL VEGETATION WITHIN THE LIMITS OF DISTURBANCE FOR THE SECTION OF THE ACCESS DRIVE BETWEEN THE END OF THE CIRCULAR TURN AROUND AND THE SPLIT FOR THE INDIVIDUAL DRIVEWAYS TO LOTS 1 AND 3 AND THE TEMPORARY CONSTRUCTION ACCESS DRIVE LEADING TO THE EXISTING BROOK CROSSING AREA. INSTALL A TEMPORARY CONSTRUCTION ENTRANCE AT THE BEGINNING OF THE TEMPORARY CONSTRUCTION ROAD AND ALL SILT FENCING SHOWN FOR CONSTRUCTION IN THIS AREA. STRIP AND STOCKPILE TOPSOIL AND SECURE WITH SILT FENCE. DISPOSE OF STUMPS AND DEBRIS OFF SITE IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS. FINAL GRADE THIS ACCESS DRIVEWAY AND THE TEMPORARY CONSTRUCTION ACCESS DRIVE AND INSTALL THE AGGREGATE BASE THROUGHOUT. INSTALL THE RIP-RAP SWALES WITH PERIODIC CHECK DAMS ALONG BOTH SIDES OF THIS SECTION OF THE ACCESS DRIVE AND INSTALL DETENTION BASIN #2 TO INITIALLY BE USED AS A SEDIMENT TRAP. INSTALL BURIED UTILITIES FROM THE END OF THE CIRCULAR TURN AROUND TO THE POINT WHERE THE INDIVIDUAL DRIVEWAYS FOR LOTS #1 & #3 BEGIN. RESTORE THIS DISTRUBED AREA, SPREAD TOPSOIL, PLACE EROSION CONTROL BLANKETS, SEED, MULCH, FERTILIZE AND STABILIZE.	MAY 25th	AUGUST 15th
• INSTALL THE STAKE HAYBALES WITH MODIFIED RIP-RAP BACKING IN THE BROOK CHANNEL DOWNSTREAM OF THE EXISTING CROSSING. EXCAVATE AND REMOVE EXISTING DRIVEWAY CROSSING AND CULVERT PIPES DOWN TO THE ORIGINAL BROOK CHANNEL DEPTH. EXCAVATE AND FINAL GRADE THE PROPOSED SIDE SLOPES, SPREAD TOPSOIL, PLACE EROSION CONTROL BLANKETS AND SEED WITH A NO MAINTENANCE CONSERVATION MIX AND STABILIZE. INSTALL PERMANENT MODIFIED RIP-RAP PROTECTION IN THE NEW CHANNEL AND INFILL WITH TOPSOIL, SEED, AND STABILIZE.	JULY 25th	SEPTEMBER 10th
• INSPECT CONDITION OF ALL EROSION AND SEDIMENT CONTROL MEASURES AND MODIFY AS NEEDED THROUGHOUT CONSTRUCTION. UPON STABILIZATION OF THE CHANNEL SIDE SLOPES, REMOVE THE RIPRAP SUPPORT BEHIND THE HAYBALES IN THE CHANNEL AND SPREAD TOPSOIL, SEED, MULCH AND STABILIZE THE TEMPORARY CONSTRUCTION ACCESS ROAD. REMOVE TEMPORARY EROSION CONTROL MEASURES 3 MONTHS AFTER PERMANENT STABILIZATION OF THE ENTIRE SITE HAS OCCURRED.. ENSURE PERMANENT STABILIZATION OF ALL DISTURBED AREAS.		NOVEMBER 30th

SEQUENCE OF CONSRTUCTION - INDIVIDUAL LOT DEVELOPMENT

	TYPICAL CONSTRUCTION SCHEDULE START	COMPLETION
• INITIATE BOX TURTLE PROTECTION STRATEGIES & MARK THE LIMITS OF DISTURBANCE FOR THE ENTIRE LOT AND DRIVEWAY. CUT AND CHIP ALL TREES WITHIN THE ABOVE AREA AND STOCKPILE FOR LATER USE. CUT & REMOVE BRUSH OFF SITE. INSTALL ALL PERIMETER SILT FENCING PER SILT FENCE DETAIL & NOTE.	JUNE 1st	JUNE 24th
• CLEAR AND GRUB THE SITE TO THE LIMITS OF DISTURBANCE. STRIP AND STOCKPILE TOPSOIL AND SECURE WITH SILT FENCE. DISPOSE OF STUMPS AND DEBRIS OFF SITE IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.	JUNE 24th	JULY 7th
• CUT & FILL THE DRIVEWAY INSTALL THE STONE AGGREGATE BASE FOR THE DRIVEWAY. CONSTRUCT DETENTION BASINS AND THE DIVERSION SWALES ALONG THE DRIVEWAY LEADING TO THEM. INSTALL CHECK DAMS THROUGHOUT THIS DRIVEWAY WORK.	JULY 8th	AUGUST 24th
• EXCAVATE AND CONSTRUCT THE HOUSE FOUNDATION AND UNDERGROUND TEL/E/CATV. INSTALL THE FOUNDATION DRAINS AND ROOFWATER DRAINS TO THEIR OUTLET. BEGIN CONSTRUCTION OF THE HOUSE AND DRILL THE WELL.	JULY 1st	AUGUST 30th
• FINISH GRADE CUTS AND FILLS FOR THE DRIVEWAY AND SPREAD TOPSOIL, SEED , FERTILIZE, MULCH AND STABILIZE THESE AREAS.	SEPTEMBER 1st	OCTOBER 2nd
• INSPECT THE CONDITION OF ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AND MODIFY AS NEEDED THROUGHOUT CONSTRUCTION.	JULY 30th	MARCH 5th, 2021
• INSTALL THE SEPTIC SYSTEM, FINISH GRADE THE AREA, SPREAD TOPSOIL, SEED,, FERTILIZE, MULCH AND STABILIZE THIS AREA.	AUGUST 15th	SEPTEMBER 1st
• INSTALL LANDSCAPING, AND PAVE THE DRIVEWAY.	AUGUST 31st	APRIL 2, 2021
• REMOVE TEMPORARY EROSION CONTROL MEASURES 3 MONTHS AFTER PERMANENT STABILIZATION OF THE ENTIRE SITE HAS OCCURRED. ENSURE PERMANENT STABILIZATION OF ALL DISTURBED AREAS.		MARCH 1ST, 2021

Protection Strategies for the Eastern Box Turtle During Construction

Following are some protection strategies developed by the Connecticut Department of Environmental Protection (CT DEEP)[1] that may be incorporated into the proposed sequence of construction.

- Site Work should be limited to the period between April 1st and September 30th when turtles are active.
- Silt fencing should be installed around the work area prior to construction. Where possible, avoid installing sedimentation and erosion control materials from: late-August through September; and, March through mid-May. These are the two time periods when amphibians and reptiles are most active, moving to and from wetlands to breed. (*Note: erosion control products that are embedded with plastic netting should be avoided.*).
- After silt fencing installation, and prior to construction, a sweep of the project area should be conducted to look for turtles.
- Site construction personnel should be informed of the possible presence of turtles and provided a description of the species.
- Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the silt fencing, and in a position in the same direction that it was walking.
- Stockpiles of soil should be cordoned off with silt fencing soil turtles do not attempt to try and nest in them.
- No vehicles or heavy machinery should be parked in any potential turtle habitat.
- Work conducted during the early morning and evening hours should occur with special care not to harm basking or foraging individuals.
- All silt fencing should be removed as soon as site work is completed, and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

PERCOLATION TESTS - CONE ROAD, EAST HAMPTON

PERFORMED BY FRANK C. MAGNOTTA P.E., PC
SEPTEMBER 25, 2019

NO: A (AT TP-3)
DEPTH: 39"

TIME	READING	RATE
10:32	4"	
:37	8"	
11:07	9"	
:17	10"	10
:27	11"	10
:37	12"	10
		10 MIN/INCH

PRESOAK AT 9:00 AM, DRY AT 10:30 AM
REFERENCE AT 23.5" BELOW GRADE

NO: B (AT TP-4)
DEPTH: 34 1/2"

TIME	READING	RATE
10:35	5"	
:55	10 3/4"	
11:05	12"	
:15	13"	10
:25	14"	10
:35	LESS THAN 3" OF WATER IN HOLE	
		10 MIN/INCH

PRESOAK AT 9:10 AM, DRY AT 10:30 AM
REFERENCE AT 18" BELOW GRADE

NO: C (AT TP- 8)
DEPTH: 31"

TIME	READING	RATE
3:24	6"	
:32	10 1/2"	
:37	11 3/4"	
:42	13"	10
:47	14"	10
:52	15"	10
:57	LESS THAN 3" OF WATER IN HOLE	
		10 MIN/INCH

PRESOAK AT 1:38 PM, DRY AT 3:00 PM
REFERENCE AT 15" BELOW GRADE

NO: D (AT TP- 10)
DEPTH: 29"

TIME	READING	RATE
3:30	4"	
:35	7 3/4"	
:40	10"	
:45	11 1/4"	4
:50	12 1/4"	5
:55	13"	6.7
4:00	14"	5
:05	LESS THAN 3" OF WATER IN HOLE	
		5 MIN/INCH

PRESOAK AT 2:00 PM, DRY AT 3:00 PM
REFERENCE AT 13" BELOW GRADE

NO: E (AT TP-11)
DEPTH: 30"

TIME	READING	RATE
12:18	3 1/2"	
:23	7"	
:28	9 1/4"	
:33	11 1/4"	2.5
:38	12 3/4"	3.33
:43	14 1/4"	3.33
:48	LESS THAN 3" OF WATER IN HOLE	
		3.33 MIN/INCH

PRESOAK AT 11:50 AM, DRY AT 12:15 AM
REFERENCE AT 14" BELOW GRADE

NO: F (AT TP-13)
DEPTH: 30"

TIME	READING	RATE
12:21	3 1/2"	
:26	9 3/4"	
:31	12 1/2"	1.83
:36	14 1/2"	2.5
:41	LESS THAN 3" OF WATER IN HOLE	
		2.5 MIN/INCH

PRESOAK AT NOON, DRY AT 12:20 AM
REFERENCE AT 13 1/2" BELOW GRADE

TEST PITS RECORDED BY DON MITCHELL, DIR. , CHATHAM H. D. SEPT.17 & 25, 2019

FORM #2 State of Connecticut Department of Public Health Application/Permit No._____ 1/1/04

SITE INVESTIGATION FOR A SEWAGE DISPOSAL SYSTEM

Property Owner : Stanislaw Oleksenko
_Location : Cone Road (Access from Old West High Street)

DEEP TEST PIT DATA/SOIL DESCRIPTIONS

DATE:_9/17/19 and 9/25/19

(Record all Test Pits)

TEST PIT: TH-2	TEST PIT: TH-1	TEST PIT: TH-5	TEST PIT TH-3
0-9" Topsoil 9-20" Reddish brown silty fine sandy loam 20-44" Very decomposed schist 44-79" Slightly more consolidated schist material	Ledge at 17"	0-10" Topsoil 10-20" Light brown silty fine sandy loam 20-26" Light brown silty fine sand and some gravel (very firm) 26-42" Red brown silty loam with decomposed schist (firm) 42-551" Decomposed schist	0-8" Topsoil 8-25" Orange brown silty fine sandy loam (loose) 25-91" Grey sandy till with stones and cobbles (firm…looser with depth0
Mottles: None GW: None Ledge: None Roots: 50" Restrictive: None	Mottles: GW: Ledge: 17" Roots: Restrictive:	Mottles: None GW: None Ledge: 51" Roots: 39" Restrictive: 51"	Mottles: Spotty 28" GW: None Ledge: None Roots: 51" Restrictive: 28"

TEST PIT: TH-4	TEST PIT: TH-8	TEST PIT: TH-6	TEST PIT TH-7
0-6" Topsoil 6-22" Light brown silty fine sandy loam (loose) 22-46" Grey sandy till (loose to firm) 46-86" Decomposed schist	0-6" Topsoil and leaf litter 6-29" Orange brown silty fine sandy loam (loose) 29-76" Brown to grey silty sandy till with rocks and schisty rocks	Ledge at 48"	0-7" Topsoil 7-24" Orange brown silty fine sandy loam (loose) 24-84" Grey fine sandy till with rocks
Mottles: 30" GW: None Ledge: None Roots: 46" Restrictive: 30"	Mottles: None GW: None Ledge: None Roots: 61" Restrictive: None	Mottles: GW: Ledge: 48" Roots: Restrictive:	Mottles: None GW: None Ledge: None Roots: 55" Restrictive: None

TEST PIT: TH-10	TEST PIT: TH-9	TEST PIT: TH-14	TEST PIT TH-11
0-5" Topsoil and leaf litter 5-17" Orange brown silty fine sandy loam (loose) 17-29" Olive brown silty fine sand w/gravel (loose) 29-40" Grey sandy till 40-75" Decomposed schist	0-8" Topsoil 8-23" Orange brown silty fine sandy loam (loose) 23-57" Olive to grey fine sand with gravel (till) (loose to firm)	0-9" Topsoil 9-23" Orange brown silty fine sandy loam (loose) 23-36" Loose grey sandy till with gravel 36-72" Grey sandy toil (firm)	0-8" Topsoil 8-24" Orange brown silty fine sandy loam (loose) 24-81" Grey sandy till with gravel (loose to firm)
Mottles: 24-40" GW: None Ledge: None Roots: 61" Restrictive: 40"	Mottles: None GW: None Ledge: None Roots: 48" Restrictive: None	Mottles: None GW: None Ledge: None Roots: 36" Restrictive: None	Mottles: None GW: None Ledge: None Roots: 48" Restrictive: None

TEST PIT: TH-12	TEST PIT: TH-13	TEST PIT:	TEST PIT
0-8" Topsoil 8-19" Orange brown silty fine sandy loam (loose) 19-36" Light brown to grey silty fine sand (loose) 36-78" Grey sandy till with pockets of schist	0-7" Topsoil 7-17" Orange brown silty fine sandy loam (loose) 17-29" Grey fine sandy till (loose) 29-80" Grey sandy till (firm)		
Mottles: None GW: None Ledge: None Roots: 33" Restrictive: None	Mottles: None GW: None Ledge: None Roots: 41" Restrictive: None	Mottles: GW: Ledge: Roots: Restrictive:	Mottles: GW: Ledge: Roots: Restrictive:

PROJECT DESCRIPTION

THE PROJECT PROPOSES TO SUBDIVIDE A 14.766 ACRES PARCEL WITH AN EXISTING HOUSE INTO TWO FRONT LOTS AND TWO INTERIOR LOTS FRONTING ON CONE ROAD. ACCESS TO THE THREE UNDEVELOPED LOTS WILL BE PROVIDED BY A 473 LF SHARED, 22 FT WIDE PAVED & CURBED ACCESS DRIVEWAY TERMINATING IN A CIRCULAR TURN AROUND THAT IS CAPABLE OF ACCOMODATING LARGE EMERGENCY RESPONSE VEHICLES. A METAL PLATE ARCH CULVERT IS PROPOSED WHERE THIS DRIVEWAY CROSSES A SMALL BROOK. CATCH BASINS ARE PROVIDED IN THIS DRIVEWAY THAT WILL DISCHARGE TO AN ADJACENT STORM WATER DETENTION BASIN.

BEYOND THE TURNAROUND IS A 250LF SECTION OF 18 FT WIDE PAVED DRIVEWAY THAT IS SHARED BY LOTS 1 & 3. ALL OTHER DRIVEWAYS IN THE SUBDIVISION SERVE THE INDIVIDUAL LOTS. STORM WATER DETENTION BASINS ARE PROPOSED ON EACH OF THE LOTS THAT WILL RECEIVE RUNOFF FROM THE IMPERVIOUS AREA AND PORTIONS OF THE CLEARED LOT AREA.

REMEDIATION OF PORTIONS OF THE WETLANDS ON LOT #1 AND A CONSERVATION EASEMENT OVER THIS AREA ARE PROPOSED.

MAP REFERENCES

- LOT SPLIT, FIRST CUT FOR STANISLAW J. OLEKSENKO, LOT 6, BK 37, 15 CONE ROAD, EASTHAMPTON, CT. SCALE: 1"=50'; DATE: JANUARY 15, 2017; SHT-1,PREFORMED BY J.L. SURVEYING.
- PROPERTY SURVEY PREPARED FOR STANISLAW J. OLEKSENKO, CONE ROAD & OLD MIDDLETOWN ROAD, ASSESSORS MAP 6, BK 37, LOT 6A: EAST HAMPTON, CONNECTICUT; SCALE: 1"=50'; DATE: MARCH 15, 2019; PREFORMED BY PICARD LAND SURVEYING, LLC.
- PROPERTY SURVEY SHOWING THE PROPOSED SUBDIVISION OF THE PARCEL SHOWN ON ASSESSORS MAP 6, BK 37, LOT 6A; PREPARED FOR STANISLAW J. OLEKSENKO, 11 CONE ROAD & OLD MIDDLETOWN ROAD, EAST HAMPTON, CONNECTICUT; SCALE: 1 INCH =50 FT, DATED JANUARY 24, 2020, REVISED MARCH 6, 2020 PREFORMED BY PICARD LAND SURVEYING, LLC.
- MAP TITLED SITE DEVELOPMENT PLAN PREPARED FOR STANISLAW J. OLEKSENKO, LOT 6A, 11 CONE ROAD, EAST HAMPTON, CONNECTICUT; SCALE: 1"=20'; DATE: JANUARY 26, 2019; PREPARED BY FRANK C. MAGNOTTA, P.E., PC.

ZONING DATA

ZONE: R-2 RESIDENTIAL

	REQUIRED
MINIMUM LOT AREA- FRONT	60,000 SF 1.377 ACRES
" " " - INTERIOR	120,000 SF 2.755 ACRES
MINIMUM LOT WIDTH- FRONT	150 FT
MIMIMUM LOT DEPTH-	200 FT
MINIMUM LOT FRONTAGE- FRONT	100 FT
" - INTERIOR	25 FT
MAXIMUM LOT COVERAGE-	10% OF LOT AREA
MAXIMUM BUILDING HEIGHT-	30 FT
BUILDING SETBACKS-	
FRONT YARD-	50 FT
SIDE YARD-	25 FT
REAR YARD-	50 FT

EROSION & SEDIMENTATION CONTROL NOTES

- PRIOR TO THE START OF CONSTRUCTION, HAY BALES AND/OR SILT FENCES SHOWN ON THIS DRAWING SHALL BE INSTALLED IN ACCORDANCE WITH STANDARDS OUTLINED IN *"CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, 2002"* AND THIS SITE PLAN.
- AT THE REQUEST OF THE TOWN PLANNER OR ZONING ENFORCEMENT OFFICER, ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED TO ADDRESS FIELD CONDITIONS.
- ALL DISTRUBED SLOPES SHALL BE SEEDED AND STABILIZED USING EROSION CONTROL BLANKETS.
- ALL DISTURBED AREAS SHALL BE TOPSOILED, SEEDED, FERTILIZED AND MULCHED IN ACCORDANCE WITH THE MINIMUM STANDARDS OUTLINED IN *"CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL,2002"*, AS FOLLOWS:
  PERMANENT SEEDING AND PLANTING DATES ARE
  APRIL 1ST TO JUNE 1ST AND AUG.15TH TO SEPT.30TH.
  TOPSOIL - 4"DEPTH
  LIME - 45-90 LBS PER 1000 SF
  FERTILIZER - (10-10-10) 7.5 LBS PER 1000 SF
  SEEDING - KENTUCKY BLUE GRASS - 2.25
  CREEPING RED FESCUE - 2.25
  PERENNIAL RYEGRASS - .50
  5.00 LB PER 1000 SF
  MULCH - STRAW/HAY 80 LBS PER 1000 SF
- THE PERSON RESPONSIBLE FOR THE IMPLEMENTATION OF THIS PLAN IS:
  NAME STANISLAW OLEKSENKO
  ADDRESS 84 CHURCHILL DRIVE, NEWINGTON, CT. 06111
  TEL. # 860-830-2196
- A CASH PERFORMANCE BOND FOR E & S CONTROL MEASURES IN AN AMOUNT TO BE DETERMINED BY THE TOWN SHOULD BE POSTED PRIOR TO DISTURBANCE OF THE SITE.
- LAND DISTURBANCES SHALL BE KEPT AT A MINIMUM AND LAND RESTABILIZATION SCHEDULED AS SOON AS PRACTICABLE.
- ALL FINISHED GRADING SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS. NO WORK AREA SHALL BE LEFT DISTURBED AND/OR UNSTABLE FOR MORE THAN 30 DAYS WITHOUT THE APPLICATION OF STABILIZATION MEASURES (I.E.SEEDING, MULCHING, ETC.).
- ALL STABILIZED AND DISTURBED AREAS, CONTROL MEASURES AND CONSTRUCTION ENTRANCES SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS OF THE END OF A RAINSTORM THAT IS 0.1 INCHES OR GREATER. REPAIR OR CORRECT DAMAGE AND/OR ADD ADDITIONAL MEASURES WITHIN 3 DAYS OF INSPECTION REQUIRED ABOVE.
- ALL CONTROL MEASURES SHALL BE PROPERLY MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL PERMANENT VEGETATION COVER HAS BEEN ESTABLISHED FOR A PERIOD OF AT LEAST 3 MONTHS.
- ALL DETENTION BASINS SHALL BE USED AS TEMPORARYSEDIMENT TRAPS DURING CONSTRUCTION. EACH BASIN SHALL BE CLEANED OF ALL ACCUMULATED SEDIMENT ONCE THE RESPECTIVE WATERSHED IS VEGETATED AND FULLY STABILIZED.

BASIS OF SANITARY DESIGN

LOT #1
NUMBER OF BEDROOMS - 4
DESIGN PERCOLATION RATE - 1-10 MIN/INCH
RELA - 578 SF
USE - 60 LF OF GEOMATRIX "GST 6212", (12" x 62") , 12' O.C.
@ 10.0 SF/LF = 600 SF

MLSS- RESTRICTIVE LAYER GREATER THAN 60"

LOT #2
EXISTING 4 BEDROOM DWELLING, SEE MAP REFERENCE #4.

LOT #3
NUMBER OF BEDROOMS - 4
DESIGN PERCOLATION RATE - 1-10 MIN/INCH
RELA - 578 SF
USE - 60 LF OF GEOMATRIX "GST 6212", (12" x 62") , 12' O.C.
@ 10.0 SF/LF = 600 SF

MLSS
MOTTLING = 24", RS = 24", SLOPE = 5.0 %
HF=34 PF=1.0 FF= 1.75
MLSS= 34 x 1.0 x 1.75 = 59.5 LF (60 LF PROPOSED)

LOT #4
NUMBER OF BEDROOMS - 4
DESIGN PERCOLATION RATE - 1-10 MIN/INCH
RELA - 578 SF
USE - 60 LF OF GEOMATRIX "GST 6212", (12" x 62") , 12' O.C.
@ 10.0 SF/LF = 600 SF

MLSS
SLSA - A) MOTTLING = 28", B) AVG. RESTRICTIVE= (30 + 51") =41",
RS = (28" + 41")/2 =35", SLOPE = 9.1 %
HF=24 PF=1.0 FF= 1.75
MLSS= 24 x 1.0 x 1.75 = 42 LF (60 LF PROPOSED)

ASSESSOR MAP 6, BK 37 , LOT 6A

APPROVED BY THE EAST HAMPTON PLANNING AND ZONING COMMISSION

CONDITIONAL APPROVAL _____
CHAIRMAN / SECRETARY

DATE:_____
EXPIRATION DATE:_____

FINAL APPROVAL_____
CHAIRMAN / SECRETARY

DATE:_____
EXPIRATION DATE:_____

OPERATION & MAINTANENCE SCHEDULES

O/P SEPARATORS & DETENTION BASIN #1

INSPECT SEMI-ANNUALLY AND REMOVE OIL, GREASES, FLOATABLES AND SEDIMENT FROM THE O/P SEPARATORS AT LEAST TWICE A YEAR, OR MORE OFTEN DURING THE WINTER WHEN SEDIMENT MATERIAL IS WITHIN 24 INCHES OF OUTLET PIPE INVERT, TO PREVENT THIS MATERIAL FROM ENTERING THE DETENTION GALLERY SYSTEM. TYPICALLY OCTOBER, JANUARY AND APRIL ARE THE TIMES FOR THESE SYSTEMS TO BE CLEANED OUT. THESE UNITS MUST BE PUMPED OUT BY A CONTRACTOR LICENSED TO DISPOSE OF THE MATERIALS CONTAINED IN THESE STRUCTURES.

CATCH BASIN SUMPS

INSPECT EVERY 6 MONTHS AND MORE OFTEN DURING WINTER SEASON FOR ACCUMULATION OF DEBRIS AND SEDIMENT. REMOVE ALL MATERIAL AT LEAST ONCE A YEAR, TYPICALLY MAY OR WHEN THE SEDIMENT LEVEL IN THE SUMP IS WITHIN 24 INCHES OF THE INVERT OF THE LOWEST PIPE IN THE STRUCTURE. THESE UNITS MUST BE PUMPED OUT BY A CONTRACTOR LICENSED TO DISPOSE OF THE TYPE OF MATERIALS CONTAINED IN THESE STRUCTURES.

OWNER / APPLICANT
STANISLAW J. OLEKSENKO
84 CHURCHHILL DRIVE
NEWINGTON, CT 06111

VALID ONLY WITH LIVE SEAL AND SIGNATURE

STATE OF CONNECTICUT · FRANK C. MAGNOTTA · NO. 19999 · REGISTERED PROFESSIONAL ENGINEER

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	P&Z DATA	FCM	1-30-2020
2	IWWA COMMENTS	FCM	2-24-2020
3	IWWA & ENGINEERING COMMENTS	FCM	3-6-2020
4	CONSTRUCTION SCHEDULE REV. PER IWWA APPROVAL	FCM	5-15-2020

SUBDIVISION PROPERTY OF

STANISLAW J. OLEKSENKO

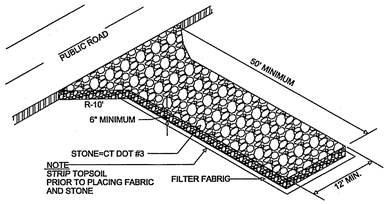
#11 CONE ROAD
~~EAST HAMPTON, CT.~~

Date: JAN. 27 , 2020
Scale: NONE

NOTES, SOIL TESTING DATA & E /S CONTROL NARRATIVES

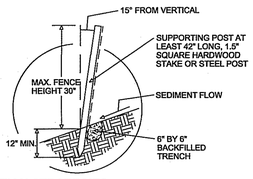
Project No. _____
Sheet No. 4 of 6

FRANK C. MAGNOTTA, P.E. PC
CONSULTING ENGINEER
FrankCMagnottaPE@Aol.com
395 MAIN STREET, PORTLAND, CT 06480
TEL. 860-342-2191



TEMPORARY CONSTRUCTION ENTRANCE

NTS

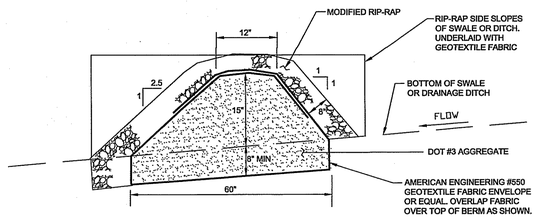


BOX TURTLE PROTECTION STRATEGIES

CONTINOUS RUNS OF SILT FENCE SHALL BE BROKEN INTO 125 FT SEGMENTS WITH A 3 FT OVERLAP OF THE ENDS OF EACH SECTION. THE OVERLAPED ENDS SHALL BE SEPARATED BY A 8 INCH GAP TO ALLOW PASSAGE OF AMPHIBIANS THRU THE SILT FENCE.

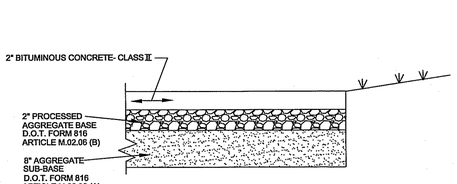
SILT FENCE

NTS



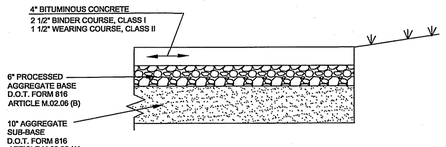
STONE BERM & TEMPORARY SEDIMENT TRAP CROSS-SECTION

NTS



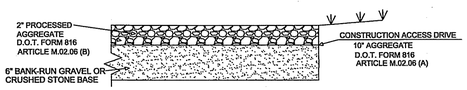
INDIVIDUAL PAVED DRIVEWAY X- SECTION

NTS



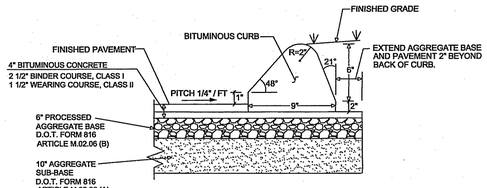
PAVED SHARED DRIVEWAY- NO CURB X- SECTION

NTS



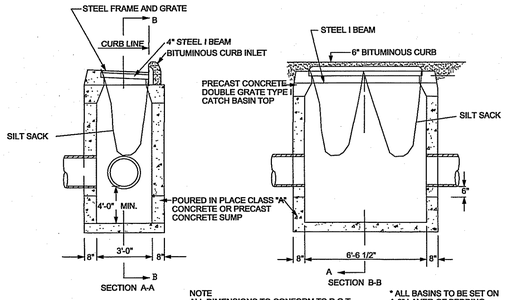
INDIVIDUAL STONE DRIVEWAY & TEMP. CONSTRUCTION ACCESS DRIVEWAY X- SECTION

NTS



PAVED SHARED DRIVEWAY- w / BIT. CURB X- SECTION

NTS

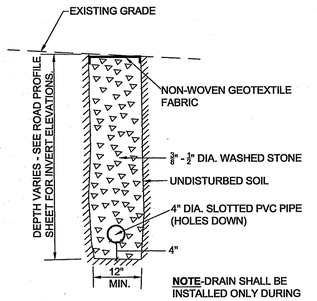


NOTE
ALL DIMENSIONS TO CONFORM TO D.O.T. DETAIL SHEET #507-D

* ALL BASINS TO BE SET ON A 6" LAYER OF BEDDING STONE

DOT TYPE "C" DOUBLE GRATE TYPE II CATCH BASIN

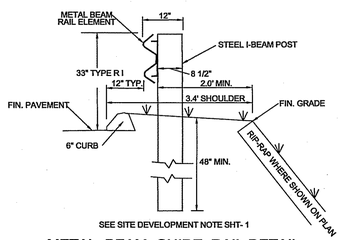
NTS



NOTE-DRAIN SHALL BE INSTALLED ONLY DURING PERIODS OF LOW GROUND WATER LEVELS

CURTAIN DRAIN X-SECTION

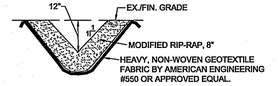
NTS



SEE SITE DEVELOPMENT NOTE SHT- 1

METAL BEAM GUIDE RAIL DETAIL

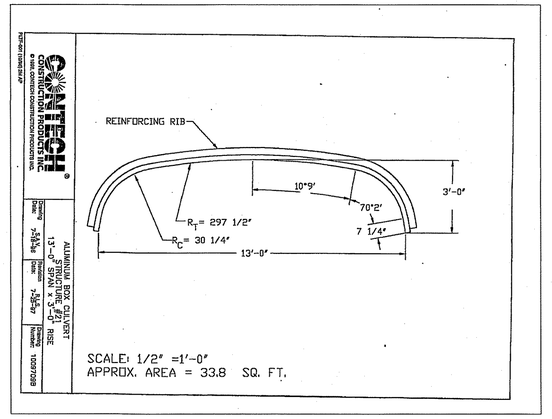
N.T.S.



"V" SHAPED RIP - RAP SWALE

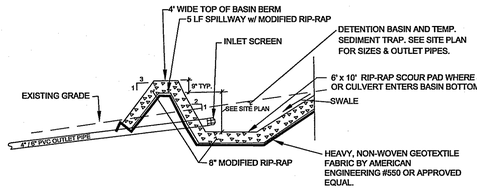
X-SECTION

NTS



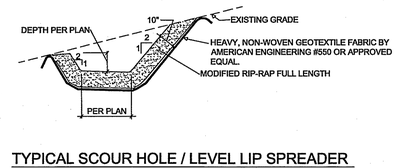
NOTE:

- THE PROPOSED ARCH CULVERT SHALL REQUIRE A COMPLETE DESIGN PREPARED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT TO BE SUBMITTED TO THE TOWN FOR APPROVAL PRIOR TO CONSTRUCTION.



INDIVIDUAL LOT DETENTION BASIN WITH EMERGENCY SPILLWAY OVERFLOW TYPICAL CROSS SECTION

NTS



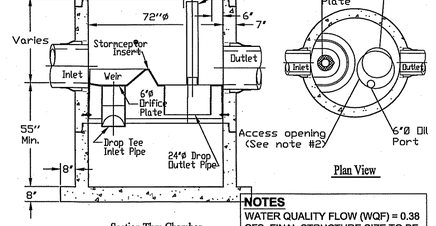
TYPICAL SCOUR HOLE / LEVEL LIP SPREADER CROSS SECTION

NTS

Rinker MATERIALS

Concrete Pipe Division

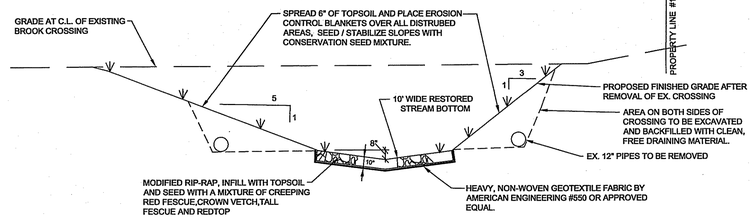
STC 900 Precast Concrete Stormceptor ®
(900 U.S. Gallon Capacity)



NOTES
WATER QUALITY FLOW (WQF) = 0.38 CFS. FINAL STRUCTURE SIZE TO BE DETERMINED BY MANUFACTURER.

Notes:
1. The Use Of Flexible Connection is Recommended at The Inlet and Outlet Where Applicable.
2. The Cover Should be Positioned Over The Outlet Drop Pipe and The Oil Port.
3. The Stormceptor System is protected by one or more of the following U.S. Patents: #4985148, #5498331, #5725760, #5753115, #5849181, #6068765, #6371690.
4. Contact a Concrete Pipe Division representative for further details not listed on this drawing.

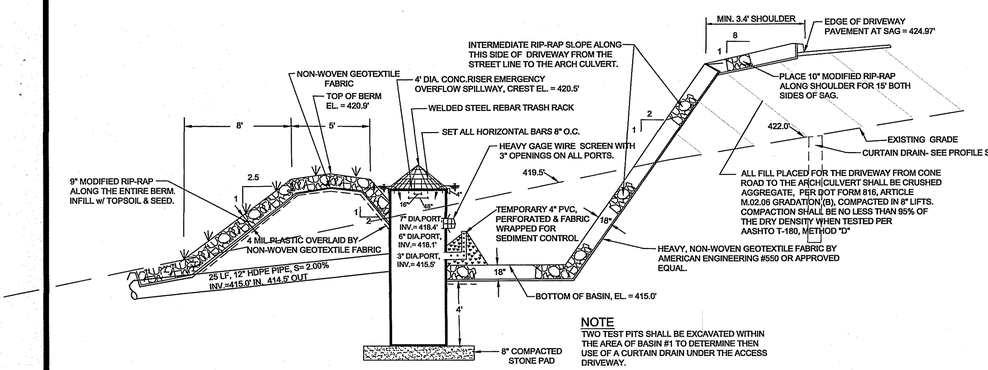
Rinker 028



(VIEW LOOKING UPSTREAM)

STREAM BED & WETLAND RESTORATION X-SECTION A-A

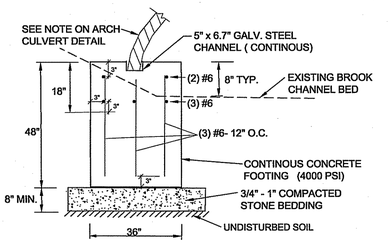
NTS



NOTE
TWO TEST PITS SHALL BE EXCAVATED WITHIN THE AREA OF BASIN #1 TO DETERMINE THEN USE OF A CURTAIN DRAIN UNDER THE ACCESS DRIVEWAY.

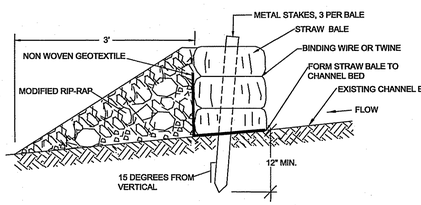
STORMWATER DETENTION BASIN #1 X-SECTION

NTS



ARCH CULVERT CONCRETE FOOTING TYPICAL X-SECTION

NTS



CROSS SECTION

HAYBALE CHECK DAM IN BROOK CHANNEL

NTS

OWNER / APPLICANT
STANISLAW J. OLEKSENKO
84 CHURCHHILL DRIVE
NEWINGTON, CT 06111

ASSESSOR MAP 6, BK 37 , LOT 6A

APPROVED BY THE EAST HAMPTON PLANNING AND ZONING COMMISSION

CONDITIONAL APPROVAL _____
CHAIRMAN / SECRETARY

DATE: _____
EXPIRATION DATE: _____

FINAL APPROVAL _____
CHAIRMAN / SECRETARY

DATE: _____
EXPIRATION DATE: _____

VALID ONLY WITH LIVE SEAL AND SIGNATURE

STATE OF CONNECTICUT · FRANK C. MAGNOTTA · NO. 11699 · REGISTERED PROFESSIONAL ENGINEER

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	PAZ DETAIL	FCM	1-30-2020
2	IWWA COMMENTS	FCM	2-24-2020
3	IWWA & ENGINEERING COMMENTS	FCM	3-6-2020
4	PEZ ENGINEERING COMMENTS IWWA APPROVAL REVISIONS	FCM	5-15-2020

SUBDIVISION PROPERTY OF

STANISLAW J. OLEKSENKO

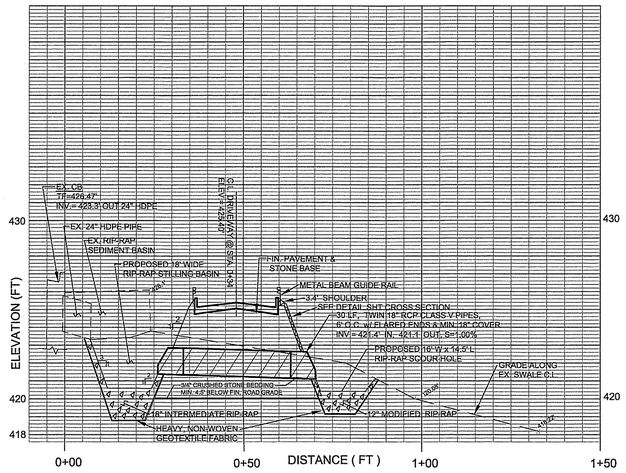
#11 CONE ROAD

~~EAST HAMPTON, CT.~~

DETAILS

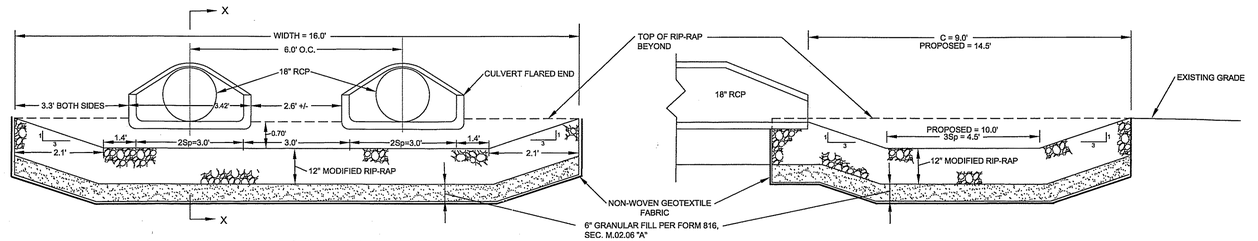
Date: JAN. 27 , 2020
Scale: NONE
Project No.
Sheet No. 5 of 6

FRANK C. MAGNOTTA, P.E. PC
CONSULTING ENGINEER
FrankCMagnottaPE@Aol.Com
395 MAIN STREET, PORTLAND, CT 06480
TEL. 860-342-2191



TWIN 18" CULVERTS CROSSING ACCESS DRIVEWAY STA. 0+34

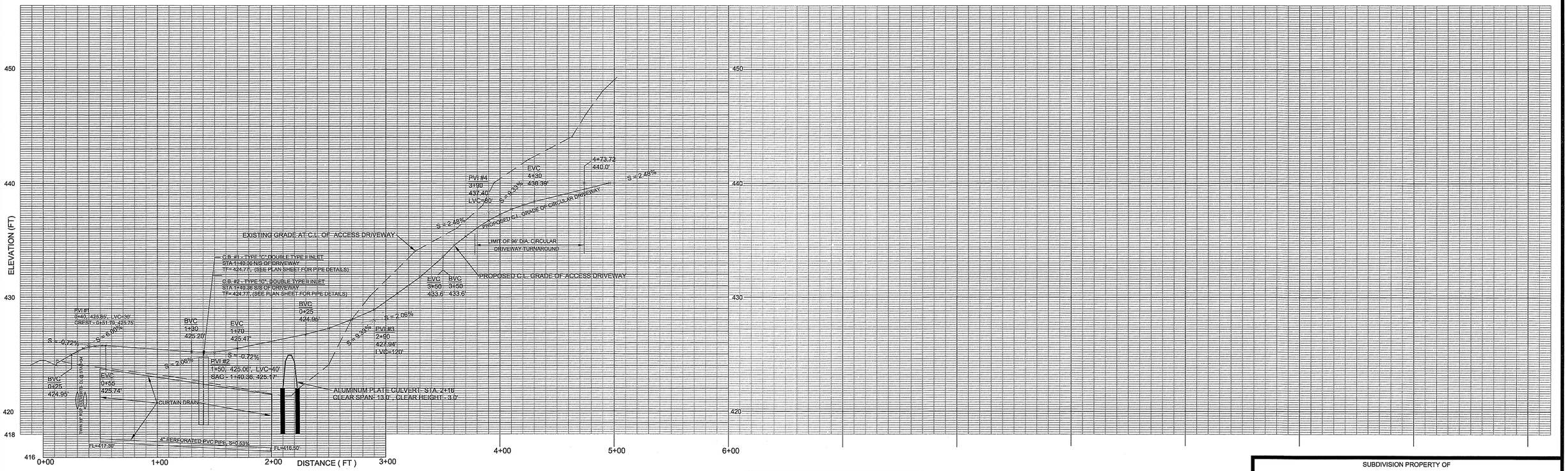
SCALE: 1"=4' VERTICAL
1"=20' HORIZONTAL



SCOUR HOLE DETAIL
AT
OUTLET TO TWIN 18" CULVERTS

NTS

CROSS SECTION X-X



SUBDIVISION ACCESS DRIVEWAY

SCALE: 1"=4' VERTICAL
1"=40' HORIZONTAL

APPROVED BY THE EAST HAMPTON PLANNING AND ZONING COMMISSION

CONDITIONAL APPROVAL _____
CHAIRMAN / SECRETARY

DATE: _____
EXPIRATION DATE: _____

FINAL APPROVAL _____
CHAIRMAN / SECRETARY

DATE: _____
EXPIRATION DATE: _____

VALID ONLY WITH LIVE SEAL AND SIGNATURE

STATE OF CONNECTICUT
FRANK C. MAGNOTTA
NO. 11699
REGISTERED PROFESSIONAL ENGINEER

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	IWWA & ENGINEERING COMMENTS	FCM	3-6-2020
2	P&Z ENGINEERING COMMENTS	FCM	5-15-2020

SUBDIVISION PROPERTY OF

STANISLAW J. OLEKSENKO

#11 CONE ROAD - LOT 6A

~~EAST HAMPTON, CT.~~

Date: JAN. 27 , 2020

Scale: AS SHOWN

DRIVEWAY & STORM DRAIN PROFILES

Project No.

Sheet No. 6 of 6

FRANK C. MAGNOTTA, P.E. PC
CONSULTING ENGINEER
FrankCMagnottaPE@Aol.Com
395 MAIN STREET, PORTLAND, CT 06480
TEL. 860-342-2191

CHATHAM HEALTH DISTRICT

Colchester, East Haddam, East Hampton, Hebron, Marlborough, & Portland

Date: March 25, 2020

To: Town of East Hampton Planning & Zoning Commission

RE: Subdivision of the property of Stanislaw Oleksenko
11 Cone Road, East Hampton, CT
Application # PZC-20-2020

Dear Commission Members:

This office has reviewed the above referenced site plan by Frank Magnotta PE, dated January 27, 2020 and last revised March 6, 2020.

The referenced site plan shows four lots, one existing previously approved to construct and three new lots. The three new lots are proposed 4 bedroom homes, with wells and septic systems.

The above stated subdivision plan meets the requirements for site suitability as per the Connecticut Public Health Code. A site plan and building plans are to be submitted for review by CHD for each new lot at the time of building permit submission.

Please feel free call me with any questions.

Respectfully,

Elizabeth Davidson

Elizabeth Davidson, MPH,RS
Sanitarian III
(860) 342-6718

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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

February 18, 2020

Frank C Magnotta
395 Main St
Portland, CT 06480
frankcmagnottape@aol.com

NDDB DETERMINATION NUMBER: 202001416

Project: Subdivision of existing parcel into four residential lots; Stanislaw Oleksenko property, 11 Cone Road in East Hampton, CT

Expiration: February 18, 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 within the proposed project area.

Eastern box turtle (*Terrapene carolina carolina*)- State Special Concern

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 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).
- 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:

- 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.

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

JACKSON ENVIRONMENTAL, LLC

- Environmental and Soil Consultants -

289 High Road, Kensington, Connecticut 06037
Phone and Fax: 860-224-4063

March 6, 2020

Mr. Frank C. Magnotta, P.E. PC
Consulting Engineer
395 Main Street
Portland, CT 06480

Re: Eastern Box Turtle Protection
Proposed and Alternate Driveway Access Crossings
11 Cone Road, East Hampton, Connecticut
Jackson Environmental Project No. 19-16

Dear Mr. Magnotta;

The February 18, 2020 letter from CT DEEP, regarding NDDB Determination Number: 202001416, identified the Eastern box turtle (*Terrapene carolina carolina*) as a State-listed species of concern.

Habitat for the Eastern Box Turtle

The Eastern Box Turtle is prevalent throughout the low-lying portions of Connecticut. The turtles prefer old early-successional habitats, (e.g. weedy areas, grasslands, old fields or pastures, shrub thickets), and deciduous forest. The 11 Cone Road property contains favorable habitat for the Eastern Box Turtle, particularly within the historically clear-cut areas, and adjacent deciduous forest, located immediately west of the north-to-south flowing continuous watercourse. The watercourse and associated wetlands are important to the turtles for hydration and cooling.

Generally, Eastern Box Turtles use early-successional habits during months with moderate temperatures; and forest habitats are important during the heat of summer and for hibernation.[1] The turtles generally hibernate from October to April. The optimal time period to conduct field surveys for the box turtle is April through June.

[1] Erb, Lori. 2011 Eastern Box Turtle Conservation Plan for Massachusetts. Massachusetts Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program. 1 Rabbit Hill Road, Westborough, MA 01581

Protection Strategies for the Eastern Box Turtle During Construction

Following are some protection strategies developed by the Connecticut Department of Environmental Protection (CT DEEP)[2] that may be incorporated into the proposed sequence of construction.

- Site Work should be limited to the period between April 1st and September 30th when turtles are active.
- Silt fencing should be installed around the work area prior to construction. Where possible, avoid installing sedimentation and erosion control materials from: late-August through September; and, March through mid-May. These are the two time periods when amphibians and reptiles are most active, moving to and from wetlands to breed. (*Note: erosion control products that are embedded with plastic netting should be avoided.*).
- After silt fencing installation, and prior to construction, a sweep of the project area should be conducted to look for turtles.
- Site construction personnel should be informed of the possible presence of turtles and provided a description of the species.
- Any turtles that are discovered should be moved, unharmed, to an area immediately outside of the silt fencing, and in a position in the same direction that it was walking.
- Stockpiles of soil should be cordoned off with silt fencing soil turtles do not attempt to try and nest in them.
- No vehicles or heavy machinery should be parked in any potential turtle habitat.
- Work conducted during the early morning and evening hours should occur with special care not to harm basking or foraging individuals.
- All silt fencing should be removed as soon as site work is completed, and soils are stable so that reptile and amphibian movement between uplands and wetlands is not restricted.

Please contact me at (860) 213-3152 with any questions or comments regarding this information.

Sincerely,

JACKSON ENVIRONMENTAL, LLC

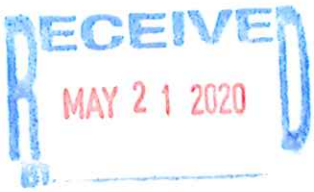
William A. Jackson, R.S., L.E.P.
Registered Soil Scientist

[2] McKay, D. CT DEEP Recommended Protection Strategies for Turtles

Frank C. Magnotta, P.E.PC
Consulting Engineer
395 Main St., Portland, CT 06480 Phone (860)342-2191
FrankCMagnottaPE@aol.com

CIVIL, SITE, STORMWATER
SUBDIVISION, SEWAGE DISPOSAL

May 15, 2020



Town of East Hampton
Planning & Zoning Commission
Mr. Jeremy DeCarli, Adm.
20 East High Street
East Hampton, CT 06424

Re: Oleksenko, #11 Cone Road - Application #PZC-20-002 for subdivision approval.

Dear Commissioners:

I am writing to respond to the Anchor Engineering Services review memo dated March 30, 2020 for the above referenced application and offer the following responses.

Comment No.

#1 – The various public and private easements required for this subdivision have been added to the record subdivision map included in the package of revised plans. A note has been added to the site plans referencing the record subdivision map for these easements.

#2 – The building setbacks for lot #6-4 have been revised on both the site plan and record subdivision map.

#3 & #4 - The IWWA members review of the work along the brook was extensive which included the requirement to prevent disturbing the natural brook channel bed. The IWWA approved the current design and erosion control methods in and adjacent to the brook channel for both the brook restoration area and the arch culvert crossing. This approval included restricting work in the channel to the dry time of year when this intermittent watercourse has no flow. The haybale / stone barrier across the channel, as approved, resulted in minimum disturbance of the channel bed.
The additional water handling barriers and by-pass piping measures being required by Anchor Engineering would create considerable impact on the natural channel bed. These changes would violate the IWWA approval as well as being totally unnecessary. As such, the plans have not been changed from those currently proposed.

#5 – Another print of the watershed map is attached to the revised stormwater analysis accompanying this submission package. Because of the large areas of this subdivision that will not be developed, only the overall developed portion of the site is modeled in the stormwater analysis. The outer boundaries of the developed portion of this subdivision have been identified which start at the top of the watershed and terminate at the brook. A stand alone watershed was created with sub-watersheds designed to control and divert all surface runoff from within this development from each lot and the access driveways to individual detention basins. The discharges from the controlled outlets for each basin are all less than the pre-development runoff rates for the same watershed. All the basin outlets discharge overland to the brook along similar paths and areas as the pre-development watershed.
Runoff from the remaining undeveloped areas of the property function independently of the developed watershed due to the unique shape and contour of the site and flow path of the runoff. As such it was not necessary to analyze the multiple disconnected and undeveloped watersheds with different discharge points along the brook that pass thru the length of the property.

The stand alone watershed approach created for the entire developed portion of this subdivision meets the standard of engineering expected for this type of project and clearly demonstrates compliance with the regulations for a zero increase in peak runoff rates from the developed portion of this project.

#6 – The outlet of the twin 18 inch culverts has been designed as a scour hole using the DOT Drainage Manual, revised May 2002 , for a type -1 scour hole. The dimensions and design criteria are included in the revised stormwater analysis dated May 15, 2020. Note that the DOT manual does not discuss treatment of multiple pipe barrels in determining the scour hole dimensions. Their criteria requires an 8 ' basin width for a single18" culvert and as such I assumed a 16' wide rip-rap scour hole for two pipes. The required basin length is 9'. The plan shows an extended length of 14.5' to closely match the existing grade at the outlet edge of the scour hole. Two cross section details showing the various DOT dimensions have been added to the profile sheet and the site plan and culvert profile have been revised to show the new scour hole dimensions. Note that the original dimensions of the rip-rap outlet structure proposed where 15' wide x 20' long.

#7 – Given the test pit data for lot 6-1, extensive wetlands and variable USDA soil boundary mapping, it's most likely that a compact / impervious till layer extends below the bottom of the detention basin. With the bottom of this basin being only 5' below existing grade, the use of a curtain drain will work well to intercept the uphill perched groundwater. The invert of the upper end of this drain has been lowered to maximize its affect. A note has been placed in the site development notes requiring test pits within the basin area for verification of the underlying soil conditions at the time when construction access to the site off Cone Road is installed.

The modeling of basin #1 has been performed eliminating all storage credit below the lowest port outlet. The changes needed to maintain the same discharge results were the addition of a new port, small changes in the diameters and inverts of the two original outlet ports and the spillway crest elevation. This analysis is detailed in the May 15th stormwater report.

#8 – The top of berm elevation for basin #1 is 420.9 ft and has been made consistent on the plans.

#9 – Basins #2,5 & 6 - Detailed detention basin designs have been prepared for basin #2, which is tied to the access driveway shared by lots 1 & 3, and basins #5 & 6 which are required for the development of lot #1. Because of the driveway design, related drainage and the limited developable area of lot #1, these basin designs and locations are fixed and can not be altered for site construction.
All three basins are designed to discharge peak flow rates that are less than the pre-development rates. These basins use 4" or 6" outlet pipes, a 5' wide rip-rap overflow spillway, no credit for infiltration and enough storage volume so that the 100 year water surface elevation does not overflow the rip-rap spillway.

– Basins #3 & 4 - These basins are intended to independently control the runoff from the developed watershed for each lot. Because of the location of the soil testing on lots #3 & 4, the conceptual site plan layouts ended up being very high on the lots. Even though the conceptual site plan layouts comply with all subdivision, health and zoning regulations, it was immediately recognized by the Owner that development of these two lots will be dramatically different from the subdivision plan when the lots are designed for construction for a future lot owner. The Owner plans to move the house and septic system nearer to the center of the lots, resulting in a smaller disturbance, shorter driveways and smaller detention basin sizes. Therefore the detailed design of the basins now, based on a conceptual subdivision plan, is premature and unnecessary given the significant changes expected in the actual lot developments not to mention the cost to design these basins twice. The proper time to locate and design these basins is during the preparation of the detailed site development plans for the actual lot construction. A note has been added to the site development notes requiring review and approval by the Town of the new detention basin designs as part of the detailed site plan designs for lots #3 &4.

#10 – A waiver request to serve three lots on a single access driveway was submitted to the P&Z Commission on March 27, 2020.

Erosion & Sedimentation Control Bond Estimate

The following is an estimate of the quantities and costs for installing E&S control measures for the shared access driveway improvements and related drainage facilities for this project.

- Temporary construction entrances: 3 @ $1800.00 each	=	$5,400.00
- Silt Fencing: 2,388 LF @ $4.00 / LF	=	$9,552.00
- Staked Haybales with rip-rap backing: 65 LF @ $8.00 / LF	=	$520.00
- Staked Haybales: 130 LF @ $2.00 / LF	=	$260.00
- Stone Sediment Berms: 2 x 55 LF = 110 LF @ $15.00 / LF	=	$1,650.00
- Catch Basin Silt Sack Inserts: 4 (2 double basins) @ $45.00 each	=	$180.00
	Total =	$17,562.00

I trust these responses and additional information adequately address all your questions and comments. If there are any further comments or questions please do not hesitate to contact me.

Respectfully Submitted,

Frank C. Magnotta

Frank C. Magnotta, PE

Office of PLANNING & ZONING OFFICIAL
JEREMY DECARLI
jdecarli@easthamptonct.gov

INTERDEPARTMENTAL REFERRAL

Re: Application to the Planning and Zoning Commission

The following Application has been made to the East Hampton Planning and Zoning Commission. Please review the attached documents. We ask that you please submit any comments you may have to the Planning and Zoning Department prior to the date indicated below. If you have any questions, please contact the department.

PROPERTY LOCATION: 11 Cone Road

PROJECT NAME: 4 Lot Subdivision

APPLICANT: Stanislaw Oleksenko **DAYTIME PHONE:** 860-830-2196

MAILING ADDRESS: 84 Churchill Dr. Newington, CT

P&Z APPLICATION #: PZC-20-002

MEETING/HEARING DATE: March 4, 2020

COMMENTS: The addresses of these three lots should be displayed in a clear manner on Cone Rd at the entrance to the private drive. Also once you access the private drive the three lots should be clearly marked with their individual addresses so as to aid public safety in locating the correct residence. The corresponding address number should also be on the house

If you have no comment, please sign on the line below.

Name: Dennis Woessner
Position: Chief of Police
Date: February 5, 2020

PROJECT DESCRIPTION

THE PROJECT PROPOSES TO SUBDIVIDE A 14.766 ACRES PARCEL WITH AN EXISTING HOUSE INTO TWO FRONT LOTS AND TWO INTERIOR LOTS FRONTING ON CONE ROAD. ACCESS TO THE THREE UNDEVELOPED LOTS WILL BE PROVIDED BY A 473 LF SHARED, 22 FT WIDE PAVED & CURBED ACCESS DRIVEWAY TERMINATING IN A CIRCULAR TURN AROUND THAT IS CAPABLE OF ACCOMODATING LARGE EMERGENCY RESPONSE VEHICLES. A METAL PLATE ARCH CULVERT IS PROPOSED WHERE THIS DRIVEWAY CROSSES A SMALL BROOK. CATCH BASINS ARE PROVIDED IN THIS DRIVEWAY THAT WILL DISCHARGE TO AN ADJACENT STORM WATER DETENTION BASIN.

BEYOND THE TURNAROUND IS A 250LF SECTION OF 18 FT WIDE PAVED DRIVEWAY THAT IS SHARED BY LOTS 1 & 3. ALL OTHER DRIVEWAYS IN THE SUBDIVISION SERVE THE INDIVIDUAL LOTS. STORM WATER DETENTION BASINS ARE PROPOSED ON EACH OF THE LOTS THAT WILL RECEIVE RUNOFF FROM THE IMPERVIOUS AREA AND PORTIONS OF THE CLEARED LOT AREA.

REMEDIATION OF PORTIONS OF THE WETLANDS ON LOT #1 AND A CONSERVATION EASEMENT OVER THIS AREA ARE PROPOSED.

FRANK C. MAGNOTTA, P.E.

Office of the **PLANNING & ZONING OFFICIAL**
JEREMY DECARLI, AICP
jdecarli@easthamptonct.gov

STAFF REPORT

Application:	PZC-20-002
Application Type:	Subdivision
Location:	11 Cone Road Map 06/ Block 37/ Lot 6A
Date:	March 4, 2020

Property Details:

- R-2 Zone
- 14.770 Acres
- "Free-Split" Administratively approved in 2017.
- Not in a sewer service area.
- Permits have been issued for construction of single family home on a portion of the lot.

Application Details:

- Four lots proposed: Two front lots (more than 100 feet of road frontage) and Two Interior lots
- A waiver request has been submitted in accordance with Section 4.6.C to allow for three lots to be served by a single shared driveway.
- A conservation area has been proposed which equals a total of 2.02 acres.

Staff Comments

Lot Size
The subdivision proposes two front lots (those with more than 100 feet of road frontage), and two interior lots. According to Section 8.3.B of the Zoning Regulations, interior lots are required to be twice the minimum lots size for the Zone. The proposed lot sizes and dimensions are compliant with the regulation.

Lot Access
As noted above, the applicant has submitted a waiver request in accordance with Section 4.6 of the Zoning Regulations. Such a waiver can be granted by the Commission by a ¾ vote. The regulation states that:

> The Commission shall not grant a waiver unless it finds, based upon evidence presented to it in each specific case that:
>
> a. The granting of the waiver will not have an adverse effect on adjacent property or on the public health or safety;
>
> b. The conditions upon which the request for a waiver is based are unique to the property for which the waiver is sought and are not generally applicable to other land in the area;
>
> Because of the particular physical surroundings, shape or topographical conditions of the specific property involved, a particular hardship to the applicant would result, as distinguished from a mere inconvenience, if the strict letter of these Regulations is carried out; and
>
> The waiver will not in any manner vary the provisions of the Zoning Regulations or the intent of the Plan of Conservation and Development.
>
> The Commission shall state upon its records the reason for which a waiver is granted in each case. In approving a waiver the Commission may require such conditions that will, in its judgment, substantially conform to the objectives of the standards or requirements of these Regulations.

The proposed access is a shared driveway, lying wholly on lot 3. As proposed, the driveway is not shown in a right-of-way and cannot be transitioned to a Town road. Maintenance will lie wholly with the three property owners who use it. As proposed, the shared driveway meets the requirements of the regulation.

An easement area should be shown (as noted in the Anchor report).

Open Space
Section VI of the Subdivision regulations state that the Commission can require of any subdivision resulting in five or more lots that open space be dedicated within the subdivision area. If open space is deemed appropriate, it shall be at the rate of 1 acre per lot, or no less than 15 percent of the overall subdivision. If the Commission determines that open space is not required, or desires to accept less than the required amount of open space, it shall be decided upon by at least a ¾ vote of the Commission. Based upon the lot size, at least 2.22 acres should be set aside as open space.

An open space conservation easement area is shown on the proposed plans encompassing 2.02 acres.

Drainage
Anchor Engineering has conducted a review of the proposed subdivision which is included in your packet. New documentation has been submitted to the Land Use Office, but has not yet been reviewed by Anchor Engineering or Town Staff.

Other
The Inland Wetlands and Watercourses Agency has not yet approved this subdivision.

Frank C. Magnotta, P.E.PC
Consulting Engineer
395 Main St., Portland, CT 06480 Phone (860)342-2191
FrankCMagnottaPE@aol.com

CIVIL, SITE, STORMWATER
SUBDIVISION, SEWAGE DISPOSAL

February 24, 2020

East Hampton Planning & Zoning Commission
Mr. Raymond Zatorski, Chairman

Re: Application PZC 20-002, subdivision of property of Stanislaw Oleksenko,
11 Cone Road, East Hampton, CT.

Dear Mr. Zatorski:

I am writing on behalf of the Owner / Applicant for the referenced project to request a waiver of Zoning regulation Sec. 4.6.C to allow three residences to share a paved, 22' wide common access driveway for this subdivision.

The shared access is necessary due to the requirement to cross a brook to reach the developable part of the property. The proposed single access driveway and curb cut are sound from an engineering and environmental perspective. This curb cut provides more than adequate safe sight line distance and will not have any adverse impact on adjacent properties. I believe a single curb cut will provide greater public health and safety than multiple individual curb cuts. Thank you for your time and consideration.

Respectively Submitted

Frank C. Magnotta, P.E.

Frank C. Magnotta, P.E.

SUBDIVISION PROPERTY OF

STANISLAW J. OLEKSENKO

#11 CONE ROAD

EAST HAMPTON, CT.

WATERSHED MAP

MAY 15, 2020 1" = 40'

40 0 40 80 160

(IN FEET)

1 inch = 40 ft.

TOWN OF EAST HAMPTON
Planning and Zoning Commission
1-860-267-7450
www.easthamptonct.gov

RECEIVED
JAN 31 2020
TIME

PZC PZC-20-004
Date 1/30/20

Fee Paid $920- Money Order
Check # 611313117-8
Rec'd. By

LOCATION 50 Main St.
MAP 02A BLK 47 LOT 25

PROJECT NAME 50 Main St.
ZONE

APPLICANT Lisa Sherman
Mailing ADDRESS Curr. PO Box 446 Middletown CT 06457
PHONE (860) 682-5157
EMAIL 2RealtorLisaS@gmail.com

CONTACT PERSON Lisa Sherman
PHONE
EMAIL

OWNER H.U.D. Home
ADDRESS
PHONE
EMAIL

SURVEYOR/ENGINEER
ADDRESS
PHONE
EMAIL

ATTORNEY
ADDRESS
PHONE
EMAIL

APPLICATION TYPE ***(application must be completed in FULL in order to be accepted)***

1. SUBDIVISION /RESUBDIVISION /CONSERVATION SUBDIVISION NO. OF LOTS
X 3. SITE PLAN MODIFICATION Residential X Commercial
4. SPECIAL PERMIT---SECTION OF THE ZONING REGS. FOR
X 5. ZONE CHANGE---FROM R-1 TO PO/R TO
X 6. AMENDMENT TO ZONING REGULATIONS 5.4.A PO/R Zone
7. LAKE POCOTOPAUG PROTECTION AREA
8. ACTIVE ADULT NO OF UNITS
7. OTHER (DESCRIBE)

APPLICATION REQUIREMENTS: This application and 10 sets of plans shall be submitted to the Planning Office and shall be received by the Commission at the next regularly scheduled meeting. *(see meeting schedule for deadline dates)*

A complete application shall consist of an application, fees, maps /plans(A-2 survey) ,engineers report including drainage calculations and watershed calculations(pre and post), bond estimates, hydrology report, environmental studies, waiver requests and traffic study where applicable

Preliminary discussions are highly recommended for subdivisions 5 lots & over and for larger Special Permit Applications
Abutters notice receipts (green cards)must be handed in to the Planning Office prior to the meeting

APPLICANTS SIGNATURE Lisa Sherman DATE 1/30/20

OWNER'S SIGNATURE DATE

The owner and applicant hereby grant the East Hampton Planning and Zoning Commission and/or it's agents permission to enter upon the property to which the application is requested for the purpose of inspection and enforcement of the Zoning Regulations and Subdivision Regulations of the Town of East Hampton.

Form PZC1 2/19

Office of PLANNING & ZONING OFFICIAL
JEREMY DECARLI
jdecarli@easthamptonct.gov

INTERDEPARTMENTAL REFERRAL

Re: Application to the Planning and Zoning Commission

The following Application has been made to the East Hampton Planning and Zoning Commission. Please review the attached documents. We ask that you please submit any comments you may have to the Planning and Zoning Department prior to the date indicated below. If you have any questions, please contact the department.

PROPERTY LOCATION: 50 Main St.

PROJECT NAME: Zone Change

APPLICANT: Lisa Sherman **DAYTIME PHONE:** 860-682-5157

MAILING ADDRESS: PO Box 446 Middletown CT 06457

P&Z APPLICATION #: PZC-20-004

MEETING/HEARING DATE: March 4, 2020

COMMENTS: I have no issues with this application

If you have no comment, please sign on the line below.

Name: Dennis Woessner

Position: Chief of Police

Date: February 5, 2020

The Rationale for Amendment

The rationale is to preserve the resident character while complimenting nearby existing uses. Of coarse, first and foremost is the main use as a residence, keeping the home look and to be able to put my real estate office in my home as well.

The home at 50 Main St. Is empty and in disrepair. Well, I happen to love old homes and this one suits all my needs. For whatever reason, I feel the need to fix this home and make it a happy place to live and work from.

My goal was to find a home and not a store front to work out of. "I think people should feel at home while shopping for a home." Important facts in choosing a home for this purpose was to be able to accommodate people with disabilities that have a hard time going house to house. Knowing this, one of my rooms will have a large pulldown screen giving the ability to shop homes without having to go in and out of homes that are difficult but still have the option of seeing them like they are walking through them.

This will give them many more options and a comfortable place to house hunt from. Accessibility to these homes make it very difficult for these buyers. Although, many homes can be easily modified to meet their needs.

To be perfectly honest there is not a lot of traffic for a real estate office. Homes do not come to us we go to them. Therefore, most of our work is on the road. I simply need a home to work from, a sign and to offer a little extra to those who need it. I did shop all of Middlesex County but this was perfect. What better way to reach my goal and preserve an old home at the same time!

Also, This is a growing town with so much to offer. I am looking forward to growing with it & being a part of the East Hampton community.

Have a Wonderful Night,
Lisa Sherman

Change to Zoning Regulations Section 5.4

Dated: 06/03/2020

1. From the June meeting agenda – "7. Old Business: B. Discussion: Update Sign Regulation to Include PO/R Zone Sign Standards". This agenda item needs to be resolved and the zoning regulations modified prior to the approval of Ms. Sherman's zoning changes.

2. Will Ms. Sherman be living in the house at 50 Main St? Will the ongoing renovations include a kitchen being added on the second floor, thus making it an apartment?

3. What houses will have the zoning changed? (60, 56, 52, 50, 51 and 47)

4. Is the zone change consistent with any applicable comprehensive plan for the area?

    - What is the town's comprehensive plan for the Main Street area?
      If a comprehensive plan that directs the future use and development of this area does not exist, shouldn't one be developed before making zoning changes that will forever modify the character of the area?

    - Why is a zoning change being instigated by an individual for their own benefit? The change is being imposed on other property owners without their consent. Shouldn't the town be responsible for modifying the zoning regulations for the good of the entire community rather than for just one individual?

5. There are other properties already zoned for this type of office. Why not utilize a property with the desired zoning and there would be no need to rezone the Main St neighborhood.

    - Why is a zoning change for a neighborhood justified for one individual who wants to have a business in a currently residential property? Is this enough to justify a rezone of the neighborhood?

6. In the zoning regulations a real estate business does not qualify as a professional office.

    - Since a real estate office does not qualify as a professional office, will the office at 50 Main Street be classified as a business office or something else?

    - What is the zoning definition of a business office – no definition is contained in the regulations?

    - Is there a limitation on the number of non-family employees for a business office?

    - Are there square footage size limitations to a business office?

7. The zone change is not consistent with the surrounding neighborhood uses. The properties in the area are residential use only.

    - The zoning regulation change to Section 5.4 would expand what could be done in the other residential properties included in area of the zoning change. The residential area would essentially become a business area that allows many different types of offices and businesses. The types of offices would include professional offices, financial

institutions, executive and administrative offices, and business offices (per Section 5.4 C.)

- The rezoning would also open up the area to not only offices, but with a permit could include (Section 5.4 D.):
  - Shop for custom work, including repair, fabricating and making of such articles incidental to such work
  - Printing and publishing
  - Public utility structures
  - Fire and police stations and other municipal uses and structures
  - Day care (effective: August 24, 2007)

- The increase in traffic at 50 Main St will be beyond the normal residential use.

- Depending on the changes made to the 50 Main St property, will surrounding property values decrease?

8. Sign

   - Lights: What will be allowed for type, wattage/intensity, color and light spill (**Light Spill** is when **light** falls outside the object to be illuminated), and the hours of illumination?

   - Can a sign be placed on the dwelling or out buildings?

   - How many signs are allowed?

   - The design, colors and placement of the sign should retain the residential character of the area. Will this be the case?

   - In Section 5.4 F, Special Provisions, 3. states There shall be no exterior evidence of the conduct of non-residential uses, except for the placement of signage complying with the provisions of these Regulations, as stated in Section 7.2.C. Does this apply to vehicles with signage for the business? Will all materials related to the business such as for sale signs and posts be stored indoors?

9. Parking Lot

   - Will additional paved parking be implemented for customers, staff and realtors?

   - Will there be lights in the parking areas – type, wattage, color, hours of illumination and light spill?

   - How will water runoff from any additional pavement be handled?

   - What are the number of parking spaces allowed by the zoning regulations?

10. What are the allowed hours of operation of the business since it is surrounded by residential properties?

Office Use Only

Project ID# PZC-20-010

Address: Edgewater

MBL: 10A/85/5C

PLANNING & ZONING COMMISSION
TOWN OF EAST HAMPTON

For: Re: Subd.

Minimum Requirements for Submission of Application to Planning and Zoning Commission

This form must be submitted with your application.

RECEIVED
MAY 13 2020

Application Requirements are based on the application type selected on application form.

___**Site Plan Review/Modification (See Section 9.1 for details)**
- ___Pre-Application Meeting – Date of Meeting _____
- ___Complete Application Form
- ___Complete Chatham Health District Application Form
- ___Fee Paid
- ___Site Plan (11 Copies) – See Section 9.2.C.2 for specifications
- ___Drainage Calculations in Compliance with Section 7.5
- ___Report from Fire Marshal
- ___Bond Estimates As Required, See Section 9.2.C.2

___**Special Permit (See Section 9.2 for details)**
- ___Pre-Application Meeting – Date of Meeting _____
- ___Complete Application Form
- ___Complete Chatham Health District Application Form
- ___Fee Paid
- ___Site Plan (11 Copies) - See Section 9.2.C.2 for specifications
- ___Pending Approval from IWWA
- ___Drainage Calculations in Compliance with Section 7.5
- ___Pending Approval or report from Fire Marshal
- ___Pending Approval or report from Public Works
- ___Traffic Study (As Required)
- ___Bond Estimates (As Required)
- ___Public Hearing Requirements

___**Zone Change (See Section 9.3 for details)**
- ___Complete Application Form
- ___Fee Paid
- ___A-2 Survey of Property showing surrounding properties and respective zone (10 Copies)
- ___Reports from Chatham Health District, Fire Marshal, Police Dept. and Public Works
- ___Public Hearing Requirements

___**Amendment to Zoning Regulations (See Section 9.3 for details)**
- ___Complete Application Form
- ___Fee Paid
- ___Existing Regulation with proposed Amendments (10 Copies)
- ___Rationale for Amendment (10 Copies)
- ___Reports from Chatham Health District, Fire Marshal, Police Dept. and Public Works
- ___Public Hearing Requirements

I certify that this application is complete.

Signature of Applicant: EDGEWATER HILL ENTERPRISES, LLC By: Stephen J. Motto, Manager **Date:** May 13, 2020

The Commission reserves the right to add additional requirements in accordance with the Regulations.

Only Complete Application Packages Will Be Accepted

TOWN OF EAST HAMPTON
Planning and Zoning Commission
1-860-267-7450
www.easthamptonct.gov

RECEIVED
MAY 18 2020

PZC PZC-20-010
Date 5/18/20

Fee Paid _____
Check # _____
Rec'd. By _____

LOCATION Easterly Side East High Street (Connecticut Route 66) and Edgewater Circle
MAP 10A BLK 85 LOT 5C

PROJECT NAME Components of the Edgewater Hill Mixed Use Development District, including Market Square 2
ZONE MUDD

APPLICANT Edgewater Hill Enterprises, LLC
PHONE (860) 267-6822
ADDRESS 138 East High Street, East Hampton, CT 06424
EMAIL stephen@dreamdevelopersct.com

CONTACT PERSON Stephen J. Motto, Manager
PHONE (860) 267-6822
EMAIL stephen@dreamdevelopersct.com

OWNER Edgewater Hill Enterprises, LLC
PHONE (860) 267-6822
ADDRESS 138 East High Street, East Hampton, CT 06424
EMAIL stephen@dreamdevelopersct.com

SURVEYOR/ENGINEER Boundaries, L.L.C.
PHONE (860) 376-2006
ADDRESS 179 Pachaug River Drive, Griswold, Connecticut 06351
EMAIL jfaulise@boundariesllc.net

ATTORNEY Heller, Heller & McCoy
PHONE (860) 848-1248
ADDRESS 736 Norwich-New London Turnpike, Uncasville, CT 06382
EMAIL hellermccoy@sbcglobal.net

APPLICATION TYPE *(application must be completed in FULL in order to be accepted)*

X 1. SUBDIVISION /RESUBDIVISION /CONSERVATION SUBDIVISION NO. OF LOTS 2
___3. SITE PLAN_____MODIFICATION_____Residential_____Commercial_____
___4. SPECIAL PERMIT---SECTION_____OF THE ZONING REGS. FOR_____
___5. ZONE CHANGE---FROM_____TO_____
___6. AMENDMENT TO ZONING REGULATIONS
X 7. LAKE POCOTOPAUG PROTECTION AREA Proposed Lot 1 Mixed Use and proposed Lot 2 multi-family residential
___8. ACTIVE ADULT NO OF UNITS_____
___7. OTHER (DESCRIBE)_____

APPLICATION REQUIREMENTS: This application and 10 sets of plans shall be submitted to the Planning Office and shall be received by the Commission at the next regularly scheduled meeting. *(see meeting schedule for deadline dates)*

A complete application shall consist of an application, fees, maps /plans(A-2 survey) ,engineers report including drainage calculations and watershed calculations(pre and post), bond estimates, hydrology report, environmental studies, waiver requests and traffic study where applicable

Preliminary discussions are highly recommended for subdivisions 5 lots & over and for larger Special Permit Applications
Abutters notice receipts (green cards)must be handed in to the Planning Office prior to the meeting

EDGEWATER HILL ENTERPRISES, LLC
APPLICANTS SIGNATURE _____ DATE May 13, 2020
By: Stephen J. Motto, Manager EDGEWATER HILL ENTERPRSIES, LLC

OWNER'S SIGNATURE _____ DATE May 13, 2020
By: Stephen J. Motto, Manager
The owner and applicant hereby grant the East Hampton Planning and Zoning Commission and/or it's agents permission to enter upon the property to which the application is requested for the purpose of inspection and enforcement of the Zoning Regulations and Subdivision Regulations of the Town of East Hampton.

Form PZC1 2/19

PLANNING AND ZONING FEE SCHEDULE

Note: Each application requires an additional $60 fee to be submitted to the State (effective 10/09)		**$ 60.00**
SUBDIVISION APPLICATION & CONSERVATION SUBDIVISION		
No. of lots 2		
A fee of $500 plus the sum of	$ 150/ lot	
1-5 lots	$ 150/ lot	$300.00

Plus a developer's fee of 3% of the bond filed for subdivisions requiring public improvements to be paid at the time bonds are filed with the Town and prior to any construction

SITE PLAN REVIEW

Residential/Commercial	$ 150	

Commercial, Industrial, Designed Development: Calculated by total sq ft of impervious surface

New Construction

Square Feet

Less than 3000 Sq Ft	$ 150	
3001 to 5,000 Sq Ft	$ 250	
5001 to 10,000 Sq ft	$ 600	
10,001 to 15,000 Sq ft	$ 1100	
For every additional 5000 Sq Ft	$ 500	

SPECIAL PERMIT

Special Permit	$ 150	

Commercial, Industrial, Designed Development: Calculated by total sq ft of impervious surface

New Construction

Square Feet

Less than 3000 Sq Ft	$ 150	
Less than 5000Sq Ft	$ 300	
5001 to 10,000 Sq Ft	$ 600	
10,001 to 15,000Sq Ft	$ 1100	
For every additional 5000 Sq FT	$ 500	

For Special Permits involving Commercial Properties fees increase by $50

SITE PLAN MODIFICAT ION

Minor Amendment	$ 50	
Major Amendment	$ 100	
ZONING OR SUBDIVISION REGULATION TEXT CHANGE	$ 300	
CHANGE IN ZONING MAP	$ 500	
LAKE POCOTOPAUG PROTECTION AREA	$ 75	$75.00
APPLICATION FOR MULTI-FAMILY, ACTIVE ADULT AND HOD	$ 1000	
Number of unit's		
Plus the sum of	$100/unit	
	Total	$435.00

AUTHORIZATION

EDGEWATER HILL ENTERPRISES, LLC, a Connecticut limited liability company and the owner of real property located on the southeasterly side of East High Street (Connecticut Route 66), East Hampton, Connecticut hereby authorizes and directs the law firm of Heller, Heller & McCoy and the engineering/surveying firm of Boundaries, L.L.C. to represent its interests in all proceedings before the Town of East Hampton Planning and Zoning Commission in conjunction with a resubdivision application for the resubdivision of two (2) proposed lots in the Edgewater Hill Mixed Use Development District in accordance with a plan entitled "Property Survey 'Resubdivision Plan' Prepared for Edgewater Hill Enterprises, LLC East High Street – East Hampton, Connecticut Scale: 1" = 80' Date: May 2020 Job I.D. No. 20-2795-3 Sheet Nos. 1 of 2 and 2 of 2" prepared by Boundaries, L.L.C.

Dated at East Hampton, Connecticut this 13th day of May, 2020.

EDGEWATER HILL ENTERPRISES, LLC

By: _____
Stephen J. Motto, its Manager

REFERENCE MAPS

A. BOUNDARY SURVEY PREPARED FOR EDGEWATER HILL, LLC, EAST HIGH STREET, EAST HAMPTON, CONNECTICUT, SCALE 1"= 80', DATE: MAY 14, 2008, SHEETS V0-01 AND V0-02. PREPARED BY: FUSS & O'NEILL, MANCHESTER, CT.

B. PROPERTY SURVEY "FREE SPLIT PLAN" PREPARED FOR EDGEWATER HILL ENTERPRISES, LLC, EAST HIGH STREET, EAST HAMPTON, CONNECTICUT, DATED: JANUARY 2018, SCALE: 1"= 40', JOB I.D. NO. 17-2524-5, SHEET 1 OF 1 PREPARED BY BOUNDARIES, LLC.

C. BOUNDARY SURVEY PREPARED FOR EDGEWATER HILL, LLC, EAST HIGH STREET, EAST HAMPTON, CONNECTICUT, SCALE 1"= 80', DATE: AUGUST 2011, SHEETS V0-01 AND V0-02. PREPARED BY FUSS & O'NEILL, MANCHESTER, CT.

D. EDGEWATER HILL EAST HAMPTON – CT MASTER PLAN FEBRUARY 21, 2012 PREPARED FOR EDGEWATER HILL, LLC, 18 LAUREL RIDGE, EAST HAMPTON, CONNECTICUT, PREPARED BY FUSS & O'NEILL, MANCHESTER, CONNECTICUT.

E. IMPROVEMENT LOCATION SURVEY PREPARED FOR EDGEWATER HILL PROPERTIES, LLC, EAST HIGH STREET EAST HAMPTON, CONNECTICUT, SCALE 1"= 40', DATE: MARCH 10, 2015, SHEET 1 OF 1. PREPARED BY MILONE & MACBROOM, CHESHIRE, CONNECTICUT.

F. COMPILATION PLAN, MAP DEPICTING EASEMENT AREA TO BE GRANTED TO: THE CONNECTICUT LIGHT AND POWER COMPANY ACROSS PROPERTY OF: EDGEWATER HILL PROPERTIES, LLC, EAST HIGH STREET EAST HAMPTON, CONNECTICUT. SCALE 1"= 40', DATE MARCH 10, 2015, SHEETS 1 AND 2 OF 2. PREPARED BY MILONE & MACBROOM, CHESHIRE, CONNECTICUT.

G. ALTA/NSPS LAND TITLE SURVEY, PREPARED FOR EDGEWATER HILL APARTMENT, LLC, 140 EAST HIGH STREET, EAST HAMPTON, CONNECTICUT, DATED: OCTOBER 27, 2016, LAST REVISED NOVEMBER 14, 2016 PREPARED BY: BOUNDARIES, LLC.

H. IMPROVEMENT LOCATION SURVEY, LOT LINE MODIFICATION PLAN, PREPARED FOR EDGEWATER HILL PROPERTIES, LLC, EAST HIGH STREET, EAST HAMPTON, CONNECTICUT DATE: MAY 2016, LAST REVISED AUGUST 26, 2016, SHEETS: 1–5, PREPARED BY: BOUNDARIES, LLC.

I. PROPERTY SURVEY, PREPARED FOR EDGEWATER HILL PROPERTIES, LLC, EAST HIGH STREET, EAST HAMPTON, CONNECTICUT DATE: MAY 2017, SHEET 1, PREPARED BY: BOUNDARIES, LLC.

J. PLAN OF PROPERTY OF JOHN & MARY BEERLE, TO BE TRANSFERRED TO CHARLES & HAZEL BARBER, EAST HAMPTON CONNECTICUT, SCALE: 1"=40', DATED: 1959 PREPARED BY: C.A. CAMPBELL ENG.

K. AS–BUILT SURVEY, PREPARED FOR BAKER HILL COMMONS, CONNECTICUT ROUTE 66, EAST HAMPTON, CONNECTICUT, SCALE: 1" =40', DATED: OCTOBER 28, 1987, SHEET 1 OF 2, PREPARED BY: DUTCH & ASSOCIATES.

L. BOUNDARY LINE SURVEY, PREPARED FOR JOHN & MARY WEINZIERL, EAST HIGH STREET – CONNECTICUT ROUTE 66, EAST HAMPTON, CONNECTICUT, SCALE: 1"=20', DATED: OCTOBER 25, 1988, PREPARED BY: TOWNE ENGINEERING, INC.

M. CONNECTICUT STATE HIGHWAY DEPARTMENT, RIGHT OF WAY MAP, TOWN OF EAST HAMPTON, EAST HAMPTON – MARLBORO ROAD, FROM LAKEVIEW STREET EASTERLY TO THE MARLBORO TOWN LINE, ROUTE NO. 14, SCALE: 1"=40', DATED: OCTOBER 31, 1938, NUMBER: 41–12, SHEET: 2 OF 4.

N. COMPILATION PLAN, MAP SHOWING EASEMENT AREA TO BE GRANTED TO THE CONNECTICUT LIGHT AND POWER COMPANY DBA EVERSOURCE ENERGY, ACROSS THE PROPERTY OF EDGEWATER HILL PROPERTIES, LLC, EDGEWATER HILL ENTERPRISES, LLC, AND EDGEWATER HILL APARTMENTS, LLC, EAST HIGH STREET, EAST HAMPTON, CONNECTICUT, FILE NUMBER: E8043, SCALE: 1"=40', DATED: MAY 2018, JOB ID NUMBER: 17–2524–8, PREPARED BY: BOUNDARIES LLC.

O. EASEMENT MAP, PROPOSED UTILITY EASEMENT OVER LANDS OF EDGEWATER HILL PROPERTIES, LLC, EDGEWATER HILL ENTERPRISES, LLC, AND EDGEWATER HILL APARTMENTS, LLC, EAST HIGH STREET, EAST HAMPTON, CONNECTICUT, SCALE: 1"=40', DATED: MAY 2018, LAST REVISED: AUGUST 24, 2018, JOB ID NUMBER: 17–2524–8, PREPARED BY: BOUNDARIES LLC.

P. COMPILATION PLAN, LOT LINE MODIFICATION, PREPARED FOR EDGEWATER HILL ENTERPRISES, LLC, 138 EAST HIGH STREET, EAST HAMPTON, CONNECTICUT, SCALE: 1"=50', DATED: SEPTEMBER 2018, JOB I.D. NO.: 17–2524–9, PREPARED BY: BOUNDARIES LLC.

Q. COMPILATION PLAN, PREPARED FOR THE TOWN OF EAST HAMPTON, EDGEWATER CIRCLE, EAST HAMPTON, CONNECTICUT, SCALE: 1"=40', DATED: JULY 2018, JOB I.D. NO.: 17–2524–10, PREPARED BY: BOUNDARIES LLC.

R. RESUBDIVISION PLAN, THE NEIGHBOR HOOD AT EDGEWATER HILL, PREPARED FOR EDGEWATER HILL ENTERPRISES, LLC, 000 EAST HIGH STREET (CT ROUTE #66), EAST HAMPTON, CONNECTICUT, DATED: OCTOBER 2018, LAST REVISED: MAY 2, 2019, SHEET 5 OF 18, PREPARED BY: BOUNDARIES LLC.

S. IMPROVEMENT LOCATION SURVEY, LOT LINE MODIFICATION PLAN, PREPARED FOR EDGEWATER HILL PROPERTIED, LLC & EDGEWATER HILL ENTERPRISES, LLC, 130/138 EAST HIGH STREET, EAST HAMPTON, CONNECTICUT, SCALE: 1"=40' DATED APRIL 2019, JOB I.D. NO. 17.2524–2, PREPARED BY BOUNDARIES LLC.

T. COMPILATION PLAN, MAP SHOWING EASEMENT AREA TO BE GRANTED TO THE CONNECTICUT LIGHT AND POWER COMPANY DBA EVERSOURCE ENERGY, ACROSS THE PROPERTY OF EDGEWATER HILL ENTERPRISES, LLC, AND THE TOWN OF EAST HAMPTON, EAST HIGH STREET (CT ROUTE#66) – EAST HAMPTON, CONNECTICUT, FILE NUMBER: E9023, SCALE:1"=40', DATED MARCH 2019, LAST REVISED: MAY 29, 2019 JOB I.D. NO. 17–2524–5, PREPARED BY BOUNDARIES LLC.

U. PROPERTY SURVEY, PREPARED FOR THE NEIGHBORHOOD AT EDGEWATER HILL, EDGEWATER HOMES I, LLC, EDGEWATER CIRCLE EAST HAMPTON, CONNECTICUT, SCALE: 1"=40', FEBRUARY 2019, JOB I.D. NO. 17–2524–9, PREPARED BY: BOUNDARIES LLC.

NOTES

THE SUBJECT PROPERTY MAY BE TOGETHER WITH, AND SUBJECT TO, THE FOLLOWING EASEMENTS, AGREEMENTS, RIGHTS OR ENCUMBRANCES RECORDED IN TOWN OF EAST HAMPTON LAND RECORDS:

1. A NON–EXCLUSIVE PERMANENT ACCESS AND TEMPORARY CONSTRUCTION EASEMENT AGREEMENT FROM MATLOR RE, LLC TO LCS PROPERTIES, LLC, RECORDED IN VOLUME 512, PAGE 994 ON APRIL 11, 2011.
2. A SPECIAL PERMIT ISSUED TO MR. STEPHEN MOTTO, DREAM DEVELOPERS OF CONNECTICUT, LLC, RECORDED IN VOLUME 515, PAGE 1029 ON AUGUST 9, 2011.
3. A VOLUNTARY SEWER LATERAL BY AND BETWEEN THE TOWN OF EAST HAMPTON WATER POLLUTION CONTROL AUTHORITY+ AND LCS PROPERTIES, LLC, RECORDED IN VOLUME 549, PAGE 1029 ON JUNE 7, 2014.
4. A PERMIT ISSUED BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION TO DREAM DEVELOPERS OF CT, LLC, RECORDED IN VOLUME 550, PAGE 721 ON SEPTEMBER 16, 2014.
5. AN ELECTRICAL DISTRIBUTION EASEMENT FROM EDGEWATER HILL PROPERTIES, LLC, TO THE CONNECTICUT LIGHT AND POWER COMPANY, dba EVERSOURCE ENERGY, RECORDED IN VOLUME 555, PAGE 118 ON APRIL 29, 2015.
6. A HOLD HARMLESS AGREEMENT BY AND BETWEEN THE EDGEWATER HILL PROPERTIES, LLC AND THE CONNECTICUT LIGHT AND POWER dba EVERSOURCE ENERGY RECORDED IN VOLUME 555, PAGE 965 ON MAY 27, 2015.
7. A SPECIAL PERMIT PROVIDED TO THE TOWN OF EAST HAMPTON, AS APPLICANT, AND TO EDGEWATER HILL ENTERPRISES, LLC, AS OWNER, OF PROPERTY LOCATED ON MAP 10A/BLOCK 85/LOT 5D, RECORDED IN VOLUME 585, PAGE 1047 ON JUNE 28, 2018.
8. A GRANT OF ACCESS AND UTILITY EASEMENTS FROM GEORGE A. LOOS AND MARY F. LOOS TO EDGEWATER HILL PROPERTIES, LLC, RECORDED IN VOLUME 569, PAGE 273 ON OCTOBER 3, 2016.
9. A DECLARATION OF RECIPROCAL ACCESS AND UTILITY EASEMENT AGREEMENT BETWEEN EDGEWATER HILL PROPERTIES, LLC AND GEORGE A. LOOS AND MARY F. LOOS, RECORDED IN VOLUME 569, PAGE 278 ON OCTOBER 3, 2016.
10. A FIRST AMENDMENT TO DECLARATION OF RECIPROCAL ACCESS AND UTILITY EASEMENT AGREEMENT BETWEEN EDGEWATER HILL PROPERTIES, LLC AND EDGEWATER HILL APARTMENTS, LLC, RECORDED IN VOLUME 570, PAGE 103 ON OCTOBER 31, 2016.
11. A SECOND AMENDMENT TO DECLARATION OF RECIPROCAL ACCESS AND UTILITY EASEMENT AGREEMENT AND GRANT OF SIGN EASEMENT BETWEEN EDGEWATER HILL PROPERTIES, LLC, EDGEWATER HILL APARTMENTS, LLC AND GEORGE A. AND MARY F. LOOS, RECORDED IN VOLUME 570, PAGE 273 ON NOVEMBER 4, 2016.
12. A GRANT OF WATER FACILITIES EASEMENT FROM EDGEWATER HILL PROPERTIES, LLC, EDGEWATER HILL APARTMENTS, LLC AND EDGEWATER HILL ENTERPRISES, LLC TO THE CONNECTICUT WATER COMPANY, RECORDED IN VOLUME 586, PAGE 655 ON JULY 25, 2018.
13. AN ELECTRIC DISTRIBUTION EASEMENT FROM EDGEWATER HILL PROPERTIES, LLC AND EDGEWATER HILL ENTERPRISES, LLC TO THE CONNECTICUT LIGHT AND POWER COMPANY dba EVERSOURCE ENERGY, RECORDED IN VOLUME 587, PAGE 293 ON AUGUST 20, 2018.
14. A RECIPROCAL ACCESS, UTILITY AND DRAINAGE EASEMENT AGREEMENT BETWEEN EDGEWATER HILL ENTERPRISES, LLC, EDGEWATER HILL PROPERTIES, LLC, AND THE TOWN OF EAST HAMPTON RECORDED IN VOLUME 588, PAGE 593 ON SEPTEMBER 26, 2018.
15. A WATER MAIN EASEMENT FROM EDGEWATER HILL PROPERTIES, LLC TO THE CONNECTICUT WATER COMPANY, RECORDED IN VOLUME 591, PAGE 615 ON JANUARY 18, 2019.
16. A WATER MAIN EASEMENT FROM EDGEWATER HILL ENTERPRISES, LLC TO THE CONNECTICUT WATER COMPANY, RECORDED IN VOLUME 591, PAGE 620 ON JANUARY 18, 2019.
17. A WATER MAIN EASEMENT FROM THE TOWN OF EAST HAMPTON TO THE CONNECTICUT WATER COMPANY, RECORDED IN VOLUME 592, PAGE 133, ON FEBRUARY 27, 2019.
18. AN ELECTRICAL DISTRIBUTION EASEMENT FROM EDGEWATER HILL ENTERPRISES, LLC, TO THE CONNECTICUT LIGHT AND POWER COMPANY dba EVERSOURCE ENERGY, RECORDED IN VOLUME 597, PAGE 745 ON SEPTEMBER 27, 2019.
19. AN ELECTRICAL DISTRIBUTION EASEMENT FROM THE TOWN OF EAST HAMPTON TO THE CONNECTICUT LIGHT AND POWER COMPANY dba EVERSOURCE ENERGY, RECORDED IN VOLUME 597, PAGE 742 ON SEPTEMBER 27, 2019.

CONVEYANCES

RECORD TITLE TO THE SUBJECT PARCELS IS REFERENCED TO THE FOLLOWING DEEDS RECORDED IN TOWN OF EAST HAMPTON LAND RECORDS:

A. A WARRANTY DEED FROM EDGEWATER HILL PROPERTIES, LLC TO TERRY L. KONRAD, RECORDED IN VOLUME 569, PAGE 293 ON OCTOBER 3, 2016.

B. A WARRANTY DEED FROM TERRY L. KONRAD TO EDGEWATER HILL PROPERTIES, LLC, RECORDED IN VOLUME 569, PAGE 296 ON OCTOBER 3, 2016. (PARCEL A)

C. A WARRANTY DEED FROM TERRY L. KONRAD TO EDGEWATER HILL APARTMENTS, LLC, RECORDED IN VOLUME 569, PAGE 299 ON OCTOBER 3, 2016. (PARCEL B)

D. A QUIT CLAIM DEED FROM GEORGE A. LOOS AND MARY F. LOOS TO EDGEWATER HILL ENTERPRISES, LLC, RECORDED IN VOLUME 580, PAGE 285 ON NOVEMBER 20, 2017. (LOT 10A/85/5C)

E. A WARRANTY DEED FROM GEORGE A. LOOS AND MARY F. LOOS TO EDGEWATER HILL ENTERPRISES, LLC, RECORDED IN VOLUME 582, PAGE 195 ON JANUARY 1, 2018.

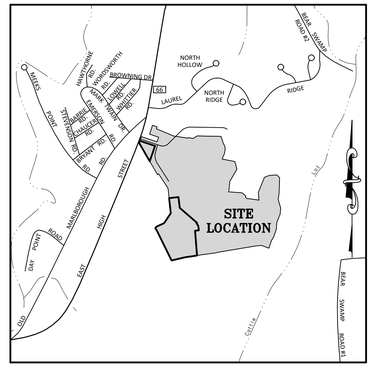
F. A SPECIAL WARRANTY DEED FROM EDGEWATER HILL ENTERPRISES, LLC TO THE TOWN OF EAST HAMPTON, RECORDED IN VOLUME 588, PAGE 589 ON SEPTEMBER 26, 2018.

G. A QUIT CLAIM DEED FROM EDGEWATER HILL PROPERTIES, LLC TO EDGEWATER HILL ENTERPRISES, LLC, RECORDED IN VOLUME 589, PAGE 419 ON OCTOBER 25, 2018.

H. A QUIT CLAIM DEED FROM EDGEWATER HILL ENTERPRISES, LLC TO EDGEWATER HOMES, LLC, RECORDED IN VOLUME 592, PAGE 309 ON MARCH 7, 2019.

I. A BOUNDARY LINE AGREEMENT BETWEEN EDGEWATER HILL PROPERTIES, LLC AND EDGEWATER HILL ENTERPRISES, LLC, RECORDED IN VOLUME 594, PAGE 257 ON SEPTEMBER 28, 2019.

J. A QUIT CLAIM DEED FROM GEORGE A. LOOS AND MARY F. LOOS TO EDGEWATER HILL ENTERPRISES, LLC, RECORDED IN VOLUME 601, PAGE 684 ON FEBRUARY 25,



LOCATION MAP
SCALE: 1"=1000'

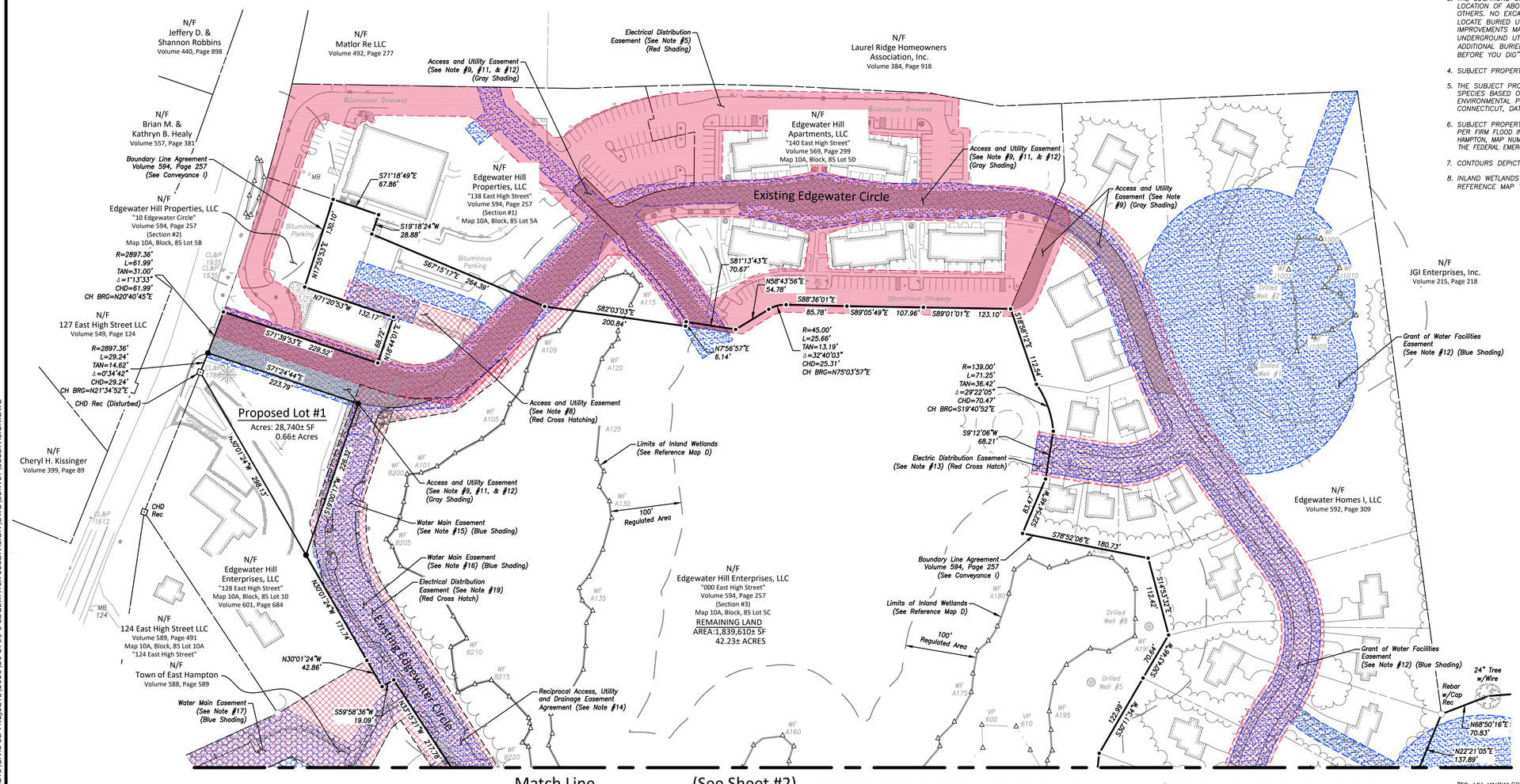
SURVEY NOTES

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 AND SUGGESTED METHODS AND PROCEDURES FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED FOR USE BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 29, 2019. IT IS A PROPERTY SURVEY AND CONFORMS TO HORIZONTAL CLASS A–2 AND TOPOGRAPHIC TD ACCURACY STANDARDS.
2. NORTH ORIENTATION DEPICTED HEREON IS BASED UPON REFERENCE MAP 1.
3. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON THE LOCATION OF ABOVE GROUND STRUCTURES AND RECORD DRAWINGS PROVIDED BY OTHERS. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES. ALL SUBTERRANEAN FEATURES AND IMPROVEMENTS MAY NOT BE DEPICTED OR NOTED HEREON. THE LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OPERATIONS.
4. SUBJECT PROPERTY IS LOCATED IN THE MIXED USE DEVELOPMENT DISTRICT (MUDD).
5. THE SUBJECT PROPERTY CONTAINS NO STATE OF FEDERAL LISTED ENDANGERED SPECIES BASED ON REVIEW OF CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION NATURAL DIVERSITY DATA BASE AREAS EAST HAMPTON CONNECTICUT, DATED DECEMBER 2019.
6. SUBJECT PROPERTY RESIDES IN FLOOD ZONE X (AREA OF MINIMAL FLOOD HAZARD). PER FIRM FLOOD INSURANCE MAP, MIDDLESEX COUNTY, CONNECTICUT TOWN OF EAST HAMPTON, MAP NUMBER: 09007C0155G, EFFECTIVE DATE: AUGUST 28, 2008, PREPARED BY: THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
7. CONTOURS DEPICTED HEREON WERE DERIVED FROM REFERENCE MAP "D"
8. INLAND WETLANDS AND VERNAL POOLS DEPICTED HEREON WERE DERIVED FROM REFERENCE MAP "D"

LEGEND & ABBREVIATIONS

±	MORE OR LESS
TYP	TYPICAL
SF	SQUARE FEET
WF 1	WETLAND FLAG
VP 1	VERNAL POOL FLAG
CHD	CONNECTICUT HIGHWAY DEPARTMENT
CONC	CONCRETE
MON	MONUMENT
REC	RECOVERED
CL&P	CONNECTICUT LIGHT AND POWER
N/F	NOW OR FORMERLY
	TREE LINE
	RETAINING WALL
	FENCE
	ANGLE POINT
	IRON PIPE OR REBAR
	MONUMENT
	REBAR OR DRILL HOLE TO BE SET
	UTILITY POLE
	GUY WIRE
	CATCH BASIN
	SANITARY MANHOLE
E	ELECTRIC MANHOLE
	STORM DRAINAGE MANHOLE
	LIGHT POST
	WATER OR GAS VALVE
	SIGN
W	WELL
	WETLAND FLAG

GRAPHIC SCALE
160 80 40 0 80
(IN FEET)
1 inch = 80 ft.



"APPROVED BY THE TOWN OF EAST HAMPTON PLANNING AND ZONING COMMISSION"

DATE OF COMPLETION OF ALL WORK

SIGNATURE OF CHAIRMAN OR SECRETARY DATE

"APPROVED BY THE TOWN OF EAST HAMPTON INLAND WETLANDS AND WATERCOURSES COMMISSION"

SIGNATURE OF CHAIRMAN OR SECRETARY DATE

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

70016
JOHN U. FAULISE JR. L.S. LICENSE NO. DATE

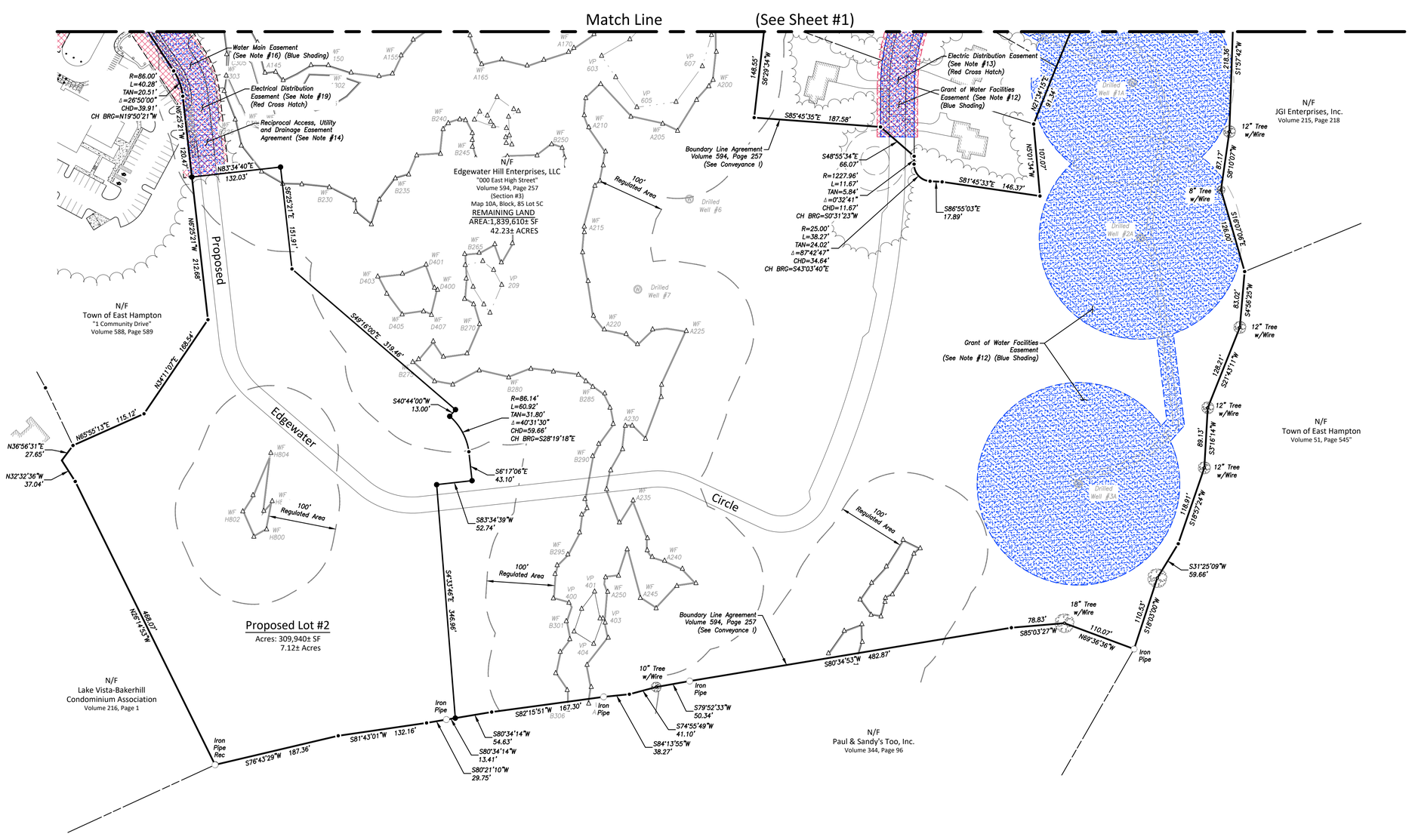
\\192.168.2.3\PROJECTS\CIVIL 3D PROJECTS\2020\20-2795-3 EDGEWATER SUBDIVISION\DWG\SURVEY\SUBDIVISION.DWG

CIVIL ENGINEERING LAND SURVEYING LAND USE PLANNING SOIL SCIENCE
BOUNDARIES
Boundaries LLC
179 Pachaug River Drive, Gilmantl, CT 06351
T 860.376.2006 | www.boundariesllc.net

Property Survey
"Resubdivision Plan"
Prepared for
Edgewater Hill Enterprises, LLC
East High Street - East Hampton, Connecticut

SCALE: 1" = 80'
DATE: May 2020
JOB I.D. NO. 20-2795-3
Revisions

SHEET NO.
1
2



GRAPHIC SCALE

160 80 40 0 80

(IN FEET)
1 inch = 80 ft.

NOTE: SEE SHEET 1 FOR SURVEY NOTES AND LEGEND.

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

70016

JOHN U. FAULISE JR. L.S. LICENSE NO. DATE

\\192.168.2.3\PROJECTS\CIVIL 3D PROJECTS\2020\20-2795-3 EDGEWATER SUBDIVISION\DWG\SURVEY\SUBDIVISION.DWG

CIVIL ENGINEERING LAND SURVEYING LAND DEVELOPMENT PLANNING SOIL SCIENCE
BOUNDARIES
Boundaries LLC
179 Pachaug River Drive, Gilmanill, CT 06351
T 860.376.2006 | www.boundariesllc.net

Property Survey
"Resubdivision Plan"
Prepared for
Edgewater Hill Enterprises, LLC
East High Street - East Hampton, Connecticut

SCALE: 1" = 80'
DATE: May 2020
JOB I.D. NO. 20-2795-3
Revisions

SHEET NO.
2
2

HELLER, HELLER & McCOY

Attorneys at Law

736 Norwich-New London Turnpike
Uncasville, Connecticut 06382

Sidney F. Heller (1903-1986)
Harry B. Heller (hellermccoy@sbcglobal.net)
William E. McCoy (hhm-bill@sbcglobal.net)

Mary Gagne O'Donal (hhm-mary@sbcglobal.net)

Telephone: (860) 848-1248
Facsimile: (860) 848-4003

May 13, 2020

East Hampton Planning and Zoning Commission
Attn: Mr. Jeremy DeCarli, Director of Planning
1 Community Drive
East Hampton, CT 06424

Re: Edgewater Hill Enterprises, LLC – 2 Lot Resubdivision

Dear Jeremy:

As you are aware, this office represents Edgewater Hill Enterprises, LLC, Edgewater Hill Apartments, LLC, Edgewater Hill Properties, LLC and Edgewater Homes I, LLC, the current developers of the Edgewater Hill Mixed Use Lifestyle Community located on the southeasterly side of East High Street (Connecticut Route 66) in the Town of East Hampton, Connecticut. On behalf of our client, Edgewater Hill Enterprises, LLC, we hereby submit an application to the Town of East Hampton Planning and Zoning Commission for a 2 lot resubdivision of a portion of the Mixed Use Development District property which is owned of record by Edgewater Hill Enterprises, LLC. The subdivision application, and the development which it is intended to foster, is consistent with the Master Plan for the Edgewater Hill Community previously approved by the East Hampton Planning and Zoning Commission.

Proposed Lot 1, located on the southeasterly side of East High Street, is intended to accommodate Market Square 2, a mixed use building with commercial and/or restaurant uses on the first floor and residential uses on the upper two floors. We are submitting, for consideration, contemporaneously with the resubdivision application, a site plan application for the development of Market Square-2.

Proposed Lot 2, located southeasterly of East High Street, and depicted on Sheet 2 of 2 of the resubdivision plan, is intended to accommodate multi-family residential development. We anticipate submitting a site plan for consideration by the Town of East Hampton Planning and Zoning Commission for this phase of Edgewater Hill later this year.

Submitted herewith and constituting the application for re-subdivision approval by the Town of East Hampton Planning and Zoning Commission are the following:

1. Ten (10) copies of the "Minimum Requirements for Submission of Application to Planning and Zoning Commission", which has been executed by the Manager of Edgewater Hill Enterprises, LLC.

2. Ten (10) copies of the Re-Subdivision Application and Lake Pocotopaug Protection Area Application submitted to the East Hampton Planning and Zoning Commission with the Fee Calculation Schedule attached thereto.

3. Ten (10) prints of the re-subdivision plan entitled "Property Survey 'Resubdivision Plan' Prepared For Edgewater Hill Enterprises, LLC East High Street – East Hampton, Connecticut Scale: 1" = 80' Date: May 2020 Job I.D. No. 20-2795-3 Sheet Nos. 1 of 2 and 2 of 2" prepared by Boundaries L.L.C.

4. An Authorization signed by the owner and applicant authorizing the law firm of Heller, Heller & McCoy and the engineering/surveying firm of Boundaries, L.L.C. to represent its interests in all proceedings before the Town of East Hampton Planning and Zoning Commission with respect to the re-subdivision application.

5. Ten (10) copies of the list of abutting property owners and owners of property located directly across the street from the application parcel.

6. Our client's check in the amount of $435.00 representing payment of the 2 lot resubdivision fee in the amount of $300.00, the Lake Pocotopaug Protection Area review fee in the amount of $75.00 and the State fee in the amount of $60.00.

Request is hereby made that you place this matter on the agenda of the June 3, 2020 meeting Town of East Hampton Planning and Zoning Commission. Request is further made that a public hearing on the resubdivision application be scheduled for the July 1, 2020 meeting of the East Hampton Planning and Zoning Commission.

Should you have any questions, please feel free to contact the undersigned.

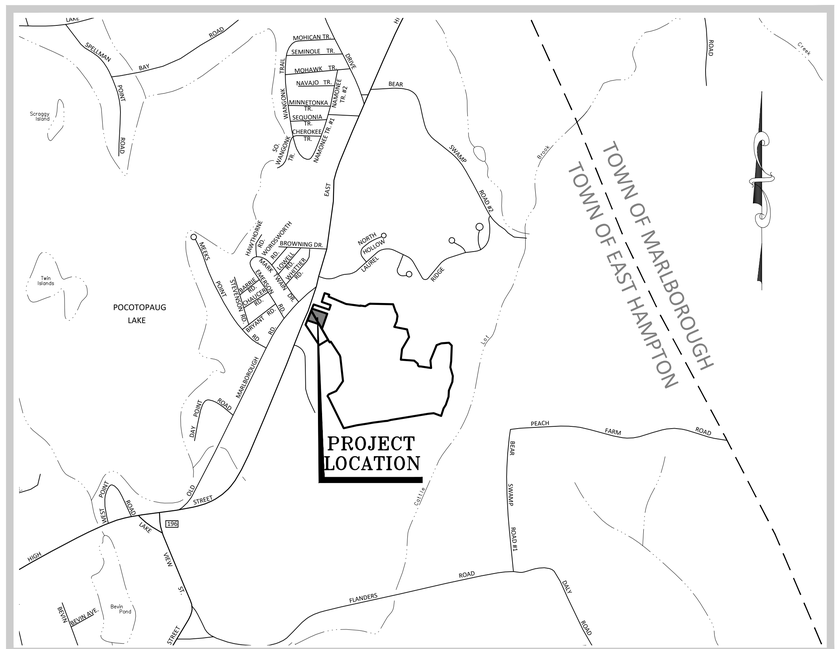
Very truly yours,

Harry B. Heller

HBH/rmb

Z:\Edgewater Hill Enterprises, LLC\Resubdivision Lots 1 & 2\P&Z\ltr.Town re Submission.docx

Site Development Plan
Proposed Mixed Use Building (MS-2)
Prepared For
Edgewater Hill Enterprises, LLC
000 East High Street (CT Route 66)
East Hampton, Connecticut
May 2020



Site Location Map
Scale: 1" = 1,000'

Index To Drawings

Sheet No.	Sheet Title
1	Cover Sheet
2	Improvement Location and Topographic Survey
3	Site Layout Plan
4	Site Grading Plan
5	Site Stormwater and Utilities Plan
6	Site Lighting and Landscaping Plan
7	Logistics and Erosion & Sedimentation Control Plan
8	Erosion & Sedimentation Control Notes and Details
9	Notes and Details (1)
10	Notes and Details (2)
11	Notes and Details (3)
12	Notes and Details (4)

"APPROVED BY THE TOWN OF EAST HAMPTON PLANNING AND ZONING COMMISSION"

SIGNATURE OF CHAIRMAN OR SECRETARY — DATE

"APPROVED BY THE TOWN OF EAST HAMPTON INLAND WETLANDS AND WATERCOURSES COMMISSION"

SIGNATURE OF CHAIRMAN OR SECRETARY — DATE

Applicants/Property Owners:

Edgewater Hill Enterprises, LLC
138 East High Street
East Hampton, CT 06424

Edgewater Hill Enterprises, LLC
138 East High Street
East Hampton, CT 06424

Property Info:

000 East High Street
Assessor's ID: 10A/85/5C
Area: 59.41± Acres

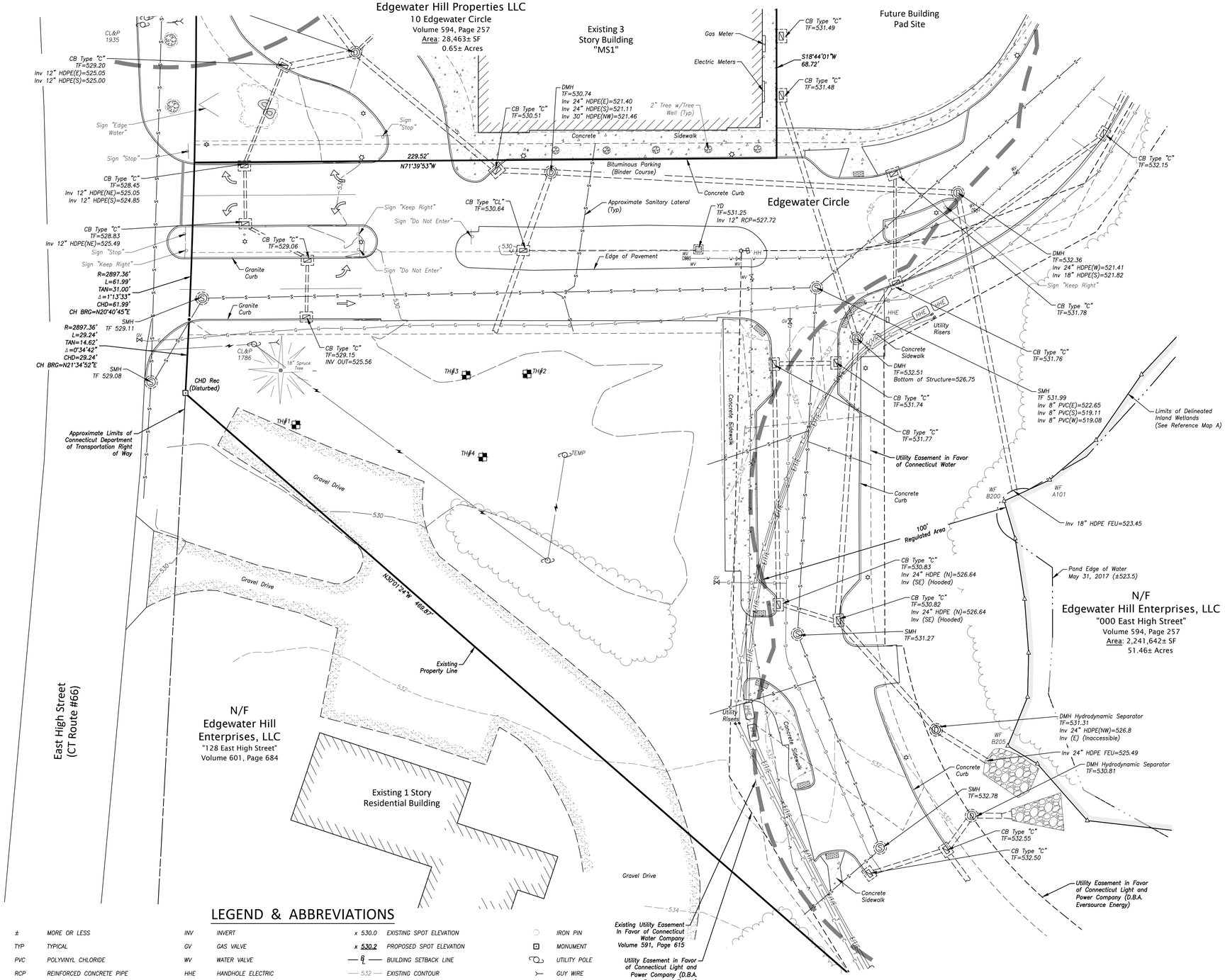
128 East High Street
Assessor's ID: 10A/85/10
Area: 1.47± Acres

FOR PERMITTING
05/20/2020

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

29102
DAVID C. McKAY, P.E. — LICENSE NO. — DATE

70016
JOHN U. FAULISE, JR. — LICENSE NO. — DATE



SURVEY 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 AND SUGGESTED METHODS AND PROCEDURES FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED FOR USE BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 29, 2019. IT IS AN IMPROVEMENT LOCATION AND TOPOGRAPHIC SURVEY AND CONFORMS TO HORIZONTAL CLASS A-2 AND TOPOGRAPHIC CLASS T-2 ACCURACY STANDARDS. IT IS INTENDED TO BE USED FOR SITE DEVELOPMENT .
2. NORTH ORIENTATION DEPICTED HEREON IS (NAD83) BASED UPON REFERENCE MAP A.
3. VERTICAL DATUM DEPICTED HEREON IS BASED ON REFERENCE MAP A.
4. THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON THE LOCATION OF ABOVE GROUND STRUCTURES AND RECORD DRAWINGS PROVIDED BY OTHERS. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/STRUCTURES. ALL SUBTERRANEAN FEATURES AND IMPROVEMENTS MAY NOT BE DEPICTED OR NOTED HEREON. THE LOCATIONS OF UNDERGROUND UTILITIES/STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREON. ADDITIONAL BURIED UTILITIES/STRUCTURES MAY BE ENCOUNTERED. CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION OPERATIONS.
5. THE FIELD SURVEY WAS COMPLETED ON MARCH 11, 2020. LAND RECORD AND RELATED RESEARCH WAS COMPLETED ON MAY 1, 2020.

REFERENCE MAP

A. PROPERTY SURVEY 'RESUBDIVISION PLAN', PREPARED FOR EDGEWATER HILL ENTERPRISES, LLC, EAST HIGH STREET – EAST HAMPTON, CONNECTICUT, SCALE: 1"=80', DATE: MAY 2020, JOB I.D. NO. 20-2795-3, SHEET 1 OF 2 THROUGH 2 OF 2, PREPARED BY BOUNDARIES, LLC.

TEST HOLE RESULTS

TEST HOLES WERE WITNESSED BY DAVID C. McKAY, P.E. OF BOUNDARIES LLC. ON MAY 8, 2020.

TH#1
0" – 6" TOPSOIL AND BROWN GRAVELLY FILL
6" – 14" REDDISH BROWN GRAVELLY FILL
14" – 28" BROWN SILTY AND GRAVELLY FILL WITH ROOTS
28" – 46" TAN TO BROWN SILTY GRAVELLY FILL WITH ORGANIC DEBRIS
46" – 84" BROWN FINE SILTY SAND WITH TRACE GRAVEL
GROUNDWATER AT 80" (FILLED TO 66" AFTER 1.5 HOURS), NO MOTTLING, NO LEDGE

TH#2
0" – 10" BROWN GRAVELLY FILL
10" – 17" REDDISH BROWN GRAVELLY FILL
17" – 48" ORGANICS AND DEMOLITION DEBRIS
GROUNDWATER AT 32", NO MOTTLING, NO LEDGE

TH#3
0" – 10" BROWN GRAVELLY FILL
10" – 14" ASPHALT
14" – 22" BROWN SILTY GRAVELLY FILL
22" – 62" BROWN TO GRAY COMPACT SILTY FILL WITH ORGANIC DEBRIS
62" – 72" ORIGINAL TOPSOIL
72" – 84" COMPACT GRAY SANDY SILT (WET)
NO GROUNDWATER, NO MOTTLING, NO LEDGE

TH#4
0" – 10" BROWN GRAVELLY FILL
10" – 18" ORANGE BROWN GRAVELLY FILL
18" – 62" COMPACT GRAY SILTY FILL WITH ORGANIC DEBRIS
62" – 69" ORIGINAL TOPSOIL
69" – 84" COMPACT GRAY SANDY SILT
GROUNDWATER AT 48", NO MOTTLING, NO LEDGE

LEGEND & ABBREVIATIONS

±	MORE OR LESS	INV	INVERT
TYP	TYPICAL	GV	GAS VALVE
PVC	POLYVINYL CHLORIDE	WV	WATER VALVE
RCP	REINFORCED CONCRETE PIPE	HHE	HANDHOLE ELECTRIC
HDPE	HIGH DENSITY POLYETHYLENE PIPE	W/	WITH
SF	SQUARE FEET	WF #1	WETLAND FLAG
FF	FINISH FLOOR	CHD	CONNECTICUT HIGHWAY DEPARTMENT
SMH	SANITARY MANHOLE	MON	MONUMENT
CB	CATCH BASIN	REC	RECOVERED
YD	YARD DRAIN	CL&P	CONNECTICUT LIGHT AND POWER
TF	TOP OF FRAME	N/F	NOW OR FORMERLY

x 530.0	EXISTING SPOT ELEVATION
x 530.2	PROPOSED SPOT ELEVATION
BL	BUILDING SETBACK LINE
532	EXISTING CONTOUR
532	PROPOSED CONTOUR
	TREE LINE
E	UNDERGROUND ELECTRIC
	OVERHEAD WIRES
S	SANITARY SEWER
W	WATER
•	ANGLE POINT

	IRON PIN
	MONUMENT
	UTILITY POLE
	GUY WIRE
	CATCH BASIN
	YARD DRAIN
	SANITARY MANHOLE
	STORM DRAINAGE MANHOLE
	WATER OR GAS VALVE
	SIGN
	WETLAND FLAG

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

FOR PERMITTING
05/20/2020

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

70016
JOHN U. FAULISE JR. L.S. LICENSE NO. DATE

CIVIL ENGINEERING LAND SURVEYING LAND USE PLANNING GIS SERVICES
BOUNDARIES
Boundaries LLC
179 Pachaug River Drive, Gilman, CT 06351
T 860.376.2006 | www.boundariesllc.net

Site Development Plan
"Improvement Location and Topographic Survey"
Prepared for
Edgewater Hill Enterprises, LLC
000 East High Street (CT Route 66) - East Hampton, Connecticut

SCALE: 1" = 20'
DATE: May 2020
JOB I.D. NO. 20-2795-2
Revisions

SHEET NO.
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12

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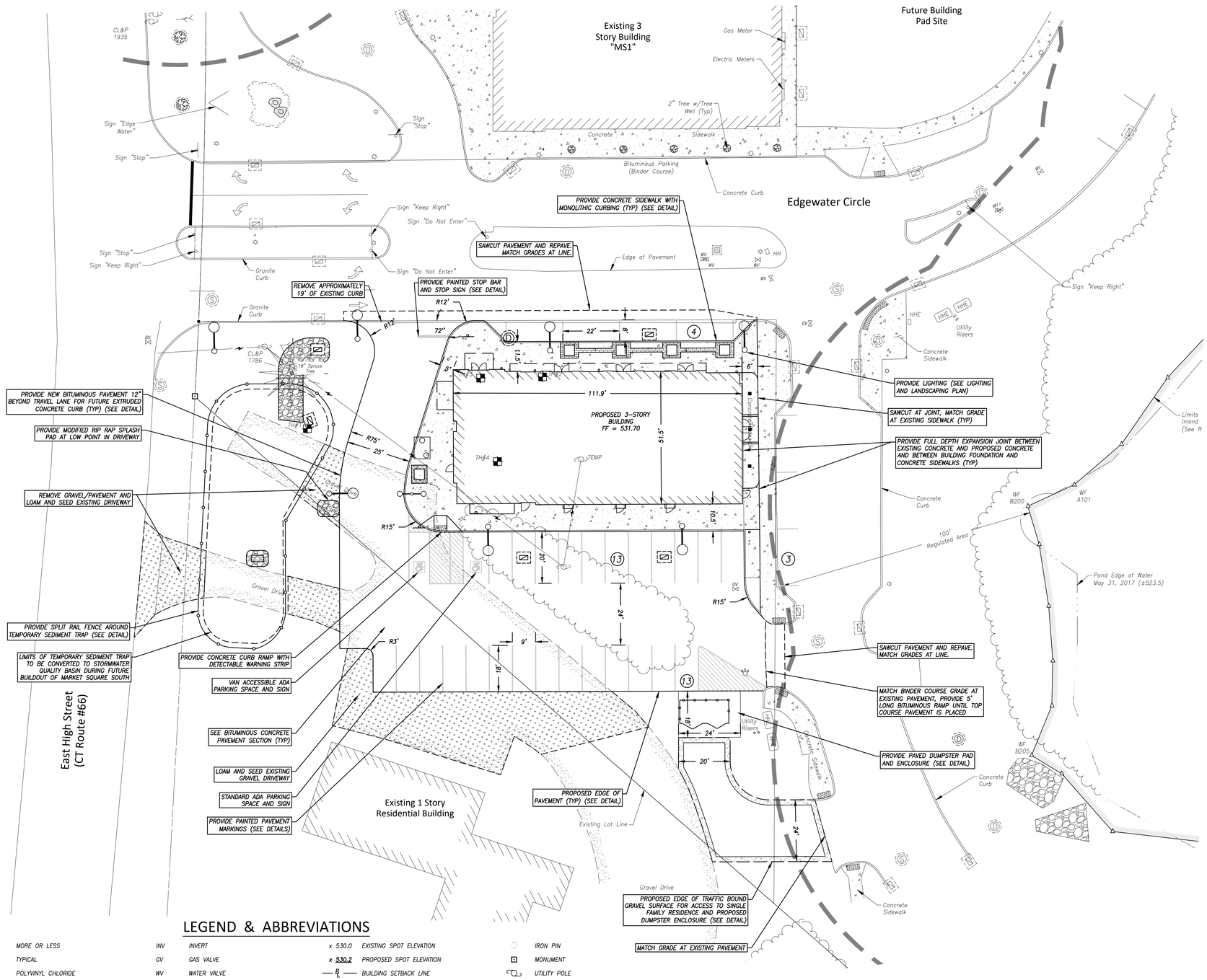

ZONING COMPLIANCE

THE SITE PLAN IS SUBSTANTIALLY COMPLIANT WITH THE EDGEWATER HILL MASTER PLAN.

PARKING CALCULATION

REQUIRED PARKING SPACES ARE PROVIDED IN ACCORDANCE WITH SECTION 7.1.B OF THE TOWN OF EAST HAMPTON ZONING REGULATIONS.

MULTI-FAMILY RESIDENTIAL: 1 – 2 PER DWELLING UNIT
RETAIL: 2 – 5 PER 1,000 SF OF GFA

PROPOSED MULTI FAMILY RESIDENTIAL UNITS = 10
EXISTING MULTI FAMILY RESIDENTIAL UNITS = 2
RETAIL GFA = 4,723 SF

MINIMUM ALLOWABLE PARKING:
12 UNITS x 1 SPACE/UNIT + 4,723 SF x 2 SPACES/1,000 SF = 22 SPACES
MAXIMUM ALLOWABLE PARKING:
12 UNITS x 2 SPACES/UNIT + 4,723 SF x 5 SPACES/1,000 SF = 48 SPACES

PARKING SPACES PROVIDED:
33 SPACES (31 STANDARD SPACES, 1 ADA VAN ACCESSIBLE SPACE, 1 ADA ACCESSIBLE SPACE)

LEGEND & ABBREVIATIONS

±	MORE OR LESS
TYP	TYPICAL
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
SF	SQUARE FEET
FF	FINISH FLOOR
SMH	SANITARY MANHOLE
CB	CATCH BASIN
YD	YARD DRAIN
TF	TOP OF FRAME
INV	INVERT
GV	GAS VALVE
WV	WATER VALVE
HHE	HANDHOLE ELECTRIC
W/	WITH
WF #1	WETLAND FLAG
CHD	CONNECTICUT HIGHWAY DEPARTMENT
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	STORM DRAINAGE MANHOLE
	WATER OR GAS VALVE
	SIGN
	WETLAND FLAG

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40 20 10 0 20

(IN FEET)
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29102
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CIVIL ENGINEERING LAND SURVEYING LAND DEVELOPMENT SITE PLANNING
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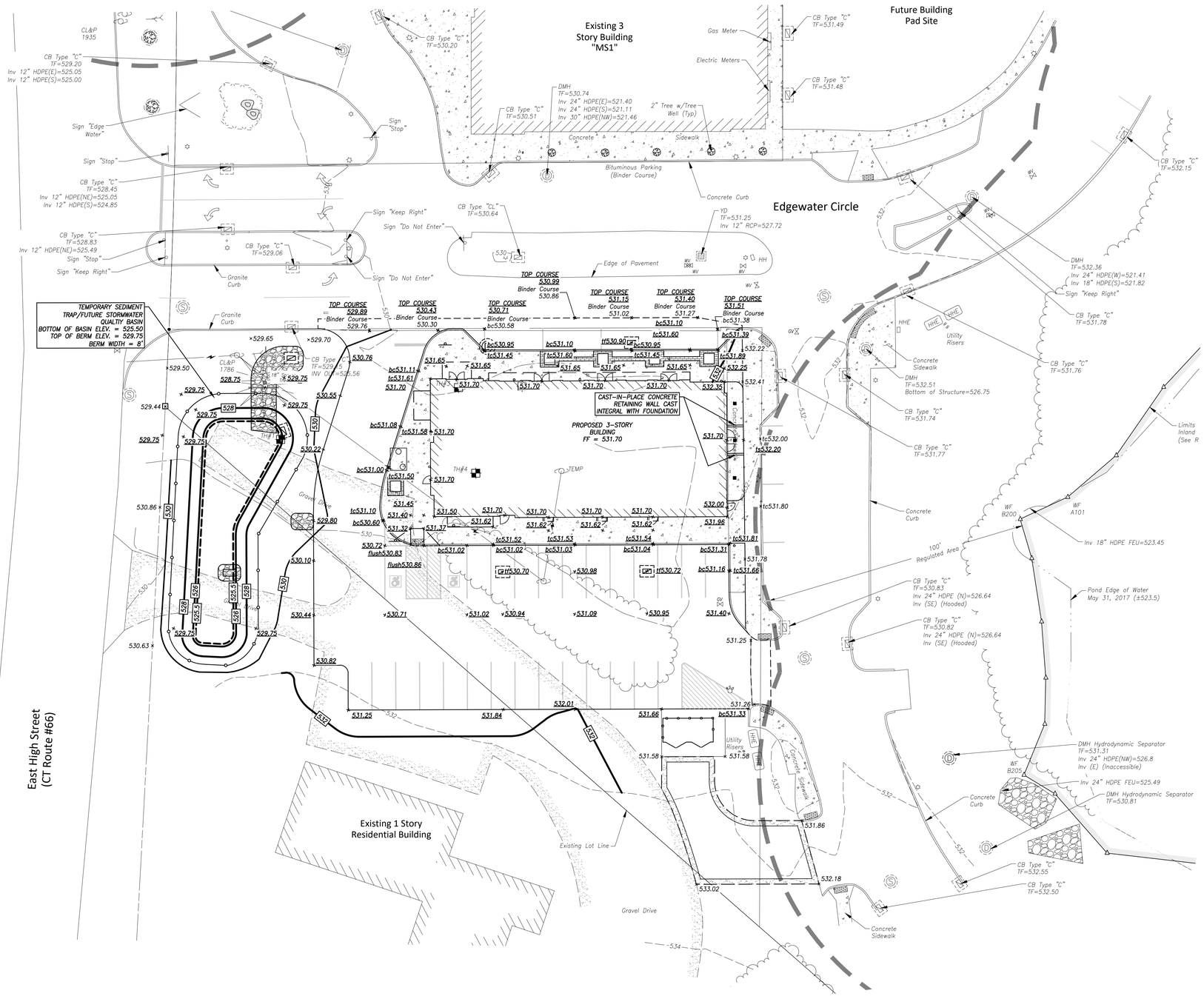

GRADING NOTES

1. *THE CONTRACTOR SHALL ENSURE THAT ALL HANDICAP PARKING AREAS DO NOT EXCEED A SLOPE GREATER THAN 50:1 OR 2% AND THAT ALL CURRENT HANDICAP ACCESSIBLE BUILDING CODE CRITERIA ARE MET.*
2. *THE SITE SHALL BE GRADED USING STANDARD CONSTRUCTION PRACTICES. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL SLOPES EQUAL TO OR STEEPER THAN 3(H):1(V) IN CONFORMANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.*

GRADING LEGEND

× 538.51	*EXISTING SPOT ELEVATION*
× 538.51	*PROPOSED SPOT ELEVATION*
bc	*BOTTOM OF CURB*
tc	*TOP OF CURB*
bsw	*BACK OF SIDEWALK*
tw	*TOP OF WALL*
bw	*BOTTOM OF WALL*
ts	*TOP OF STEP*
tf	*TOP OF FRAME*

GRAPHIC SCALE

40 20 10 0 20

(IN FEET)
1 inch = 20 ft.

FOR PERMITTING
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DAVID C. MCKAY, P.E. LICENSE NO. DATE

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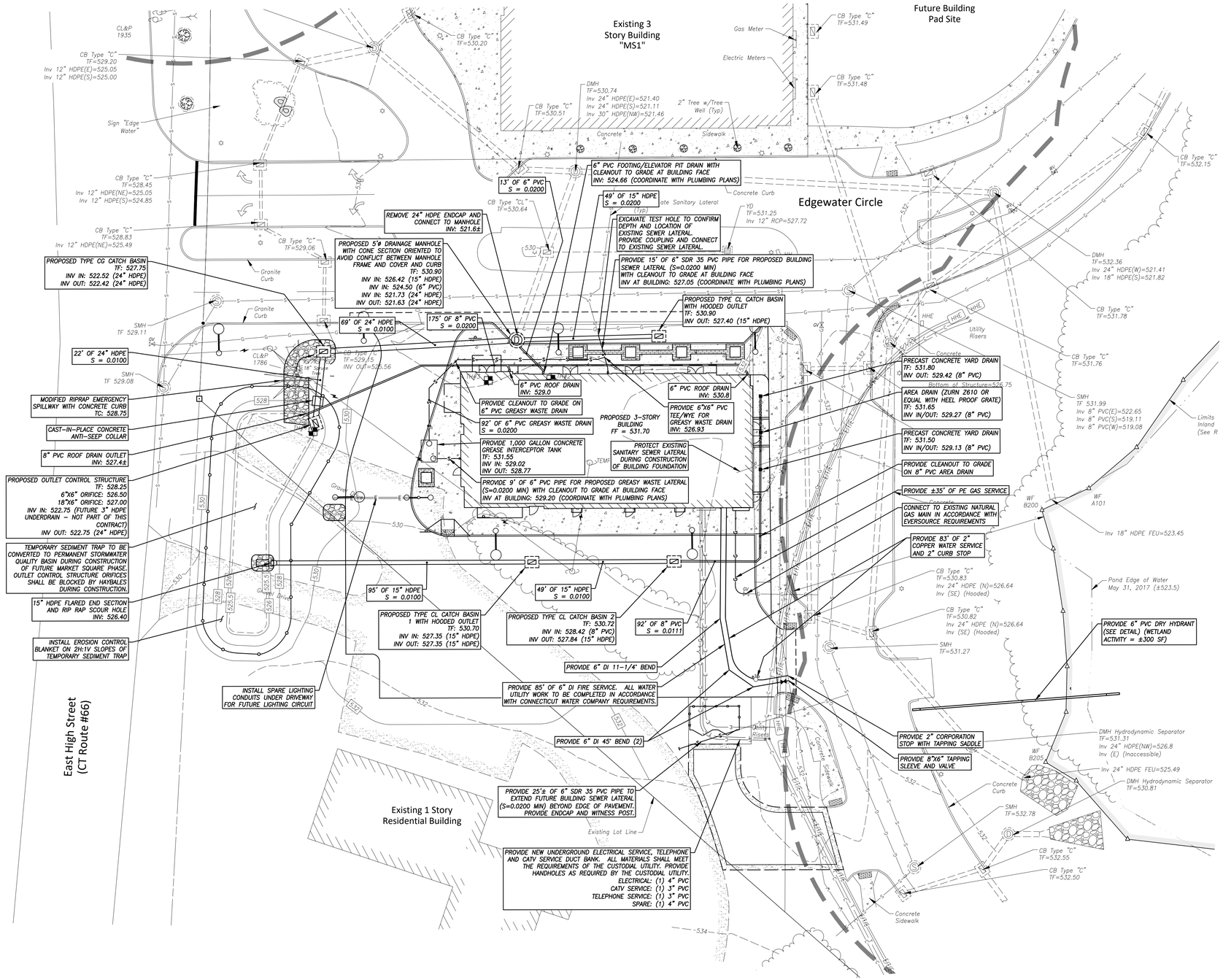

WATER MAIN INSTALLATION NOTES

1. PROJECT MUST BE BUILT TO CT WATER COMPANY SPECIFICATIONS.
2. CLASS 52 DUCTILE IRON PIPE REQUIRED.
3. COPPER AND/OR DUCTILE IRON SERVICE LATERAL MATERIAL REQUIRED.
4. GATE VALVES OPEN LEFT.
5. ALL WATER MAIN PIPING AND APPURTENANCES MUST BE POLYETHYLENE ENCASED IN ACCORDANCE WITH AWWA ANSI–AWWA C105/A21.5–99(10)
6. MEGALUG RESTRAINTS REQUIRED ON ALL FITTINGS, BENDS, OFFSETS, TEES, GATE & VALVES.
7. FIELD LOK (U.S. PIPE) OR SURE STOP 350 (MCWANE) RESTRAINING GASKETS ARE REQUIRED 2 PIPE JOINTS BEFORE AND AFTER EACH FITTING AND ON THE LAST 3 PIPE LENGTHS ON DEAD ENDS.
8. THRUST BLOCKING IS REQUIRED ON ALL BENDS, TEES, OFFSETS AND DEAD ENDS.
9. ALL WATER MAINS SHALL BE INSTALLED TO A DEPTH OF 4–FEET OF COVER BASED ON THE ROADWAY GRADE, EXCEPT AS NOTED.
10. 3–FT MINIMUM HORIZONTAL SEPARATION REQUIRED BETWEEN WATER AND ANY OTHER UTILITY/UNDERGROUND STRUCTURE. 10–FT MINIMUM HORIZONTAL SEPARATION REQUIRED BETWEEN WATER AND SEWER/SEPTIC ("SEWER") ***SLEEVE REQUIRED WHERE WATER CROSSES SEWER IF WATER IS BELOW SEWER AND/OR WHEN 18" VERTICAL SEPARATION CANNOT BE ACHIEVED WHEN WATER IS ABOVE SEWER. 4–FEET MINIMUM HORIZONTAL SEPARATION REQUIRED BETWEEN WATER MAIN AND DRAINAGE WHEN AT LIKE ELEVATIONS.
11. WATER MAINS TO BE DEFLECTED UNDER ALL STORM DRAINS UNLESS OTHERWISE NOTED OR AS DIRECTED BY A CT WATER COMPANY PROJECT MANAGER. A VERTICAL CLEARANCE OF 18" TO BE MAINTAINED BETWEEN STORM DRAIN AND WATER MAINS. THE CONTRACTOR IS RESPONSIBLE FOR PROPER COMPACTION AROUND AND UNDER EXISTING DRAINAGE FACILITIES WHICH MAY INCLUDE REMOVAL AND RESETTING TO PROPER GRADE.
12. ANGLE OF BENDS TO BE FIELD DETERMINED.
13. MAXIMUM ALLOWABLE DEFLECTION PER FULL LENGTH PUSH–ON JOINT FOR 4" TO 12" IS FIVE (5) DEGREES AND THREE (3) DEGREES FOR 14" AND GREATER DUCTILE IRON PIPE.
14. WHERE AN AIR RELIEF IS REQUIRED, CWC WILL PERFORM TAP AND INSTALL WHILE THE INSTALLATION CONTRACTOR IS RESPONSIBLE FOR THE EXCAVATION AND RESTORATION UNLESS OTHERWISE NOTED. LABOR AND MATERIALS FOR THE INSTALLATION(S) WILL BE CHARGED TO THE PROJECT.
15. ***WHEN THE INSTALLATION OF UNDERGROUND INFRASTRUCTURE DEVIATES FROM THE CT WATER COMPANY APPROVED PLAN(S), THE APPLICANT, AT HIS/HER COST, WILL BE HELD LIABLE FOR THE RELOCATION OF INFRASTRUCTURE AS REQUIRED TO THE SATISFACTION OF THE CT WATER COMPANY. FAILURE TO CORRECT ANY DEVIATION DEEMED UNACCEPTABLE TO THE CT WATER COMPANY WILL RESULT IN LITIGATION.

DRAINAGE & UTILITY NOTES

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATIONS AND INFORMATION PROVIDED BY OTHERS. THEIR ACTUAL LOCATION MAY VARY FROM THOSE INDICATED AND ALL UNDERGROUND UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 800–922–4455 TO MARK OUT ALL UNDERGROUND UTILITIES A MINIMUM OF 3 BUSINESS DAYS PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITY. CONTRACTOR SHALL VERIFY ALL LOCATIONS, DIMENSIONS AND ELEVATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL ADHERE TO ALL APPLICABLE TOWN OF EAST HAMPTON STANDARDS AND REGULATIONS.
2. THE CONTRACTOR SHALL OBTAIN, REVIEW AND ADHERE TO ALL REQUIREMENTS AND ANY CONDITIONS OF APPROVAL OF THE TOWN OF EAST HAMPTON, THE CONNECTICUT DEPARTMENT OF TRANSPORTATION, AND ALL CUSTODIAL UTILITY COMPANIES.
3. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, BONDING AND INSURANCE REQUIRED BY THE TOWN OF EAST HAMPTON, THE CONNECTICUT DEPARTMENT OF TRANSPORTATION, AND ALL CUSTODIAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
4. THE CONTRACTOR SHALL CONFORM TO ALL APPLICABLE TOWN AND/OR STATE STANDARDS AND REGULATIONS FOR ALL ROADWAY, DRAINAGE AND UTILITY WORK.
5. ALL SANITARY SEWER UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST APPLICABLE TOWN OF EAST HAMPTON WATER POLLUTION CONTROL AUTHORITY (WPCA) RULES, REGULATIONS AND SPECIFICATIONS. FOUNDATION DRAINS, SUMP PUMPS AND/OR ROOF LEADERS SHALL NOT DISCHARGE INTO THE SANITARY SEWER SYSTEM.
6. ALL DRAINAGE PIPE SHALL BE SMOOTH INTERIOR HIGH DENSITY POLYETHYLENE PIPE (HDPE) OR APPROVED EQUAL UNLESS OTHERWISE NOTED. ALL PIPE SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. A MINIMUM OF TWO FEET OF COVER SHALL BE PROVIDED OVER THE PIPE PRIOR TO ANY VEHICULAR TRAFFIC. ROOF LEADERS AND FOOTING DRAINS SHALL BE 6" (MIN.) SCHEDULE 40 PVC ASTM D1785.

UTILITY CONSTRUCTION NOTES

1. SEE CT WATER COMPANY DEVELOPER'S HANDBOOK FOR WATER SYSTEM CONSTRUCTION DETAILS.
2. SEE CT NATURAL GAS COMPANY DEVELOPER'S HANDBOOK FOR NATURAL GAS SYSTEM CONSTRUCTION DETAILS.
3. SEE EVERSOURCE, COMCAST, AND FRONTIER COMMUNICATIONS DEVELOPER'S HANDBOOKS FOR ELECTRICAL AND TELECOMMUNICATIONS CONSTRUCTION DETAILS.

STORMWATER SYSTEM OPERATION AND MAINTENANCE

1. THE PROPOSED STORMWATER MANAGEMENT SYSTEM INCLUDES DEEP SUMP CATCH BASINS, A STORMWATER BASIN, AND PREFORMED RIP RAP SCOUR HOLES.
   - 1.1. CATCH BASINS SHALL BE INSPECTED SEMI–ANNUALLY, AS SOON AS POSSIBLE FOLLOWING THE SNOW AND ICE REMOVAL SEASON, PREFERABLY PRIOR TO SPRING RAINFALL EVENTS. CATCH BASIN CLEANING SHOULD OCCUR IF SEDIMENT HAS FILLED ONE HALF OF THE TOTAL SUMP DEPTH (I.E. LESS THAN TWO FEET FROM THE INVERT OF THE OUTLET PIPE TO THE SEDIMENT DEPOSIT.) SEDIMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE REGULATIONS.
   - 1.2. THE STORMWATER BASIN SHALL BE INSPECTED SEMI–ANNUALLY FOR COLLECTED SEDIMENT AND DEBRIS AND SIGNS OF EROSION. THE STORMWATER BASIN SHALL BE CLEANED AND MOWED ANNUALLY. SEDIMENT SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE REGULATIONS.
   - 1.3. THE RIP RAP SCOUR HOLES SHALL BE INSPECTED SEMI–ANNUALLY FOR SIGNS OF SCOUR AND ACCUMULATION OF DEBRIS AND SEDIMENT. IF SCOUR HAS OCCURRED THE RIP RAP AND GRAVEL SHALL BE REPLACED. DEBRIS SHALL BE DISPOSED OF AS REQUIRED.
2. STORMWATER MANAGEMENT SYSTEM MAINTENANCE FREQUENCY MAY BE REDUCED BY IMPLEMENTING A STREET SWEEEPING PROGRAM, TO BE PERFORMED AT LEAST ANNUALLY IMMEDIATELY FOLLOWING THE SNOW AND ICE REMOVAL SEASON.

GRAPHIC SCALE

40 20 10 0 20

(IN FEET)
1 inch = 20 ft.

FOR PERMITTING
05/20/2020

29102
DAVID C. MCKAY, P.E. LICENSE NO. DATE

P:\CIVIL 3D PROJECTS\2020\20-2795-2 DREAM-MS2\DWG\DESIGN\3 SITE PLAN.DWG

CIVIL ENGINEERING LAND SURVEYING LAND USE PLANNING 3D/BIM SERVICES
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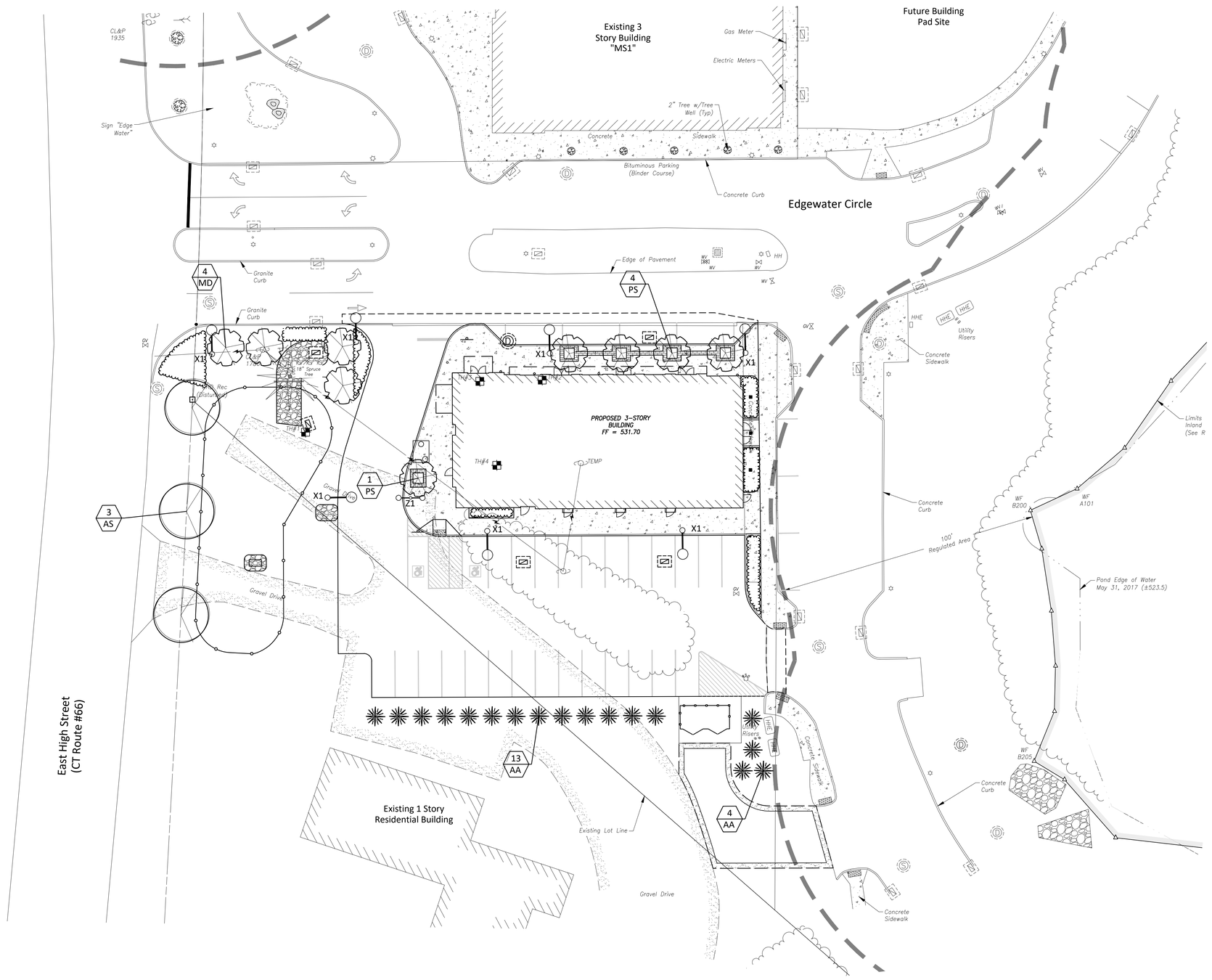

PLANT LIST

CD	BOTANICAL NAME	COMMON NAME	SIZE
DECIDUOUS TREES			
AS	ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN SUGAR MAPLE	3-3.5" CAL.
FLOWERING TREES			
MD	MALUS 'DONALD WYMAN'	DONALD WYMAN	2.5"-3" CAL.
PS	PRUNUS SARGENTII 'COLUMNARIS'	COLUMNAR SARGENT CHERRY	2-2.5" CAL.
EVERGREEN TREES			
AA	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	6' HT.

MARKET SQUARE SHRUB MASSING PALETTE

CD	BOTANICAL NAME	COMMON NAME	SIZE
SHRUBS			
BD	BUDDLEIA BLUE CHIP	BLUE CHIP BUTTERFLY BUSH	24-36" HT.
BX	BUXUS X GREEN VELVET	GREEN VELVET BOXWOOD	18-24" SPD.
CS	CORNUS SERICEA 'BAILEY'	RED TWIGGED DOGWOOD	
EE	EUONYMUS EMERALD GAIETY	VARIEGATED WINTERCREEPER	2-3' HT.
IG	ILEX GLABRA SHAMROCK	SHAMROCK INKBERRY	18-24" SPD.
IA	ILEX VERTICILLATA AFTERGLOW	AFTERGLOW WINTERBERRY	2-3' HT.
IM	ILEX VERTICILLATA JIM DANDY	MALE WINTERBERRY	2-3' HT.
PJ	PIERIS JAP. MOUNTAIN FIRE	MOUNT. FIRE ANDROMEDA	-24" SPD.
PS	PINUS STROBUS SOFT TOUCH	SOFT TOUCH DWARF PINE	18-24" SPD.
PERENNIALS, BULBS AND GRASSES			
CK	CALAMAGROSTIS KARL FOERSTER	FEATHER REED GRASS	2 GAL. POT
EM	ECHINACEA P. MAGNUS	MAGNUS CONEFLOWER	5 PT. POT
HD	HEMEROCALLIS DARING DECEPTION	REBLOOMING PURPLE DAYLILY	5 PT. POT
HS	HEMEROCALLIS STELLA D'ORO	REBLOOMING YELLOW DAYLILY	5 PT. POT
IV	IRIS VERSICOLOR	BLUE FLAG	2" PLUG 18" O.C.
IS	IRIS SIBERICA	SIBERIAN IRIS	5 PT. POT
LS	LEUCANTHEMUM SUPERBUM BECKY	DWARF SHASTA DAISY	5 PT. POT
LK	LIATRIS SPICATA KOBOLD	GAYFEATHER	5 PT. POT
LM	LIRIOPE MUSCARI BIG BLUE	BIG BLUE LIRIOPE	GAL. POT
NR	NEPETA X FAASSENII 'WALKER'S LOW'	WALKER'S LOW CATMINT	GAL. POT
NI	NARCISSUS ICE FOLLIES	ICE FOLLIES DAFFODIL	TOP SIZE BULBS
PV	PANICUM V. HEAVY METAL	BLUE SWITCH GRASS	2 GAL. POT
PA	PENNISETUM ALOPICUROIDES	FOUNTAIN GRASS	2 GAL. POT
PB	PHLOX SUB. EMERALD CUSHION BLUE	BLUE CREEPING PHLOX	GAL. POT
RG	RUDBECKIA F. GOLDSTRUM	BLACK EYED SUSAN	GAL. POT
SA	SEDUM NEON	NEON SEDUM	GAL. POT
SB	SEDUM BLACKJACK	BLACKJACK SEDUM	GAL. POT
SH	STACHYS B. HELENE VAN STEIN	BIG EARS LAMB'S EARS	GAL. POT
TC	TULIPA C. LADY JANE	LADY JANE SPECIES TULIP	TOP SIZE BULBS
TG	TULIPA G. RED RIDING HOOD	RED SPECIES TULIP	TOP SIZE BULBS
WW	WEIGELA FLORIDA 'WINE AND ROSES'	WINE AND ROSES WEIGLEA	3 PT. POT

LEGEND & ABBREVIATIONS

- DECIDUOUS TREES
- MARKET SHRUB MASSING
- FLOWERING TREES
- EVERGREEN TREES
- X1 — SINGLE FIXTURE OFFSET LIGHT POLE
- Z1 — DOUBLE FIXTURE OFFSET LIGHT POLE
- 1 / AS — LANDSCAPE MATERIAL IDENTIFIER

GRAPHIC SCALE

40 20 10 0 20

(IN FEET)
1 inch = 20 ft.

FOR PERMITTING
05/20/2020

29102
DAVID C. MCKAY, P.E. LICENSE NO. DATE

P:\CIVIL 3D PROJECTS\2020\20-2795-2 DREAM-MS2\DWG\DESIGN\3 SITE PLAN.DWG

CIVIL ENGINEERING LAND SURVEYING LAND USE PLANNING SOIL SCIENCE
BOUNDARIES
Boundaries LLC
179 Pachaug River Drive Gilman, CT 06351
T 860.376.2006 | www.boundariesllc.net

Site Development Plan
"Site Lighting and Landscaping Plan"
Prepared for
Edgewater Hill Enterprises, LLC
000 East High Street (CT Route 66) - East Hampton, Connecticut

SCALE: 1" = 20'
DATE: May 2020
JOB I.D. NO. 20-2795-2
Revisions

SHEET NO.
6
12

Existing 3 Story Building "MS1"

Future Building Pad Site

Edgewater Circle

East High Street (CT Route #66)

Existing 1 Story Residential Building

PROPOSED 3-STORY BUILDING FF = 531.70

PROVIDE INLET PROTECTION

COORDINATE WITH EVERSOURCE TO REMOVE POLE AND EXISTING OVERHEAD UTILITIES

CLEAR AND GRUB TREES AND VEGETATION

PROVIDE AND MAINTAIN HAY BALE BARRIER AT INLET ORIFICES AND WRAP TRASH RACK IN FILTER FABRIC UNTIL UPGRADIENT STABILIZATION IS ACHIEVED.

PROVIDE CONTINUOUS SEDIMENT FENCE BARRIER AT DOWNGRADIENT LIMIT OF DISTURBANCE

PROVIDE TEMPORARY SEDIMENT TRAP TO REMAIN AFTER CONSTRUCTION MAXIMUM CONTRIBUTING AREA = 0.7 ACRES STORAGE VOLUME REQUIRED FOR 1.34 CY/ACRE = 93.8 CY STORAGE VOLUME PROVIDED = 177.8 CY FROM EL. 526 TO TOP OF FRAME

AFTER STABILIZATION OF UPGRADIENT AREAS, REMOVE AND DISPOSE OF COLLECTED SEDIMENT IN SEDIMENT TRAP AND SEED WITH GRASS

PROVIDE EROSION CONTROL BLANKET ON ALL 2H:1V SLOPES

REMOVE VEGETATION AND STRIP TOPSOIL FROM PROPOSED DEVELOPMENT AREAS. STOCKPILE TOPSOIL FOR REUSE.

PROPOSED ACCESS, DRAINAGE AND LANDSCAPING EASEMENT FROM EDGEWATER HILL ENTERPRISES, LLC (128 EAST HIGH STREET) TO EDGEWATER HILL ENTERPRISES, LLC AREA: ±10,111 SF

CLEAR AND GRUB EXISTING TREES

PROPOSED ACCESS EASEMENT FROM EDGEWATER HILL ENTERPRISES, LLC TO EDGEWATER HILL ENTERPRISES, LLC (128 EAST HIGH STREET) AREA: ±773 SF

PROVIDE 24'x50' ANTI-TRACKING PAD

PROVIDE CONTINUOUS SEDIMENT FENCE BARRIER (TURBIDITY CURTAIN IN OPEN WATER) AT DOWNGRADIENT LIMIT OF DISTURBANCE

Pond Edge of Water May 31, 2017 (±523.5)

100' Regulated Area

Limits Inland (See R

Gravel Drive

Existing Lot Line

CHD Rec w/Disc w/Witness Iron Pipe

CL&P 1935

CL&P 1786

Sign "Edge Water"

Gas Meter

Electric Meters

2" Tree w/Tree Well (Typ)

Concrete Sidewalk

Bituminous Parking (Binder Course)

Concrete Curb

Granite Curb

Edge of Pavement

Utility Risers

Concrete Curb

Concrete Sidewalk

WF B200

WF A101

WF B205

HHE

GV

WV

TEMP

TH#4

N21°50'22"E 130.52'

186.97' N30°01'24"W

155.18' N71°26'32"W

82.10' (Reference Only)

40.37' (Reference Only)

S71°24'44"E 45.90'

36.30' N30°01'24"W

N19°00'17"E 24.60'

N71°24'44"W 18.49'

24.49' (Reference Only)

16.19' (Reference Only)

186.13' (Reference Only)

214.60' (Reference Only)

GRAPHIC SCALE

40 20 10 0 20

(IN FEET)
1 inch = 20 ft.

FOR PERMITTING
05/20/2020

29102
DAVID C. MCKAY, P.E. LICENSE NO. DATE

P:\CIVIL 3D PROJECTS\2020\20-2795-2 DREAM-MS2\DWG\DESIGN\3 SITE PLAN.DWG

CIVIL ENGINEERING LAND SURVEYING LAND USE PLANNING GIS EXPERT
BOUNDARIES
Boundaries LLC
179 Pachaug River Drive, Gilman, CT 06351
T 860.376.2006 | www.boundariesllc.net

Site Development Plan
"Logistics and Erosion & Sedimentation Control Plan"
Prepared for
Edgewater Hill Enterprises, LLC
000 East High Street (CT Route 66) - East Hampton, Connecticut

SCALE: 1" = 20'
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7
12

NARRATIVE

THIS PROPOSAL INVOLVES THE CONTINUED DEVELOPMENT OF THE MASTER PLAN FOR THE EDGEWATER HILL MIXED USE DEVELOPMENT DISTRICT. THE PROPOSED PHASE INCLUDES A NEW 5,700 SQUARE FOOT, THREE STORY MIXED USE BUILDING AND SUPPORTING UTILITIES AND INFRASTRUCTURE.

PRIMARY ACCESS TO THE NEW BUILDING WILL BE VIA EDGEWATER CIRCLE, CONSTRUCTED DURING PREVIOUS PHASES OF THE DEVELOPMENT.

ON-SITE IMPROVEMENTS WILL INCLUDE: VEHICULAR ACCESS AND CIRCULATION DRIVES; VEHICLE PARKING AREAS; PEDESTRIAN SIDEWALKS; STORMWATER MANAGEMENT IMPROVEMENTS; POTABLE AND FIRE PROTECTION WATER SERVICES; SEWER, GAS AND ELECTRICAL UTILITIES; LIGHTING; AND LANDSCAPING.

INLAND WETLANDS LOCATED UPON THE SUBJECT PROPERTY ARE AS SHOWN ON THE APPROVED EDGEWATER HILL MASTER PLAN, AND PERMITS TO CONDUCT REGULATED ACTIVITIES FOR THE WORK CONTEMPLATED HEREON MUST BE OBTAINED FROM THE MUNICIPAL WETLANDS AND WATERCOURSES AGENCY.

CONTINUOUS SEDIMENT BARRIERS WILL BE INSTALLED AT LOCATIONS SHOWN ON THIS PLAN PRIOR TO ANY EARTHWORK OPERATIONS. THESE MEASURES WILL BE MAINTAINED UNTIL ALL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.

REFERENCE IS MADE TO:

1. CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, MAY 2002.
2. UNITED STATES DEPARTMENT OF AGRICULTURE (USDA), NATURAL RESOURCES CONSERVATION SERVICE (NRCS), WEB SOIL SURVEY (WSS) FOR THE STATE OF CONNECTICUT.

DEVELOPMENT SCHEDULE:

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS TO SCHEDULE A MANDATORY PRE-CONSTRUCTION MEETING ON SITE TO DISCUSS ISSUES AS THEY RELATE TO THE PROPOSED PROJECT. THESE ISSUES WILL INCLUDE BUT NOT BE LIMITED TO:
1. RESOURCE PROTECTION.
2. CONSTRUCTION VEHICLE ACCESS, PARKING, AND FUELING.
3. CONSTRUCTION METHODS AND SCHEDULING.
4. EXISTING SITE UTILITIES AND MARK-OUT COORDINATION.
5. MATERIAL DELIVERY AND STOCKPILING.
6. SITE INSPECTION PROCEDURES AND AS-BUILT DRAWINGS.

SUGGESTED SEQUENCE OF CONSTRUCTION:

PHASE 1 – INSTALLATION OF EROSION CONTROLS

1. OBTAIN APPROPRIATE PERMITS, NOTIFY TOWN OFFICIALS OF CONSTRUCTION COMMENCEMENT, AND SUBMIT CONSTRUCTION TIMETABLE.
2. FLAG THE LIMITS OF CONSTRUCTION AND CLEARING LIMITS.
3. INSTALL THE CONSTRUCTION ENTRANCE/ANTI-TRACKING PAD AND CONTRACTOR PARKING/LAYDOWN AREA.
4. ON-SITE CONSTRUCTION SEQUENCE SHALL START WITH THE MINIMUM AMOUNT OF CLEARING REQUIRED TO INSTALL GEOTEXTILE SEDIMENT FENCE, SEDIMENT AND EROSION CONTROL BERMS, AND/OR HAY/STRAW BALES AS SHOWN ON PLAN.
5. INSTALL SEDIMENT FENCE AND HAY/STRAW BALES AS SHOWN ON THE PLANS OR AS REQUIRED. CONSTRUCT TOP AND TOE OF SLOPE SWALES, TEMPORARY SEDIMENT TRAPS, WATER BARS AND CHECK DAMS AS SHOWN ON THE PLANS.
6. FOLLOWING INSTALLATION OF THE EROSION CONTROLS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR INSPECTION AND APPROVAL OF INSTALLED MEASURES. NO WORK SHALL COMMENCE UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED AND APPROVED BY THE ENGINEER.

PHASE 2 – SITE PREPARATION

1. STRIP AND STOCKPILE TOPSOIL FROM PROPOSED GRADING AREAS AFTER EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED. THE TOPSOIL SHALL BE SEEDED IMMEDIATELY AFTER STOCKPILING IN ORDER TO STABILIZE THE SLOPE AND LIMIT SEDIMENT RUNOFF. ALL STOCKPILED TOPSOIL SHALL BE SEEDED AND MULCHED WHEN IT IS TO BE STORED FOR MORE THAN 21 DAYS FROM TIME OF STOCKPILING.
2. PERFORM MASS EARTHWORK AS REQUIRED TO ESTABLISH ROUGH GRADES. ALL CUTS AND FILLS REQUIRED. ESTABLISH THE SUBGRADE FOR THE TOPSOIL AREAS, PARKING AND ROADWAY AS REQUIRED AND BENCH THE BUILDING TO A SUBGRADE. ALLOW A REASONABLE AMOUNT OF AREA AROUND THE FOOTPRINT OF THE BUILDING FOR THE CONSTRUCTION ACTIVITIES.
3. COMPACT SUBGRADE TO 95% MAXIMUM DENSITY PRIOR TO PLACING FILL OR SUBBASE FOR PAVED AREAS.

PHASE 3 – SITE IMPROVEMENTS AND BUILDING CONSTRUCTION

1. BEGIN CONSTRUCTION OF THE BUILDING.
2. INSTALL ALL SANITARY SEWERS, WATER MAINS, STORMWATER MANAGEMENT IMPROVEMENTS, AND UTILITIES TO WITHIN 5 FEET OF THE BUILDING.
3. PREPARE SUB-BASE FOR PARKING AREAS, ACCESS AND CIRCULATION DRIVES, SLOPES AND ANY OTHER AREA OF DISTURBANCE FOR FINAL GRADING.
4. INSTALL SUB-BASE AND BASE COURSES OF GRAVEL IN SIDEWALKS, PARKING AREAS, ACCESS AND CIRCULATION DRIVES.
5. PLACE TOPSOIL WHERE REQUIRED. COMPLETE THE PERIMETER LANDSCAPE PLANTINGS AND INSTALL LIGHTING.
6. FINE GRADE, RAKE, SEED AND MULCH TO WITHIN 2 FEET OF THE CURBING.
7. UPON SUBSTANTIAL COMPLETION OF THE BUILDING, COMPLETE THE BALANCE OF SITE WORK AND STABILIZATION OF ALL OTHER DISTURBED AREAS. INSTALL FIRST COURSE OF PAVING.

PHASE 4 – FINAL SEEDING AND CLEANUP

1. WHEN ALL OTHER WORK HAS BEEN COMPLETED, REPAIR AND SWEEP ALL PAVED AREAS FOR THE FINAL COURSE OF PAVING. INSPECT THE DRAINAGE SYSTEM AND CLEAN AS NEEDED.
2. INSTALL FINAL COURSE OF PAVEMENT ON ROADWAYS, ACCESS AND CIRCULATION DRIVES, AND PARKING AREAS.
3. ALL DISTURBED AREAS SHALL BE PREPARED WITH TOPSOIL AND SEEDED AND MULCHED ACCORDING TO THIS PLAN.
4. AFTER ALL FINAL GRADED DISTURBED AREAS HAVE BEEN STABILIZED, REMOVE ALL EROSION AND SEDIMENT STRUCTURES. CLEAN ALL STORMWATER STRUCTURES OF SEDIMENT AND DEBRIS.

ANTICIPATED CONSTRUCTION SCHEDULE

NO.	PHASE DESCRIPTION	ESTIMATED DURATION
1	INSTALLATION OF EROSION CONTROLS	1 WEEK
2	SITE PREPARATION	1 MONTH
3	SITE UTILITIES AND BUILDING CONSTRUCTION	6 MONTHS
4	SIDEWALKS, PAVING, FINAL SEEDING AND CLEANUP	1 MONTH

EROSION CONTROL OPERATION & MAINTENANCE:

THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE PROJECT. NO CONSTRUCTION SHALL PROCEED UNTIL PROPER SEDIMENTATION AND EROSION CONTROL METHODS HAVE BEEN INSTALLED AS THE SEQUENCE OF CONSTRUCTION NECESSITATES.

MAINTENANCE OF EROSION AND SEDIMENT CONTROLS SHALL BE COMPLETED IN ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL (2002). THE GUIDELINES ARE AVAILABLE ELECTRONICALLY AT https://portal.ct.gov/DEEP/Water/Soil-Erosion-and-Sediment-Control-Guidelines/Guidelines-for-Soil-Erosion-and-Sediment-Control. A SUMMARY OF THE MAINTENANCE REQUIREMENTS FOR THE PROJECT IS PROVIDED BELOW.

DURING CONSTRUCTION, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN PROPER WORKING ORDER. DISTURBED AREAS SHALL BE KEPT TO A MINIMUM AND SHALL ONLY TAKE PLACE WHERE IMMEDIATELY REQUIRED TO FURTHER CONSTRUCTION. IT IS DESIRABLE FROM AN EROSION PREVENTION PERSPECTIVE TO MINIMIZE DISTURBED AREAS. FINAL GRADING AND SEEDING SHALL TAKE PLACE AS SOON AS PRACTICABLE.

A RAIN GAUGE SHALL BE PLACED AT THE PROJECT IN A WORKABLE LOCATION AND MONITORED DURING RAINFALL PERIODS UNTIL ALL DISTURBED AREAS ARE STABILIZED.

EVERY PRECAUTION SHALL BE USED DURING CONSTRUCTION TO PREVENT AND MINIMIZE THE DEGRADATION OF THE EXISTING WATER QUALITY FROM STORMWATER RUNOFF DURING CONSTRUCTION. ALL ACTIVITIES SHALL BE IN CONFORMANCE TO AND CONSISTENT WITH ALL APPLICABLE WATER QUALITY STANDARDS AND MANAGEMENT PRACTICES AS SET FORTH BY LOCAL, STATE AND FEDERAL AGENCIES.

THE SITE CONTRACTOR SHALL APPOINT AN ONSITE AGENT WHO SHALL BE PERSONALLY RESPONSIBLE FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN AND ENFORCING THE PRESCRIBED SAFEGUARDS DURING THE EXCAVATION AND OPERATION PERIOD. THE NAME AND CONTACT INFORMATION FOR THE EROSION CONTROL AGENT SHALL BE SUPPLIED TO THE MUNICIPAL ZONING OFFICIAL.

THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES THROUGHOUT THE PROJECT, INFORMING ALL PARTIES ENGAGED ON SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN, NOTIFYING THE PROPER AGENCY AND OFFICIALS OF ANY TRANSFER OF THIS RESPONSIBILITY.

ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REPAIRED, CLEANED AND/OR REPLACED AS NECESSARY THROUGHOUT THE PROJECT IN ORDER TO MAINTAIN COMPLETE AND INTEGRAL EROSION AND SEDIMENT CONTROL PROTECTION. ONCE IN PLACE, ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO REMAIN IN PLACE IN PROPER CONDITION AND BE CONTINUOUSLY MAINTAINED UNTIL FINAL SITE STABILIZATION HAS BEEN COMPLETED. FOLLOWING SUCH PERMANENT STABILIZATION, THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE DISMANTLED, REMOVED, AND DISPOSED OF IN AN APPROVED MANNER. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES BEYOND THOSE SHOWN ON THE PLANS OR PRESCRIBED HEREIN SHALL BE PUT IN PLACE, WHENEVER NECESSARY, TO ADDRESS FIELD CONDITIONS AND/OR AS ORDERED BY THE ENGINEER OR THE MUNICIPAL ZONING OFFICIAL.

QUALIFIED PERSONNEL PROVIDED BY THE SITE CONTRACTOR SHALL INSPECT DISTURBED AREAS AND THE LOCATIONS WHERE VEHICLES ENTER AND LEAVE THE SITE. THESE AREAS SHALL BE INSPECTED AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND WITHIN TWENTY-FOUR HOURS AT THE END OF A STORM THAT IS 0.1 INCHES OR GREATER. ADDITIONAL MEASURES BEYOND THOSE INDICATED AND/OR SHOWN ON THIS PLAN SET OR PRESCRIBED HEREIN SHALL BE PUT IN PLACE, WHENEVER NECESSARY, TO ADDRESS FIELD CONDITIONS AND/OR AS ORDERED BY THE ENGINEER. WHERE SITES HAVE BEEN TEMPORARILY OR FINALLY STABILIZED, SUCH INSPECTION SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH FOR THREE CONSECUTIVE MONTHS.

NO SOIL, FILL OR OTHER MATERIALS SHALL BE DEPOSITED IN SURROUNDING INLAND WETLANDS UNLESS PERMITTED BY THE LOCAL REGULATORY AUTHORITY.

ALL TEMPORARY STORAGE AND/OR STOCKPILE AREAS SHALL BE PROPERLY STABILIZED TO PREVENT EROSION AND SUITABLY CONTAINED TO PREVENT TURBID RUNOFF.

DUMPING OF OIL OR OTHER DELETERIOUS MATERIALS ON THE GROUND IS FORBIDDEN. THE APPLICANT SHALL PROVIDE A MEANS OF CATCHING, RETAINING AND PROPERLY DISPOSING OF DRAINED OIL, REMOVED OIL FILTERS, OR OTHER DELETERIOUS MATERIAL FROM EQUIPMENT USED ON SITE. VEHICLE MAINTENANCE SHALL BE COMPLETED OFF SITE. ALL OIL SPILLS SHALL BE IMMEDIATELY REPORTED TO THE DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION/HAZARDOUS MATERIALS OFFICE. FAILURE TO DO SO MAY RESULT IN THE IMPOSITION OF FINES UNDER THE APPLICABLE CONNECTICUT GENERAL STATUTES.

DURING CONSTRUCTION, THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE INSPECTION AND MAINTENANCE TO ASSURE PROPER PERFORMANCE OF EROSION CONTROL MEASURES. INSPECTION AND MAINTENANCE SHALL INCLUDE, AT A MINIMUM, THE FOLLOWING:

- INSPECT ALL SEDIMENT FENCE AND OTHER EROSION CONTROL MEASURES. REPAIR OR REPLACE ANY DAMAGED PORTION IN ORDER TO INSURE ITS PROPER AND EFFECTIVE OPERATION. REMOVE ACCUMULATED SEDIMENT IF REQUIRED (GREATER THAN 4" DEPTH).
- INSPECT ALL STOCKPILES. REPAIR OR REPLACE ANY DAMAGED PORTION OF EROSION CONTROL MEASURES SURROUNDING THESE AREAS IN ORDER TO PREVENT SEDIMENTATION DOWNGRADIENT.
- INSPECT GRASS RESTORED AREAS. REVEGETATE ANY ERODED OR DISTURBED AREAS TO PROVIDE PERMANENT STABILIZATION. RESEED AND/OR REVEGETATE ANY AREAS THAT DO NOT HAVE A SUITABLE STAND OF GRASS OR ANY SCOURED AREAS TO PROVIDE PERMANENT STABILIZATION.
- INSPECT ANTI-TRACKING PAD. REMOVE AND DISPOSE OF PAD AND REPLACE IF PAD IS NO LONGER FUNCTIONING EFFICIENTLY OR ACCUMULATED SEDIMENT IS TO A DEPTH OF 2" BELOW THE STONE SURFACE.
- INSPECT DOWNGRADIENT AREAS OF ALL STORMWATER DISCHARGES AND DEVELOPMENT AREAS. STABILIZE ANY ERODED AREAS IF FOUND.
- INSPECT ROADWAYS ADJACENT TO THE SITE DAILY. SWEEP OR VACUUM TO REMOVE VISIBLE ACCUMULATED SEDIMENT.

EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S)

MINIMIZE DISTURBED AREA AND PROTECT NATURAL FEATURES AND SOIL

TOPSOIL:

TOPSOIL WILL BE REMOVED AND STOCKPILED ON SITE AND UTILIZED FOR FINAL GRADING. ADDITIONAL TOPSOIL, IF REQUIRED, WILL BE SUPPLIED FROM AN OFF-SITE SOURCE. EXCESS MATERIALS RESULTING FROM "CUT SLOPES" IN THE AREAS OF THE PROPOSED CONSTRUCTION THAT ARE NOT INTENDED FOR REUSE WILL BE IMMEDIATELY REMOVED FROM THE SITE. WHEN SOIL IS STOCKPILED, THE SLOPE OF THE STOCKPILE WILL NOT EXCEED 2 HORIZONTAL TO 1 VERTICAL.

INSTALLATION SCHEDULE: AS NOTED, EXCAVATED TOPSOIL WILL BE STOCKPILED ON SITE. SEDIMENT FENCE OR WOOD CHIP BERMS WILL BE PLACED AROUND ANY STOCKPILES THAT ARE NOT IMMEDIATELY REMOVED FROM THE SITE TO PROTECT THE EXISTING DRAINAGE DITCHES AND OFF SITE AREAS.

MAINTENANCE AND INSPECTION: THE CUT AND FILL AREAS WILL BE INSPECTED WEEKLY FOR EROSION. THESE AREAS WILL BE STABILIZED IMMEDIATELY WITH EROSION CONTROLS OR GRADED TO AVOID POSSIBLE DISTURBANCE TO THE EXISTING DRAINAGE DITCHES OR OFF SITE AREAS. SEE ALSO MAINTENANCE AND INSPECTION PROCEDURES FOR SILT FENCE.

CONTROL STORMWATER FLOWING ONTO AND THROUGH THE PROJECT

AREA FOR SILT TO ACCUMULATE:

BMP/INSTALLATION SCHEDULE: BEFORE ANY GRADING OPERATIONS BEGIN, A SEDIMENT AND EROSION CONTROL BERM OR SEDIMENT FENCE WILL BE INSTALLED ADJACENT TO THE AREAS UNDER CONSTRUCTION JUST OUTSIDE THE LIMITS OF DISTURBANCE.

OTHER ADJACENT OFF SITE AREAS WILL ALWAYS BE PROTECTED BY A SEDIMENT FENCE OR ANOTHER BMP UNTIL FINAL STABILIZATION IS ACHIEVED.

MAINTENANCE AND INSPECTION: THE GRADED AREAS AND SEDIMENT FENCE WILL BE INSPECTED WEEKLY TO ENSURE THAT THERE ARE NO STRUCTURAL FAILURES AND IMMEDIATELY AFTER RAIN EVENTS.

CONSTRUCTION SPECIFICATIONS

SEDIMENT FENCE:

1. THE MATERIAL FOR SEDIMENT FENCES SHOULD BE A PERVIOUS SHEET OF SYNTHETIC FABRIC SUCH AS POLYPROPYLENE, NYLON, POLYESTER, OR POLYETHYLENE YARN.
2. THE STAKES USED TO ANCHOR THE FILTER FABRIC SHOULD BE WOOD OR METAL. WOODEN STAKES SHOULD BE AT LEAST 3 FEET LONG AND HAVE A MINIMUM DIAMETER OF 1-1/2 INCHES.
3. ERECT SEDIMENT FENCE IN A CONTINUOUS FASHION FROM A SINGLE ROLL OF FABRIC TO ELIMINATE GAPS IN THE FENCE. IF A CONTINUOUS ROLL OF FABRIC IS NOT AVAILABLE, OVERLAP THE FABRIC FROM BOTH DIRECTIONS ONLY AT STAKES OR POSTS. OVERLAP AT LEAST 6 INCHES. EXCAVATE A TRENCH TO BURY THE BOTTOM OF THE FABRIC FENCE AT LEAST 6 INCHES BELOW THE GROUND SURFACE. THIS HELPS TO PREVENT GAPS FROM FORMING NEAR THE GROUND SURFACE. GAPS WOULD MAKE THE FENCING USELESS AS A SEDIMENT BARRIER.
4. THE HEIGHT OF THE FENCE POSTS SHOULD BE 16 TO 34 INCHES ABOVE THE ORIGINAL GROUND SURFACE. SPACE THE POSTS NO MORE THAN 10 FEET APART.
5. THE FENCE SHOULD BE DESIGNED TO WITHSTAND THE RUNOFF FROM A 10-YEAR PEAK STORM EVENT. ONCE INSTALLED, IT SHOULD REMAIN IN PLACE UNTIL ALL AREAS UPSLOPE HAVE BEEN PERMANENTLY STABILIZED BY VEGETATION OR OTHER MEANS.

INSTALLATION:

1. DIG A 6" DEEP TRENCH ON THE UPHILL SIDE OF THE PROPOSED BARRIER LOCATION.
2. POSITION THE POSTS ON THE DOWNHILL SIDE OF THE FABRIC BARRIER AND DRIVE THE POST 12" INTO THE GROUND.
3. LAY THE BOTTOM 6" OF THE FABRIC BARRIER IN THE TRENCH TO PREVENT UNDERMINING AND BACKFILL.

MAINTENANCE:

1. SEDIMENT SHOULD BE REMOVED ONCE IT HAS ACCUMULATED TO 4" DEPTH.
2. FILTER FABRIC SHOULD BE REPLACED WHENEVER IT HAS DETERIORATED TO SUCH AN EXTENT THAT THE EFFECTIVENESS OF THE FABRIC IS REDUCED (APPROXIMATELY SIX MONTHS).
3. SEDIMENT FENCE SHOULD REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN PERMANENTLY STABILIZED.
4. ALL SEDIMENT ACCUMULATED AT THE FENCE SHOULD BE REMOVED AND PROPERLY DISPOSED OF BEFORE THE FENCE IS REMOVED.

INSPECTION:

1. INSPECT SEDIMENT FENCE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF STORM EVENTS SUCH AS INTERMITTENT SHOWERS OVER ONE OR MORE DAYS) AND WITHIN 24 HOURS AFTER THE END OF A STORM EVENT OF 0.1 INCHES OR GREATER, AND AT LEAST ONCE EVERY SEVEN CALENDAR DAYS, AT LEAST 72 HOURS APART.
2. WHERE SITES HAVE BEEN FINALLY OR TEMPORARILY STABILIZED, SUCH INSPECTIONS MAY BE CONDUCTED ONCE PER MONTH.

HAY/STRAW BALE BARRIER

INSTALLATION:

1. EXCAVATE TRENCH 4" AND PLACE MATERIAL UP SLOPE OF TRENCH.
2. PLACE BALES IN A SINGLE ROW IN THE TRENCH, LENGTHWISE, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER AND THE BINDINGS ORIENTED AROUND THE SIDES RATHER THAN ALONG THE TOPS AND BOTTOMS OF THE BALES (TO AVOID PREMATURE ROTTING OF THE BINDINGS).
3. ANCHOR EACH BALE WITH AT LEAST 2 STAKES, DRIVING THE FIRST STAKE IN EACH BALE TOWARD THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER. STAKES MUST BE DRIVEN A MINIMUM OF 18 INCHES INTO THE GROUND. FILL ANY GAPS BETWEEN THE BALES WITH STRAW TO PREVENT WATER FROM ESCAPING BETWEEN THE BALES.
4. BACKFILL THE BALES WITH THE EXCAVATED TRENCH MATERIAL TO A MINIMUM DEPTH OF 4 INCHES ON THE UPHILL SIDE OF THE BALES. TAMP BY HAND OR MACHINE AND COMPACT THE SOIL. LOOSE HAY/STRAW SCATTERED OVER THE DISTURBED AREA IMMEDIATELY UPHILL FROM THE HAY BALE BARRIER TENDS TO INCREASE BARRIER EFFICIENCY.

MAINTENANCE

1. INSPECT THE HAY/STRAW BALE BARRIER AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.1 INCH OR GREATER TO DETERMINE MAINTENANCE NEEDS. FOR DEWATERING OPERATIONS, INSPECT FREQUENTLY BEFORE, DURING, AND AFTER PUMPING OPERATIONS. REMOVE THE SEDIMENT DEPOSITS WHEN SEDIMENT DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHT OF THE BARRIER.
2. REPLACE OR REPAIR THE BARRIER WITHIN 24 HOURS OF OBSERVED FAILURE. FAILURE OF THE BARRIER HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BY THE BARRIER BECAUSE:
   (a) THE BARRIER HAS BEEN OVERTOPPED, UNDERCUT OR BYPASSED BY RUNOFF WATER,
   (b) THE BARRIER HAS BEEN MOVED OUT OF POSITION, OR
   (c) THE BALES HAVE DETERIORATED OR BEEN DAMAGED.
3. WHEN REPETITIVE FAILURES OCCUR AT THE SAME LOCATION, REVIEW CONDITIONS AND LIMITATIONS FOR USE AND DETERMINE IF ADDITIONAL CONTROLS ARE NEEDED TO REDUCE FAILURE RATE OR REPLACE HAY/STRAW BALE BARRIER.
4. MAINTAIN THE HAY/STRAW BALE BARRIER UNTIL THE CONTRIBUTING AREA IS STABILIZED. AFTER THE UP SLOPE AREAS HAVE BEEN PERMANENTLY STABILIZED, PULL THE STAKES OUT OF THE HAY BALES. REMOVE SEDIMENT.

DUST CONTROL:

DUST FROM THE SITE WILL BE CONTROLLED BY USING A MOBILE PRESSURE-TYPE DISTRIBUTOR TRUCK THAT WILL APPLY POTABLE WATER AT RATE OF 300 GALLONS PER ACRE AND MINIMIZED AS NEEDED TO AVOID PONDING.

INSTALLATION SCHEDULE: DUST CONTROL WILL BE IMPLEMENTED AS NEEDED ONCE SITE GRADING HAS BEEN INITIATED, AND DURING WINDY CONDITIONS EXCEEDING 20MPH, WHILE SITE GRADING IS OCCURRING. SPRAYING OF WATER WILL BE PERFORMED ONCE PER DAY DURING THE MONTHS OF MARCH THROUGH MAY AND NO MORE THAN THREE TIMES PER DAY FROM JUNE TO SEPTEMBER OR WHENEVER DRYNESS OF SOIL WARRANTS IT.

MAINTENANCE SCHEDULE: AT LEAST ONE MOBILE UNIT WILL BE AVAILABLE AT ALL TIMES DURING CONSTRUCTION TO APPLY WATER. EACH MOBILE UNIT SHALL BE EQUIPPED WITH A POSITIVE SHUTOFF VALVE TO PREVENT OVER WATERING OF DISTURBED AREAS.

SOIL STABILIZATION

FINAL STABILIZATION:

PERMANENT SEEDING SHOULD BE APPLIED IMMEDIATELY AFTER THE FINAL DESIGN GRADES ARE ACHIEVED AT THE SITE BUT NO LATER THAN 14 DAYS AFTER CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED. AFTER THE ENTIRE SITE IS STABILIZED, ANY SEDIMENT THAT HAS ACCUMULATED WILL BE REMOVED AND HAULED OFF SITE TO A LICENSED LANDFILL FACILITY. CONSTRUCTION DEBRIS, TRASH, AND TEMPORARY BMP'S WILL ALSO BE REMOVED AND ANY AREAS DISTURBED DURING REMOVAL WILL BE SEEDED IMMEDIATELY.

SEEDBED PREPARATION:

1. TOPSOIL WILL BE SPREAD OVER FINAL GRADED AREAS AT A MINIMUM DEPTH OF FOUR INCHES. TOPSOIL SHALL INCLUSIVELY MEAN A SOIL MEETING ONE OF THE FOLLOWING SOIL TEXTURAL CLASSES ESTABLISHED BY THE UNITED STATES DEPARTMENT OF AGRICULTURE CLASSIFICATION SYSTEM BASED UPON THE PROPORTION OF SAND, SILT, AND CLAY SIZE PARTICLES AFTER PASSING A 2 MILLIMETER (MM) SIEVE AND SUBJECTED TO A PARTICLE SIZE ANALYSIS:

1.1. LOAMY SAND, INCLUDING COARSE, LOAMY FINE, AND LOAMY VERY FINE SAND, SANDY LOAM, INCLUDING COARSE, FINE AND VERY FINE SANDY LOAM, LOAM, OR SILT LOAM WITH NOT MORE THAN 60% SILT;
1.2. CONTAINING NOT LESS THAN 6% AND NOT MORE THAN 20% ORGANIC MATTER AS DETERMINED BY LOSS-ON-IGNITION OF OVEN DRIED SAMPLES DRIED AT 105 DEGREES CENTIGRADE;
1.3. POSSESSING A PH RANGE OF 6.0-7.5, EXCEPT IF THE VEGETATIVE PRACTICE BEING USED SPECIFICALLY REQUIRES A LOWER PH, THEN PH MAY BE ADJUSTED ACCORDINGLY;
1.4. HAVING SOLUBLE SALTS NOT EXCEEDING 500 PPM;
1.5. AND THAT IS LOOSE AND FRIABLE AND FREE FROM REFUSE, STUMPS, ROOTS, BRUSH, WEEDS, FROZEN PARTICLES, ROCKS, AND STONES OVER 1.25 INCHES IN DIAMETER, AND ANY MATERIAL THAT WILL PREVENT THE FORMATION OF A SUITABLE SEEDBED OR PREVENT SEED GERMINATION AND PLANT GROWTH.

2. FERTILIZER WILL BE APPLIED TO THE SEEDBED AS NEEDED. FERTILIZERS WILL BE COMMERCIAL TYPE OF UNIFORM COMPOSITION, FREE-FLOWING AND CONFORMING TO THE APPLICABLE STATE AND FEDERAL LAWS. CHOOSE NATIVE SPECIES THAT ARE ADAPTED TO LOCAL WEATHER AND SOIL CONDITIONS WHEREVER POSSIBLE TO REDUCE WATER AND FERTILIZER INPUTS AND LOWER MAINTENANCE OVERALL.
3. TOPSOIL WILL BE LOOSENED BY RAKING, TILLING OR OTHER SUITABLE METHODS.

FINAL STABILIZATION SHOULD BE INSTALLED ON PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE PERMANENTLY CEASED BUT NO LATER THAN 14 DAYS AFTER CONSTRUCTION CEASES.

ALL SEEDED AREAS WILL BE INSPECTED WEEKLY DURING CONSTRUCTION ACTIVITIES FOR FAILURE UNTIL A DENSE COVER OF VEGETATION HAS BEEN ESTABLISHED. IF FAILURE IS NOTICED ON THE SEEDED AREA, THE AREA WILL BE RESEEDED, FERTILIZED AND MULCHED IMMEDIATELY. AFTER CONSTRUCTION IS COMPLETE AT THE SITE PERMANENT STABILIZATION MEASURES WILL BE MONITORED UNTIL FINAL STABILIZATION IS REACHED.

SEED MIXTURE FOR UPLAND AREAS

	LBS./ACRE	LBS./1000 S.F.
KENTUCKY BLUEGRASS	20	0.45
CREEPING RED FESCUE	20	0.45
PERENNIAL RYEGRASS	5	0.10
	45	1.00

THE RECOMMENDED SEEDING DATES ARE: APRIL 1-JUNE 15 AND AUGUST 1-SEPTEMBER 15.

SEE FIGURE PS-2 IN THE 2002 GUIDELINES FOR ADDITIONAL PERMANENT SEED MIXES.

SPILL PREVENTION AND CONTROL PLAN:

1. VEHICLE FUELING: REFUELING OF VEHICLES AND EQUIPMENT SHALL BE CONDUCTED IN A DESIGNATED LAYDOWN AREA, AT LEAST 100 FEET FROM WETLANDS OR DRAINAGE STRUCTURES. THE LOCATION WITHIN THE LAYDOWN AREA SHALL BE COMPRISED OF AN IMPERVIOUS SURFACE WITHOUT ACCESS TO ANY SUBSURFACE DRAINAGE STRUCTURES. A SPILL CLEANUP KIT SHALL BE MAINTAINED AT THE FUELING LOCATION.
2. HAZARDOUS MATERIAL STORAGE: HAZARDOUS MATERIALS INCLUDING BUT NOT LIMITED TO FUEL, OIL AND PETROLEUM PRODUCTS AND SOLVENTS WILL BE STORED IN AN APPROVED COVERED STORAGE UNIT AND PROVIDED WITH SECURED SECONDARY CONTAINMENT WITH AN IMPERVIOUS FLOOR IN ACCORDANCE WITH FEDERAL AND MUNICIPAL REGULATIONS.
3. MATERIAL SAFETY DATA SHEETS, A MATERIAL INVENTORY, AND EMERGENCY CONTACT INFORMATION WILL BE MAINTAINED AT THE ON-SITE PROJECT TRAILER.
4. SPILL KITS: SPILL KITS WILL BE STORED WITHIN THE MATERIAL STORAGE AREA, CONCRETE WASHOUT AREAS, AND DESIGNATED FUELING AREA.
5. SPILLS: ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. SPENT ABSORBENT MATERIALS AND RAGS SHALL BE PLACED IN A SEALED DRUM AND WILL BE HAULED OFF-SITE IMMEDIATELY AFTER THE SPILL IS CLEANED UP FOR DISPOSAL AT THE APPROPRIATE LANDFILL. SPILLS OR RELEASES OF HAZARDOUS CHEMICALS OR PETROLEUM PRODUCTS SHALL BE PROMPTLY REPORTED TO CTDEEP AT 1-800-424-3338 AND THE NATIONAL RESPONSE CENTER 1-800-424-8802.

   IN ACCORDANCE WITH CONNECTICUT GENERAL STATUES THE CONTRACTOR SHALL WITHIN 24 HOURS OF VERBAL NOTIFICATION COMPLETE A WRITTEN "REPORT OF PETROLEUM OR CHEMICAL PRODUCT DISCHARGE, SPILLAGE OR RELEASE" AND MAIL IT TO: CTDEEP, BUREAU OF WASTE MANAGEMENT, 79 ELM STREET, HARTFORD, CT, 06106-5127.

INSTALLATION SCHEDULE: THE SPILL PREVENTION AND CONTROL PROCEDURES WILL BE IMPLEMENTED ONCE CONSTRUCTION BEGINS ON-SITE.

SPILL PREVENTION AND CONTROL BEST MANAGEMENT PRACTICES (BMP'S) DESCRIPTION:

1. MATERIAL HANDLING AND WASTE MANAGEMENT:

WASTE MATERIALS:

ALL WASTE MATERIALS WILL BE COLLECTED AND DISPOSED OF INTO METAL WASTE DUMPSTERS IN DESIGNATED AREAS. DUMPSTERS WILL HAVE A SECURE TIGHT LID, BE PLACED AWAY FROM STORM WATER DRAINS AND STRUCTURES, AND WILL MEET ALL FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS. ONLY TRASH AND CONSTRUCTION DEBRIS WILL BE PLACED IN THE DUMPSTERS. CONSTRUCTION MATERIALS WILL NOT BE BURIED ON SITE.

MAINTENANCE AND INSPECTION: THE DUMPSTERS WILL BE INSPECTED WEEKLY AND IMMEDIATELY AFTER STORM EVENTS. THE DUMPSTER WILL BE EMPTIED WEEKLY OR MORE FREQUENTLY IF NEEDED, AND TAKEN TO THE APPROPRIATE LANDFILL.

HAZARDOUS WASTE MATERIALS:

BMP DESCRIPTION: ALL HAZARDOUS WASTE MATERIALS INCLUDING OIL FILTERS, PETROLEUM PRODUCTS, PAINT, AND EQUIPMENT MAINTENANCE FLUIDS WILL BE STORED IN STRUCTURALLY SOUND AND SEALED SHIPPING CONTAINERS IN A DESIGNATED AREA. HAZARDOUS WASTE MATERIALS WILL BE STORED IN APPROPRIATE AND CLEARLY MARKED CONTAINERS AND SEGREGATED FROM OTHER NON-WASTE MATERIALS. SECONDARY CONTAINMENT WILL BE PROVIDED FOR ALL WASTE MATERIALS IN A DESIGNATED AREA AND WILL CONSIST OF COMMERCIALLY AVAILABLE SPILL PALLETS. ADDITIONALLY, ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, COUNTY, AND LOCAL REGULATIONS. HAZARDOUS WASTE MATERIALS WILL NOT BE DISPOSED OF INTO THE ON-SITE DUMPSTERS.

MAINTENANCE AND INSPECTION: THE HAZARDOUS WASTE MATERIALS AREA WILL BE INSPECTED WEEKLY AND AFTER STORM EVENTS. THE STORAGE AREA WILL BE KEPT CLEAN, WELL ORGANIZED AND EQUIPPED WITH AMPLE CLEANUP SUPPLIES AS APPROPRIATE FOR THE MATERIALS BEING STORED. MATERIAL SAFETY DATA SHEETS, MATERIAL INVENTORY, AND EMERGENCY CONTACT NUMBERS WILL BE MAINTAINED IN THE OFFICE TRAILER.

SANITARY WASTE:

BMP DESCRIPTION: PORTABLE TOILETS, LOCATED IN THE STAGING AREA, WILL BE PROVIDED AT THE SITE THROUGHOUT THE CONSTRUCTION PHASE. THE TOILETS WILL BE LOCATED AWAY FROM CONCENTRATED DRAINAGE FLOW PATHS.

MAINTENANCE AND INSPECTION: SANITARY WASTE WILL BE COLLECTED A MINIMUM OF ONCE A WEEK AND SHALL BE INSPECTED WEEKLY FOR EVIDENCE OF LEAKING HOLDING TANKS.

RECYCLING:

BMP DESCRIPTION: WOOD PALLETS, CARDBOARD BOXES, AND OTHER RECYCLABLE CONSTRUCTION SCRAPS WILL BE DISPOSED OF IN A DESIGNATED DUMPSTER FOR RECYCLING. THE DUMPSTER WILL HAVE A SECURE WATERTIGHT LID, BE PLACED AWAY FROM STORMWATER CONVEYANCES AND DRAINS AND MEET ALL LOCAL AND STATE SOLID-WASTE MANAGEMENT REGULATIONS. ONLY SOLID RECYCLABLE CONSTRUCTION SCRAPS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER.

MAINTENANCE AND INSPECTION: THE RECYCLING DUMPSTER WILL BE INSPECTED WEEKLY. THE RECYCLING DUMPSTER WILL BE EMPTIED WHEN FULL AND TAKEN TO AN APPROVED RECYCLING CENTER BY THE CONTRACTOR. IF RECYCLABLE CONSTRUCTION WASTES ARE EXCEEDING THE DUMPSTER'S CAPACITY, THE DUMPSTERS WILL BE EMPTIED MORE FREQUENTLY.

2. DESIGNATE WASHOUT AREAS:

CONCRETE WASHOUT

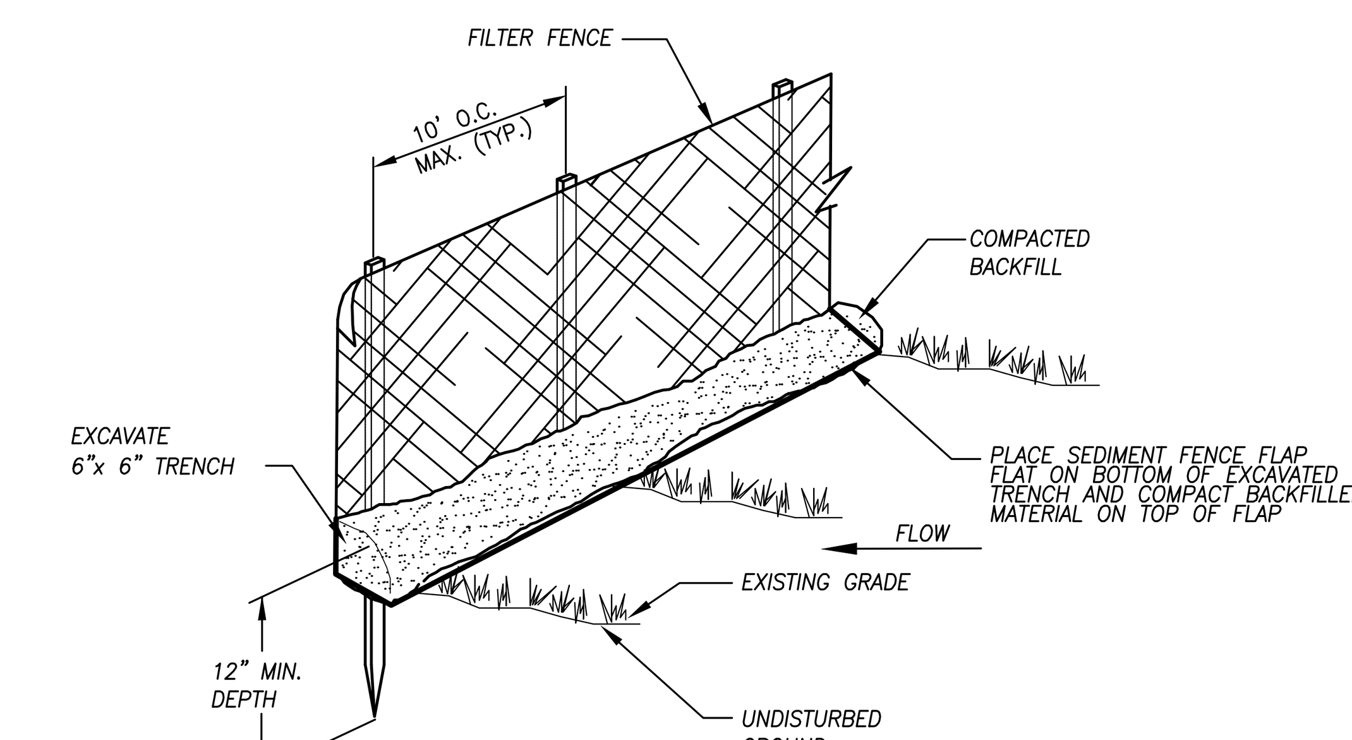
BMP DESCRIPTION: A TEMPORARY, ABOVE-GRADE CONCRETE WASHOUT AREA SHALL BE DESIGNATED. WHEN THE TEMPORARY WASHOUT AREA IS NO LONGER NEEDED FOR THE CONSTRUCTION PROJECT, THE HARDENED CONCRETE AND MATERIALS USED TO CONSTRUCT THE AREA WILL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS, AND THE AREA WILL BE STABILIZED.

INSTALLATION SCHEDULE: THE WASHOUT AREA WILL BE DESIGNATED BEFORE CONCRETE POURS OCCUR AT THE SITE.

3. VEHICLE FUELING AND MAINTENANCE PRACTICES:

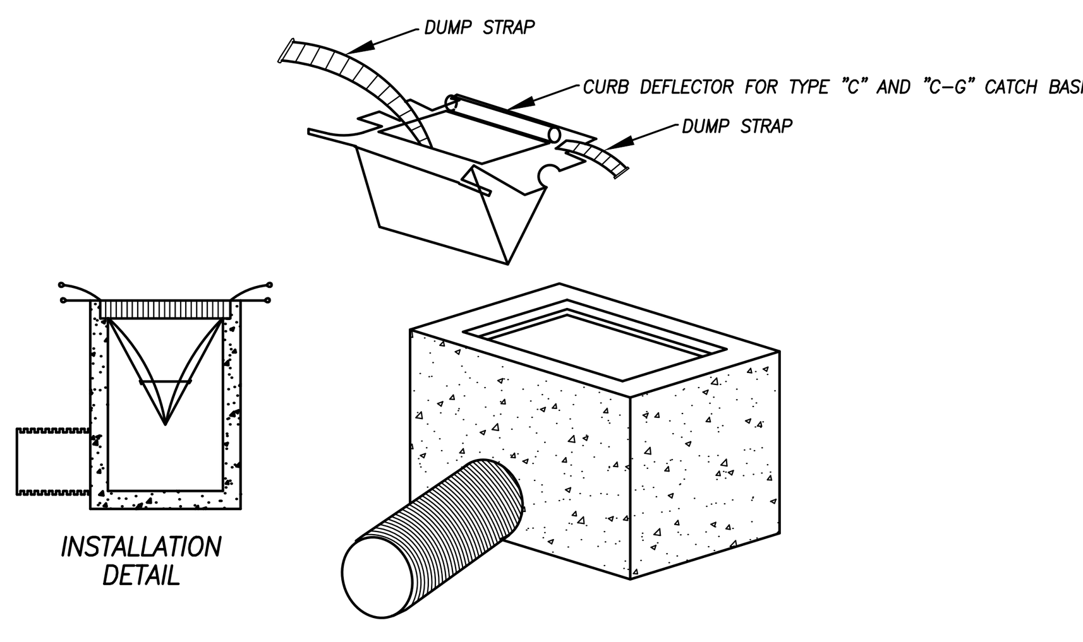
BMP DESCRIPTION: SEVERAL TYPES OF VEHICLES AND EQUIPMENT WILL BE USED ON-SITE THROUGHOUT THE PROJECT, INCLUDING GRADERS, SCRAPERS, EXCAVATORS, LOADERS, ROLLERS, TRUCKS AND TRAILERS, BACKHOES, AND FORKLIFTS. ALL MAJOR EQUIPMENT/VEHICLE FUELING WILL BE PERFORMED IN THE STAGING AREA. THIS PROPOSED ACTIVITY IS TO BE SITUATED SO THAT DRAINAGE FACILITIES OR WATER COURSES LOCATED IN THE AREA ARE NOT AT RISK FROM POTENTIAL INFILTRATION. ABSORBENT, SPILL-CLEANUP MATERIALS AND SPILL KITS WILL BE AVAILABLE AT THE COMBINED STAGING AND MATERIALS STORAGE AREA. FUEL WILL BE DELIVERED TO THE SITE ON AN AS NEEDED BASIS BY A FUEL DELIVERY SERVICE. FUELING OF EQUIPMENT WILL ONLY OCCUR IN DESIGNATED FUELING AREAS. NON-EMERGENCY VEHICLE MAINTENANCE INCLUDING WASHING IS PROHIBITED ON SITE.

INSTALLATION SCHEDULE: BMPS IMPLEMENTED FOR FUELING ACTIVITIES WILL BEGIN AT THE START OF THE PROJECT.



SEDIMENT FENCE DETAIL

NOT TO SCALE



INLET SEDIMENT CONTROL DEVICE

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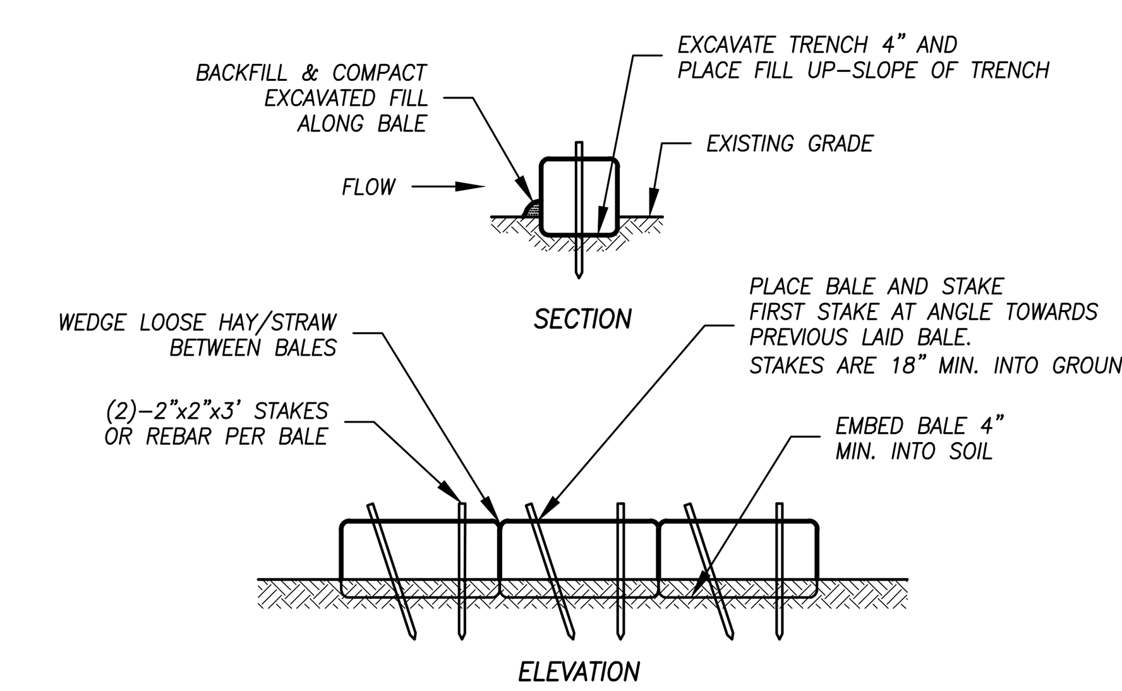

HAY/STRAW BALE BARRIER DETAIL

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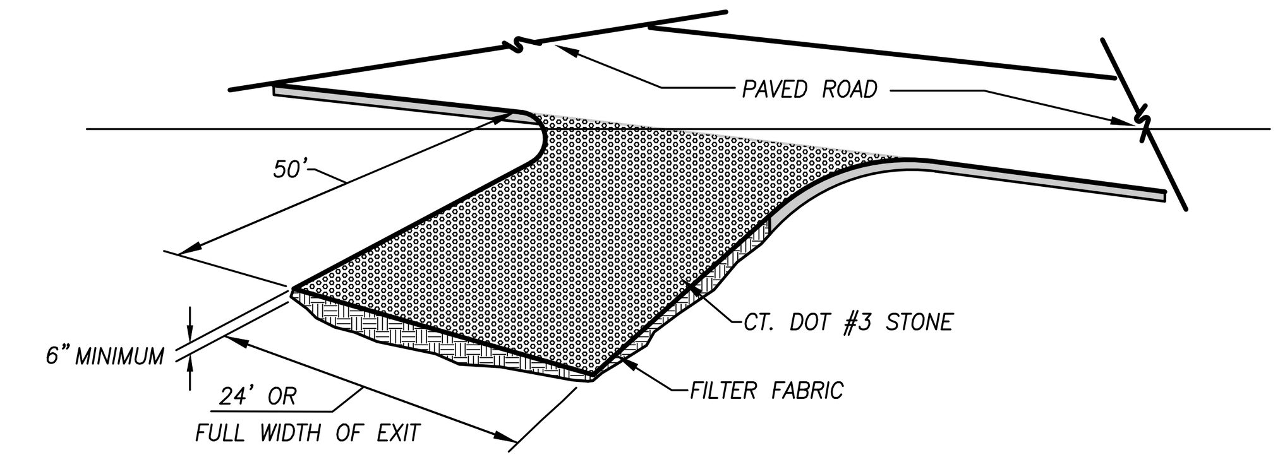


ANTI-TRACKING PAD

NOT TO SCALE

FOR PERMITTING
05/20/2020

PLAN NOTES:

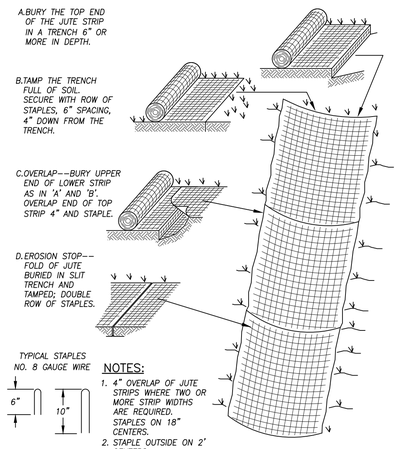
1. SEE COVER SHEET FOR ENGINEER AND SURVEYOR SIGNATURES AND SEALS.

BOUNDARIES
CIVIL ENGINEERING LAND SURVEYING LAND USE PLANNING SOIL SCIENCE
Boundaries LLC
179 Pachaug River Drive, Griswold, CT 06351
T 860.376.2006 | www.boundariesllc.net

Site Development Plan
"Erosion & Sedimentation Control Notes and Details"
Prepared for
Edgewater Hill Enterprises, LLC
000 East High Street (CT Route 66) - East Hampton, Connecticut

SCALE:	As Noted
DATE:	May 2020
JOB I.D. NO.	20-2795-2
Revisions	
SHEET NO.	8 / 12

P:\CIVIL 3D PROJECTS\2020\20-2795-2 DREAM-MS2\DWG\DESIGN\4 NOTES DETAILS.DWG

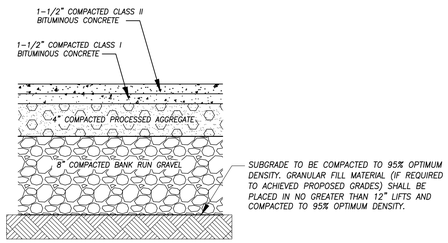


NOTES:

1. 4" OVERLAP OF JUTE STRIPS WHERE TWO OR MORE STRIP WIDTHS ARE REQUIRED. STAPLES ON 18" CENTERS.
2. STAPLE OUTSIDE ON 2' CENTERS.
3. JUTE NETTING SHALL BE INSTALLED IN ALL PERMANENT GRASS SWALES.

JUTE NETTING DETAIL

NOT TO SCALE



BITUMINOUS CONCRETE PAVEMENT DETAIL

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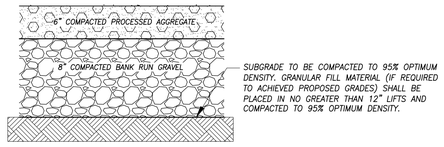

TRAFFIC BOUND GRAVEL SURFACE DETAIL

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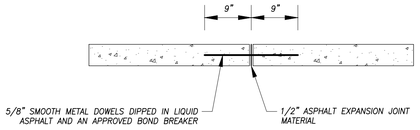
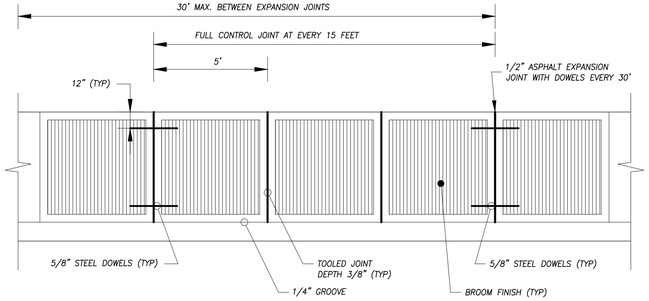
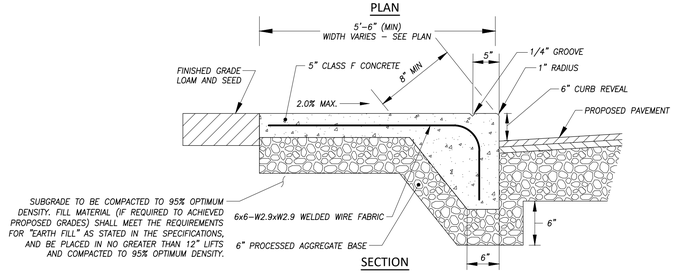


CONCRETE SIDEWALK EXPANSION JOINT DETAIL

NOT TO SCALE



PLAN



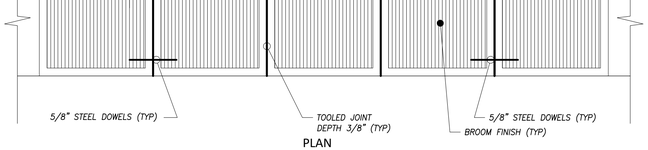
SECTION

NOTES:

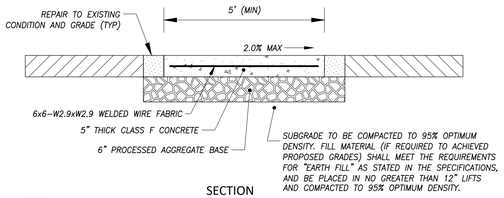
1. AT THE END OF THE DAILY POUR OF CONCRETE GALVANIZED STEEL DOWELS SHALL BE INSERTED IN THE LAST SLAB FOR THE NEXT DAY'S POUR.

CONCRETE SIDEWALK WITH MONOLITHIC CURBING DETAIL

NOT TO SCALE



PLAN



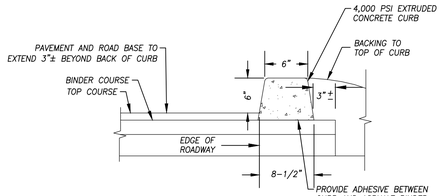
SECTION

NOTES:

1. AT THE END OF THE DAILY POUR OF CONCRETE METAL DOWELS SHALL BE INSERTED IN THE LAST SLAB FOR THE NEXT DAY'S POUR.

CONCRETE SIDEWALK DETAIL

NOT TO SCALE



EXTRUDED CONCRETE CURB DETAIL

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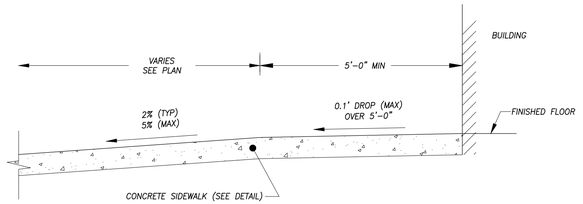

TYPICAL GRADING AT ENTRY DOORS

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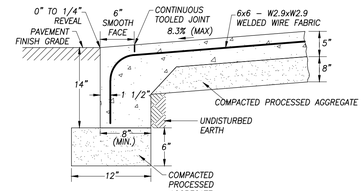
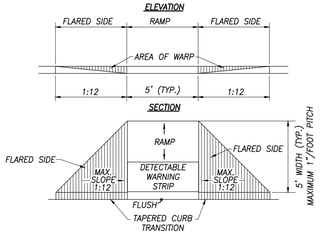


ELEVATION

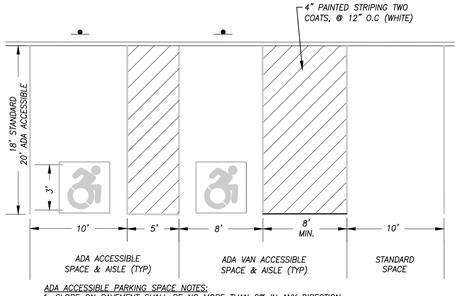


PLAN

NOTE:
ALL CONCRETE CURB RAMPS, TO PROVIDE A DETECTABLE WARNING TEXTURE AS REQUIRED BY SECTION 4.27 OF ANSI A117.1-1986

SIDEWALK RAMP DETAIL

NOT TO SCALE



ADA ACCESSIBLE PARKING SPACE NOTES:

1. SLOPE ON PAVEMENT SHALL BE NO MORE THAN 2% IN ANY DIRECTION.
2. CROSS HATCH AISLES MAY NOT BE SHARED BETWEEN TWO SPACES OF DIFFERENT TYPE.
3. AISLE WIDTH IS 8' FOR VAN ACCESSIBLE SPACES, AND 5' FOR ALL OTHER ACCESSIBLE SPACES.
4. USE CURRENT "SPEEDY" ADA SYMBOL FOR ALL PAVEMENT MARKINGS AND SIGNS.

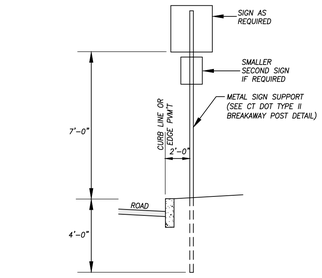
PARKING SPACE DETAILS

NOT TO SCALE

FOR PERMITTING
05/20/2020

PLAN NOTES:

1. SEE COVER SHEET FOR ENGINEER AND SURVEYOR SIGNATURES AND SEALS.



DIRECTIONAL SIGN SUPPORT DETAIL

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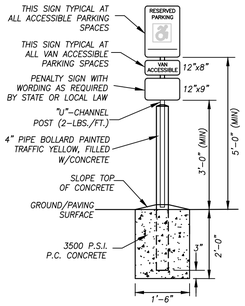

ACCESSIBLE PARKING SIGN DETAIL

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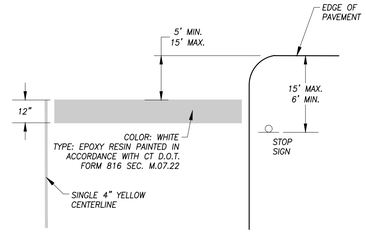

STOP BAR DETAIL

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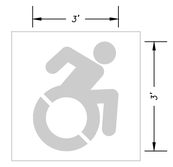
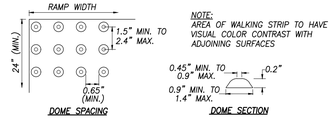


ACCESSIBLE PARKING SPACE SYMBOL DETAIL

NOT TO SCALE



DETECTABLE WARNING STRIP DETAIL

NOT TO SCALE

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Boundaries LLC
179 Pachaug River Drive, Gilman, CT 06351
T 860.376.2006 | www.boundariesllc.net

Site Development Plan
"Notes and Details (1)"
Prepared for
Edgewater Hill Enterprises, LLC
000 East High Street (CT Route 66) - East Hampton, Connecticut

SCALE:	As Noted
DATE:	May 2020
JOB I.D. NO.	20-2795-2
Revisions	

SHEET NO.
9
12

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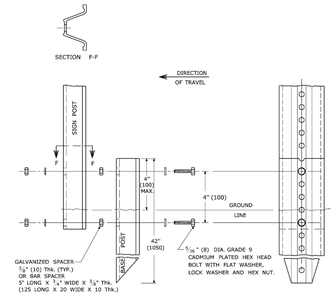
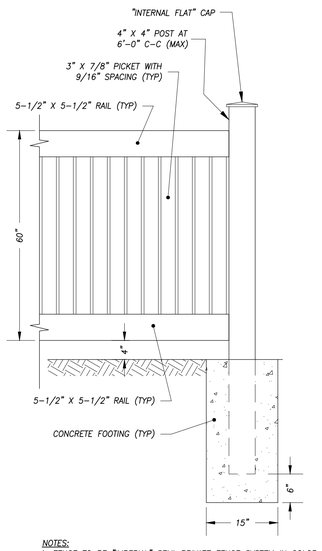


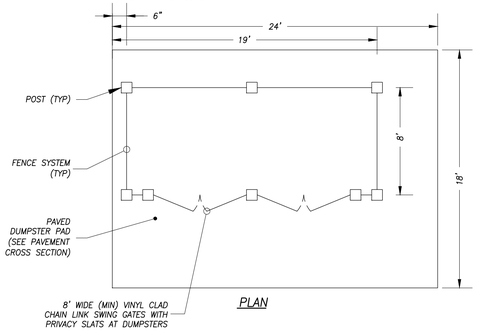
SEE CT DOT STANDARD DETAIL SHEET TR-1208_02 FOR ADDITIONAL DETAILS

CT DOT BREAKAWAY TYPE II SIGN POST DETAIL

NOT TO SCALE



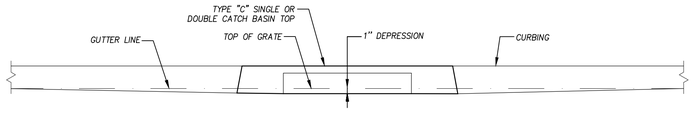
NOTES:
1. FENCE TO BE "IMPERIAL" SEMI-PRIVATE FENCE SYSTEM IN COLOR WHITE AS MANUFACTURED BY BUFF-TECH, OR APPROVED EQUAL.
2. PROVIDE EQUAL SPACING OF POSTS.



PLAN

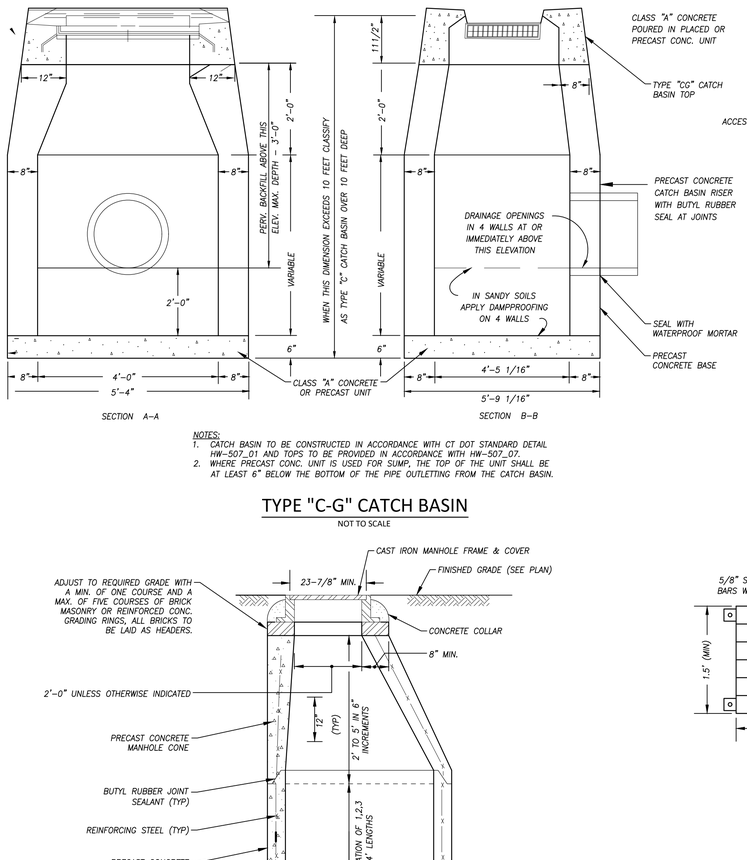
DUMPSTER ENCLOSURE DETAIL

NOT TO SCALE



TYPE "C" CATCH BASIN TOP IN A LINE OF 6" CONCRETE CURBING OR 6" STONE CURBING

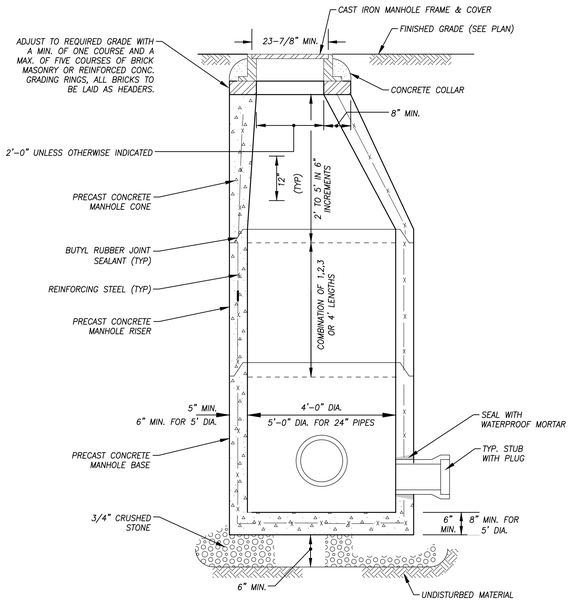
NOT TO SCALE



NOTES:
1. CATCH BASIN TO BE CONSTRUCTED IN ACCORDANCE WITH CT DOT STANDARD DETAIL HW-507_01 AND TOPS TO BE PROVIDED IN ACCORDANCE WITH HW-507_07.
2. WHERE PRECAST CONC. UNIT IS USED FOR SUMP, THE TOP OF THE UNIT SHALL BE AT LEAST 6" BELOW THE BOTTOM OF THE PIPE OUTLETTING FROM THE CATCH BASIN.

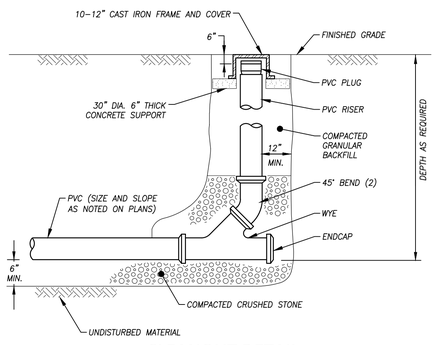
TYPE "C-G" CATCH BASIN

NOT TO SCALE



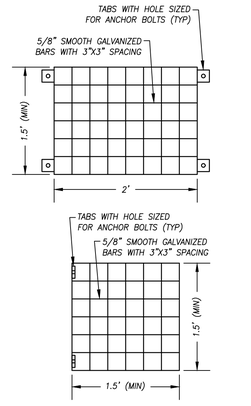
PRECAST CONCRETE STORM DRAIN MANHOLE DETAIL

NOT TO SCALE



CLEANOUT DETAIL

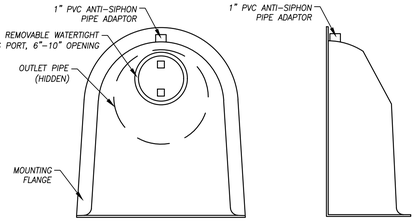
NOT TO SCALE



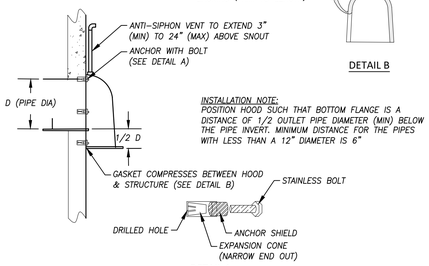
NOTES:
1. GALVANIZE TRASH RACK AFTER WELDING/FABRICATION.

TRASH RACK DETAIL

NOT TO SCALE



SNOUT OIL-WATER DEBRIS SEPERATOR

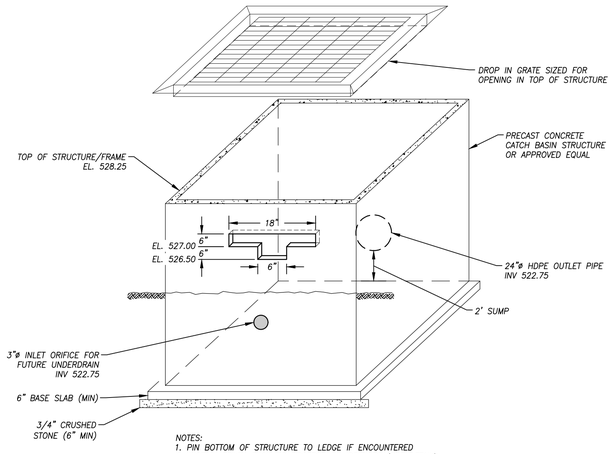


INSTALLATION NOTE:
POSITION HOOD SUCH THAT BOTTOM FLANGE IS A DISTANCE OF 1/2 OUTLET PIPE DIAMETER (MIN) BELOW THE PIPE INVERT. MINIMUM DISTANCE FOR THE PIPES WITH LESS THAN A 12" DIAMETER IS 6"

NOTES:
1. ALL HOODS AND TRAPS FOR CATCH BASINS AND OUTLET CONTROL STRUCTURES SHALL BE AS MANUFACTURED BY BEST MANAGEMENT PRODUCTS, INC., OR EQUAL.
2. THE SIZE AND POSITION OF THE HOOD SHALL BE DETERMINED BY OUTLET PIPE SIZE AND THE MANUFACTURER'S RECOMMENDATIONS.
3. THE SURFACE OF THE STRUCTURE WHERE THE HOOD IS MOUNTED SHALL BE FINISHED SMOOTH AND FREE OF LOOSE MATERIAL.
4. THE HOOD SHALL BE SECURELY ATTACHED TO THE STRUCTURE WALL WITH 3/8" STAINLESS STEEL BOLTS AND OIL-RESISTANT GASKET AS PROVIDED IN THE MANUFACTURER SUPPLIED INSTALLATION KIT.

CATCH BASIN HOODED OUTLET

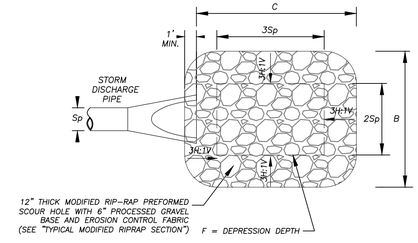
NOT TO SCALE



NOTES:
1. PIN BOTTOM OF STRUCTURE TO LEDGE IF ENCOUNTERED
2. INSTALL TRASH RACK TO PROTECT ALL ORIFICES (SEE DETAIL)

OUTLET CONTROL STRUCTURE

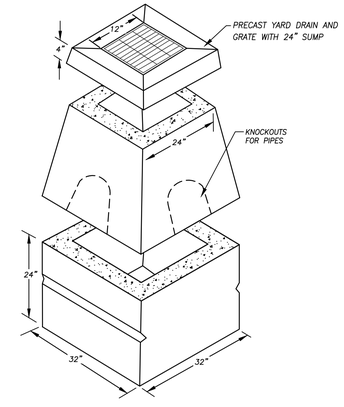
NOT TO SCALE



PIPE Sp	C	B	F	RIPRAP GRADATION
15"	7.5 FT	6.25 FT	0.625 FT	MODIFIED RIPRAP

TYPE 1 RIP RAP SCOUR HOLE DETAIL

NOT TO SCALE



NOTE: STRUCTURE TO BE SET ON 6" (MIN) OF 3/4" CRUSHED STONE.

PRECAST YARD DRAIN DETAIL

NOT TO SCALE

FOR PERMITTING
05/20/2020

PLAN NOTES:

1. SEE COVER SHEET FOR ENGINEER AND SURVEYOR SIGNATURES AND SEALS.

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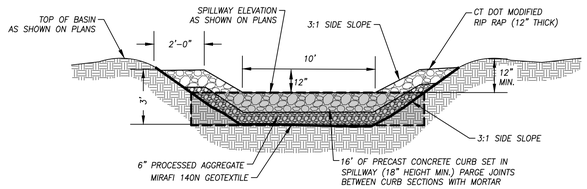
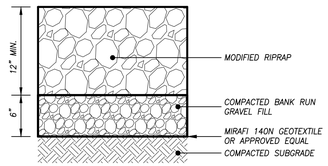


RIPRAP/BASIN SPILLWAY DETAIL

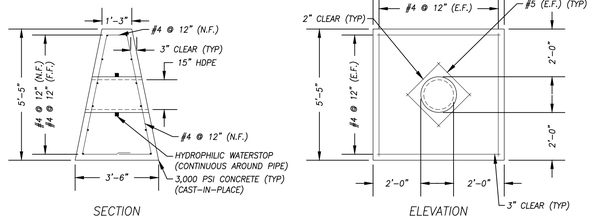
NOT TO SCALE



NOTES:
1. TO BE USED AT PIPE DISCHARGES AND EMERGENCY SPILLWAY CHANNEL.

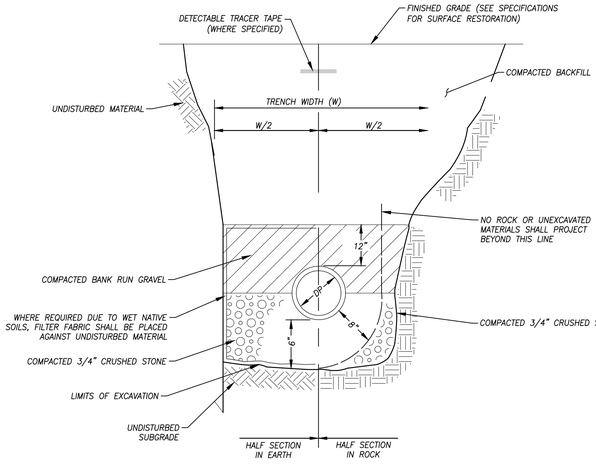
TYPICAL MODIFIED RIPRAP SECTION

NOT TO SCALE



ANTI-SEEP COLLAR DETAIL

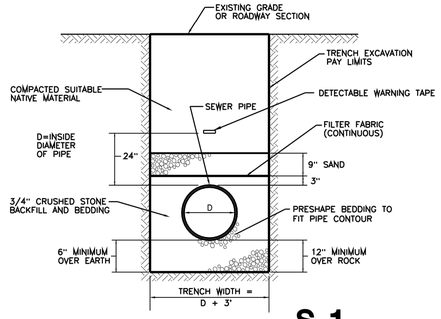
NOT TO SCALE



NOTES:
1. THE TOP 12" OF TRENCH BACKFILL IN TRAVELED WAYS SHALL BE COMPACTED PROCESSED GRAVEL.

TRENCH DETAIL (STORM DRAINAGE)

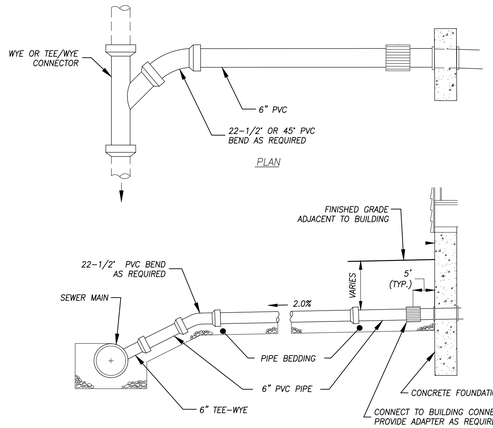
NOT TO SCALE



S-1

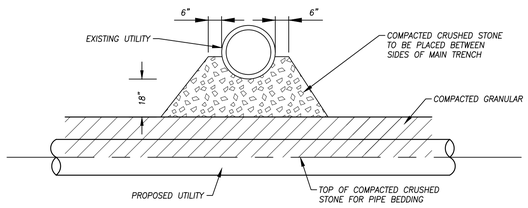
SANITARY SEWER TRENCH DETAIL

NOT TO SCALE



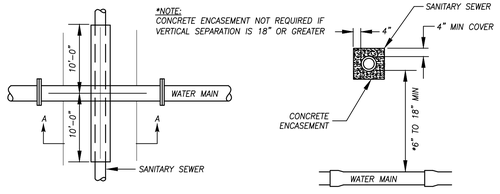
TYPICAL BUILDING CONNECTION DETAIL

NOT TO SCALE



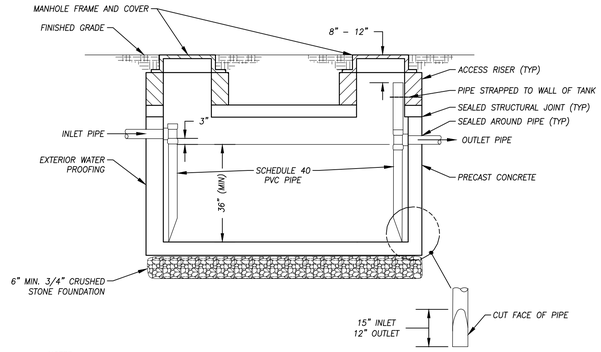
UTILITY CROSSING DETAIL

NOT TO SCALE



WATER AND SEWER CROSSING DETAIL

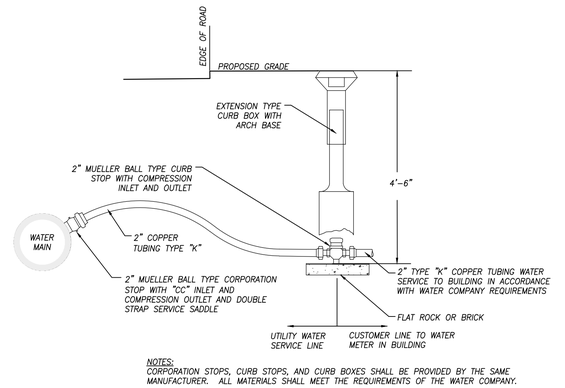
NOT TO SCALE



NOTES:
1. THE CONCRETE TANK SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI AND SHALL BE H-20 LOAD RATED WITH THE AMOUNT OF COVER SHOWN ON THE DESIGN DRAWING.
2. TANK SHALL HAVE A MINIMUM CAPACITY OF 1,000 GALLONS.
3. EXTERIOR OF THE TANK AND ACCESS RISERS SHALL BE COATED WITH A WATERPROOF SEALANT.
4. STRUCTURAL SEAM OF THE TANK SHALL BE FILLED AND COATED WITH A WATERPROOF SEALANT. THE STRUCTURAL SEAM SHALL BE LOCATED ABOVE THE LIQUID LEVEL OF THE TANK.
5. THE TANK SHALL HAVE ACCESS RISERS AND MANHOLE FRAMES AND COVERS TO FINISHED GRADES ABOVE THE INLET AND OUTLET PIPES.
6. THE INLET AND OUTLET PIPING SHALL HAVE BAFFLE TEES. THE OUTLET TEE SHALL BE EQUIPPED WITH A STAND PIPE RISER EXTENDING TO BETWEEN 8" AND 12" FROM THE MANHOLE COVER.
7. THE INCOMING PIPE SHALL ONLY INCLUDE KITCHEN WASTE PLUMBING AND NO SOURCES OF DOMESTIC WASTEWATER OR STORMWATER.

GREASE INTERCEPTOR TANK DETAIL

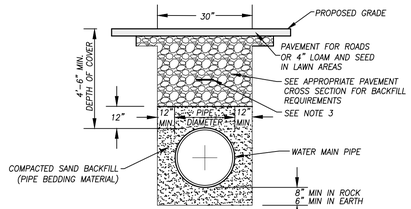
NOT TO SCALE



NOTES:
CORPORATION STOPS, CURB STOPS, AND CURB BOXES SHALL BE PROVIDED BY THE SAME MANUFACTURER. ALL MATERIALS SHALL MEET THE REQUIREMENTS OF THE WATER COMPANY.

WATER SERVICE DETAIL

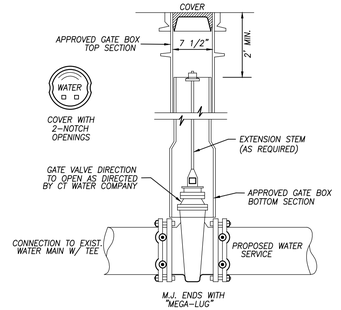
NOT TO SCALE



NOTES:
1. IF PIPE IS PLACED IN OR ON LEDGE, ALL LEDGE WITHIN 8" OF PIPE SHALL BE REMOVED AND REPLACED WITH PIPE BEDDING.
2. MINIMUM PIPE COVER SHALL CONFORM TO MANUFACTURER'S SPECIFICATIONS.
3. CONTRACTOR TO INSTALL AN UNDERGROUND FACILITY WARNING TAPE IN TRENCH WITH 24" MIN. SEPARATION ABOVE UTILITY

WATER MAIN TRENCH DETAIL

NOT TO SCALE



GATE VALVE AND GATE BOX DETAIL

NOT TO SCALE

FOR PERMITTING
05/20/2020

PLAN NOTES:

1. SEE COVER SHEET FOR ENGINEER AND SURVEYOR SIGNATURES AND SEALS.

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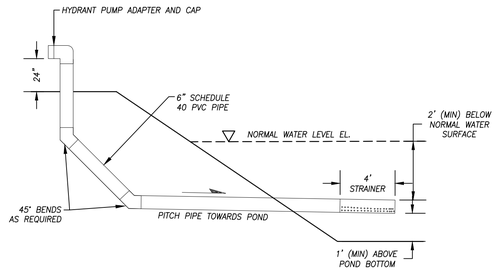
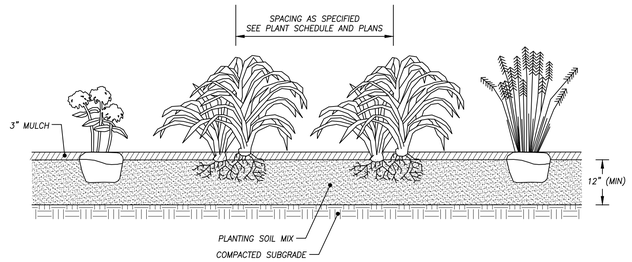


NOTE:
DRY HYDRANT TO BE INSTALLED IN ACCORDANCE WITH TOWN OF EAST HAMPTON FIRE DEPARTMENT REQUIREMENTS

TYPICAL DRY HYDRANT PROFILE

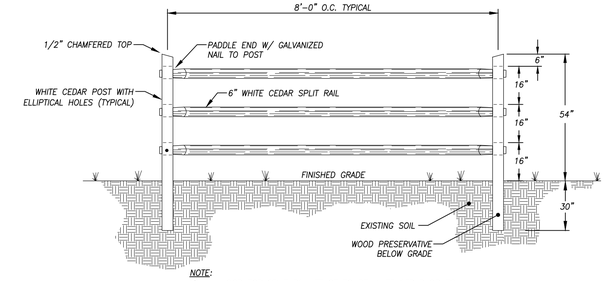
NOT TO SCALE



NOTES:
1. ROTOTILL FERTILIZER AND LIME INTO SOIL PRIOR TO PLANTING IN ACCORDANCE WITH SOIL ANALYSIS RECOMMENDATIONS.
2. DO NOT OVER-COMPACT PLANTING BED. WATER THOROUGHLY AFTER PLANTING.
3. ADJUST PLANTING DEPTH AS RECOMMENDED BY SUPPLIER.
4. MULCH SHALL NOT COME INTO CONTACT WITH CROWNS OF PERENNIALS.

PERENNIAL/GROUNDCOVER PLANTING DETAIL

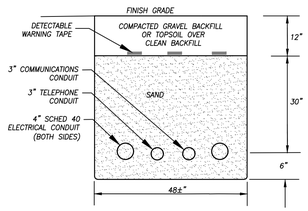
NOT TO SCALE



NOTE:
1) ALL WOOD FOR SPLIT RAIL FENCE TO BE WHITE CEDAR OR EQUAL.

SPLIT RAIL FENCE DETAIL

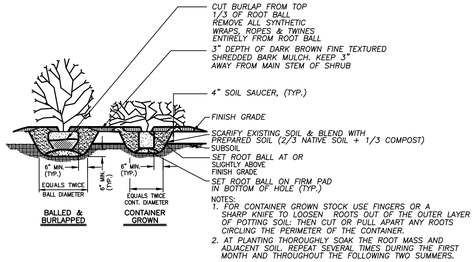
NOT TO SCALE



NOTE:
CONTRACTOR TO CONFIRM UTILITY CONDUIT REQUIREMENTS PRIOR TO CONSTRUCTION

ELECTRIC & TELECOMM TRENCH DETAIL

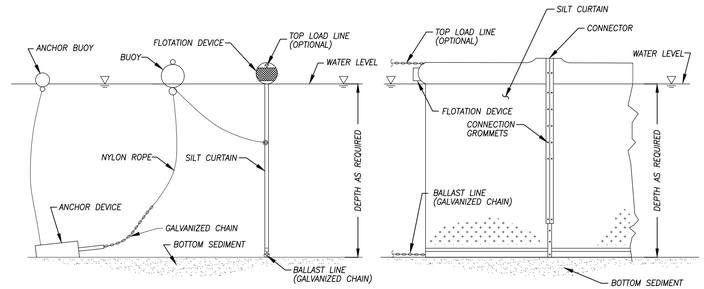
NOT TO SCALE



NOTES:
1. FOR CONTAINER GROWN STOCK USE FINGERS OR A SHARP KNIFE TO LOOSEN ROOTS OUT OF THE OUTER LAYER OF POTTING SOIL; THEN CUT OR PULL APART ANY ROOTS CIRCLING THE PERIMETER OF THE CONTAINER.
2. AT PLANTING THOROUGHLY SOAK THE ROOT MASS AND ADJACENT SOIL. REPEAT SEVERAL TIMES DURING THE FIRST MONTH AND THROUGHOUT THE FOLLOWING TWO SUMMERS.

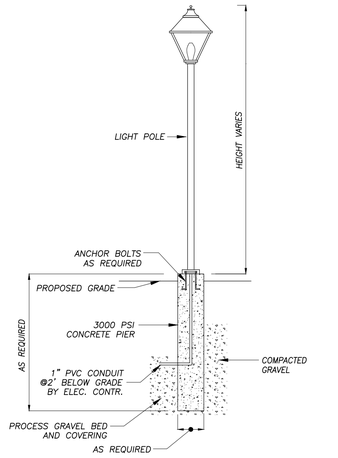
SHRUB PLANTING DETAIL

NOT TO SCALE



TURBIDITY CURTAIN DETAIL

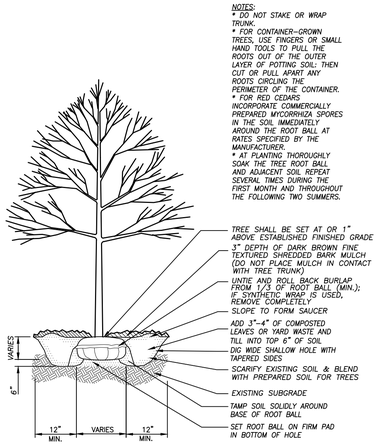
NOT TO SCALE



NOTE:
1. LIGHTING TO BE AS SHOWN ON LIGHTING PLAN.
2. BASE PLATE BOLT PATTERN PROVIDED BY LIGHTING MANUFACTURER.
3. CONCRETE PIER TO BE SIZED AS REQUIRED BY LIGHTING MANUFACTURER'S STRUCTURAL ENGINEER.

LIGHT POLE DETAIL

NOT TO SCALE



TREE PLANTING DETAIL

NOT TO SCALE

FOR PERMITTING
05/20/2020

PLAN NOTES:

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Town of East Hampton

Water Pollution Control Authority
P.O. Box 218, 20 Gildersleeve Drive
East Hampton, Connecticut 06424-0218
Telephone (860) 267-2536, Fax (860) 267-9913

To: Members of WPCA

XC: Jim Carey, Daphne Schaub, Thad King

Date: July 24, 2014

Re: Wastewater Service Developer's Permit Agreement – Edgewater Hill
Agenda item #2

From: V. F. Susco, Jr.

We have received a request to extend the wastewater system to accommodate the Mixed Use Development District (MUDD) known as Edgewater Hill located off of East High Street. The total project consists of both commercial and residential development on +/-73.6 acres, to be served entirely by approximately 5500+/- L.F of gravity sewer main.

The project is being proposed in phases. Phase 1 will consist of approximately 1700+/- L.F. of gravity sewer main to serve 7 commercial and 5 residential buildings on Edgewater Terrace and Phase 1A is currently being constructed as a standalone commercial building served by an existing abandoned sewer lateral off of East High Street (Route 66).

CLA Engineers have reviewed the Phase 1 plans that addressed the most recent comments of the WPCA and has presented the appropriate estimates for construction ($275,000.00) and inspection ($12,500.00). A Public Hearing is scheduled for August 5, 2014. The following resolution is recommended by management:

RESOLVED: That the Authority hereby approves the sewer construction plans for Phase 1 of Edgewater Hill for 7 commercial and 5 residential buildings on Edgewater Terrace. Furthermore, the Authority authorizes the execution of the standard Developer's Permit Agreement for the property. Developer is required to construct gravity main sewers for the Town of East Hampton in Edgewater Hill, at an estimated construction cost of $250,000.00 with a $25,000.00 contingency amount, as therein provided.

Developer is further required to deposit with the Authority the sum of $12,500.00 to defray the anticipated construction inspection expenses and all other expenses of any kind incurred by the Authority associated with this project.

Developer is also required to pay a unit outlet charge in the amount of $2,500.00 per unit for the residential buildings and $1.00/square foot for retail space in the commercial buildings, provided that such outlet charge is payable at the time of unit transfer, or the issuance of a certificate of occupancy, whichever is earlier.

Developer shall further submit a performance bond satisfactory to the Authority in favor of the Town of East Hampton in the amount of $275,000.00 to cover the work called for by the said Developer's Permit Agreement, which sum includes the construction cost plus contingency.

The Authority's approval is expressly conditioned upon the Developer executing said standard form Developer's Permit Agreement, the standard form of Voluntary Sewer Lien covering such subdivision, which shall secure the payment of said outlet charges, and is conditioned further upon the Developer submitting such performance bond and said deposit. The required performance bond may be satisfied by letter of credit, cash bond or surety bond."

Site Plan Modif. – new bldg MS 2

PLANNING & ZONING COMMISSION
TOWN OF EAST HAMPTON

Office Use Only

Project ID# PZC-20-011

Address: Edgewater

MBL: 10A/85/5C-10

Minimum Requirements for Submission of Application to Planning and Zoning Commission

This form must be submitted with your application.

Application Requirements are based on the application type selected on application form.

RECEIVED
MAY 18 2020

X **Site Plan Review/Modification (See Section 9.1 for details)**
- ___Pre-Application Meeting – Date of Meeting _____
- X Complete Application Form
- ___Complete Chatham Health District Application Form
- X Fee Paid
- X Site Plan (11 Copies) – See Section 9.2.C.2 for specifications
- X Drainage Calculations in Compliance with Section 7.5
- X Report from Fire Marshal
- ___Bond Estimates As Required, See Section 9.2.C.2

___**Special Permit (See Section 9.2 for details)**
- ___Pre-Application Meeting – Date of Meeting _____
- ___Complete Application Form
- ___Complete Chatham Health District Application Form
- ___Fee Paid
- ___Site Plan (11 Copies) - See Section 9.2.C.2 for specifications
- ___Pending Approval from IWWA
- ___Drainage Calculations in Compliance with Section 7.5
- ___Pending Approval or report from Fire Marshal
- ___Pending Approval or report from Public Works
- ___Traffic Study (As Required)
- ___Bond Estimates (As Required)
- ___Public Hearing Requirements

___**Zone Change (See Section 9.3 for details)**
- ___Complete Application Form
- ___Fee Paid
- ___A-2 Survey of Property showing surrounding properties and respective zone (10 Copies)
- ___Reports from Chatham Health District, Fire Marshal, Police Dept. and Public Works
- ___Public Hearing Requirements

___**Amendment to Zoning Regulations (See Section 9.3 for details)**
- ___Complete Application Form
- ___Fee Paid
- ___Existing Regulation with proposed Amendments (10 Copies)
- ___Rationale for Amendment (10 Copies)
- ___Reports from Chatham Health District, Fire Marshal, Police Dept. and Public Works
- ___Public Hearing Requirements

I certify that this application is complete

Signature of Applicant: EDGEWATER HILL ENTERPRISES, LLC By: Stephen J. Motto, Manager **Date:** May 13, 2020

The Commission reserves the right to add additional requirements in accordance with the Regulations.

Only Complete Application Packages Will Be Accepted

TOWN OF EAST HAMPTON
Planning and Zoning Commission
1-860-267-7450
www.easthamptonct.gov

RECEIVED
MAY 18 2020

PZC PZC-20-011
Date 5/18/20

Fee Paid _____
Check # _____
Rec'd. By _____

LOCATION Easterly Side East High Street (Connecticut Route 66) and Edgewater Circle
MAP 10A BLK 85 LOT 5C and 10

PROJECT NAME Components of the Edgewater Hill Mixed Use Development District, including Market Square 2
ZONE MUDD

APPLICANT Edgewater Hill Enterprises, LLC
PHONE (860) 267-6822
ADDRESS 138 East High Street, East Hampton, CT 06424
EMAIL stephen@dreamdevelopersct.com

CONTACT PERSON Stephen J. Motto, Manager
PHONE (860) 267-6822
EMAIL stephen@dreamdevelopersct.com

OWNER Edgewater Hill Enterprises, LLC
PHONE (860) 267-6822
ADDRESS 138 East High Street, East Hampton, CT 06424
EMAIL stephen@dreamdevelopersct.com

SURVEYOR/ENGINEER Boundaries, L.L.C.
PHONE (860) 376-2006
ADDRESS 179 Pachaug River Drive, Griswold, Connecticut 06351
EMAIL jfaulise@boundariesllc.net

ATTORNEY Heller, Heller & McCoy
PHONE (860) 848-1248
ADDRESS 736 Norwich-New London Turnpike, Uncasville, CT 06382
EMAIL hellermccoy@sbcglobal.net

APPLICATION TYPE *(application must be completed in FULL in order to be accepted)*

___1. SUBDIVISION /RESUBDIVISION /CONSERVATION SUBDIVISION NO. OF LOTS 2
X 3. SITE PLAN X MODIFICATION ___ Residential ___ Commercial X
___4. SPECIAL PERMIT---SECTION ___ OF THE ZONING REGS. FOR ___
___5. ZONE CHANGE---FROM ___ TO ___
___6. AMENDMENT TO ZONING REGULATIONS
X 7. LAKE POCOTOPAUG PROTECTION AREA Development of mixed use building MS-2 as a component of the Edgewater Hill Master Planned Community
___8. ACTIVE ADULT NO OF UNITS ___
___7. OTHER (DESCRIBE) ___

APPLICATION REQUIREMENTS: This application and 10 sets of plans shall be submitted to the Planning Office and shall be received by the Commission at the next regularly scheduled meeting. *(see meeting schedule for deadline dates)*

A complete application shall consist of an application, fees, maps /plans(A-2 survey) ,engineers report including drainage calculations and watershed calculations(pre and post), bond estimates, hydrology report, environmental studies, waiver requests and traffic study where applicable

Preliminary discussions are highly recommended for subdivisions 5 lots & over and for larger Special Permit Applications
Abutters notice receipts (green cards)must be handed in to the Planning Office prior to the meeting

EDGEWATER HILL ENTERPRISES, LLC
APPLICANTS SIGNATURE _____ DATE May 13, 2020
By: Stephen J. Motto, Manager EDGEWATER HILL ENTERPRSIES, LLC

OWNER'S SIGNATURE _____ DATE May 13, 2020
By: Stephen J. Motto, Manager
The owner and applicant hereby grant the East Hampton Planning and Zoning Commission and/or it's agents permission to enter upon the property to which the application is requested for the purpose of inspection and enforcement of the Zoning Regulations and Subdivision Regulations of the Town of East Hampton.

Form PZC1 2/19

AUTHORIZATION

EDGEWATER HILL ENTERPRISES, LLC, a Connecticut limited liability company and the owner of real property located on the southeasterly side of East High Street (Connecticut Route 66), East Hampton, Connecticut hereby authorizes and directs the law firm of Heller, Heller & McCoy and the engineering/surveying firm of Boundaries, L.L.C. to represent its interests in all proceedings before the Town of East Hampton Planning and Zoning Commission in conjunction with a resubdivision application for the resubdivision of two (2) proposed lots in the Edgewater Hill Mixed Use Development District in accordance with a plan entitled "Property Survey 'Resubdivision Plan' Prepared for Edgewater Hill Enterprises, LLC East High Street – East Hampton, Connecticut Scale: 1" = 80' Date: May 2020 Job I.D. No. 20-2795-3 Sheet Nos. 1 of 2 and 2 of 2" prepared by Boundaries, L.L.C.

Dated at East Hampton, Connecticut this 13th day of May, 2020.

EDGEWATER HILL ENTERPRISES, LLC

By: _____
Stephen J. Motto, its Manager

HELLER, HELLER & McCOY

Attorneys at Law

736 Norwich-New London Turnpike
Uncasville, Connecticut 06382

Sidney F. Heller (1903-1986)
Harry B. Heller (hellermccoy@sbcglobal.net)
William E. McCoy (hhm-bill@sbcglobal.net)

Mary Gagne O'Donal (hhm-mary@sbcglobal.net)

Telephone: (860) 848-1248
Facsimile: (860) 848-4003

May 13, 2020

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED
127 East High St, LLC
84 Middletown Avenue
East Hampton, CT 06424

Re: Edgewater Hill Enterprises, LLC

Gentleperson:

You are hereby advised that Edgewater Hill Enterprises, LLC has filed an application with the Town of East Hampton Planning and Zoning Commission for site plan approval for the development of a proposed three (3) story mixed use building to be located on the southerly side of Edgewater Circle and the easterly side of East High Street (Connecticut Route 66). The project, designated as "Market Square 2" is a proposed mixed-use development project with commercial/restaurant space on the first floor and multi-family apartments on the second and third floors. The project is located on property currently owned by Edgewater Hill Enterprises, LLC and is designated as 000 East High Street by the East Hampton Assessor. The property for which development is proposed represents portions of those properties designated as Lot Nos. 10 and 5C in Block 85 on East Hampton Assessor's Map 10A.

The property proposed for development is a component of the Edgewater Hill Master Planned Community and is located in the Mixed Use Development District Overlay Zone pursuant to the Zoning Regulations promulgated by the East Hampton Planning and Zoning Commission. The Edgewater Hill Master Planned Community obtained master plan approval from the East Hampton Planning and Zoning Commission in 2012. The development of Market Square 2 is a component of the Edgewater Hill Master Planned Community and is consistent with the Master Plan which has been approved by the East Hampton Planning and Zoning Commission.

In conjunction with the development of this project, an application has been submitted to the Town of East Hampton Planning and Zoning Commission. Submitted with the application is a site development plan for Market Square 2 entitled "Site Development Plan Proposed Mixed Use Building (MS-2) Prepared For Edgewater Hill Enterprises, LLC 000 East High Street (CT Route

66) East Hampton, Connecticut May 2020 Applicant/Property Owners: Edgewater Hill Enterprises, LLC 138 East High Street East Hampton, CT 06424 Edgewater Hill Enterprises, LLC 138 East High Street East Hampton, CT 06424 Property Info: 000 East High Street Assessor's ID: 10A/85/5C 128 East High Street Assessor's ID: 10A/85/10 Area: 1.47 +/- Acres" prepared by Boundaries, L.L.C.

The East Hampton Planning and Zoning Commission will consider this application at its regularly scheduled meeting of Wednesday, June 3, 2020 at 7:00 p.m. The meeting will be held at the new East Hampton Town Hall located at 1 Community Avenue, East Hampton, Connecticut. However, due to restrictions emanating from the COVID-19 pandemic, it is likely that the meeting will be held as a "virtual meeting". Should you wish to participate in the meeting, or be advised of the proceedings occurring at the meeting, you should contact the East Hampton Land Use Department to be advised as to the procedure required in order to join and participate in the meeting.

Again, due to the current COVID-19 pandemic, you should contact the Land Use Department of the Town of East Hampton at the East Hampton Town Hall to make arrangements to view the application and supporting documentation in the event that you wish to review the same.

You are being advised of the pendency of this application due to the fact that you have been identified as the owner of real property which either abuts the application parcel, or is located directly across the street from the application parcel. Should you desire further information with repect to this application, in addition to obtaining application information from the East Hampton Planning Department, you may contact this office, as representative of the applicant.

Very truly yours,

Harry B. Heller

HBH/rmb
enclosures

John U. Faulise, Jr., L.S.
Gerald J. Stefon, L.S.

Demian A. Sorrentino, AICP, C.S.S.

David C. McKay, P.E.
Jacob S. Faulise, E.I.T.

CIVIL ENGINEERING LAND SURVEYING LAND USE PLANNING SOIL SCIENCE
BOUNDARIES

Boundaries LLC
179 Pachaug River Drive
P.O. Box 184
Griswold, CT 06351
T 860.376.2006 | F 860.376.5899

www.boundariesllc.net

STORMWATER MANAGEMENT REPORT

PREPARED FOR:

EDGEWATER HILL ENTERPRISES, LLC

PROPOSED MIXED USE BUILDING (MS-2)
000 EAST HIGH STREET (CT ROUTE 66)
EAST HAMPTON, CONNECTICUT

MAY 2020

PREPARED BY:

BOUNDARIES LLC

PROJECT I.D. NO. 20-2795-2

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Introduction

On behalf of Edgewater Hill Enterprises, LLC., Boundaries, LLC. has prepared the following stormwater management report for the proposed MS-2 mixed use commercial building located in the "Market Square" portion of the Edgewater Hill Mixed Use Development. Additional supporting information regarding the proposed development and the construction completed to date can be found in the approved development Master Plan documents prepared by others. The following analysis demonstrates that the proposed stormwater management system provides treatment of stormwater runoff and attenuation of the peak stormwater flows leaving the site to the State of Connecticut Department of Transportation's (CT DOT) stormwater management system located in East High Street (CT Route 66), ultimately discharging to Lake Pocotopaug.

The location of the project is shown on the Locus Map included as Figure 1. The FEMA Flood Insurance Rate Map is included as Figure 2.

Wetlands located on the subject properties include an existing man-made pond located in the central portion of the proposed development. The pond drains into the stormwater management system in Edgewater Circle. Stormwater runoff from the man-made pond and from upgradient undeveloped and developed areas ultimately discharge through a series of open channels and pipes to Lake Pocotopaug. Additional wetland areas are located on the property, but are outside of the Market Square area, and are upgradient of the current phase of the proposed development.

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey the soils in the project area consist of Paxton-Urban land complex, 3 to 8% slopes; Nipmuck-Brookfield complex, 3 to 15% slopes, very rocky; and Ridgebury, Leicester, and Whitman soils, 0 to 8% slopes, extremely stony. Nipmuck-Brookfield complex is classified as Hydrologic Soil Group B. Paxton soils are classified as Hydrologic Soil Group C. Ridgebury, Leicester, and Whitman soils are wetland soils (near the pond) and are classified as Hydrologic Soil Group D. Upgradient contributing areas consist of Udorthents; Woodbridge fine sandy loam, 8 to 15% slopes; Canton and Charlton fine sandy loams, 3 to 15% slopes; and Paxton and Montauk fine sandy loams, 8 to 35% slopes, very/extremely stony. Woodbridge and Paxton and Montauk soils are classified as Hydrologic Soil Group C. Canton and Charlton soils are classified as Hydrologic Soil Group B. The NRCS Web Soil Survey Soils Report is provided in Appendix A.

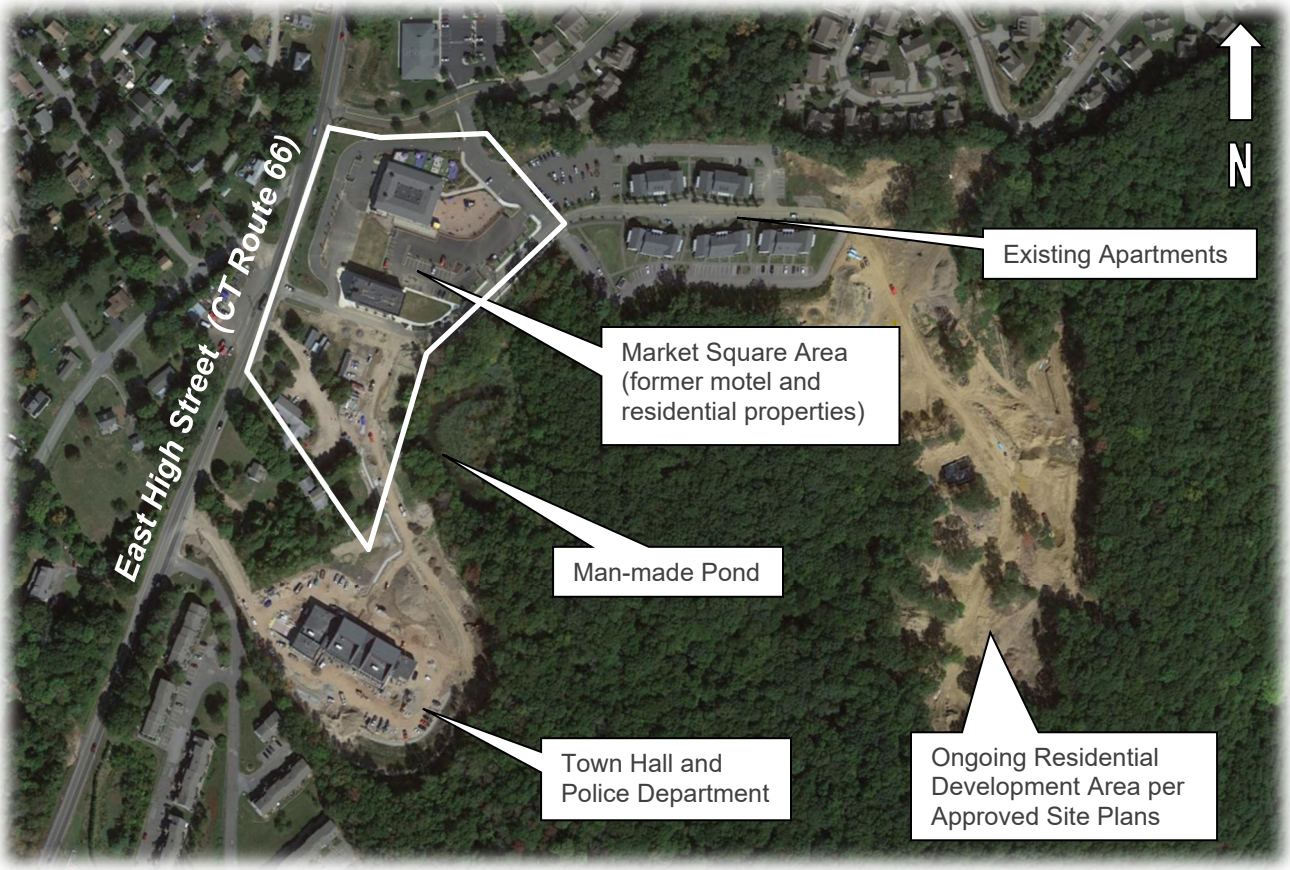
Pre- and post-development conditions hydrographs were estimated using the hydrologic modeling program HydroCAD. The methodology selected was NRCS TR-20. Times of concentration were estimated using multiple segment flow paths as described in the NRCS TR-55 manual. The Type III 24-hour storm was analyzed under antecedent moisture condition two (2). Rainfall totals were as reported by the NOAA Precipitation Frequency Data Server accessed on April 27, 2020. HydroCAD modeling results are presented in Appendix B. Pipe sizing calculations were completed using the Manning's capacity of the pipe reaches. The water quality volume was calculated using the methods detailed in the CT DEEP Stormwater Quality Manual. Supporting stormwater calculations are included in Appendix C.

The proposed improvements include the installation of catch basins and stormwater collection appurtenant to the construction of the MS-2 building, excavation of a temporary sediment trap to be used during subsequent phases of construction (to be converted to permanent water quality basin upon the completion of the Market Square phase of development), and discharge of the treated runoff to CT DOT's stormwater collection system through the existing stormwater management system installed in Edgewater Circle. The proposed site development plans are included in Appendix D. The proposed stormwater management system has been designed so there will be no drainage impact to State facilities.

The stormwater management system will provide attenuation of post-development peak discharge rates to match pre-development rates and will provide treatment of stormwater discharges. The stormwater management system has been designed to meet the requirements of the Connecticut Department of Energy and Environmental Protection (CT DEEP) Stormwater Quality Manual and the Connecticut Department of Transportation Drainage Manual for both peak stormwater runoff flow rate attenuation and stormwater quality mitigation for the 2, 10, 25 and the 100-year storm events.

Pre-Development Conditions

The Edgewater Hill development is located within the Edgewater Hill Mixed Use Development District. The development is being completed utilizing a phased approach. To date, the first two buildings in the Market Square area and the residential apartment buildings have been constructed. The new Town Hall and Police Department and additional residential lots are currently under construction. The project area formerly included a motel, residential properties and associated infrastructure. Runoff from the frontage along East High Street (CT Route 66) drains to CT DOT's 30-inch RCP culvert that carries flow under CT Route 66 and ultimately discharges to Lake Pocotopaug. Stormwater runoff from the Town Hall and Police Department, apartments, a small portion of the residential development and upgradient undeveloped areas flows to the existing pond. The pond is drained through an 18-inch diameter HDPE pipe that discharges to the stormwater management system in Edgewater Circle. Runoff from the remainder of the site flows overland to the east (away from State facilities and Lake Pocotopaug) and is not included in this analysis. Existing conditions aerial photography of the properties is shown below.



Aerial Photograph of Site

Photographs of the existing State drainage facilities are presented below. The Edgewater Hill development discharges to a wetland upgradient of CT DOT's 30-inch culvert. No modifications or improvements are proposed to the existing discharge, wetland area, or 30-inch culvert inlet. The wetland area and drainage discharge and inlets are stable and show no signs of sedimentation, scour, or erosion.

Edgewater Hill Drainage Discharge to Wetlands Adjacent to CT Route 66

Wetlands System Adjacent to CT Route 66

Headwall and 30-inch Culvert Inlet Towards CT Route 66

Pre-development watersheds are shown on Figure 3. Pre-development watersheds were delineated using topographic survey data for the subject parcels and aerial mapping for off-site contributing areas. Land uses were estimated using aerial photography and topographic survey data. The pre-development conditions analyzed in the model are based on the conditions before the Edgewater Hill project was initiated.

Runoff Curve Numbers (CN) used for the pre-development conditions analysis are as follows: 55 (woods with good ground cover) for wooded areas in Hydrologic Soil Group B, 70 (woods with good ground cover) for wooded areas in Hydrologic Soil Group C, 77 (woods with good ground cover) for wooded areas in Hydrologic Soil Group D, 61 (>75% grass cover) for the grassed areas in Hydrologic Soil Group B, 74 (>75% grass cover) for the grassed areas in Hydrologic Soil Group C, 80 (>75% grass cover) for the grassed areas in Hydrologic Soil Group D, 96 (gravel surface) for the exposed dirt/gravel areas, and 98 (impervious) for existing impervious areas such as paved areas, buildings and the pond surface.

The pre-development conditions watersheds are described further below:

Drainage Area #1 (DA #1)

This 6.8± acre watershed encompasses the western portion of the project area, and is comprised of the former motel, residential properties, and areas that drain directly to the 30-inch culvert under Route 66. The weighted CN of the drainage area is 70. Runoff from this area flows overland to the shoulder of Route 66 prior to leaving the site through the 30-inch culvert.

Drainage Area #2 (DA #2)

This 45.5± acre watershed encompasses the portion of the site that contributes runoff to the existing pond and is comprised of a portion of the existing residential properties and the wooded undeveloped areas. The weighted CN of the watershed is 66. Runoff from this area flows overland to the pond before it flows through an 18-inch drainage pipe to the 30-inch culvert that crosses Route 66.

Pre-development conditions peak runoff rates were analyzed at the 30-inch culvert, where the runoff leaves the site. Reported peak flow rates are summarized below in Table 1. Detailed modeling results are included in Appendix B.

Table 1
Peak Runoff Rates – Pre-Development Conditions

Design Storm Event	Total Off-Site Peak Runoff Rate – Pond 2P (CFS)	Peak Water Surface Elevation at 30-inch Culvert – Pond 2P (FT)	Time to Peak at 30-inch Culvert – Pond 2P (hours)
2-Year	6.62	521.10	12.57
10-Year	16.88	521.93	12.41
25-Year	21.32	522.26	12.40
50-Year	24.93	522.53	12.39
100-Year	28.78	522.85	12.38

Post-Development Conditions

The proposed improvements installation of catch basins and additional piping to collect runoff from the proposed MS-2 building and parking lot. The drainage system will discharge to a proposed temporary sediment trap that will be converted to a permanent water quality basin during subsequent phases of the Market Square buildout. The proposed improvements to the stormwater management system are part of the overall stormwater management strategy to provide treatment and peak rate attenuation of the stormwater runoff prior to leaving the site.

The proposed stormwater management system components proposed for construction include the following:

- Four (4) precast concrete catch basins;
- One (1) precast concrete drainage manhole;
- One (1) precast concrete outlet control structure;
- 275 feet of drainage pipe; and
- Water Quality Basin.

No modifications or improvements are proposed to the existing discharges upgradient of the CT DOT's drainage facilities or to the CT DOT's drainage facilities.

The proposed improvements to the stormwater management system meet the following design standards:

- The post-development peak discharge rates from the 2-year, 10-year, 25-year, 50-year, and 100-year storms are less than or equal to pre-development peak discharge rates;
- The conveyance system leading to, from, and through stormwater management facilities has capacity for the 25-year, 24-hour storm, at a minimum; and
- The water quality volume is treated prior to discharge from the site.

The proposed conditions hydrologic model includes the full buildout of the Market Square, the existing daycare, apartment buildings, and the Town Hall and Police Department and associated infrastructure. Individual site plans need to be prepared for each of the future phases, however the future development of Market Square has been included in the stormwater modeling to demonstrate that the stormwater management system as proposed meets the design standards noted above. Post-development conditions watersheds and the built-out Market Square development are shown on Figure 4. Post-development conditions watersheds were delineated using topographic survey data and the proposed development plans for the subject areas. Land uses were estimated using aerial photography and the proposed development plans. Site development plans are included in Appendix D.

Runoff Curve Numbers (CN) used for the post-development conditions analysis are as follows: 55 (woods with good ground cover) for wooded areas in Hydrologic Soil Group B, 70 (woods with good ground cover) for wooded areas in Hydrologic Soil Group C, 77 (woods with good ground cover) for wooded areas in Hydrologic Soil Group D, 61 (>75% grass cover) for the grassed areas in Hydrologic Soil Group B, 74 (>75% grass cover) for the grassed areas in Hydrologic Soil Group C, 80 (>75% grass cover) for the grassed areas in Hydrologic Soil Group D, 86 (newly graded area) for the mulched play areas in Hydrologic Soil Group B, and 98 (impervious) for existing and proposed impervious areas such as paved roads, driveways, buildings, and the pond surface.

The proposed conditions watersheds are described further below:

Drainage Area #1A (DA #1A)

This 2.1± acre watershed encompasses a portion of the existing Edgewater Hill mixed use development that flows to the 30-inch culvert, and is comprised of the parking lot, access drive, and building associated with the existing daycare. The weighted CN of the watershed is 91. Runoff from this area flows overland to a series of catch basins and discharges to the 30-inch culvert. The discharge to the 30-inch culvert was constructed as part of Phase 1 of the Edgewater Hill Development and will not be modified as part of this project.

Drainage Area #1B (DA #1B)

This 2.2± acre watershed encompasses the remainder of the northern half of the Market Square area and is comprised of the existing play areas associated with the daycare, the proposed buildings in the northern half of Market Square, associated parking areas and access drives, and a portion of the existing road to the apartment buildings. The weighted CN of the watershed is 92. Runoff from this area is collected by a series of catch basins and discharges through a hydrodynamic separator to the existing pond for treatment and attenuation of the runoff. Ultimately the runoff discharges through the 18-inch HDPE pipe to the 30-inch culvert. The discharge to the 30-inch culvert was constructed as part of Phase 1 of the Edgewater Hill Development and will not be modified as part of this project.

Drainage Area #1C (DA #1C)

This 0.3± acre watershed encompasses a portion of the southern half of Market Square and is comprised of the access drives and associated parking constructed as part of the Town Hall and Police Department project. The weighted CN of the watershed is 94. Runoff from this area is collected by a series of catch basins and discharges through a hydrodynamic separator to the existing pond for treatment and attenuation of the runoff. Ultimately the runoff discharges through the 18-inch HDPE pipe to the 30-inch culvert. The discharge to the 30-inch culvert was constructed as part of Phase 1 of the Edgewater Hill Development and will not be modified as part of this project.

Drainage Area #1D (DA #1D)

This 2.0± acre watershed encompasses a portion of the southern half of Market Square, and is comprised of the proposed buildings, parking lots and access drives that will be constructed during future phases of the development. The currently proposed MS-2 building is located within this watershed. The weighted CN of the watershed is 93. Runoff from this area will be collected by a water quality swale and water quality basin for treatment and attenuation of the runoff prior to discharging to the 30-inch culvert. The discharge to the 30-inch culvert was constructed as part of Phase 1 of the Edgewater Hill Development and will not be modified as part of this project.

Drainage Area #2A (DA #2A)

This 3.7± acre watershed encompasses a portion of the existing residential development associated with the Edgewater Hill project, and is comprised of the existing apartment buildings, existing access drives and associated parking areas. The weighted CN of the drainage area is 83. Runoff from this area is collected by a series of catch basins and discharges to the existing man-made pond.

Drainage Area #2B (DA #2B)

This 2.2± acre watershed encompasses a portion of the access drives for the apartment buildings and currently undeveloped areas and is comprised of the upgradient apartment units and adjacent wooded areas. The weighted CN of the drainage area is 72. Runoff from this area is collected by a catch basin and discharged to an existing detention basin prior to flowing to the existing man-made pond.

Drainage Area #2C (DA #2C)

This 38.3± acre watershed encompasses the remaining areas that drain to the existing man-made pond and is comprised of the existing wooded and wetland areas. The weighted CN of the drainage area is 67. Runoff from this area flows overland into the existing man-made pond.

Drainage Area #2D (DA #2D)

This 5.7± acre watershed encompasses the Town Hall and Police Department and associated access drives and parking lot. The weighted CN of the drainage area is 83. Runoff from this area is collected by a series of catch basins and swales and discharged to various underground storage/infiltration systems, retention basin and rain garden prior to draining to the existing man-made pond. Stormwater modeling results for this watershed are imported from the detailed model prepared for the Town Hall and Police Department site plan approval.

Post-development conditions peak runoff rates were analyzed at the 30-inch culvert. The peak runoff rates are summarized below in Table 2. Comparisons of peak runoff rates, water surface elevations, and time to peak flows at the 30-inch culvert are presented below in Tables 3 through 5.

Table 2
Peak Runoff Rates – Post-Development Conditions

Storm Event	Total Off-Site Peak Runoff Rate – Pond 2P (CFS)	Peak Water Surface Elevation at 30-inch Culvert – Pond 2P (FT)	Time to Peak at 30-inch Culvert – Pond 2P (hours)
2-Year	6.57	521.10	13.54
10-Year	14.79	521.78	12.42
25-Year	20.87	522.22	12.20
50-Year	24.76	522.51	12.19
100-Year	28.51	522.82	12.18

Table 3
Peak Runoff Rates – Post-Development Conditions vs. Pre-Development Conditions

Storm Event	Post-Development Conditions Total Off-Site Peak Runoff Rate – Pond 2P (CFS)	Pre-Development Conditions Total Off-Site Peak Runoff Rate – Pond 2P (CFS)	Change in Peak Runoff Rate (CFS)
2-Year	6.57	6.62	-0.05
10-Year	14.79	16.88	-2.09
25-Year	20.87	21.32	-0.45
50-Year	24.76	24.93	-0.17
100-Year	28.51	28.78	-0.27

Table 4
Peak Water Surface Elevations – Post-Development Conditions vs. Pre-Development Conditions

Storm Event	Post-Development Conditions Peak Water Surface Elevation at 30-inch Culvert – Pond 2P (FT)	Pre-Development Conditions Peak Water Surface Elevation at 30-inch Culvert – Pond 2P (FT)	Change in Peak Water Surface Elevation (FT)
2-Year	521.10	521.10	0.00
10-Year	521.78	521.93	-0.15
25-Year	522.22	522.26	-0.04
50-Year	522.51	522.53	-0.02
100-Year	522.82	522.85	-0.03

Table 5
Time to Peak Flow – Post-Development Conditions vs. Pre-Development Conditions

Storm Event	Post-Development Conditions Time to Peak Flow at 30-inch Culvert – Pond 2P (hours)	Pre-Development Conditions Time to Peak Flow at 30-inch Culvert – Pond 2P (hours)	Change in Time of Peak Flow (hours)
2-Year	13.54	12.57	+0.96
10-Year	12.42	12.41	+0.01
25-Year	12.20	12.40	-0.20
50-Year	12.19	12.39	-0.20
100-Year	12.18	12.38	-0.20

As presented above, the proposed stormwater management system does not result in increases to off-site flow rates or water surface elevations, and therefore will have no impact to CT DOT drainage facilities and meets the recommendations of the CT DEEP Stormwater Quality Manual for peak flow rate attenuation. The decrease in time to peak flow during the 25-year, 50-year and 100-year storm events is measured in minutes and will therefore not result in significant changes to downstream flow patterns. The increase in time to peak flow during the 2-year storm event is a result of the detention provided throughout the development and is an expected result of peak flow rate attenuation for smaller storm events. The time to peak flow during the 10-year storm event is essentially unchanged from pre-development conditions. The analysis results presented above include the full build-out of the Market Square area as shown on Figure 4.

Stormwater Management System Design

The proposed methodology for managing the stormwater from the Market Square area consists of treating the stormwater runoff from the northern half of Market Square and the existing roadway (Edgewater Circle) utilizing hydrodynamic separators and utilizing the storage capacity of the man-made pond to attenuate peak flow rates. This portion of the development has been completed under the previous phase of construction.

Stormwater runoff from the southern half of Market Square will be collected, treated and detained in a proposed water quality basin prior to discharging through the existing collection system in Edgewater Circle to the 30-inch RCP culvert at Route 66. Additional analysis and treatment/peak flow rate

attenuation of the future phases of residential development will be required as development progresses as the water quality basin is sized only for the impervious area associated with the southern portion of Market Square as shown on Figure 4 of this report.

The proposed stormwater collection system consists of catch basins and curbing along the future parking areas and sidewalks. The proposed drains are sized for the 25-year storm event, at a minimum, based on the calculated Manning's capacity of each pipe reach. Pipe sizing calculations are summarized below and are included in Appendix C.

Table 6
Pipe Reach Capacity Summary – 25-Year Design Storm

Structure From	Structure To	Manning's Capacity (CFS)	25-year Design Storm Flow for Pipe Reach (CFS)
Type CL Catch Basin	**Drainage Manhole**	9.16	0.3
Type CG Catch Basin	**Drainage Manhole**	22.68	11.39
Outlet Control Structure	**Type CG Catch Basin**	22.68	11.39
Type C Catch Basin 1	**Rip Rap Scour Hole**	6.48	1.3
Type C Catch Basin 2	**Type C Catch Basin 1**	6.48	0.9
Roof	**Water Quality Basin**	1.97	1.2

The piped discharge and overflow spillway will be protected from erosion by rip rap sized in accordance with the recommendations of the CT DOT Drainage Manual. Sizing calculations for the scour protection are summarized in Table 7 and included in Appendix C.

Table 7
Scour Protection Sizing

Stormwater Discharge	100-year Discharge Velocity (FPS)	Proposed Surface Treatment	Typical Allowable Velocity (FPS)
Catch Basin Drainage	4.6	Modified Rip Rap Scour Hole	14.7 (Per DOT Drainage Manual)
Water Quality Basin Spillway	1.88 (No spillway discharge modeled for 100-year design storm. Velocity shown assumes all other outlets are blocked.)	Modified Rip Rap Spillway	8 for rip rap (Per DOT Drainage Manual)

The stormwater management system will also provide treatment of the runoff from the proposed impervious areas. Treatment of runoff from the site will be accomplished using a deep sump catch basin with hooded outlet prior to the discharge to the Water Quality Basin. The proposed Water Quality Basin

is sized to retain and infiltrate the water quality volume associated with the upgradient impervious areas. Sizing calculations for the Water Quality Basin are summarized in Table 8 and are included in Appendix C.

Table 8
Water Quality Basin Sizing Criteria

Design Criteria	Sizing Result
Contributing Impervious Area	1.27 acres
Contributing Drainage Area	1.84 acres
Water Quality Volume	4,179 cubic feet
Storage Below Lowest Orifice	6,958 cubic feet

The water quality basin is intended to be provided with an underdrain system to ensure that there is not a standing pool of water in the water quality basin between storm events. The underdrain will be embedded in crushed stone, wrapped in filter fabric, beneath a sand filter layer to filter and treat the stored runoff as it is released after storm events. This system will provide the treatment of the water quality volume that is required prior to discharge.

Construction Phase Stormwater Management

The Water Quality Basin presented in the HydroCAD model (Appendix B) is sized to provide treatment of the water quality volume from the entire southern half of the Market Square area. The current proposal includes the development of only one (1) of the buildings and the minimum amount of impervious area required to provide parking for the proposed building. Therefore, the proposed Water Quality Basin will only be partially constructed as part of this phase of development. The proposed basin will serve as a temporary sediment trap during construction of the current and future phases of Market Square. The temporary sediment trap is currently sized to provide 134 cubic yards of storage capacity per acre of upgradient disturbed area, and to retain the water quality volume associated with the impervious area created during construction of the MS-2 building and associated infrastructure (current phase). The required and provided volumes are summarized in Tables 9 and 10 and included in Appendix C.

Table 9
MS-2 Phase Temporary Sediment Trap Sizing Criteria

Design Criteria	Sizing Result
Contributing Area	0.7 acres
Storage Volume Required	2,533 cubic feet
Storage Volume Below Outlet Structure Top of Frame	5,720 cubic feet (Outlet orifices to be blocked until upgradient areas are stabilized)

Table 10
MS-2 Phase Water Quality Basin Sizing Criteria

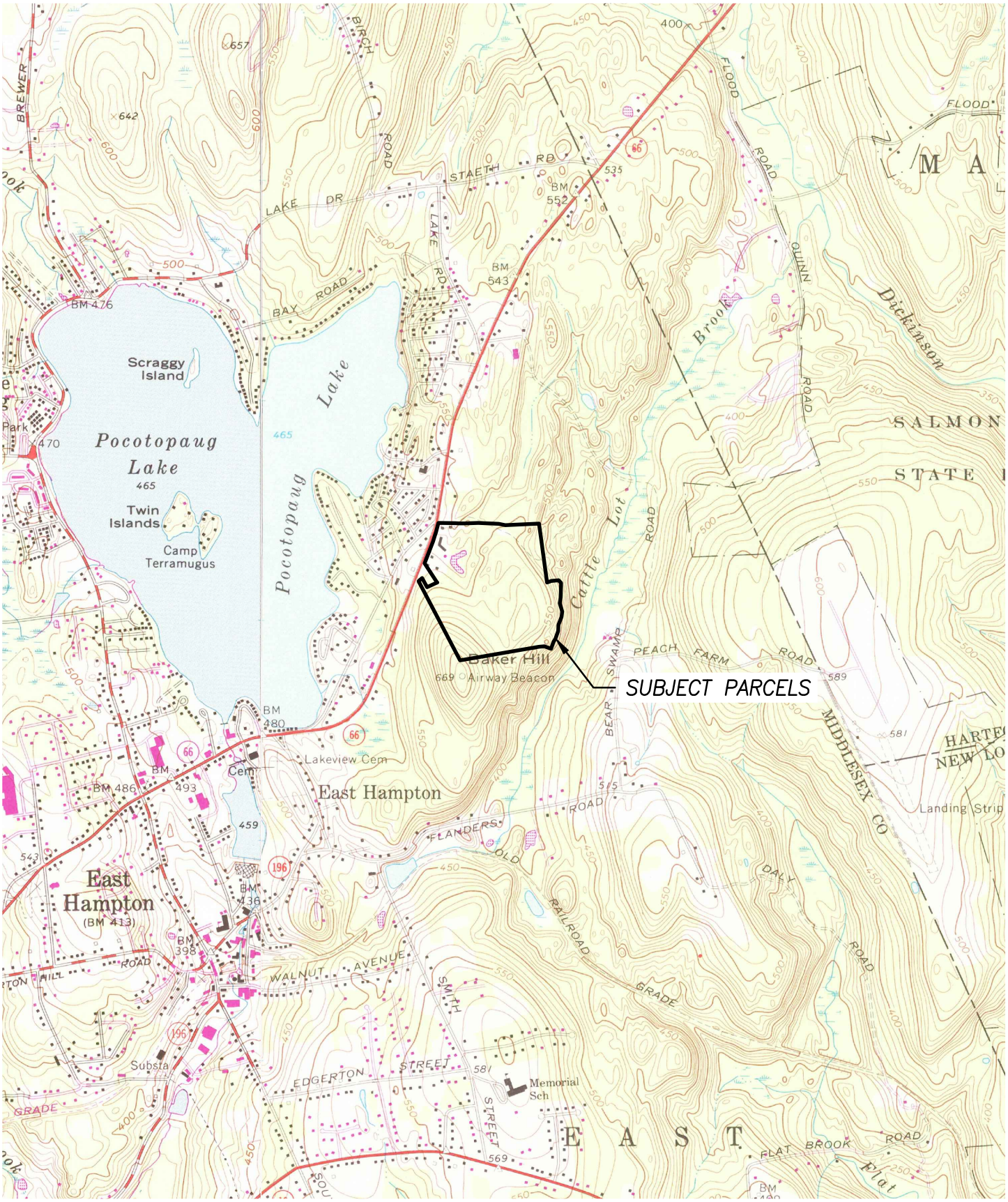
Design Criteria	Sizing Result
Contributing Impervious Area	0.42 acres
Contributing Drainage Area	0.70 acres
Water Quality Volume	1,375 cubic feet
Storage Below Lowest Orifice	1,629 cubic feet

The bottom of the temporary sediment trap will be maintained 9-inches above the proposed bottom of the full build-out water quality basin to protect the infiltration capacity of the native soils from silt and over compaction due to construction equipment. The proposed underdrain system will not be installed until construction of the southern half of Market Square is complete to protect the underdrain from blockages and silt deposition.

Summary

The proposed stormwater management system provides peak rate attenuation and treatment of the stormwater runoff prior to leaving the site in accordance with the applicable requirements of the CT DEEP, CT DOT and Town of East Hampton. There will be no drainage impact to CT DOT facilities as a result of the proposed improvements depicted on the enclosed site plans.

The proposed improvements are shown on plans titled “Site Development Plan, Proposed Mixed Use Building (MS-2), Prepared for Edgewater Hill Enterprises, LLC., 000 East High Street, East Hampton, Connecticut, May 2020, Job I.D. No. 20-2795-2, Sheet 1 through Sheet 12 of 12” prepared by Boundaries LLC.



BOUNDARIES
CIVIL ENGINEERING LAND SURVEYING LAND USE PLANNING SOIL SCIENCE
Boundaries LLC
179 Pachaug River Drive, Griswold, CT 06351
T 860.376.2006 | www.boundariesllc.net

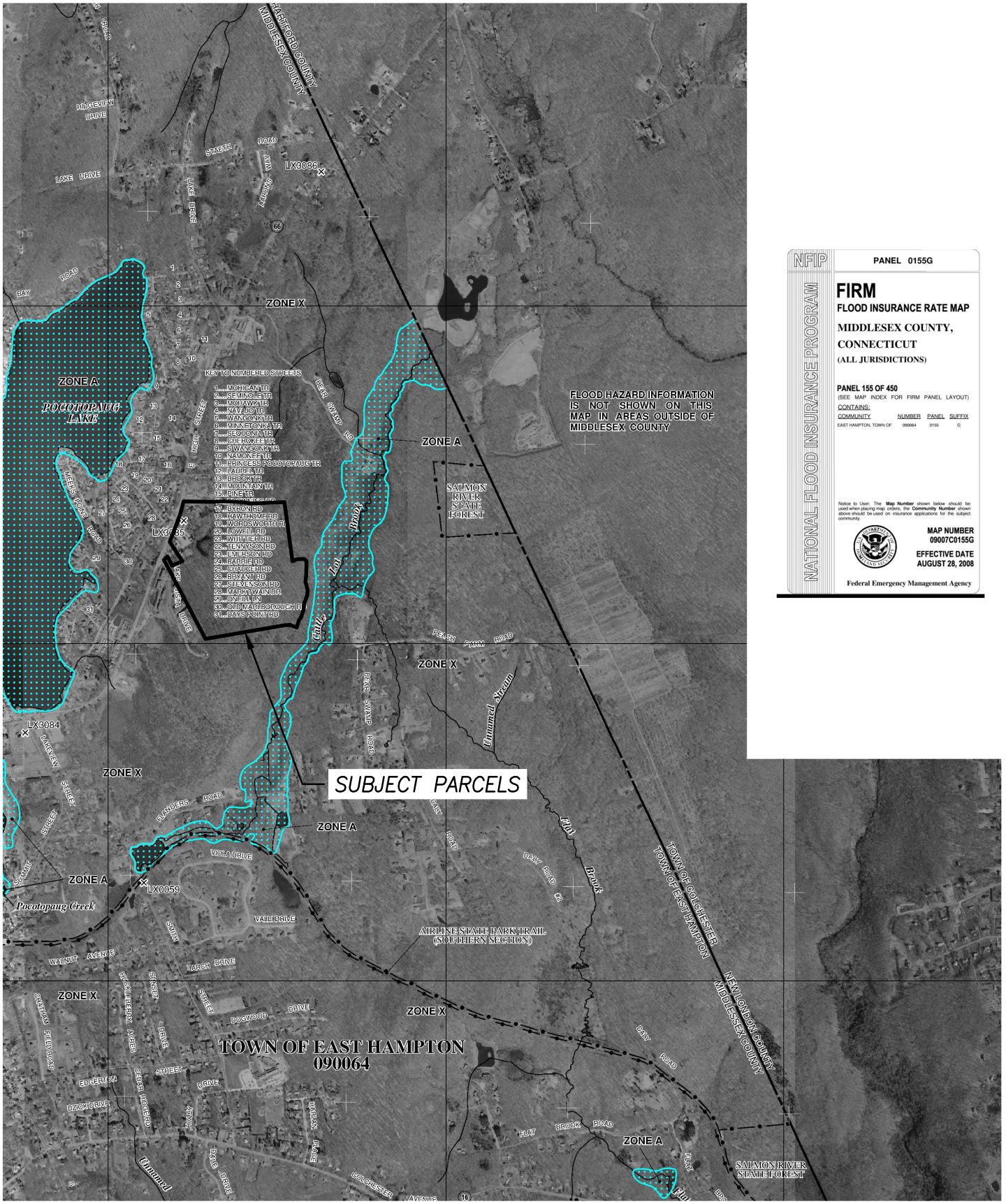
Locus Map

(Middle Haddam - 68 / Moodus - 69 Quads)

Proposed Mixed Use Building

East High Street, East Hampton, CT

SCALE:	1"=2,000'
DATE:	May 2020
JOB NO.	20-2795-2
FIGURE	1



NFIP

PANEL 0155G

FIRM

FLOOD INSURANCE RATE MAP

MIDDLESEX COUNTY, CONNECTICUT

(ALL JURISDICTIONS)

PANEL 155 OF 450

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
EAST HAMPTON, TOWN OF	090064	0155	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
09007C0155G

EFFECTIVE DATE
AUGUST 28, 2008

Federal Emergency Management Agency

NATIONAL FLOOD INSURANCE PROGRAM

BOUNDARIES
CIVIL ENGINEERING LAND SURVEYING LAND USE PLANNING SOIL SCIENCE

Boundaries LLC
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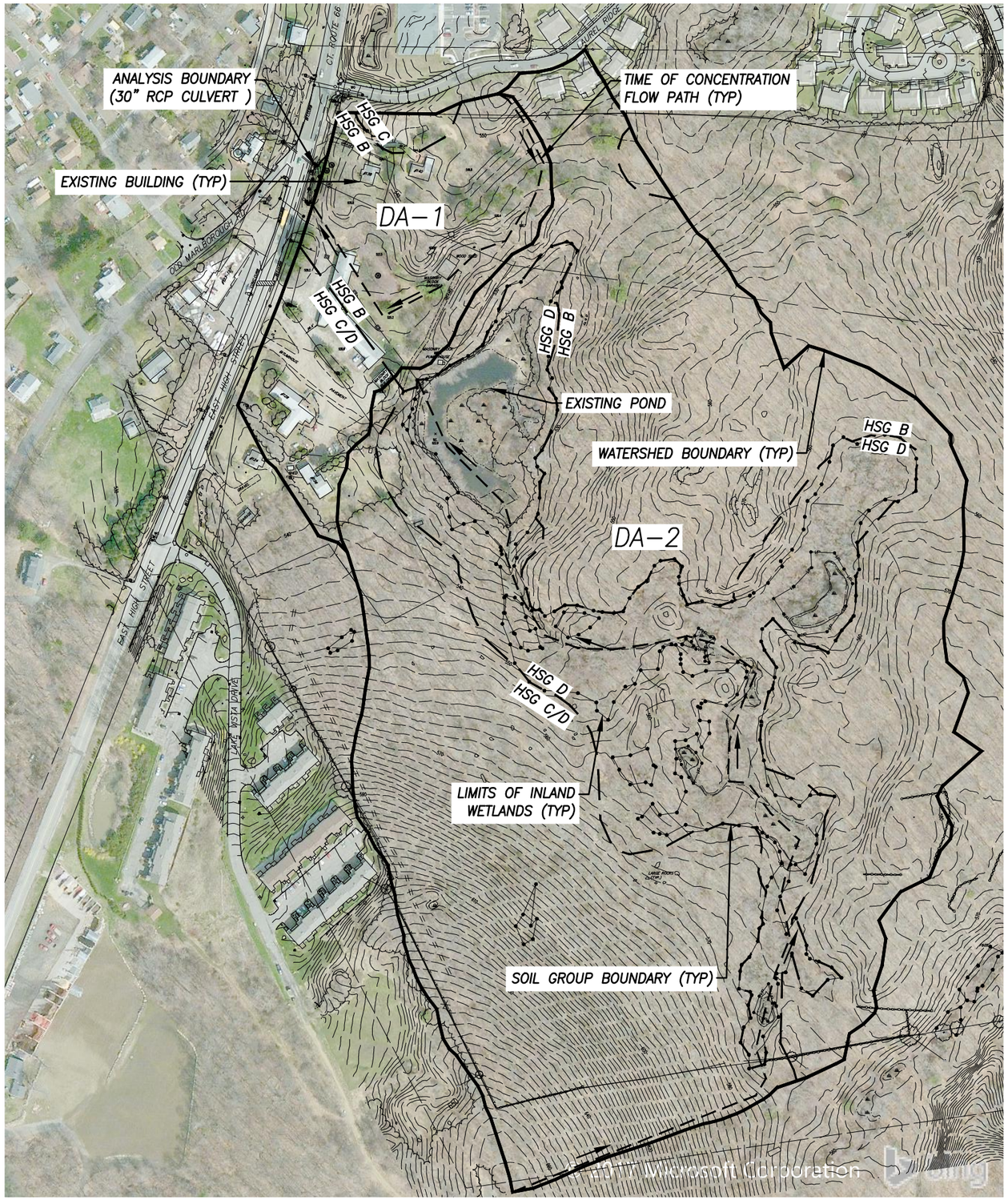
FEMA Flood Insurance Rate Map

Map 090064 Panel 155 G

Proposed Mixed Use Building

East High Street, East Hampton, CT

SCALE:	1"=2,000'
DATE:	May 2020
JOB NO.	20-2795-2
FIGURE	2



Pre-Development Conditions

Watershed	Area (acres)	CN Value	Description
DA-1	6.763	70	Former residences, motel and associated parking lot
DA-2	45.453	66	Undeveloped land and two units of Laurel Ridge community
TOTAL	52.216	66	Former residences, motel, two units of Laurel Ridge community and undeveloped land

GRAPHIC SCALE

500 250 125 0 250

(IN FEET)
1 inch = 250 ft.

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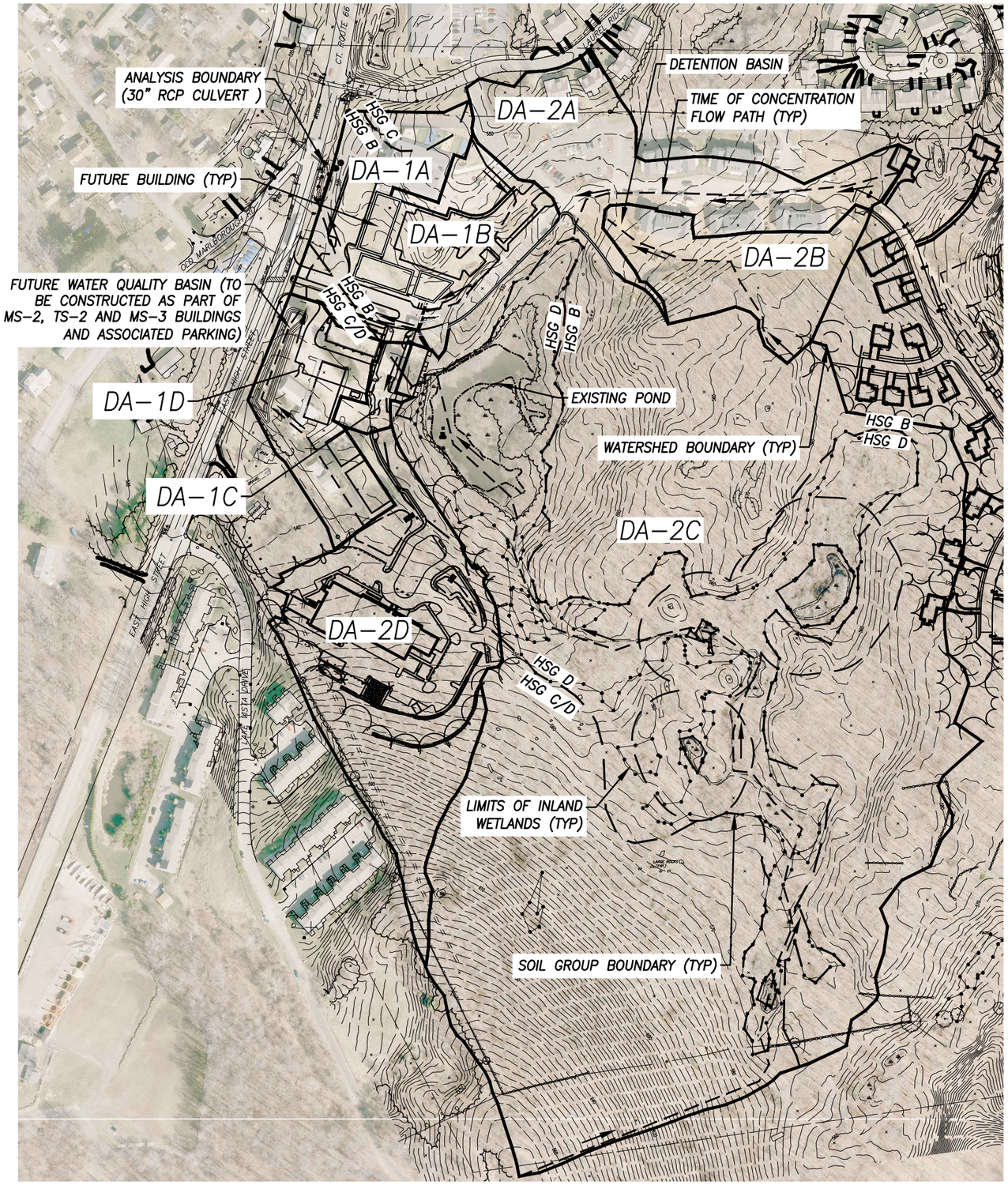
Pre-Development Conditions Watersheds
Proposed Mixed Use Building
Edgewater Hill Enterprises LLC
East High Street, East Hampton, Connecticut

SCALE: 1"=250'
DATE: May 2020
FIGURE 3



Market Square Post-Development Conditions

Watershed	Area (acres)	CN Value	Description
DA-1A	2.061	91	Existing Daycare building and parking lot
DA-1B	2.158	92	MS-1 building, proposed TS-1 building, and existing parking lot, and road
DA-1C	0.342	94	Existing road and proposed parking lot
DA-1D	1.962	93	Proposed MS-2 building, future Market Square buildings, parking, and stormwater quality basin
DA-2A	3.613	84	Existing parking lot, roadway and apartment buildings
DA-2B	2.152	72	Existing roadway and apartment buildings
DA-2C	37.862	68	Existing wooded area and wetlands (stormwater from future phases will be evaluated by phase)
DA-2D	5.658	83	Existing Town Hall and Police Department site, roadway and parking
TOTAL	55.807	73	Market Square, Daycare, Apartment Buildings, Town Hall and undisturbed areas for future phases

GRAPHIC SCALE

500 250 125 0 250

(IN FEET)
1 inch = 250 ft.

CIVIL ENGINEERING LAND SURVEYING LAND USE PLANNING SOIL SCIENCE
BOUNDARIES
Boundaries LLC
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Post-Development Conditions Watersheds
Proposed Mixed Use Building
Edgewater Hill Enterprises LLC
East High Street, East Hampton, Connecticut

SCALE: 1"=250'
DATE: May 2020
FIGURE 4

Appendix A
NRCS Web Soil Survey Soils Report

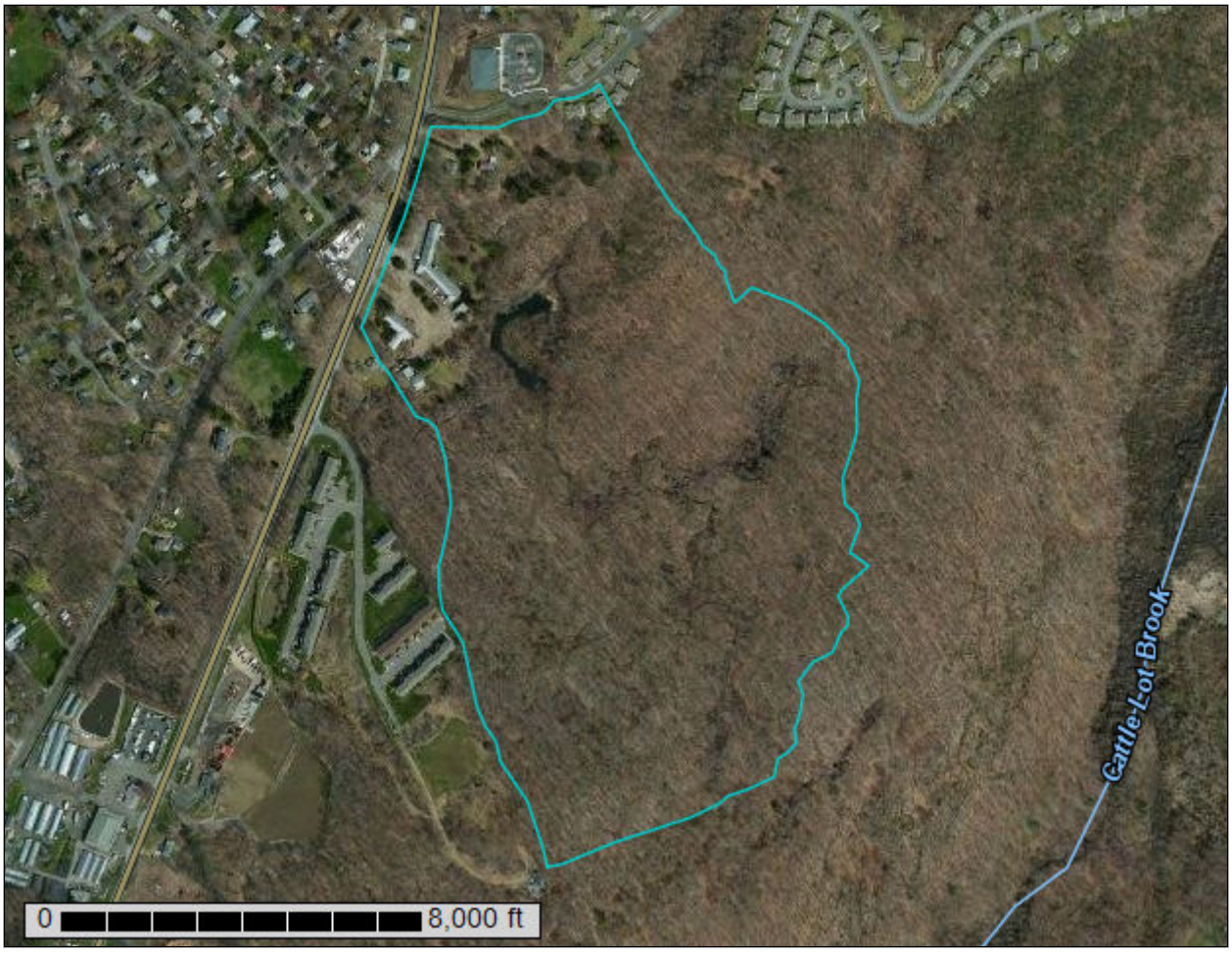
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for State of Connecticut



April 12, 2017

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:4,190 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

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.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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 15, Sep 28, 2016

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

Date(s) aerial images were photographed: Mar 28, 2011—Apr 18, 2011

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

State of Connecticut (CT600)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	7.2	13.7%
46C	Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony	4.9	9.4%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	0.2	0.3%
72C	Nipmuck-Brookfield complex, 3 to 15 percent slopes, very rocky	26.1	50.0%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	1.0	1.9%
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	9.3	17.7%
284B	Paxton-Urban land complex, 3 to 8 percent slopes	3.3	6.3%
308	Udorthents, smoothed	0.3	0.6%
Totals for Area of Interest		**52.2**	**100.0%**

Map Unit Descriptions

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 up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties

and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

State of Connecticut

3—Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2t2qt
Elevation: 0 to 1,480 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Ridgebury, extremely stony, and similar soils: 40 percent
Leicester, extremely stony, and similar soils: 35 percent
Whitman, extremely stony, and similar soils: 17 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury, Extremely Stony

Setting

Landform: Depressions, drumlins, ground moraines, drainageways, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: fine sandy loam
Bw - 6 to 10 inches: sandy loam
Bg - 10 to 19 inches: gravelly sandy loam
Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: Yes

Description of Leicester, Extremely Stony

Setting

Landform: Depressions, ground moraines, drainageways, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Parent material: Coarse-loamy supraglacial or subglacial till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 7 inches: fine sandy loam
Bg - 7 to 18 inches: fine sandy loam
BC - 18 to 24 inches: fine sandy loam
C1 - 24 to 39 inches: gravelly fine sandy loam
C2 - 39 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B/D
Hydric soil rating: Yes

Description of Whitman, Extremely Stony

Setting

Landform: Depressions, drumlins, ground moraines, drainageways, hills
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 1 inches: peat

A - 1 to 10 inches: fine sandy loam
Bg - 10 to 17 inches: gravelly fine sandy loam
Cdg - 17 to 61 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: 7 to 38 inches to densic material
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: Yes

Minor Components

Woodbridge, extremely stony

Percent of map unit: 6 percent
Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Footslope, summit, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Swansea

Percent of map unit: 2 percent
Landform: Bogs, swamps
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

46C—Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w687
Elevation: 0 to 1,420 feet

Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Woodbridge, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Woodbridge, Very Stony

Setting

Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 9 inches: fine sandy loam
Bw1 - 9 to 20 inches: fine sandy loam
Bw2 - 20 to 32 inches: fine sandy loam
Cd - 32 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 19 to 27 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C/D
Hydric soil rating: No

Minor Components

Paxton, very stony

Percent of map unit: 9 percent
Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex

Across-slope shape: Convex, linear
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 4 percent
Landform: Depressions, drumlins, ground moraines, drainageways, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Whitman, very stony

Percent of map unit: 1 percent
Landform: Depressions, drainageways
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton, very stony

Percent of map unit: 1 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

62C—Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2wks7
Elevation: 0 to 1,310 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Canton, extremely stony, and similar soils: 50 percent
Charlton, extremely stony, and similar soils: 35 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton, Extremely Stony

Setting

Landform: Ridges, hills, moraines
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Side slope, crest, nose slope

Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 2 inches: slightly decomposed plant material
A - 2 to 5 inches: fine sandy loam
Bw1 - 5 to 16 inches: fine sandy loam
Bw2 - 16 to 22 inches: gravelly fine sandy loam
2C - 22 to 67 inches: gravelly loamy sand

Properties and qualities

Slope: 3 to 15 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: 19 to 39 inches to strongly contrasting textural stratification
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Charlton, Extremely Stony

Setting

Landform: Ground moraines, ridges, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy melt-out till derived from granite, gneiss, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 4 inches: fine sandy loam
Bw - 4 to 27 inches: gravelly fine sandy loam
C - 27 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 15 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 8.7 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Chatfield, extremely stony
Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Crest, side slope, nose slope
Down-slope shape: Convex
Across-slope shape: Linear, convex
Hydric soil rating: No

Leicester, extremely stony
Percent of map unit: 5 percent
Landform: Depressions, ground moraines, drainageways, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear, concave
Across-slope shape: Concave
Hydric soil rating: Yes

Sutton, extremely stony
Percent of map unit: 5 percent
Landform: Ground moraines, hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

72C—Nipmuck-Brookfield complex, 3 to 15 percent slopes, very rocky

Map Unit Setting
National map unit symbol: 2svjw
Elevation: 70 to 1,310 feet
Mean annual precipitation: 46 to 56 inches

Mean annual air temperature: 45 to 50 degrees F
Frost-free period: 140 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Nipmuck and similar soils: 50 percent
Brookfield and similar soils: 40 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nipmuck

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, base slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy supraglacial meltout till derived from mica schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 7 inches: fine sandy loam
Bw1 - 7 to 17 inches: fine sandy loam
Bw2 - 17 to 23 inches: fine sandy loam
C1 - 23 to 30 inches: sandy loam
C2 - 30 to 35 inches: loamy sand
2Rj - 35 to 44 inches: bedrock

Properties and qualities

Slope: 3 to 15 percent
Percent of area covered with surface fragments: 3.2 percent
Depth to restrictive feature: 20 to 39 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Low to high (0.01 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Brookfield

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Loamy supraglacial meltout till derived from mica schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: fine sandy loam
Bw1 - 3 to 13 inches: gravelly fine sandy loam
Bw2 - 13 to 27 inches: gravelly fine sandy loam
C - 27 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 15 percent
Percent of area covered with surface fragments: 3.2 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Brimfield

Percent of map unit: 5 percent
Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, nose slope, side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Rock outcrop

Percent of map unit: 5 percent
Hydric soil rating: No

85C—Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w67f
Elevation: 0 to 1,520 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton, very stony, and similar soils: 55 percent
Montauk, very stony, and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 8 to 15 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Montauk, Very Stony

Setting

Landform: Drumlins, ground moraines, recessionial moraines, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex

Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 8 to 15 percent
Percent of area covered with surface fragments: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 6 percent
Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton, very stony

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 3 percent
Landform: Depressions, drumlins, ground moraines, drainageways, hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave

Across-slope shape: Concave
Hydric soil rating: Yes

Stockbridge, very stony
Percent of map unit: 1 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

86D—Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony

Map Unit Setting
National map unit symbol: 2w67c
Elevation: 0 to 1,400 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition
Paxton, extremely stony, and similar soils: 55 percent
Montauk, extremely stony, and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Extremely Stony

Setting
Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile
Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities
Slope: 15 to 35 percent

Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Montauk, Extremely Stony

Setting

Landform: Drumlins, ground moraines, recessionial moraines, hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy over sandy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 6 inches: fine sandy loam
Bw1 - 6 to 28 inches: fine sandy loam
Bw2 - 28 to 36 inches: sandy loam
2Cd - 36 to 74 inches: gravelly loamy sand

Properties and qualities

Slope: 15 to 35 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Natural drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 1.42 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 5.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Charlton, extremely stony
Percent of map unit: 6 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge, extremely stony
Percent of map unit: 5 percent
Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury, extremely stony
Percent of map unit: 3 percent
Landform: Depressions, drumlins, ground moraines, drainageways, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Stockbridge, extremely stony
Percent of map unit: 1 percent
Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

284B—Paxton-Urban land complex, 3 to 8 percent slopes

Map Unit Setting
National map unit symbol: 2w67s
Elevation: 0 to 1,070 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 145 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Paxton and similar soils: 45 percent
Urban land: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Linear, convex
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 39 inches to densic material
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Description of Urban Land

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 0 inches to manufactured layer
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 to 0.00 in/hr)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Charlton

Percent of map unit: 7 percent
Landform: Hills
Landform position (two-dimensional): Shoulder, backslope, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Woodbridge

Percent of map unit: 5 percent
Landform: Drumlins, ground moraines, hills
Landform position (two-dimensional): Backslope, summit, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Udorthents

Percent of map unit: 5 percent
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury

Percent of map unit: 3 percent
Landform: Depressions, drumlins, ground moraines, drainageways, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: Yes

308—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 9lmj
Elevation: 0 to 2,000 feet
Mean annual precipitation: 43 to 56 inches
Mean annual air temperature: 45 to 55 degrees F
Frost-free period: 120 to 185 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Setting

Down-slope shape: Convex
Across-slope shape: Linear

Typical profile

A - 0 to 5 inches: loam
C1 - 5 to 21 inches: gravelly loam
C2 - 21 to 80 inches: very gravelly sandy loam

Properties and qualities

Slope: 0 to 35 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: About 24 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Udorthents, wet substratum

Percent of map unit: 7 percent
Hydric soil rating: No

Unnamed, undisturbed soils

Percent of map unit: 7 percent
Hydric soil rating: No

Urban land

Percent of map unit: 5 percent
Hydric soil rating: No

Rock outcrop

Percent of map unit: 1 percent
Hydric soil rating: No

Soil Information for All Uses

Soil Properties and Qualities

The Soil Properties and Qualities section includes various soil properties and qualities displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each property or quality.

Soil Qualities and Features

Soil qualities are behavior and performance attributes that are not directly measured, but are inferred from observations of dynamic conditions and from soil properties. Example soil qualities include natural drainage, and frost action. Soil features are attributes that are not directly part of the soil. Example soil features include slope and depth to restrictive layer. These features can greatly impact the use and management of the soil.

Hydrologic Soil Group

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

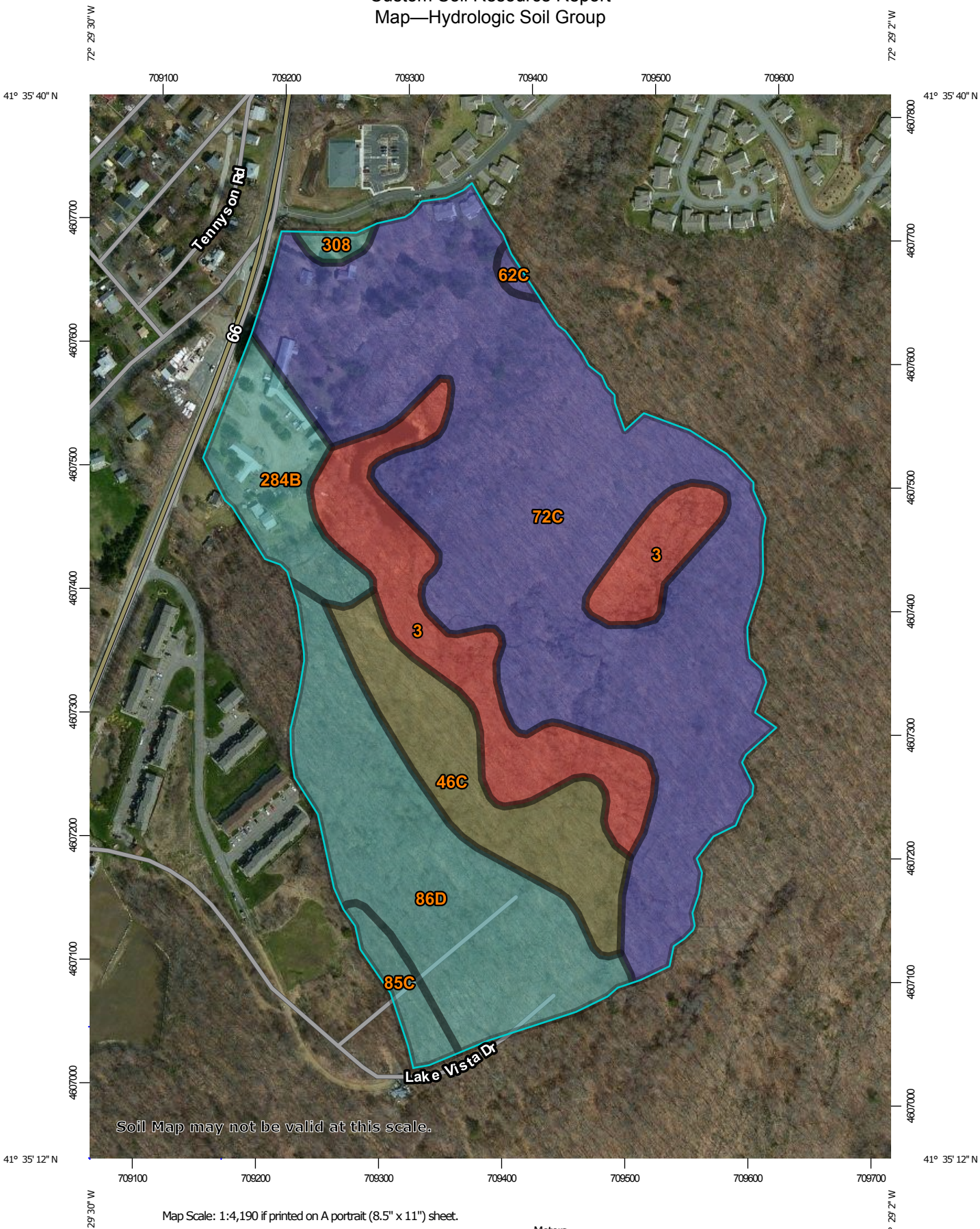
Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Custom Soil Resource Report
Map—Hydrologic Soil Group



Map Scale: 1:4,190 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 50 100 200 300

Feet
0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Lines

A

A/D

B

B/D

C

C/D

D

Not rated or not available

Soil Rating Points

A

A/D

B

B/D

C

C/D

D

Not rated or not available

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.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

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 15, Sep 28, 2016

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

Date(s) aerial images were photographed: Mar 28, 2011—Apr 18, 2011

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.

Table—Hydrologic Soil Group

Hydrologic Soil Group— Summary by Map Unit — State of Connecticut (CT600)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	D	7.2	13.7%
46C	Woodbridge fine sandy loam, 8 to 15 percent slopes, very stony	C/D	4.9	9.4%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B	0.2	0.3%
72C	Nipmuck-Brookfield complex, 3 to 15 percent slopes, very rocky	B	26.1	50.0%
85C	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes, very stony	C	1.0	1.9%
86D	Paxton and Montauk fine sandy loams, 15 to 35 percent slopes, extremely stony	C	9.3	17.7%
284B	Paxton-Urban land complex, 3 to 8 percent slopes	C	3.3	6.3%
308	Udorthents, smoothed	C	0.3	0.6%
Totals for Area of Interest			**52.2**	**100.0%**

Rating Options—Hydrologic Soil Group

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

References

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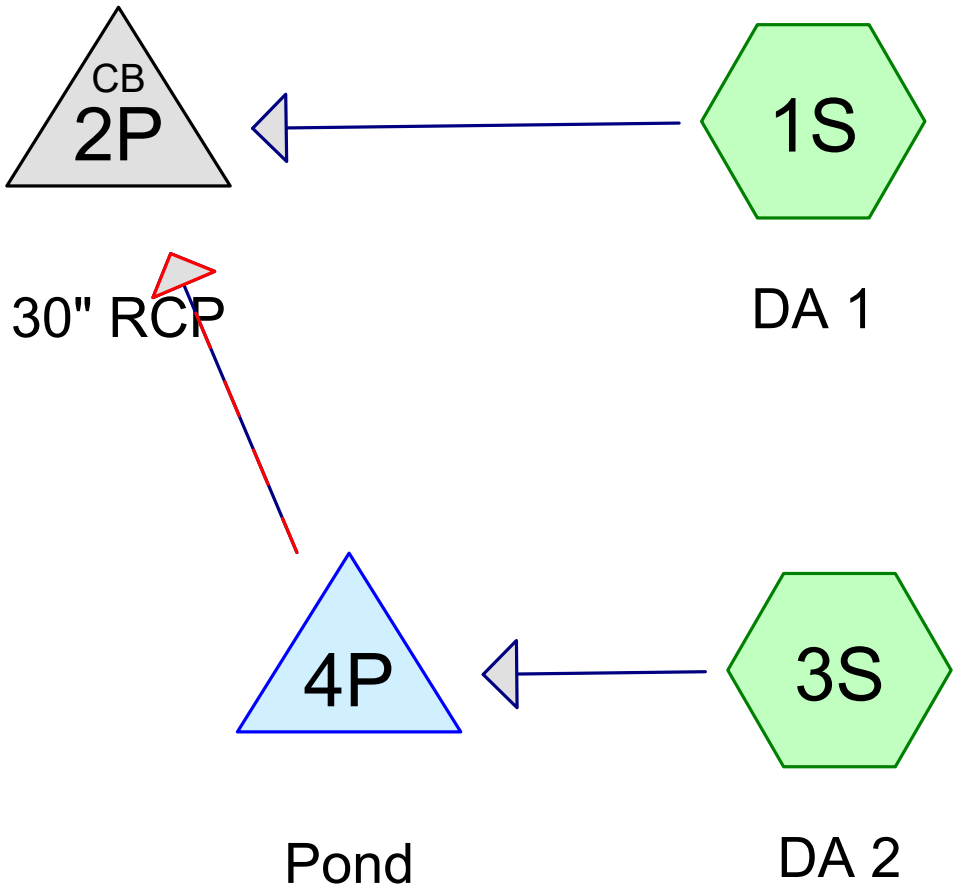
Appendix B
HydroCAD Modeling Results

Pre-Development Conditions HydroCAD Results



Subcat Reach Pond Link

Routing Diagram for Existing to RT 66
Prepared by {enter your company name here}, Printed 5/8/2020
HydroCAD® 10.10-4a s/n 04031 © 2020 HydroCAD Software Solutions LLC

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	Type III 24-hr		Default	24.00	1	3.37	2
2	10-Year	Type III 24-hr		Default	24.00	1	5.18	2
3	25-Year	Type III 24-hr		Default	24.00	1	6.30	2
4	50-Year	Type III 24-hr		Default	24.00	1	7.14	2
5	100-Year	Type III 24-hr		Default	24.00	1	8.04	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.715	61	>75% Grass cover, Good, HSG B (1S, 3S)
1.356	74	>75% Grass cover, Good, HSG C (1S, 3S)
0.090	80	>75% Grass cover, Good, HSG D (3S)
0.076	96	Gravel surface, HSG B (1S, 3S)
0.332	96	Gravel surface, HSG C (1S, 3S)
0.977	98	Paved parking, HSG B (1S)
0.050	98	Paved parking, HSG C (1S, 3S)
0.207	98	Unconnected roofs, HSG B (1S, 3S)
0.155	98	Unconnected roofs, HSG C (1S)
0.839	98	Water Surface, 0% imp, HSG D (3S)
19.980	55	Woods, Good, HSG B (1S, 3S)
15.507	70	Woods, Good, HSG C (1S, 3S)
10.929	77	Woods, Good, HSG D (3S)
52.214	**67**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
22.956	HSG B	1S, 3S
17.401	HSG C	1S, 3S
11.858	HSG D	3S
0.000	Other	
52.214		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	1.715	1.356	0.090	0.000	3.162	>75% Grass cover, Good	1S, 3S
0.000	0.076	0.332	0.000	0.000	0.408	Gravel surface	1S, 3S
0.000	0.977	0.050	0.000	0.000	1.027	Paved parking	1S, 3S
0.000	0.207	0.155	0.000	0.000	0.362	Unconnected roofs	1S, 3S
0.000	0.000	0.000	0.839	0.000	0.839	Water Surface, 0% imp	3S
0.000	19.980	15.507	10.929	0.000	46.417	Woods, Good	1S, 3S
0.000	**22.956**	**17.401**	**11.858**	**0.000**	**52.214**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	2P	519.92	519.62	80.0	0.0037	0.013	30.0	0.0	0.0
2	4P	522.29	520.81	440.8	0.0034	0.013	18.0	0.0	0.0

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: DA 1 Runoff Area=294,524 sf 18.58% Impervious Runoff Depth=0.93"
Flow Length=1,064' Tc=26.2 min CN=70 Runoff=4.01 cfs 0.523 af

Subcatchment 3S: DA 2 Runoff Area=1,979,932 sf 0.29% Impervious Runoff Depth=0.73"
Tc=22.6 min CN=66 Runoff=20.84 cfs 2.768 af

Pond 2P: 30" RCP Peak Elev=521.10' Inflow=6.62 cfs 3.262 af
30.0" Round Culvert n=0.013 L=80.0' S=0.0037 '/' Outflow=6.62 cfs 3.262 af

Pond 4P: Pond Peak Elev=523.56' Storage=0.939 af Inflow=20.84 cfs 2.768 af
Primary=4.54 cfs 2.739 af Secondary=0.00 cfs 0.000 af Outflow=4.54 cfs 2.739 af

Total Runoff Area = 52.214 ac Runoff Volume = 3.291 af Average Runoff Depth = 0.76"
97.34% Pervious = 50.825 ac 2.66% Impervious = 1.389 ac

Summary for Subcatchment 1S: DA 1

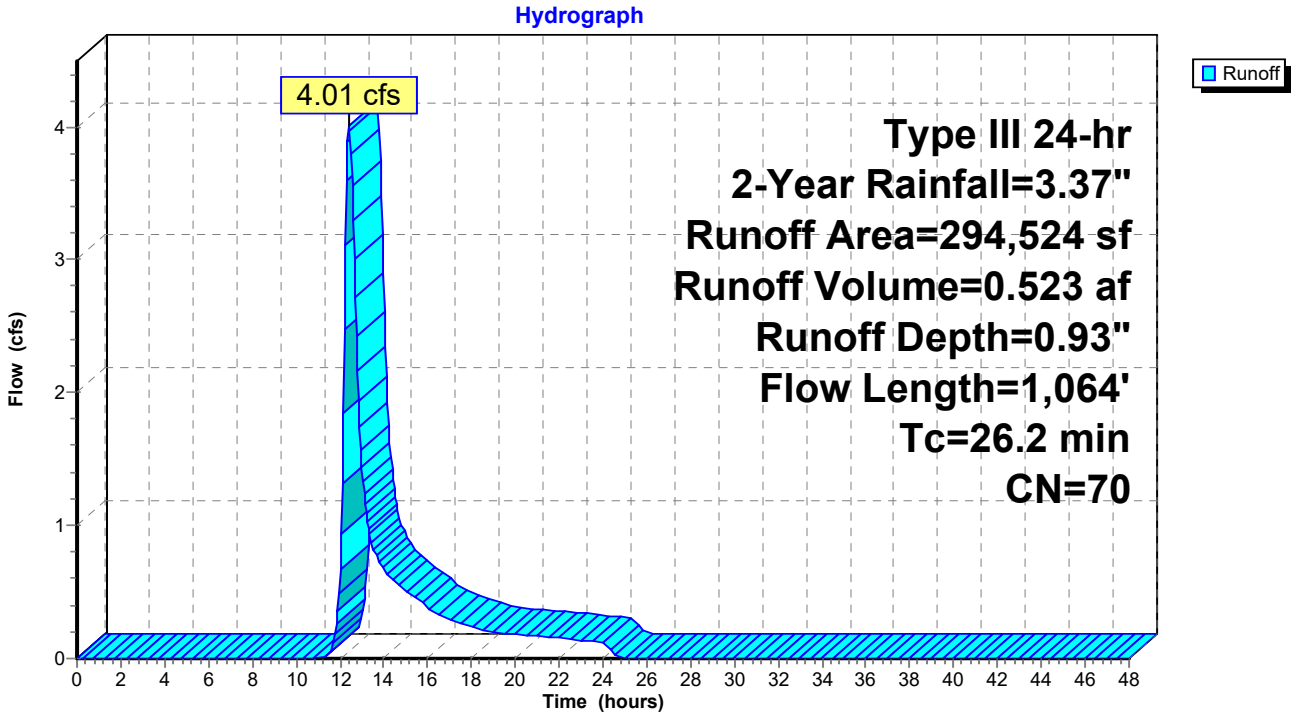
Runoff = 4.01 cfs @ 12.41 hrs, Volume= 0.523 af, Depth= 0.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.37"

Area (sf)	CN	Description
10,077	74	>75% Grass cover, Good, HSG C
1,575	98	Paved parking, HSG C
411	70	Woods, Good, HSG C
2,001	96	Gravel surface, HSG C
1,499	98	Unconnected roofs, HSG B
1,111	98	Unconnected roofs, HSG B
1,273	96	Gravel surface, HSG B
1,214	98	Unconnected roofs, HSG B
42,571	98	Paved parking, HSG B
1,694	96	Gravel surface, HSG B
4,509	98	Unconnected roofs, HSG C
113	98	Unconnected roofs, HSG C
2,133	98	Unconnected roofs, HSG C
12,266	96	Gravel surface, HSG C
2,876	70	Woods, Good, HSG C
1,206	70	Woods, Good, HSG C
677	70	Woods, Good, HSG C
650	70	Woods, Good, HSG C
3,876	70	Woods, Good, HSG C
641	70	Woods, Good, HSG C
4,468	55	Woods, Good, HSG B
99,615	55	Woods, Good, HSG B
62,431	61	>75% Grass cover, Good, HSG B
35,637	74	>75% Grass cover, Good, HSG C
294,524	70	Weighted Average
239,799		81.42% Pervious Area
54,725		18.58% Impervious Area
10,579		19.33% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.1300	0.17		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
5.3	343	0.0466	1.08		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
10.3	434	0.0100	0.70		**Shallow Concentrated Flow, Grass** Short Grass Pasture Kv= 7.0 fps
0.3	40	0.0183	2.18		**Shallow Concentrated Flow, Gravel** Unpaved Kv= 16.1 fps
0.4	147	0.0360	6.04	40.29	**Parabolic Channel, Channel** W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.035 Earth, dense weeds
26.2	1,064	Total			

Subcatchment 1S: DA 1



Summary for Subcatchment 3S: DA 2

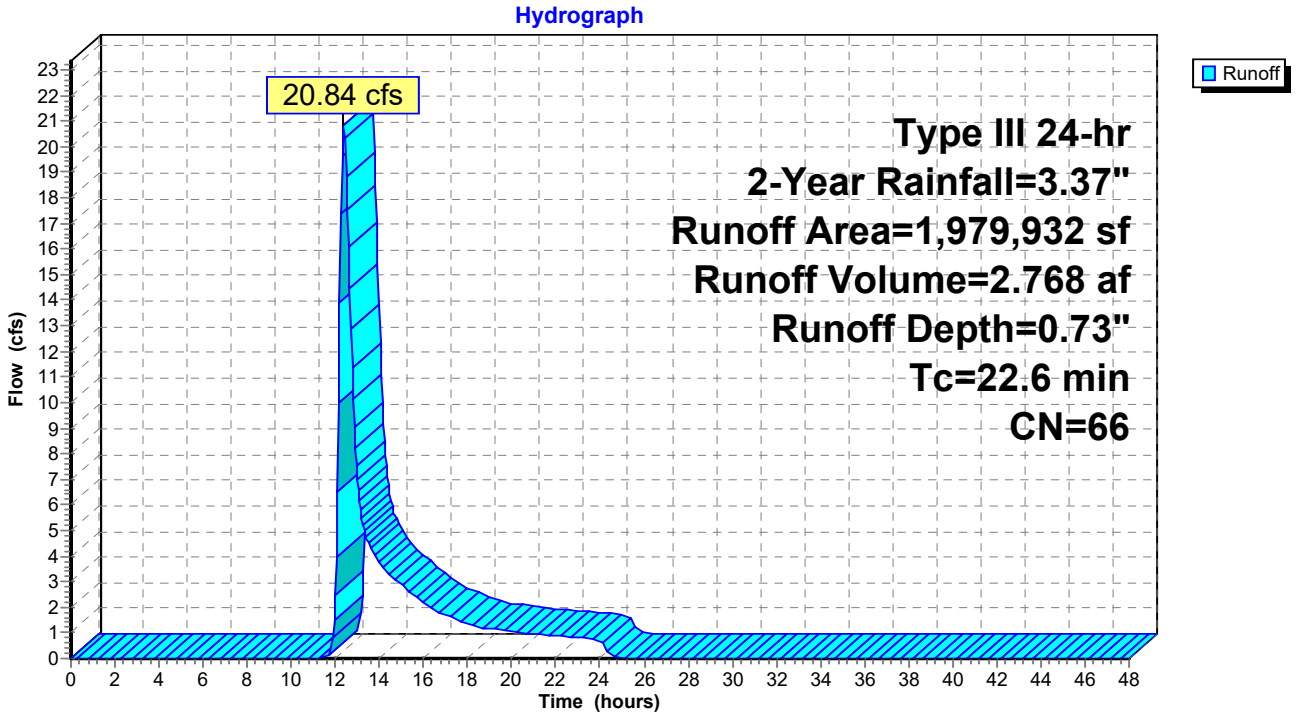
Runoff = 20.84 cfs @ 12.37 hrs, Volume= 2.768 af, Depth= 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.37"

Area (sf)	CN	Description
473,802	77	Woods, Good, HSG D
36,547	98	Water Surface, 0% imp, HSG D
3,920	80	>75% Grass cover, Good, HSG D
12,284	61	>75% Grass cover, Good, HSG B
5,184	98	Unconnected roofs, HSG B
766,264	55	Woods, Good, HSG B
663,462	70	Woods, Good, HSG C
2,265	77	Woods, Good, HSG D
1,699	70	Woods, Good, HSG C
174	96	Gravel surface, HSG C
348	96	Gravel surface, HSG B
610	98	Paved parking, HSG C
13,373	74	>75% Grass cover, Good, HSG C
1,979,932	66	Weighted Average
1,974,138		99.71% Pervious Area
5,794		0.29% Impervious Area
5,184		89.47% Unconnected

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

Subcatchment 3S: DA 2



Summary for Pond 2P: 30" RCP

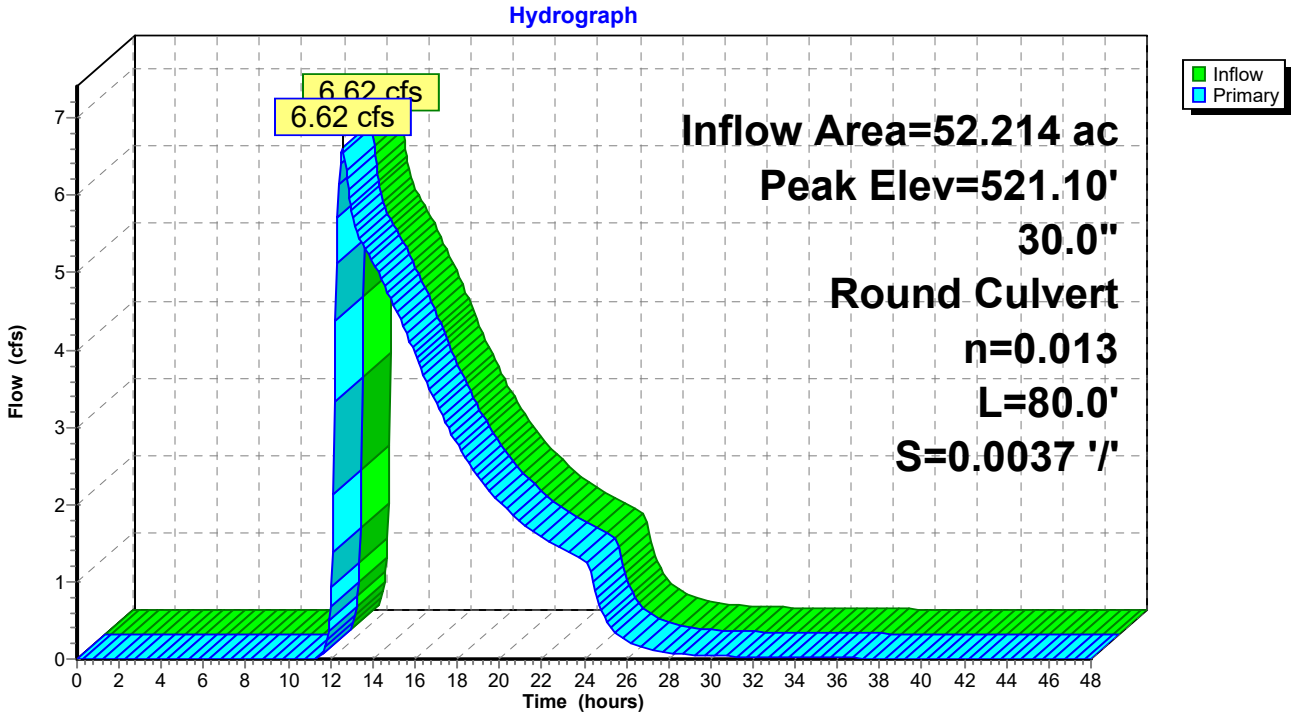
Inflow Area = 52.214 ac, 2.66% Impervious, Inflow Depth > 0.75" for 2-Year event
Inflow = 6.62 cfs @ 12.57 hrs, Volume= 3.262 af
Outflow = 6.62 cfs @ 12.57 hrs, Volume= 3.262 af, Atten= 0%, Lag= 0.0 min
Primary = 6.62 cfs @ 12.57 hrs, Volume= 3.262 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 521.10' @ 12.57 hrs
Flood Elev= 527.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	519.92'	**30.0" Round 30" RC** L= 80.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 519.92' / 519.62' S= 0.0037 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 4.91 sf

Primary OutFlow Max=6.61 cfs @ 12.57 hrs HW=521.10' (Free Discharge)
1=30" RC (Barrel Controls 6.61 cfs @ 4.24 fps)

Pond 2P: 30" RCP



Summary for Pond 4P: Pond

Inflow Area = 45.453 ac, 0.29% Impervious, Inflow Depth = 0.73" for 2-Year event
Inflow = 20.84 cfs @ 12.37 hrs, Volume= 2.768 af
Outflow = 4.54 cfs @ 13.46 hrs, Volume= 2.739 af, Atten= 78%, Lag= 65.2 min
Primary = 4.54 cfs @ 13.46 hrs, Volume= 2.739 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 523.56' @ 13.46 hrs Surf.Area= 1.304 ac Storage= 0.939 af

Plug-Flow detention time= 144.0 min calculated for 2.739 af (99% of inflow)
Center-of-Mass det. time= 138.3 min (1,040.1 - 901.8)

Volume	Invert	Avail.Storage	Storage Description
#1	522.20'	10.783 af	**Pond Storage (Irregular)**Listed below

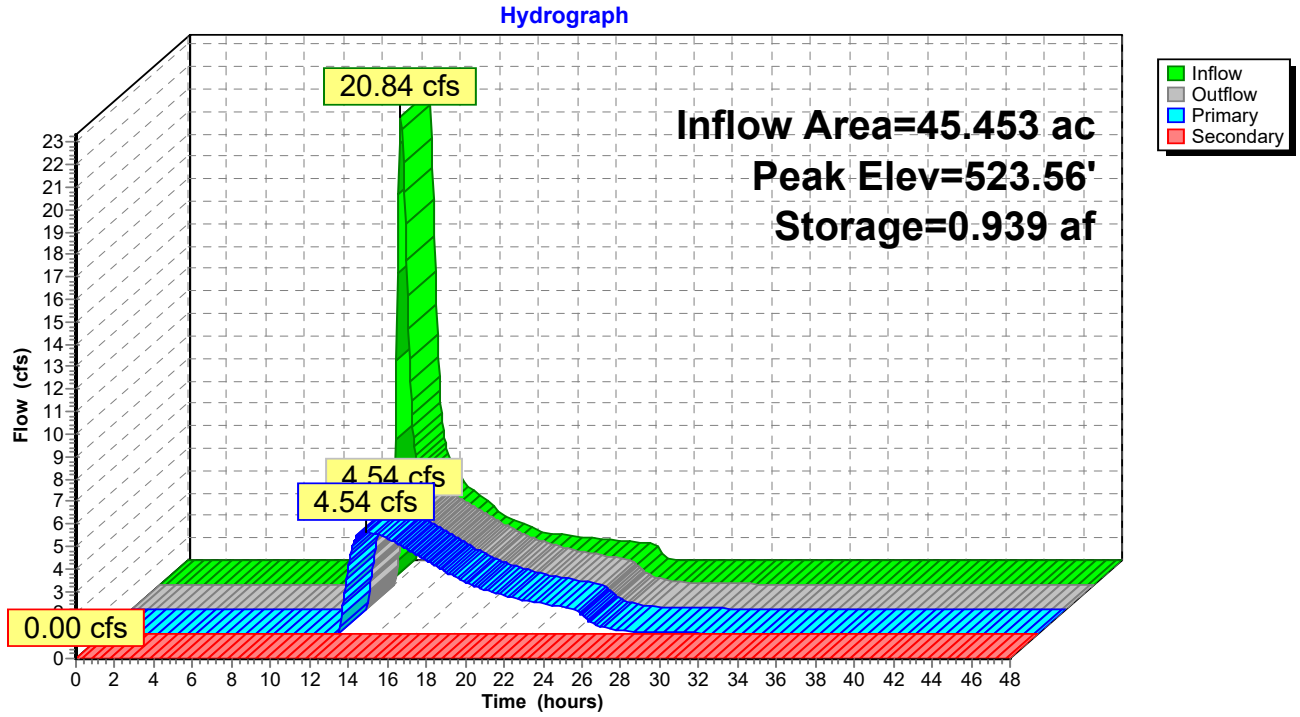
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
522.20	0.002	10.0	0.000	0.000	0.002
522.87	0.636	1,389.1	0.150	0.150	3.527
524.00	1.723	1,270.7	1.283	1.433	4.103
526.00	2.359	1,494.7	4.065	5.499	5.237
528.00	2.936	1,638.1	5.284	10.783	6.061

Device	Routing	Invert	Outlet Devices
#1	Primary	522.29'	**18.0" Round 18" RCP** L= 440.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 522.29' / 520.81' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf
#2	Secondary	526.90'	**83.0' long x 15.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=4.54 cfs @ 13.46 hrs HW=523.56' TW=520.98' (Dynamic Tailwater)
↑—**1=18" RCP** (Barrel Controls 4.54 cfs @ 3.82 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=522.20' TW=519.92' (Dynamic Tailwater)
↑—**2=Overflow** (Controls 0.00 cfs)

Pond 4P: Pond


Hydrograph
20.84 cfs
4.54 cfs
4.54 cfs
0.00 cfs
Inflow Area=45.453 ac
Peak Elev=523.56'
Storage=0.939 af
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: DA 1 Runoff Area=294,524 sf 18.58% Impervious Runoff Depth=2.17"
Flow Length=1,064' Tc=26.2 min CN=70 Runoff=10.12 cfs 1.223 af

Subcatchment 3S: DA 2 Runoff Area=1,979,932 sf 0.29% Impervious Runoff Depth=1.85"
Tc=22.6 min CN=66 Runoff=60.43 cfs 7.013 af

Pond 2P: 30" RCP Peak Elev=521.93' Inflow=16.88 cfs 8.206 af
30.0" Round Culvert n=0.013 L=80.0' S=0.0037 '/' Outflow=16.88 cfs 8.206 af

Pond 4P: Pond Peak Elev=524.88' Storage=3.229 af Inflow=60.43 cfs 7.013 af
Primary=7.48 cfs 6.983 af Secondary=0.00 cfs 0.000 af Outflow=7.48 cfs 6.983 af

Total Runoff Area = 52.214 ac Runoff Volume = 8.236 af Average Runoff Depth = 1.89"
97.34% Pervious = 50.825 ac 2.66% Impervious = 1.389 ac

Summary for Subcatchment 1S: DA 1

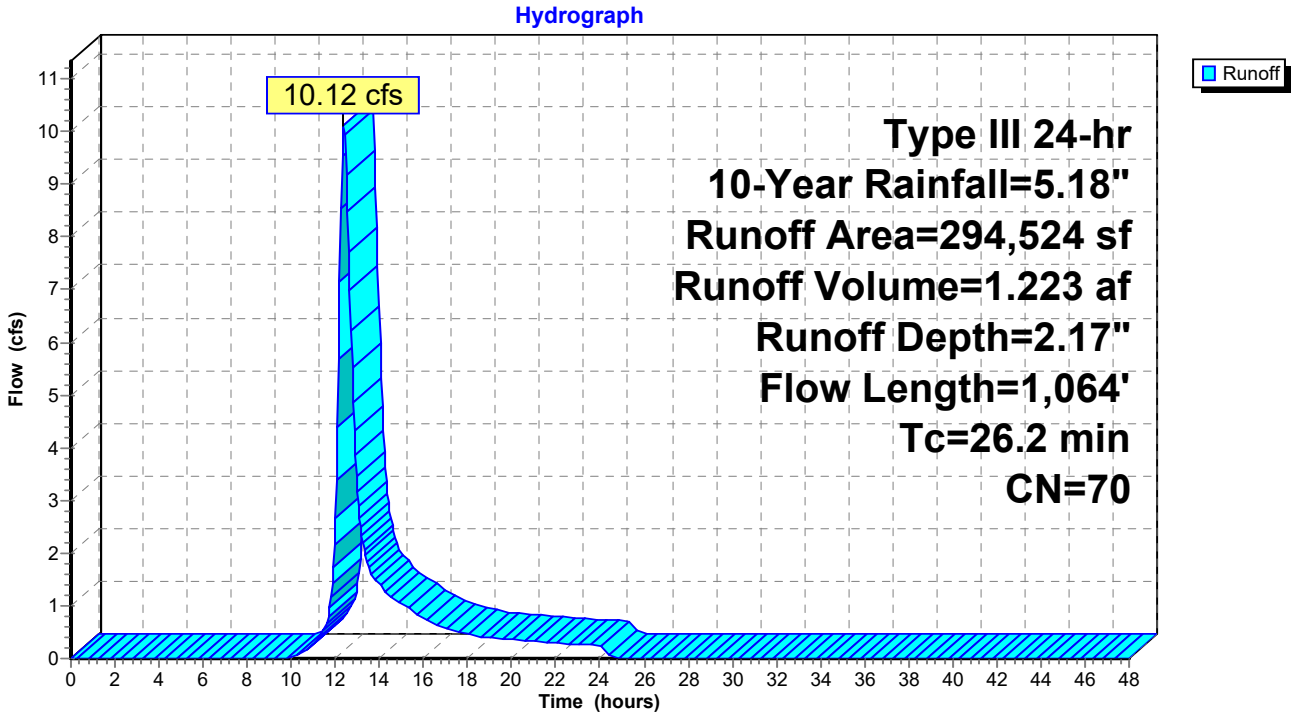
Runoff = 10.12 cfs @ 12.38 hrs, Volume= 1.223 af, Depth= 2.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.18"

Area (sf)	CN	Description
10,077	74	>75% Grass cover, Good, HSG C
1,575	98	Paved parking, HSG C
411	70	Woods, Good, HSG C
2,001	96	Gravel surface, HSG C
1,499	98	Unconnected roofs, HSG B
1,111	98	Unconnected roofs, HSG B
1,273	96	Gravel surface, HSG B
1,214	98	Unconnected roofs, HSG B
42,571	98	Paved parking, HSG B
1,694	96	Gravel surface, HSG B
4,509	98	Unconnected roofs, HSG C
113	98	Unconnected roofs, HSG C
2,133	98	Unconnected roofs, HSG C
12,266	96	Gravel surface, HSG C
2,876	70	Woods, Good, HSG C
1,206	70	Woods, Good, HSG C
677	70	Woods, Good, HSG C
650	70	Woods, Good, HSG C
3,876	70	Woods, Good, HSG C
641	70	Woods, Good, HSG C
4,468	55	Woods, Good, HSG B
99,615	55	Woods, Good, HSG B
62,431	61	>75% Grass cover, Good, HSG B
35,637	74	>75% Grass cover, Good, HSG C
294,524	70	Weighted Average
239,799		81.42% Pervious Area
54,725		18.58% Impervious Area
10,579		19.33% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.1300	0.17		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
5.3	343	0.0466	1.08		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
10.3	434	0.0100	0.70		**Shallow Concentrated Flow, Grass** Short Grass Pasture Kv= 7.0 fps
0.3	40	0.0183	2.18		**Shallow Concentrated Flow, Gravel** Unpaved Kv= 16.1 fps
0.4	147	0.0360	6.04	40.29	**Parabolic Channel, Channel** W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.035 Earth, dense weeds
26.2	1,064	Total			

Subcatchment 1S: DA 1



Summary for Subcatchment 3S: DA 2

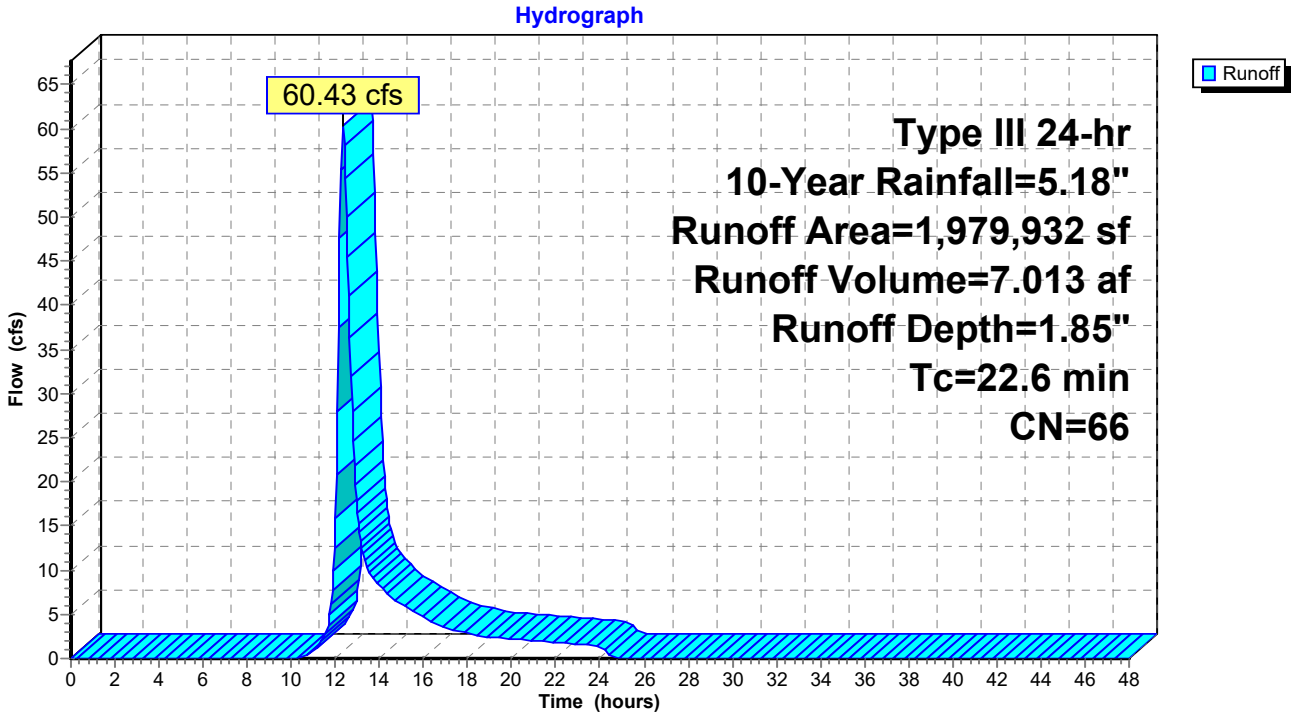
Runoff = 60.43 cfs @ 12.34 hrs, Volume= 7.013 af, Depth= 1.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.18"

Area (sf)	CN	Description
473,802	77	Woods, Good, HSG D
36,547	98	Water Surface, 0% imp, HSG D
3,920	80	>75% Grass cover, Good, HSG D
12,284	61	>75% Grass cover, Good, HSG B
5,184	98	Unconnected roofs, HSG B
766,264	55	Woods, Good, HSG B
663,462	70	Woods, Good, HSG C
2,265	77	Woods, Good, HSG D
1,699	70	Woods, Good, HSG C
174	96	Gravel surface, HSG C
348	96	Gravel surface, HSG B
610	98	Paved parking, HSG C
13,373	74	>75% Grass cover, Good, HSG C
1,979,932	66	Weighted Average
1,974,138		99.71% Pervious Area
5,794		0.29% Impervious Area
5,184		89.47% Unconnected

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

Subcatchment 3S: DA 2



Summary for Pond 2P: 30" RCP

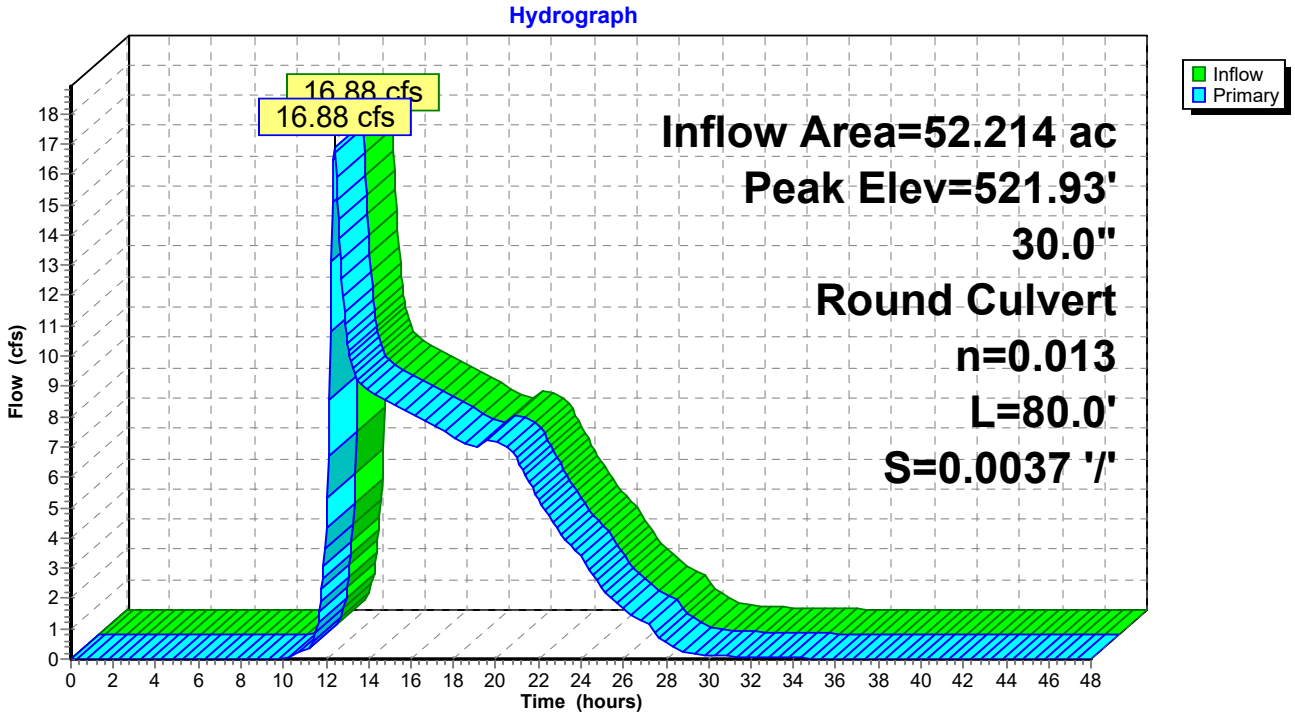
Inflow Area = 52.214 ac, 2.66% Impervious, Inflow Depth > 1.89" for 10-Year event
Inflow = 16.88 cfs @ 12.41 hrs, Volume= 8.206 af
Outflow = 16.88 cfs @ 12.41 hrs, Volume= 8.206 af, Atten= 0%, Lag= 0.0 min
Primary = 16.88 cfs @ 12.41 hrs, Volume= 8.206 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 521.93' @ 12.41 hrs
Flood Elev= 527.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	519.92'	**30.0" Round 30" RC** L= 80.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 519.92' / 519.62' S= 0.0037 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 4.91 sf

Primary OutFlow Max=16.84 cfs @ 12.41 hrs HW=521.93' (Free Discharge)
↳**1=30" RC** (Barrel Controls 16.84 cfs @ 5.45 fps)

Pond 2P: 30" RCP



Summary for Pond 4P: Pond

Inflow Area = 45.453 ac, 0.29% Impervious, Inflow Depth = 1.85" for 10-Year event
Inflow = 60.43 cfs @ 12.34 hrs, Volume= 7.013 af
Outflow = 7.48 cfs @ 14.27 hrs, Volume= 6.983 af, Atten= 88%, Lag= 116.0 min
Primary = 7.48 cfs @ 14.27 hrs, Volume= 6.983 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 524.88' @ 14.27 hrs Surf.Area= 2.004 ac Storage= 3.229 af

Plug-Flow detention time= 230.9 min calculated for 6.983 af (100% of inflow)
Center-of-Mass det. time= 228.3 min (1,099.7 - 871.4)

Volume	Invert	Avail.Storage	Storage Description
#1	522.20'	10.783 af	**Pond Storage (Irregular)**Listed below

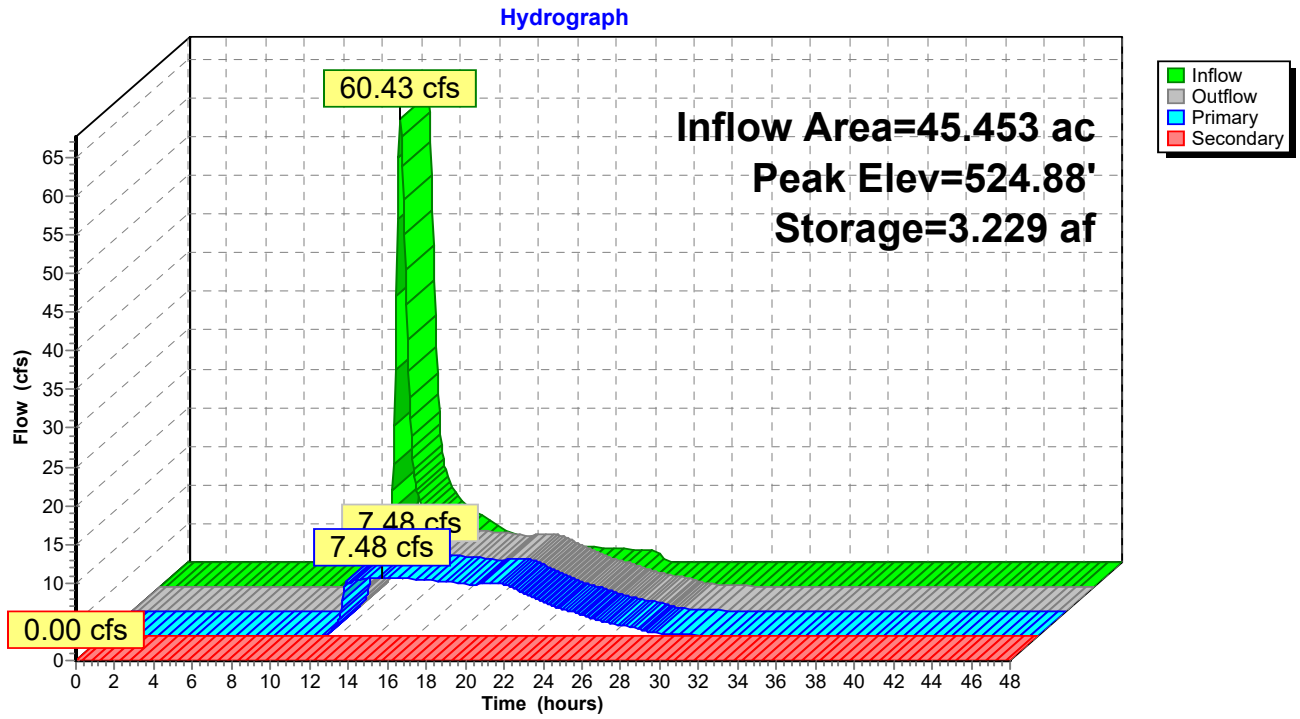
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
522.20	0.002	10.0	0.000	0.000	0.002
522.87	0.636	1,389.1	0.150	0.150	3.527
524.00	1.723	1,270.7	1.283	1.433	4.103
526.00	2.359	1,494.7	4.065	5.499	5.237
528.00	2.936	1,638.1	5.284	10.783	6.061

Device	Routing	Invert	Outlet Devices
#1	Primary	522.29'	**18.0" Round 18" RCP** L= 440.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 522.29' / 520.81' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf
#2	Secondary	526.90'	**83.0' long x 15.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=7.48 cfs @ 14.27 hrs HW=524.88' TW=521.30' (Dynamic Tailwater)
↑—**1=18" RCP** (Barrel Controls 7.48 cfs @ 4.23 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=522.20' TW=519.92' (Dynamic Tailwater)
↑—**2=Overflow** (Controls 0.00 cfs)

Pond 4P: Pond


Hydrograph
60.43 cfs
7.48 cfs
7.48 cfs
0.00 cfs
Inflow Area=45.453 ac
Peak Elev=524.88'
Storage=3.229 af
Inflow
Outflow
Primary
Secondary
Flow (cfs)
0
5
10
15
20
25
30
35
40
45
50
55
60
65
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: DA 1 Runoff Area=294,524 sf 18.58% Impervious Runoff Depth=3.05"
Flow Length=1,064' Tc=26.2 min CN=70 Runoff=14.40 cfs 1.716 af

Subcatchment 3S: DA 2 Runoff Area=1,979,932 sf 0.29% Impervious Runoff Depth=2.66"
Tc=22.6 min CN=66 Runoff=89.03 cfs 10.093 af

Pond 2P: 30" RCP Peak Elev=522.26' Inflow=21.32 cfs 11.778 af
30.0" Round Culvert n=0.013 L=80.0' S=0.0037 '/' Outflow=21.32 cfs 11.778 af

Pond 4P: Pond Peak Elev=525.84' Storage=5.181 af Inflow=89.03 cfs 10.093 af
Primary=8.76 cfs 10.062 af Secondary=0.00 cfs 0.000 af Outflow=8.76 cfs 10.062 af

Total Runoff Area = 52.214 ac Runoff Volume = 11.809 af Average Runoff Depth = 2.71"
97.34% Pervious = 50.825 ac 2.66% Impervious = 1.389 ac

Summary for Subcatchment 1S: DA 1

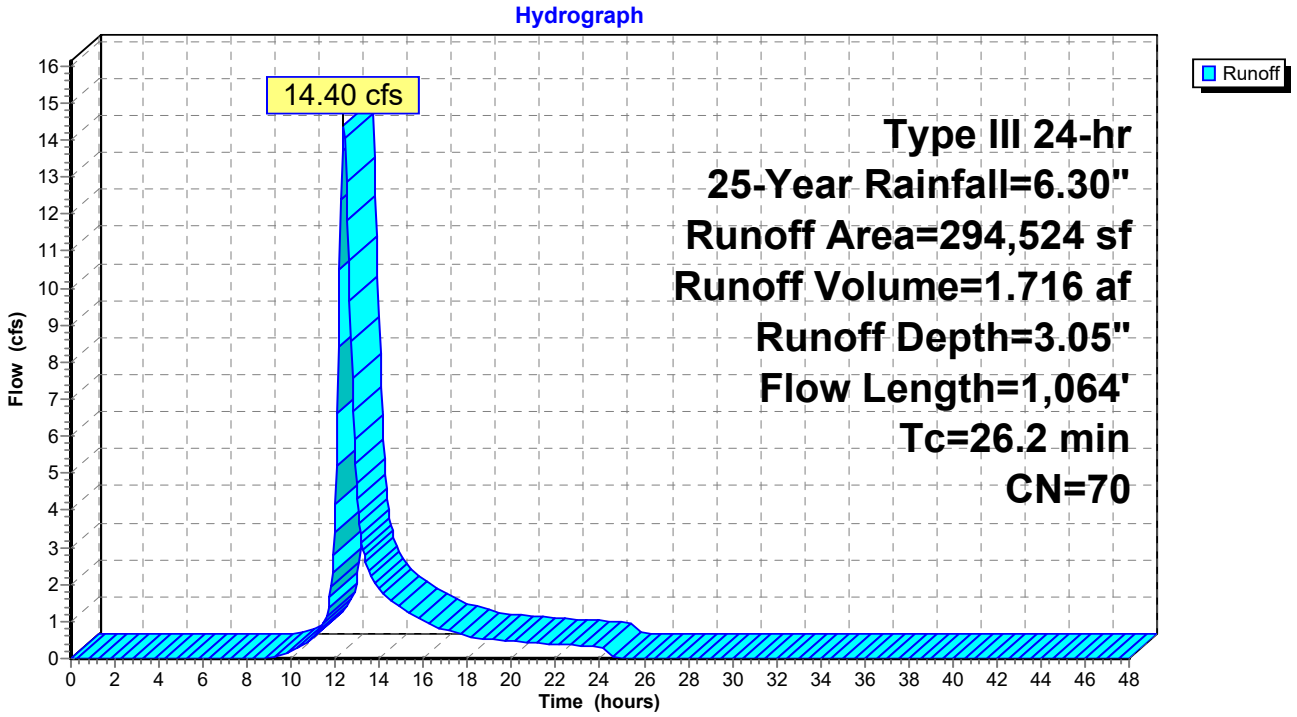
Runoff = 14.40 cfs @ 12.37 hrs, Volume= 1.716 af, Depth= 3.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=6.30"

Area (sf)	CN	Description
10,077	74	>75% Grass cover, Good, HSG C
1,575	98	Paved parking, HSG C
411	70	Woods, Good, HSG C
2,001	96	Gravel surface, HSG C
1,499	98	Unconnected roofs, HSG B
1,111	98	Unconnected roofs, HSG B
1,273	96	Gravel surface, HSG B
1,214	98	Unconnected roofs, HSG B
42,571	98	Paved parking, HSG B
1,694	96	Gravel surface, HSG B
4,509	98	Unconnected roofs, HSG C
113	98	Unconnected roofs, HSG C
2,133	98	Unconnected roofs, HSG C
12,266	96	Gravel surface, HSG C
2,876	70	Woods, Good, HSG C
1,206	70	Woods, Good, HSG C
677	70	Woods, Good, HSG C
650	70	Woods, Good, HSG C
3,876	70	Woods, Good, HSG C
641	70	Woods, Good, HSG C
4,468	55	Woods, Good, HSG B
99,615	55	Woods, Good, HSG B
62,431	61	>75% Grass cover, Good, HSG B
35,637	74	>75% Grass cover, Good, HSG C
294,524	70	Weighted Average
239,799		81.42% Pervious Area
54,725		18.58% Impervious Area
10,579		19.33% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.1300	0.17		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
5.3	343	0.0466	1.08		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
10.3	434	0.0100	0.70		**Shallow Concentrated Flow, Grass** Short Grass Pasture Kv= 7.0 fps
0.3	40	0.0183	2.18		**Shallow Concentrated Flow, Gravel** Unpaved Kv= 16.1 fps
0.4	147	0.0360	6.04	40.29	**Parabolic Channel, Channel** W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.035 Earth, dense weeds
26.2	1,064	Total			

Subcatchment 1S: DA 1



Summary for Subcatchment 3S: DA 2

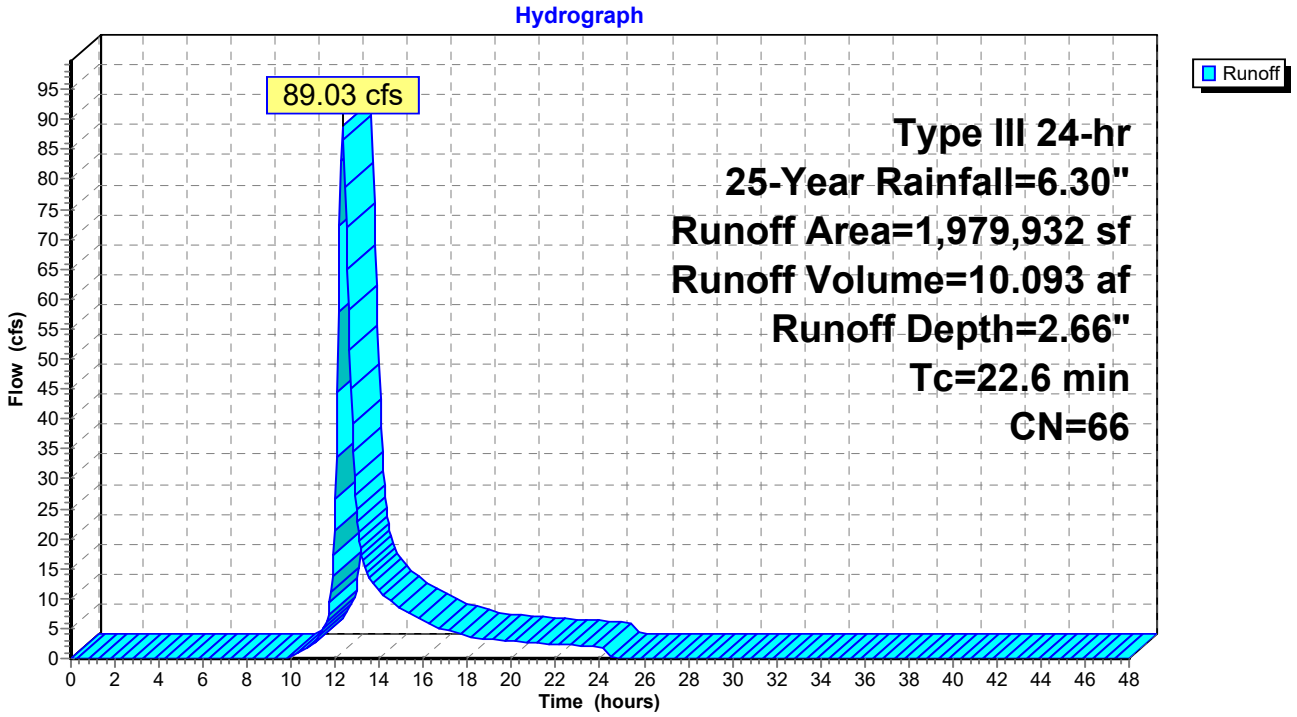
Runoff = 89.03 cfs @ 12.33 hrs, Volume= 10.093 af, Depth= 2.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=6.30"

Area (sf)	CN	Description
473,802	77	Woods, Good, HSG D
36,547	98	Water Surface, 0% imp, HSG D
3,920	80	>75% Grass cover, Good, HSG D
12,284	61	>75% Grass cover, Good, HSG B
5,184	98	Unconnected roofs, HSG B
766,264	55	Woods, Good, HSG B
663,462	70	Woods, Good, HSG C
2,265	77	Woods, Good, HSG D
1,699	70	Woods, Good, HSG C
174	96	Gravel surface, HSG C
348	96	Gravel surface, HSG B
610	98	Paved parking, HSG C
13,373	74	>75% Grass cover, Good, HSG C
1,979,932	66	Weighted Average
1,974,138		99.71% Pervious Area
5,794		0.29% Impervious Area
5,184		89.47% Unconnected

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

Subcatchment 3S: DA 2



Summary for Pond 2P: 30" RCP

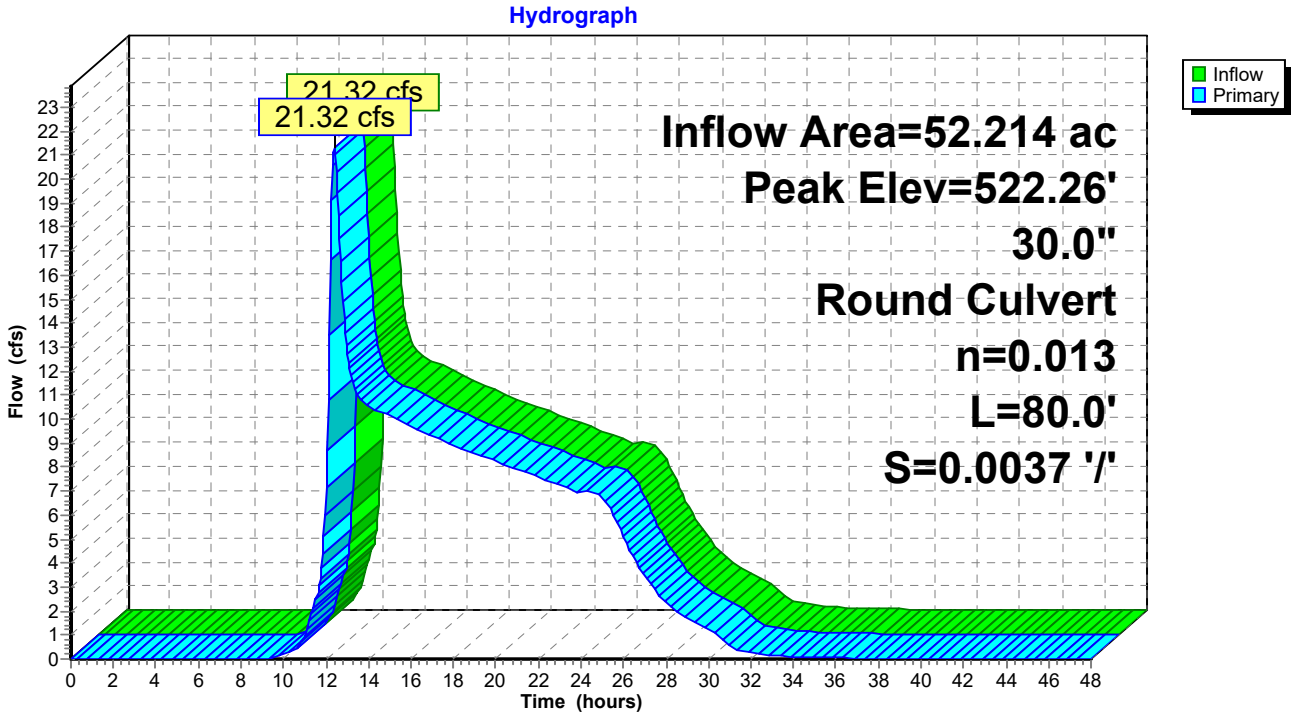
Inflow Area = 52.214 ac, 2.66% Impervious, Inflow Depth > 2.71" for 25-Year event
Inflow = 21.32 cfs @ 12.40 hrs, Volume= 11.778 af
Outflow = 21.32 cfs @ 12.40 hrs, Volume= 11.778 af, Atten= 0%, Lag= 0.0 min
Primary = 21.32 cfs @ 12.40 hrs, Volume= 11.778 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 522.26' @ 12.40 hrs
Flood Elev= 527.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	519.92'	**30.0" Round 30" RC** L= 80.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 519.92' / 519.62' S= 0.0037 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 4.91 sf

Primary OutFlow Max=21.30 cfs @ 12.40 hrs HW=522.25' (Free Discharge)
1=30" RC (Barrel Controls 21.30 cfs @ 5.80 fps)

Pond 2P: 30" RCP



Summary for Pond 4P: Pond

Inflow Area = 45.453 ac, 0.29% Impervious, Inflow Depth = 2.66" for 25-Year event
Inflow = 89.03 cfs @ 12.33 hrs, Volume= 10.093 af
Outflow = 8.76 cfs @ 14.83 hrs, Volume= 10.062 af, Atten= 90%, Lag= 150.2 min
Primary = 8.76 cfs @ 14.83 hrs, Volume= 10.062 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 525.84' @ 14.83 hrs Surf.Area= 2.309 ac Storage= 5.181 af

Plug-Flow detention time= 315.4 min calculated for 10.062 af (100% of inflow)
Center-of-Mass det. time= 313.5 min (1,174.0 - 860.5)

Volume	Invert	Avail.Storage	Storage Description
#1	522.20'	10.783 af	**Pond Storage (Irregular)**Listed below

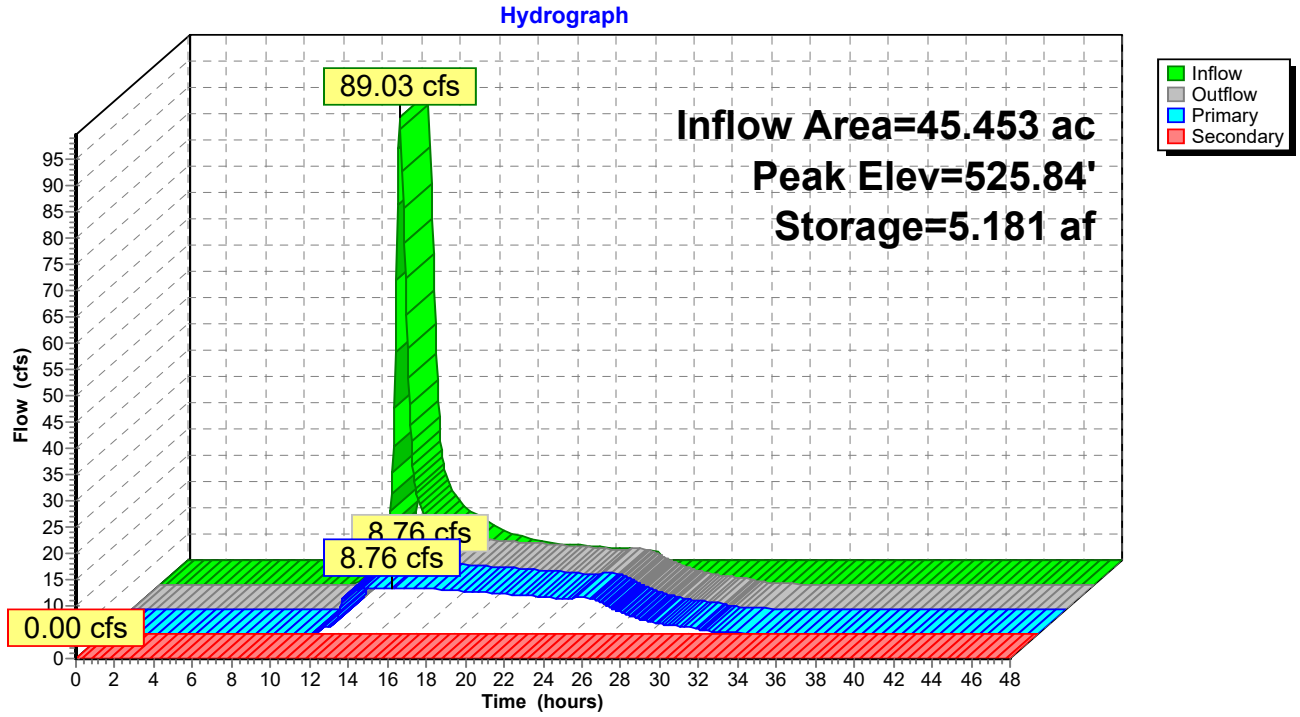
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
522.20	0.002	10.0	0.000	0.000	0.002
522.87	0.636	1,389.1	0.150	0.150	3.527
524.00	1.723	1,270.7	1.283	1.433	4.103
526.00	2.359	1,494.7	4.065	5.499	5.237
528.00	2.936	1,638.1	5.284	10.783	6.061

Device	Routing	Invert	Outlet Devices
#1	Primary	522.29'	**18.0" Round 18" RCP** L= 440.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 522.29' / 520.81' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf
#2	Secondary	526.90'	**83.0' long x 15.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=8.76 cfs @ 14.83 hrs HW=525.84' TW=521.42' (Dynamic Tailwater)
↑—**1=18" RCP** (Barrel Controls 8.76 cfs @ 4.96 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=522.20' TW=519.92' (Dynamic Tailwater)
↑—**2=Overflow** (Controls 0.00 cfs)

Pond 4P: Pond


Hydrograph
89.03 cfs
8.76 cfs
8.76 cfs
0.00 cfs
Inflow Area=45.453 ac
Peak Elev=525.84'
Storage=5.181 af
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: DA 1 Runoff Area=294,524 sf 18.58% Impervious Runoff Depth=3.74"
Flow Length=1,064' Tc=26.2 min CN=70 Runoff=17.73 cfs 2.105 af

Subcatchment 3S: DA 2 Runoff Area=1,979,932 sf 0.29% Impervious Runoff Depth=3.31"
Tc=22.6 min CN=66 Runoff=111.95 cfs 12.556 af

Pond 2P: 30" RCP Peak Elev=522.53' Inflow=24.93 cfs 14.628 af
30.0" Round Culvert n=0.013 L=80.0' S=0.0037 '/' Outflow=24.93 cfs 14.628 af

Pond 4P: Pond Peak Elev=526.51' Storage=6.834 af Inflow=111.95 cfs 12.556 af
Primary=9.54 cfs 12.523 af Secondary=0.00 cfs 0.000 af Outflow=9.54 cfs 12.523 af

Total Runoff Area = 52.214 ac Runoff Volume = 14.660 af Average Runoff Depth = 3.37"
97.34% Pervious = 50.825 ac 2.66% Impervious = 1.389 ac

Summary for Subcatchment 1S: DA 1

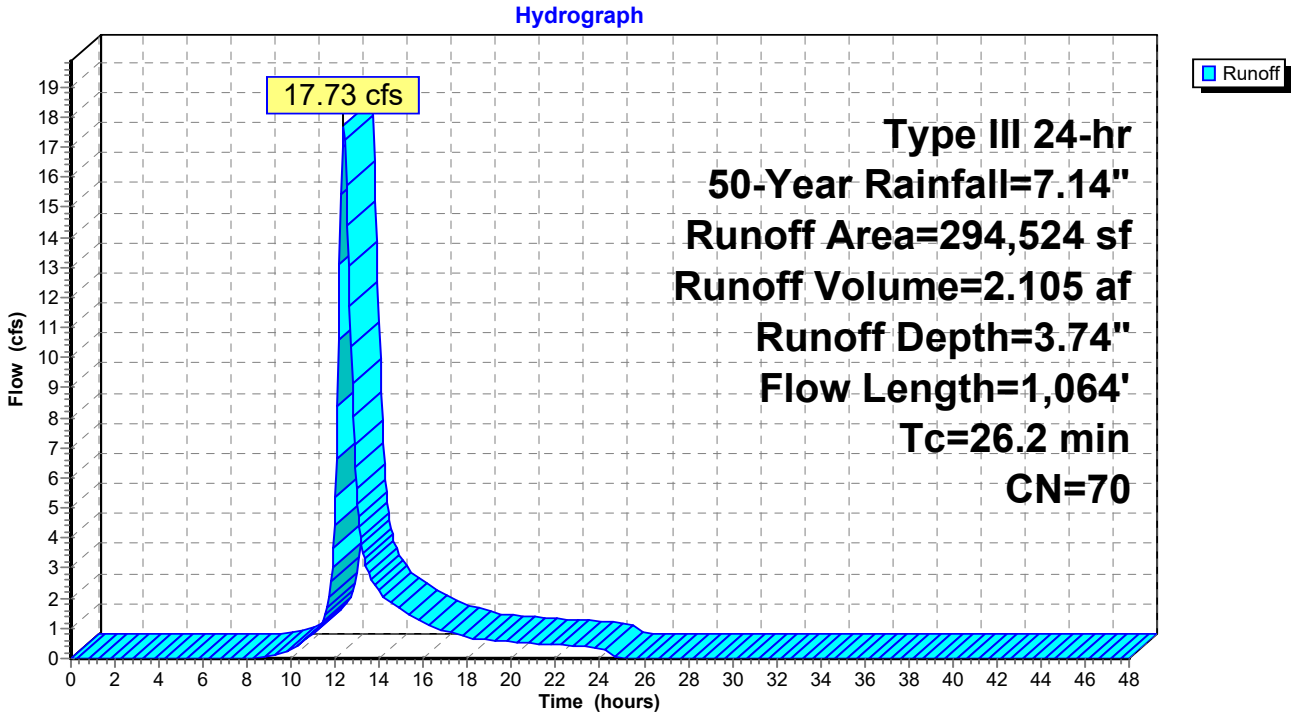
Runoff = 17.73 cfs @ 12.37 hrs, Volume= 2.105 af, Depth= 3.74"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=7.14"

Area (sf)	CN	Description
10,077	74	>75% Grass cover, Good, HSG C
1,575	98	Paved parking, HSG C
411	70	Woods, Good, HSG C
2,001	96	Gravel surface, HSG C
1,499	98	Unconnected roofs, HSG B
1,111	98	Unconnected roofs, HSG B
1,273	96	Gravel surface, HSG B
1,214	98	Unconnected roofs, HSG B
42,571	98	Paved parking, HSG B
1,694	96	Gravel surface, HSG B
4,509	98	Unconnected roofs, HSG C
113	98	Unconnected roofs, HSG C
2,133	98	Unconnected roofs, HSG C
12,266	96	Gravel surface, HSG C
2,876	70	Woods, Good, HSG C
1,206	70	Woods, Good, HSG C
677	70	Woods, Good, HSG C
650	70	Woods, Good, HSG C
3,876	70	Woods, Good, HSG C
641	70	Woods, Good, HSG C
4,468	55	Woods, Good, HSG B
99,615	55	Woods, Good, HSG B
62,431	61	>75% Grass cover, Good, HSG B
35,637	74	>75% Grass cover, Good, HSG C
294,524	70	Weighted Average
239,799		81.42% Pervious Area
54,725		18.58% Impervious Area
10,579		19.33% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.1300	0.17		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
5.3	343	0.0466	1.08		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
10.3	434	0.0100	0.70		**Shallow Concentrated Flow, Grass** Short Grass Pasture Kv= 7.0 fps
0.3	40	0.0183	2.18		**Shallow Concentrated Flow, Gravel** Unpaved Kv= 16.1 fps
0.4	147	0.0360	6.04	40.29	**Parabolic Channel, Channel** W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.035 Earth, dense weeds
26.2	1,064	Total			

Subcatchment 1S: DA 1



Summary for Subcatchment 3S: DA 2

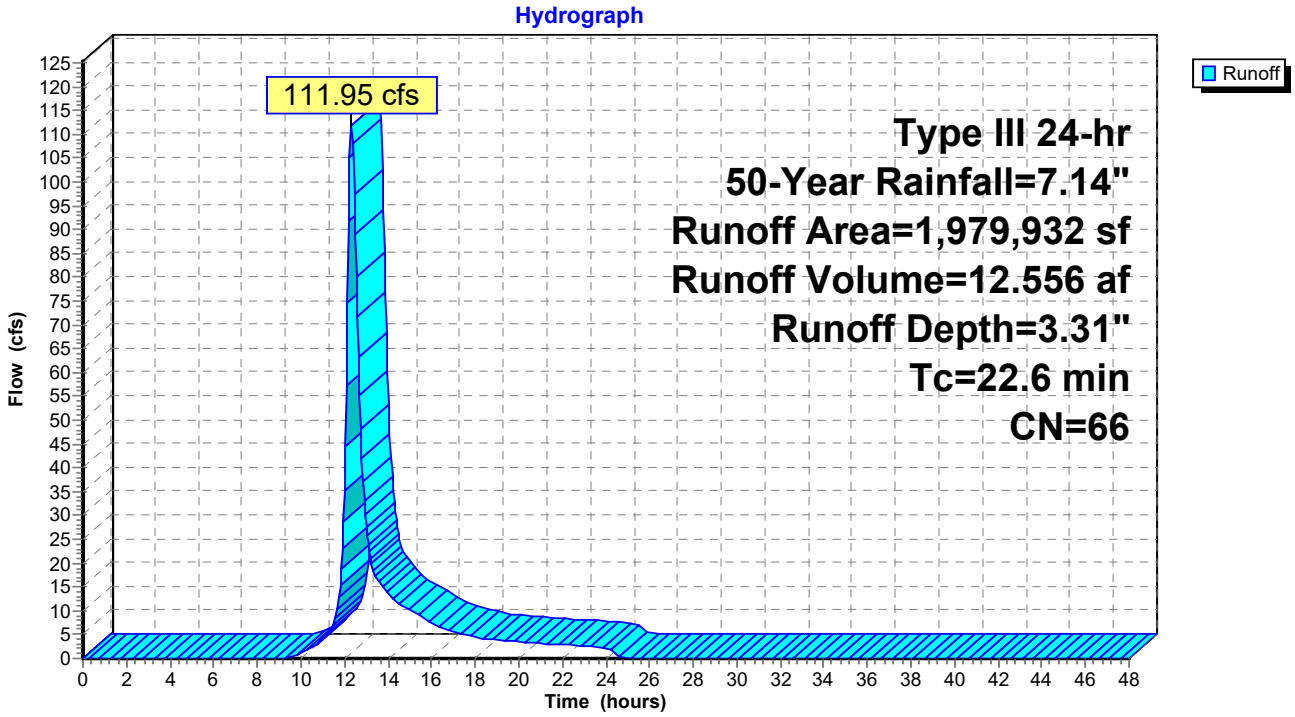
Runoff = 111.95 cfs @ 12.32 hrs, Volume= 12.556 af, Depth= 3.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=7.14"

Area (sf)	CN	Description
473,802	77	Woods, Good, HSG D
36,547	98	Water Surface, 0% imp, HSG D
3,920	80	>75% Grass cover, Good, HSG D
12,284	61	>75% Grass cover, Good, HSG B
5,184	98	Unconnected roofs, HSG B
766,264	55	Woods, Good, HSG B
663,462	70	Woods, Good, HSG C
2,265	77	Woods, Good, HSG D
1,699	70	Woods, Good, HSG C
174	96	Gravel surface, HSG C
348	96	Gravel surface, HSG B
610	98	Paved parking, HSG C
13,373	74	>75% Grass cover, Good, HSG C
1,979,932	66	Weighted Average
1,974,138		99.71% Pervious Area
5,794		0.29% Impervious Area
5,184		89.47% Unconnected

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

Subcatchment 3S: DA 2



Summary for Pond 2P: 30" RCP

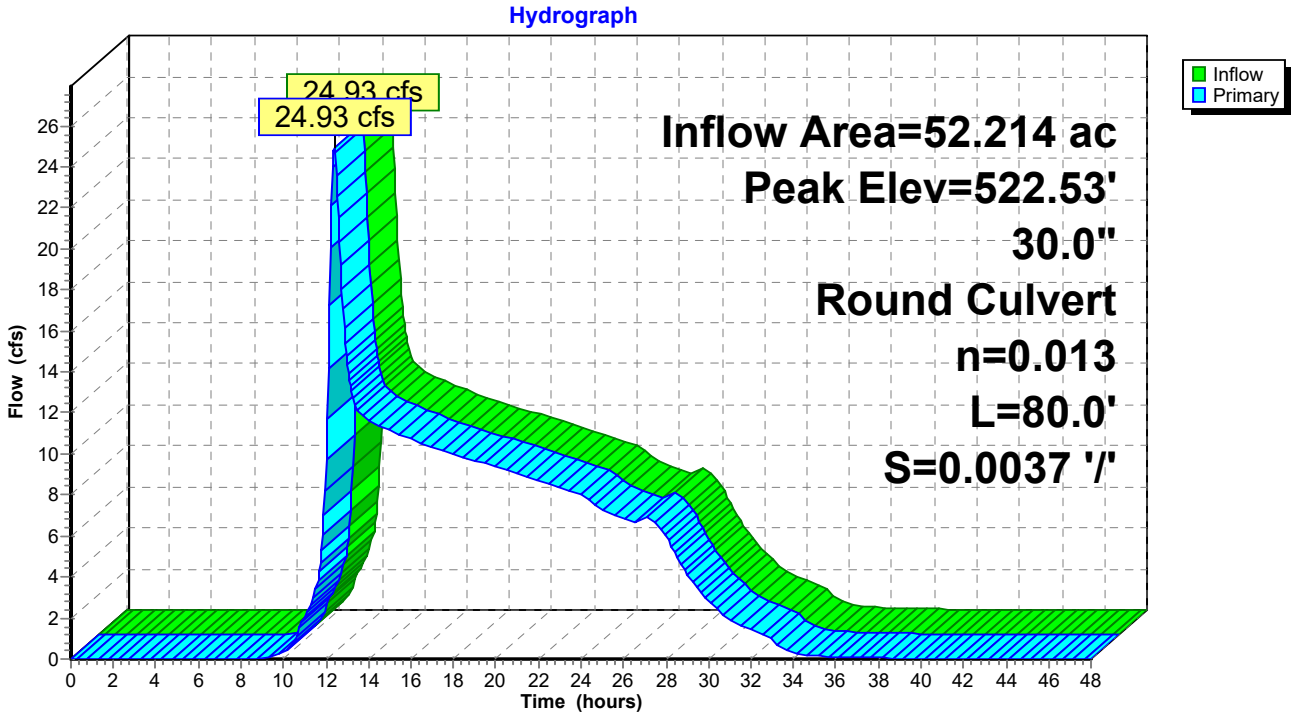
Inflow Area = 52.214 ac, 2.66% Impervious, Inflow Depth > 3.36" for 50-Year event
Inflow = 24.93 cfs @ 12.39 hrs, Volume= 14.628 af
Outflow = 24.93 cfs @ 12.39 hrs, Volume= 14.628 af, Atten= 0%, Lag= 0.0 min
Primary = 24.93 cfs @ 12.39 hrs, Volume= 14.628 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 522.53' @ 12.39 hrs
Flood Elev= 527.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	519.92'	**30.0" Round 30" RC** L= 80.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 519.92' / 519.62' S= 0.0037 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 4.91 sf

Primary OutFlow Max=24.87 cfs @ 12.39 hrs HW=522.52' (Free Discharge)
1=30" RC (Barrel Controls 24.87 cfs @ 6.05 fps)

Pond 2P: 30" RCP



Summary for Pond 4P: Pond

Inflow Area = 45.453 ac, 0.29% Impervious, Inflow Depth = 3.31" for 50-Year event
Inflow = 111.95 cfs @ 12.32 hrs, Volume= 12.556 af
Outflow = 9.54 cfs @ 15.20 hrs, Volume= 12.523 af, Atten= 91%, Lag= 172.7 min
Primary = 9.54 cfs @ 15.20 hrs, Volume= 12.523 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 526.51' @ 15.20 hrs Surf.Area= 2.505 ac Storage= 6.834 af

Plug-Flow detention time= 375.7 min calculated for 12.510 af (100% of inflow)
Center-of-Mass det. time= 374.9 min (1,229.0 - 854.1)

Volume	Invert	Avail.Storage	Storage Description
#1	522.20'	10.783 af	**Pond Storage (Irregular)**Listed below

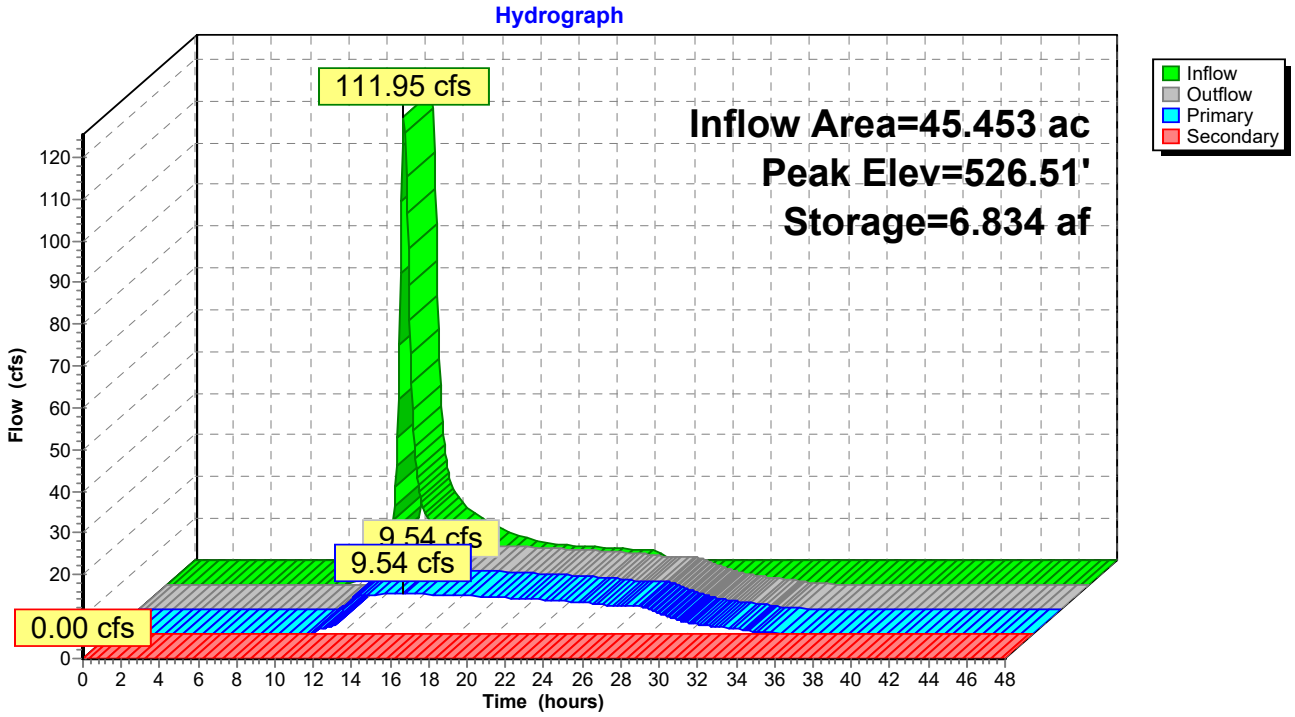
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
522.20	0.002	10.0	0.000	0.000	0.002
522.87	0.636	1,389.1	0.150	0.150	3.527
524.00	1.723	1,270.7	1.283	1.433	4.103
526.00	2.359	1,494.7	4.065	5.499	5.237
528.00	2.936	1,638.1	5.284	10.783	6.061

Device	Routing	Invert	Outlet Devices
#1	Primary	522.29'	**18.0" Round 18" RCP** L= 440.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 522.29' / 520.81' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf
#2	Secondary	526.90'	**83.0' long x 15.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=9.54 cfs @ 15.20 hrs HW=526.51' TW=521.49' (Dynamic Tailwater)
↑—**1=18" RCP** (Barrel Controls 9.54 cfs @ 5.40 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=522.20' TW=519.92' (Dynamic Tailwater)
↑—**2=Overflow** (Controls 0.00 cfs)

Pond 4P: Pond


Hydrograph
111.95 cfs
9.54 cfs
9.54 cfs
0.00 cfs
Inflow Area=45.453 ac
Peak Elev=526.51'
Storage=6.834 af
Inflow
Outflow
Primary
Secondary
Flow (cfs)
0
20
30
40
50
60
70
80
90
100
110
120
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48
Time (hours)

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: DA 1 Runoff Area=294,524 sf 18.58% Impervious Runoff Depth=4.50"
Flow Length=1,064' Tc=26.2 min CN=70 Runoff=21.39 cfs 2.535 af

Subcatchment 3S: DA 2 Runoff Area=1,979,932 sf 0.29% Impervious Runoff Depth=4.04"
Tc=22.6 min CN=66 Runoff=137.19 cfs 15.304 af

Pond 2P: 30" RCP Peak Elev=522.85' Inflow=28.78 cfs 17.805 af
30.0" Round Culvert n=0.013 L=80.0' S=0.0037 '/' Outflow=28.78 cfs 17.805 af

Pond 4P: Pond Peak Elev=527.00' Storage=8.135 af Inflow=137.19 cfs 15.304 af
Primary=10.09 cfs 14.422 af Secondary=6.81 cfs 0.848 af Outflow=16.90 cfs 15.270 af

Total Runoff Area = 52.214 ac Runoff Volume = 17.839 af Average Runoff Depth = 4.10"
97.34% Pervious = 50.825 ac 2.66% Impervious = 1.389 ac

Summary for Subcatchment 1S: DA 1

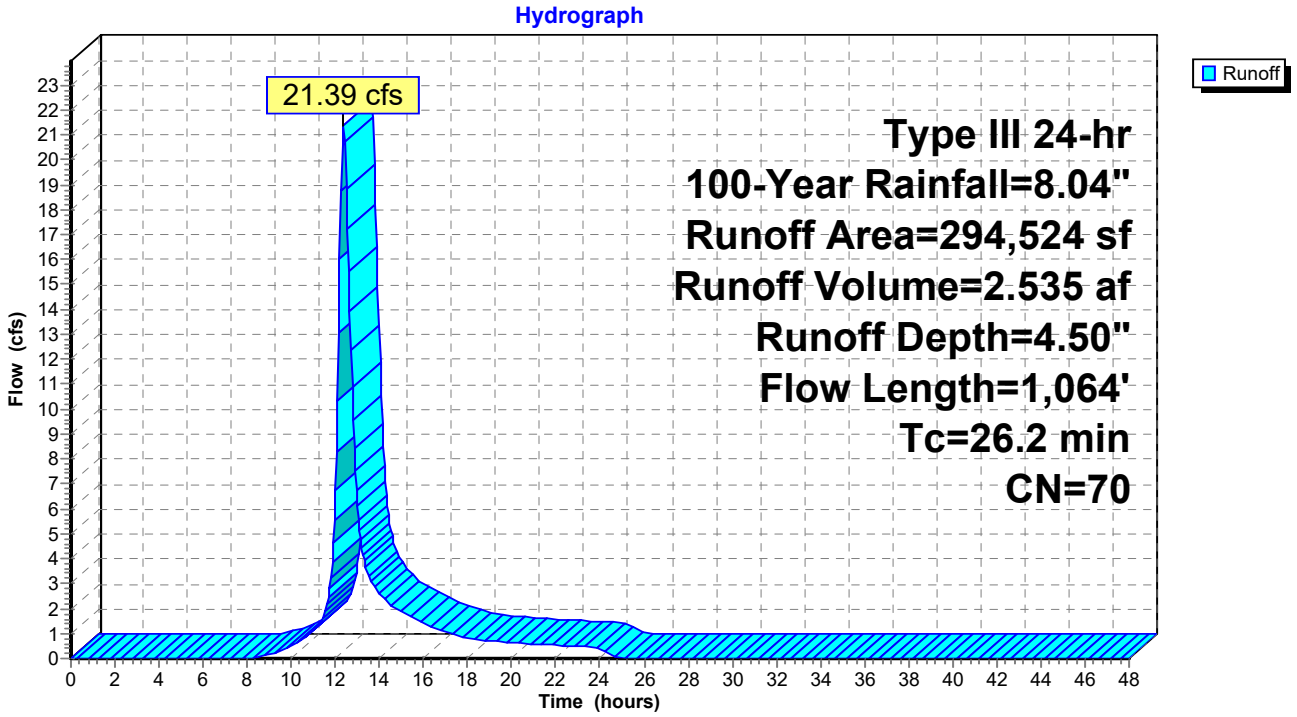
Runoff = 21.39 cfs @ 12.37 hrs, Volume= 2.535 af, Depth= 4.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.04"

Area (sf)	CN	Description
10,077	74	>75% Grass cover, Good, HSG C
1,575	98	Paved parking, HSG C
411	70	Woods, Good, HSG C
2,001	96	Gravel surface, HSG C
1,499	98	Unconnected roofs, HSG B
1,111	98	Unconnected roofs, HSG B
1,273	96	Gravel surface, HSG B
1,214	98	Unconnected roofs, HSG B
42,571	98	Paved parking, HSG B
1,694	96	Gravel surface, HSG B
4,509	98	Unconnected roofs, HSG C
113	98	Unconnected roofs, HSG C
2,133	98	Unconnected roofs, HSG C
12,266	96	Gravel surface, HSG C
2,876	70	Woods, Good, HSG C
1,206	70	Woods, Good, HSG C
677	70	Woods, Good, HSG C
650	70	Woods, Good, HSG C
3,876	70	Woods, Good, HSG C
641	70	Woods, Good, HSG C
4,468	55	Woods, Good, HSG B
99,615	55	Woods, Good, HSG B
62,431	61	>75% Grass cover, Good, HSG B
35,637	74	>75% Grass cover, Good, HSG C
294,524	70	Weighted Average
239,799		81.42% Pervious Area
54,725		18.58% Impervious Area
10,579		19.33% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	100	0.1300	0.17		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
5.3	343	0.0466	1.08		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
10.3	434	0.0100	0.70		**Shallow Concentrated Flow, Grass** Short Grass Pasture Kv= 7.0 fps
0.3	40	0.0183	2.18		**Shallow Concentrated Flow, Gravel** Unpaved Kv= 16.1 fps
0.4	147	0.0360	6.04	40.29	**Parabolic Channel, Channel** W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.035 Earth, dense weeds
26.2	1,064	Total			

Subcatchment 1S: DA 1



Summary for Subcatchment 3S: DA 2

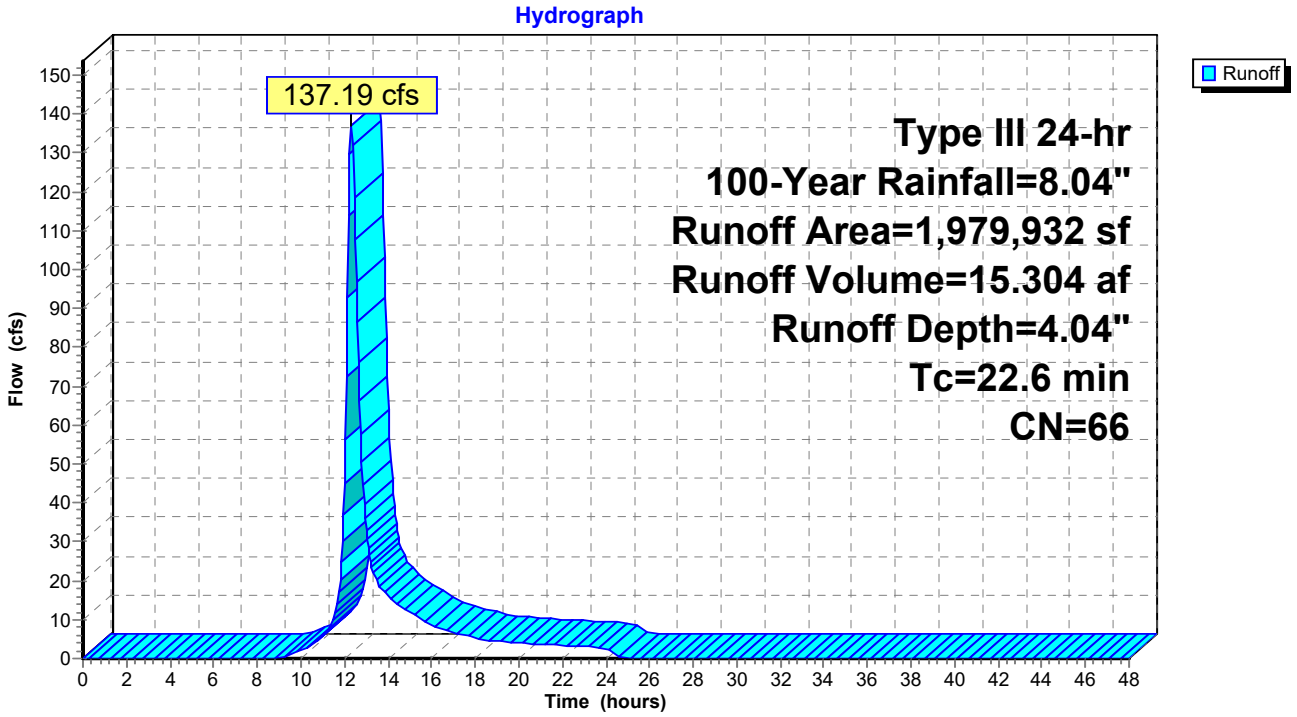
Runoff = 137.19 cfs @ 12.32 hrs, Volume= 15.304 af, Depth= 4.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.04"

Area (sf)	CN	Description
473,802	77	Woods, Good, HSG D
36,547	98	Water Surface, 0% imp, HSG D
3,920	80	>75% Grass cover, Good, HSG D
12,284	61	>75% Grass cover, Good, HSG B
5,184	98	Unconnected roofs, HSG B
766,264	55	Woods, Good, HSG B
663,462	70	Woods, Good, HSG C
2,265	77	Woods, Good, HSG D
1,699	70	Woods, Good, HSG C
174	96	Gravel surface, HSG C
348	96	Gravel surface, HSG B
610	98	Paved parking, HSG C
13,373	74	>75% Grass cover, Good, HSG C
1,979,932	66	Weighted Average
1,974,138		99.71% Pervious Area
5,794		0.29% Impervious Area
5,184		89.47% Unconnected

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

Subcatchment 3S: DA 2



Summary for Pond 2P: 30" RCP

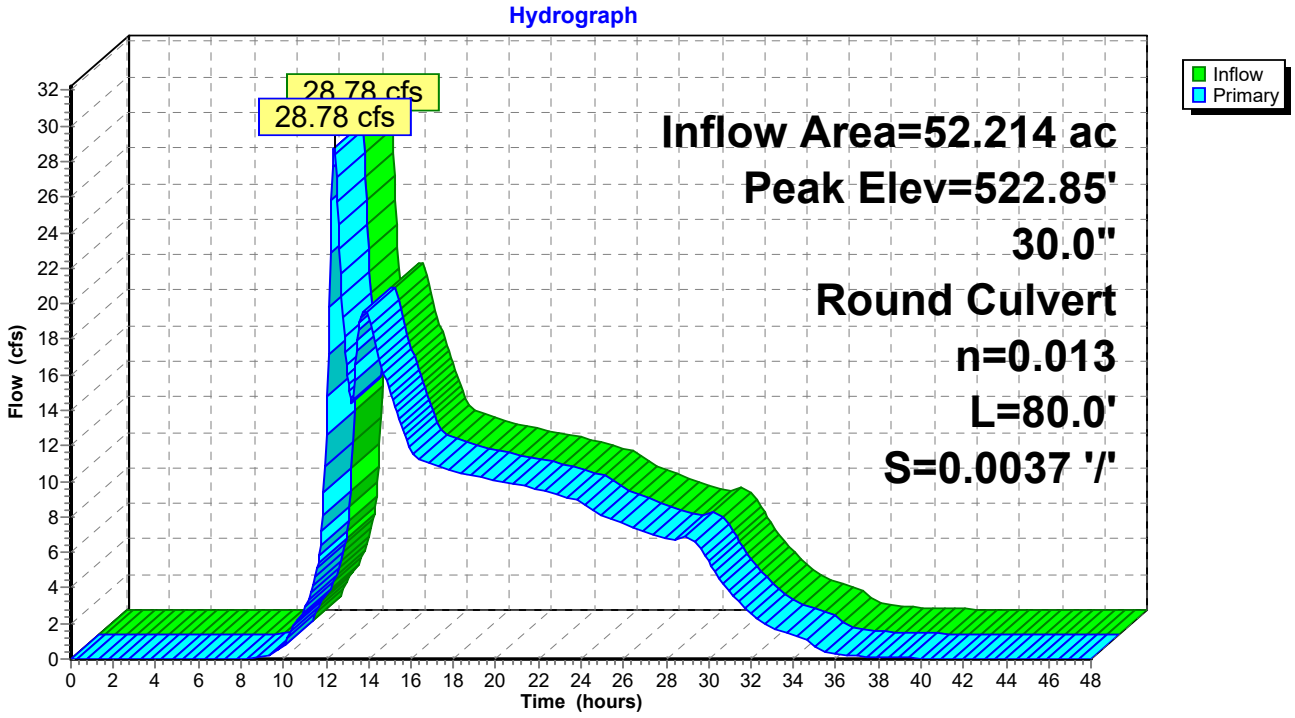
Inflow Area = 52.214 ac, 2.66% Impervious, Inflow Depth > 4.09" for 100-Year event
Inflow = 28.78 cfs @ 12.38 hrs, Volume= 17.805 af
Outflow = 28.78 cfs @ 12.38 hrs, Volume= 17.805 af, Atten= 0%, Lag= 0.0 min
Primary = 28.78 cfs @ 12.38 hrs, Volume= 17.805 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 522.85' @ 12.38 hrs
Flood Elev= 527.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	519.92'	**30.0" Round 30" RC** L= 80.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 519.92' / 519.62' S= 0.0037 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 4.91 sf

Primary OutFlow Max=28.70 cfs @ 12.38 hrs HW=522.84' (Free Discharge)
1=30" RC (Barrel Controls 28.70 cfs @ 6.29 fps)

Pond 2P: 30" RCP



Summary for Pond 4P: Pond

Inflow Area = 45.453 ac, 0.29% Impervious, Inflow Depth = 4.04" for 100-Year event
Inflow = 137.19 cfs @ 12.32 hrs, Volume= 15.304 af
Outflow = 16.90 cfs @ 13.87 hrs, Volume= 15.270 af, Atten= 88%, Lag= 93.0 min
Primary = 10.09 cfs @ 13.87 hrs, Volume= 14.422 af
Secondary = 6.81 cfs @ 13.87 hrs, Volume= 0.848 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 527.00' @ 13.87 hrs Surf.Area= 2.647 ac Storage= 8.135 af

Plug-Flow detention time= 396.8 min calculated for 15.270 af (100% of inflow)
Center-of-Mass det. time= 395.4 min (1,243.8 - 848.4)

Volume	Invert	Avail.Storage	Storage Description
#1	522.20'	10.783 af	**Pond Storage (Irregular)**Listed below

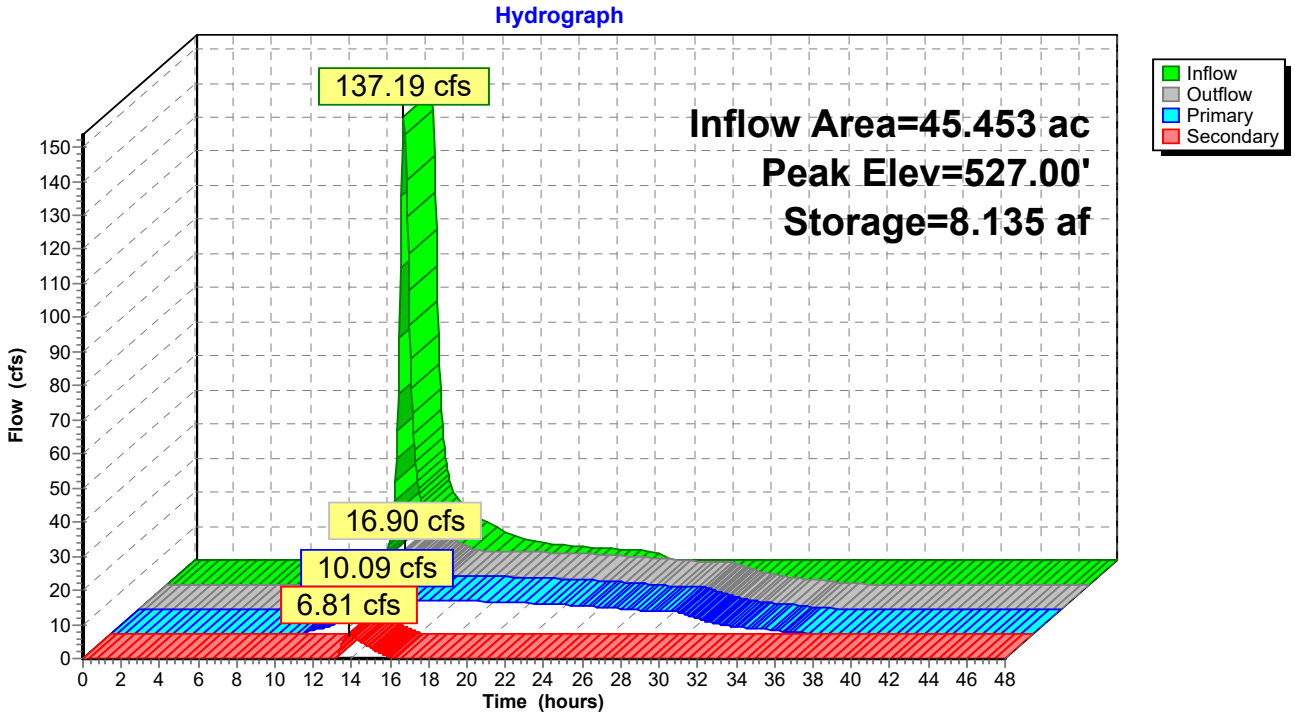
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
522.20	0.002	10.0	0.000	0.000	0.002
522.87	0.636	1,389.1	0.150	0.150	3.527
524.00	1.723	1,270.7	1.283	1.433	4.103
526.00	2.359	1,494.7	4.065	5.499	5.237
528.00	2.936	1,638.1	5.284	10.783	6.061

Device	Routing	Invert	Outlet Devices
#1	Primary	522.29'	**18.0" Round 18" RCP** L= 440.8' RCP, groove end projecting, Ke= 0.200 Inlet / Outlet Invert= 522.29' / 520.81' S= 0.0034 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf
#2	Secondary	526.90'	**83.0' long x 15.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=10.09 cfs @ 13.87 hrs HW=527.00' TW=522.13' (Dynamic Tailwater)
↑—**1=18" RCP** (Barrel Controls 10.09 cfs @ 5.71 fps)

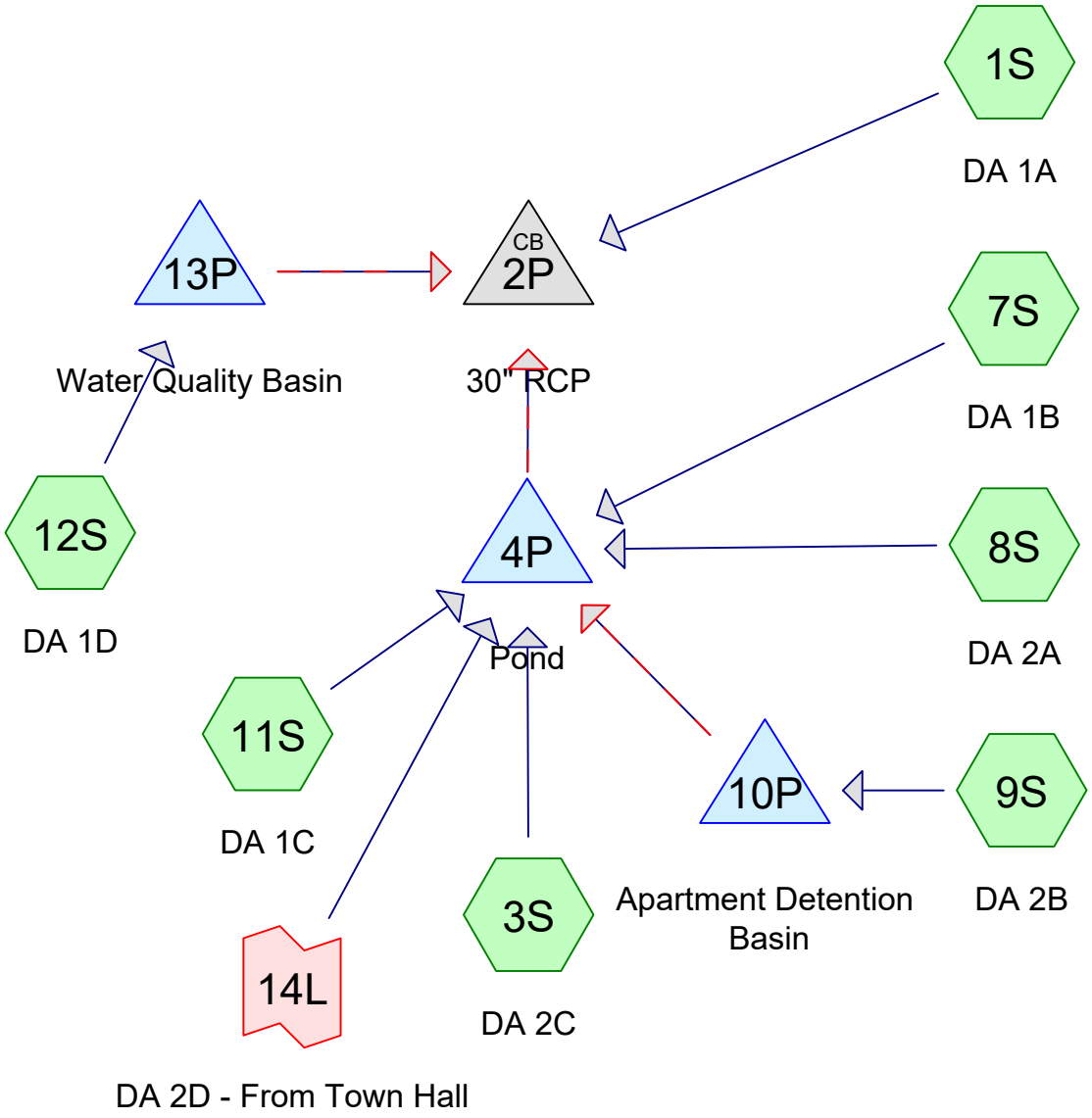
Secondary OutFlow Max=6.80 cfs @ 13.87 hrs HW=527.00' TW=522.13' (Dynamic Tailwater)
↑—**2=Overflow** (Weir Controls 6.80 cfs @ 0.84 fps)

Pond 4P: Pond


Hydrograph
137.19 cfs
16.90 cfs
10.09 cfs
6.81 cfs
Inflow Area=45.453 ac
Peak Elev=527.00'
Storage=8.135 af
Inflow
Outflow
Primary
Secondary
Flow (cfs)
Time (hours)

Post-Development Conditions

HydroCAD Results



Subcat Reach Pond Link

Routing Diagram for Market Square and Existing Development to RT 66

Prepared by {enter your company name here}, Printed 5/8/2020

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	Type III 24-hr		Default	24.00	1	3.37	2
2	10-Year	Type III 24-hr		Default	24.00	1	5.18	2
3	25-Year	Type III 24-hr		Default	24.00	1	6.30	2
4	50-Year	Type III 24-hr		Default	24.00	1	7.14	2
5	100-Year	Type III 24-hr		Default	24.00	1	8.04	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.126	61	>75% Grass cover, Good, HSG B (1S, 3S, 7S, 8S, 9S)
0.559	74	>75% Grass cover, Good, HSG C (1S, 11S, 12S)
0.271	86	Newly graded area, HSG B (7S)
5.700	98	Paved parking, HSG B (1S, 3S, 7S, 8S, 9S)
2.153	98	Paved parking, HSG C (1S, 3S, 11S, 12S)
0.152	98	Roofs, HSG B (8S)
0.110	98	Roofs, HSG C (3S)
0.870	98	Unconnected roofs, HSG B (3S)
0.076	98	Water Surface, 0% imp, HSG B (9S)
0.140	98	Water Surface, 0% imp, HSG C (12S)
0.839	98	Water Surface, 0% imp, HSG D (3S)
14.726	55	Woods, Good, HSG B (3S, 8S, 9S)
11.541	70	Woods, Good, HSG C (3S)
10.670	77	Woods, Good, HSG D (3S)
50.933	**72**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
24.921	HSG B	1S, 3S, 7S, 8S, 9S
14.503	HSG C	1S, 3S, 11S, 12S
11.509	HSG D	3S
0.000	Other	
50.933		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	3.126	0.559	0.000	0.000	3.685	>75% Grass cover, Good	1S, 3S, 7S, 8S, 9S, 11S, 12S
0.000	0.271	0.000	0.000	0.000	0.271	Newly graded area	7S
0.000	5.700	2.153	0.000	0.000	7.853	Paved parking	1S, 3S, 7S, 8S, 9S, 11S, 12S
0.000	0.152	0.110	0.000	0.000	0.262	Roofs	3S, 8S
0.000	0.870	0.000	0.000	0.000	0.870	Unconnected roofs	3S
0.000	0.076	0.140	0.839	0.000	1.055	Water Surface, 0% imp	3S, 9S, 12S
0.000	14.726	11.541	10.670	0.000	36.937	Woods, Good	3S, 8S, 9S
0.000	**24.921**	**14.503**	**11.509**	**0.000**	**50.933**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1S	0.00	0.00	253.0	0.0200	0.013	18.0	0.0	0.0
2	7S	0.00	0.00	167.0	0.0200	0.013	18.0	0.0	0.0
3	8S	0.00	0.00	82.0	0.0500	0.013	15.0	0.0	0.0
4	9S	0.00	0.00	108.0	0.0200	0.013	15.0	0.0	0.0
5	2P	519.92	519.62	80.0	0.0037	0.013	30.0	0.0	0.0
6	4P	520.91	520.64	110.8	0.0024	0.013	30.0	0.0	0.0
7	4P	521.46	520.91	86.8	0.0063	0.013	30.0	0.0	0.0
8	4P	521.41	521.40	157.1	0.0001	0.013	24.0	0.0	0.0
9	4P	523.45	521.82	117.9	0.0138	0.013	18.0	0.0	0.0
10	10P	536.00	534.50	75.0	0.0200	0.013	12.0	0.0	0.0
11	13P	522.50	521.75	75.0	0.0100	0.013	24.0	0.0	0.0

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: DA 1A Runoff Area=2.061 ac 80.93% Impervious Runoff Depth=2.42"
Flow Length=532' Tc=11.0 min CN=91 Runoff=4.83 cfs 0.415 af

Subcatchment 3S: DA 2C Runoff Area=38.645 ac 2.85% Impervious Runoff Depth=0.78"
Flow Length=2,588' Tc=22.6 min UI Adjusted CN=67 Runoff=19.31 cfs 2.506 af

Subcatchment 7S: DA 1B Runoff Area=94,000 sf 75.97% Impervious Runoff Depth=2.51"
Flow Length=669' Tc=6.0 min CN=92 Runoff=6.05 cfs 0.452 af

Subcatchment 8S: DA 2A Runoff Area=3.613 ac 61.86% Impervious Runoff Depth=1.83"
Flow Length=740' Tc=12.1 min CN=84 Runoff=6.30 cfs 0.550 af

Subcatchment 9S: DA 2B Runoff Area=2.152 ac 30.72% Impervious Runoff Depth=1.04"
Flow Length=735' Tc=19.6 min CN=72 Runoff=1.65 cfs 0.186 af

Subcatchment 11S: DA 1C Runoff Area=14,897 sf 83.63% Impervious Runoff Depth=2.71"
Tc=6.0 min CN=94 Runoff=1.01 cfs 0.077 af

Subcatchment 12S: DA 1D Runoff Area=85,452 sf 71.00% Impervious Runoff Depth=2.61"
Tc=6.0 min CN=93 Runoff=5.66 cfs 0.427 af

Pond 2P: 30" RCP Peak Elev=521.10' Inflow=6.57 cfs 5.086 af
Primary=6.57 cfs 5.086 af Secondary=0.00 cfs 0.000 af Outflow=6.57 cfs 5.086 af

Pond 4P: Pond Peak Elev=524.63' Storage=1.899 af Inflow=30.36 cfs 4.352 af
Primary=5.50 cfs 4.245 af Secondary=0.00 cfs 0.000 af Outflow=5.50 cfs 4.245 af

Pond 10P: Apartment Detention Basin Peak Elev=536.68' Storage=228 cf Inflow=1.65 cfs 0.186 af
Primary=1.61 cfs 0.186 af Secondary=0.00 cfs 0.000 af Outflow=1.61 cfs 0.186 af

Pond 13P: Water Quality Basin Peak Elev=526.67' Storage=7,748 cf Inflow=5.66 cfs 0.427 af
Primary=0.57 cfs 0.425 af Secondary=0.00 cfs 0.000 af Outflow=0.57 cfs 0.425 af

2-Year Primary Outflow Imported from Proposed Conditions - Town Hall Site~Link EAST.hce Inflow=3.72 cfs 0.582 af
Link Area= 5.658 ac 40.42% Imperv. Primary=3.72 cfs 0.582 af

Total Runoff Area = 50.933 ac Runoff Volume = 4.612 af Average Runoff Depth = 1.09"
82.36% Pervious = 41.948 ac 17.64% Impervious = 8.985 ac

Summary for Subcatchment 1S: DA 1A

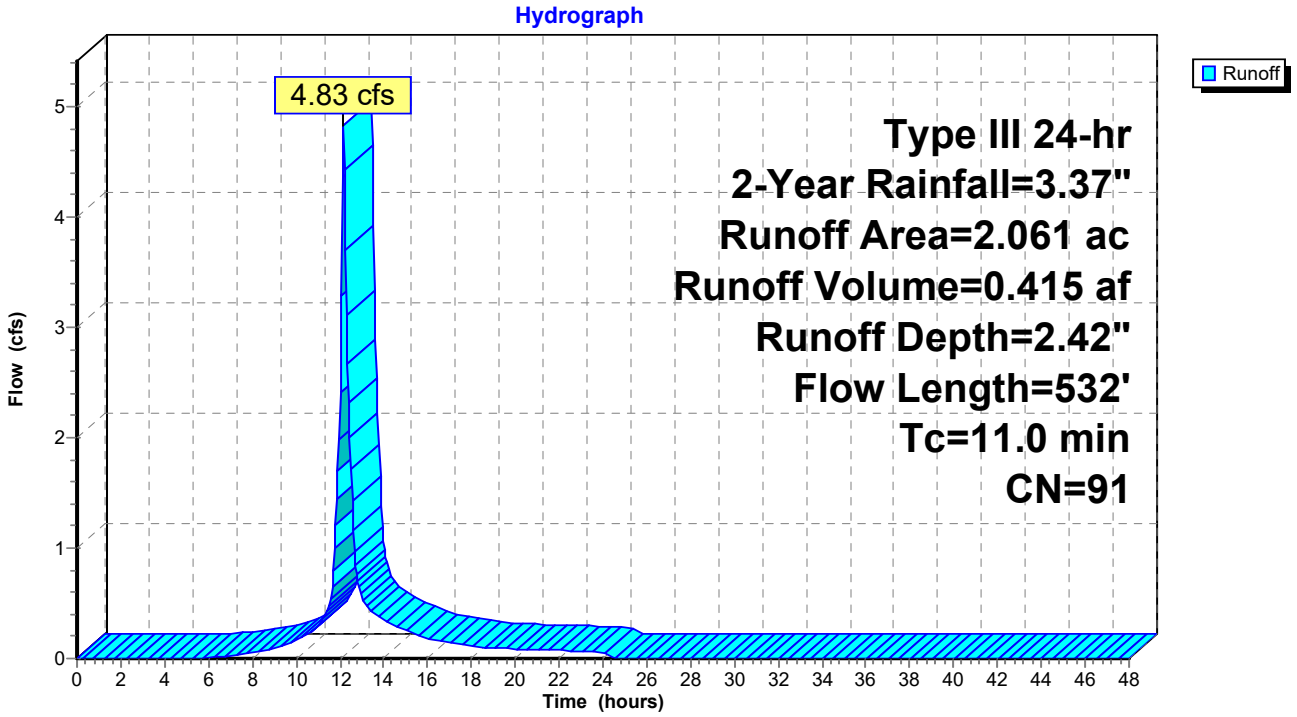
Runoff = 4.83 cfs @ 12.15 hrs, Volume= 0.415 af, Depth= 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.37"

Area (ac)	CN	Description
0.201	98	Paved parking, HSG C
1.260	98	Paved parking, HSG B
0.207	98	Paved parking, HSG C
0.074	74	>75% Grass cover, Good, HSG C
0.319	61	>75% Grass cover, Good, HSG B
2.061	91	Weighted Average
0.393		19.07% Pervious Area
1.668		80.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	40	0.0100	0.08		**Sheet Flow, Lawn** Grass: Dense n= 0.240 P2= 3.37"
1.7	239	0.0126	2.28		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.5	253	0.0200	8.41	14.86	**Pipe Channel, HDPE Drain** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
11.0	532	Total			

Subcatchment 1S: DA 1A



Summary for Subcatchment 3S: DA 2C

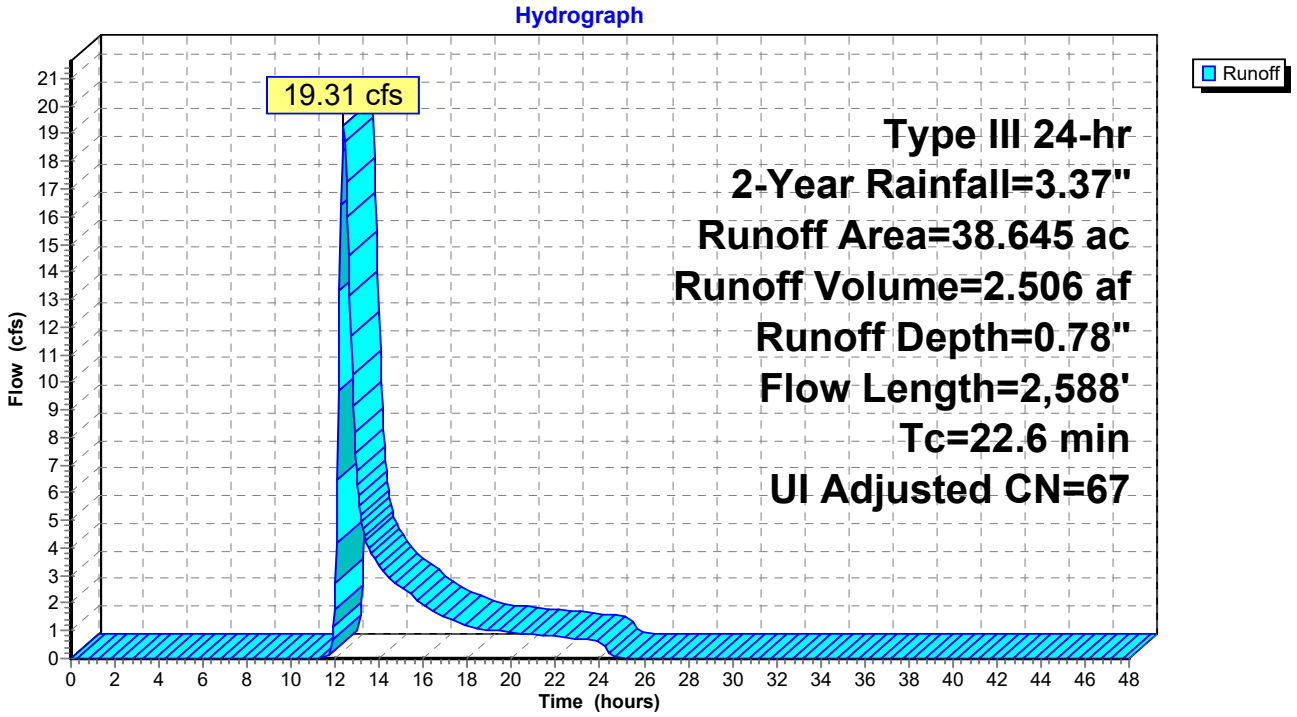
Runoff = 19.31 cfs @ 12.37 hrs, Volume= 2.506 af, Depth= 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.37"

Area (ac)	CN	Adj	Description
10.670	77		Woods, Good, HSG D
0.839	98		Water Surface, 0% imp, HSG D
13.926	55		Woods, Good, HSG B
11.541	70		Woods, Good, HSG C
0.066	98		Paved parking, HSG C
0.110	98		Roofs, HSG C
0.057	98		Paved parking, HSG B
0.566	61		>75% Grass cover, Good, HSG B
0.870	98		Unconnected roofs, HSG B
38.645	68	67	Weighted Average, UI Adjusted
37.542			97.15% Pervious Area
1.103			2.85% Impervious Area
0.870			78.88% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0850	0.14		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
5.1	598	0.1539	1.96		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
5.2	1,600	0.0262	5.16	34.37	**Parabolic Channel, Channel** W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.035 Earth, dense weeds
0.6	290		8.02		**Lake or Reservoir, Pond** Mean Depth= 2.00'
22.6	2,588	Total			

Subcatchment 3S: DA 2C



Summary for Subcatchment 7S: DA 1B

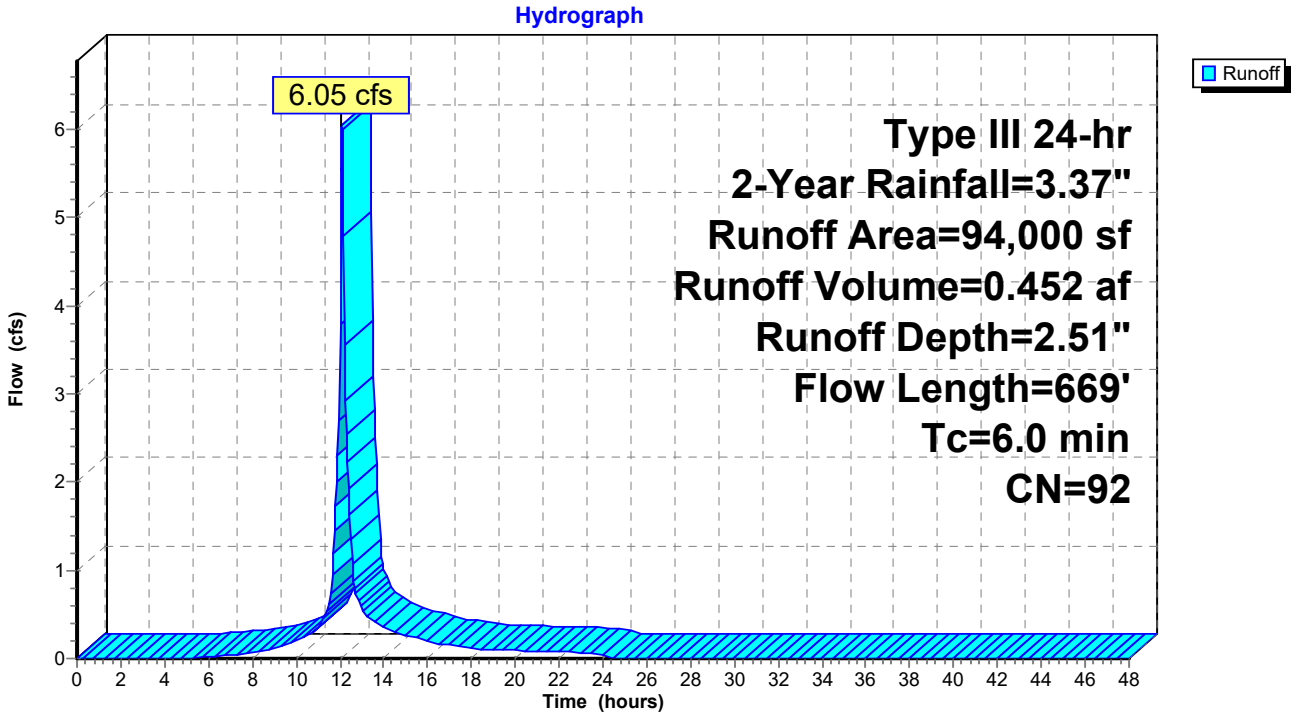
Runoff = 6.05 cfs @ 12.09 hrs, Volume= 0.452 af, Depth= 2.51"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.37"

Area (sf)	CN	Description
71,413	98	Paved parking, HSG B
11,784	86	Newly graded area, HSG B
10,803	61	>75% Grass cover, Good, HSG B
94,000	92	Weighted Average
22,587		24.03% Pervious Area
71,413		75.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.41		**Sheet Flow, Play areas** Smooth surfaces n= 0.011 P2= 3.37"
0.1	40	0.1500	6.24		**Shallow Concentrated Flow, Play areas** Unpaved Kv= 16.1 fps
2.2	362	0.0175	2.69		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.3	167	0.0200	8.41	14.86	**Pipe Channel, HDPE** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
3.8	669	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 7S: DA 1B



Summary for Subcatchment 8S: DA 2A

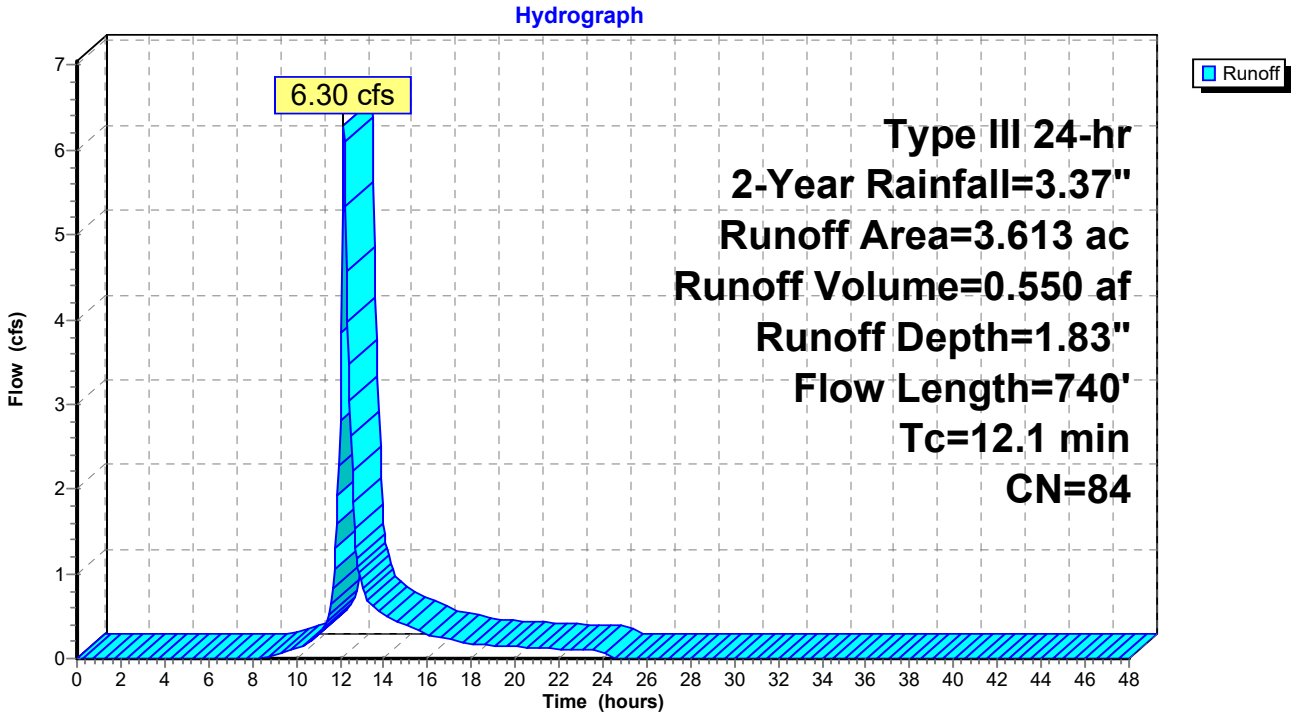
Runoff = 6.30 cfs @ 12.17 hrs, Volume= 0.550 af, Depth= 1.83"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.37"

Area (ac)	CN	Description
1.953	98	Paved parking, HSG B
0.152	98	Roofs, HSG B
0.394	61	>75% Grass cover, Good, HSG B
0.054	55	Woods, Good, HSG B
0.930	61	>75% Grass cover, Good, HSG B
0.130	98	Paved parking, HSG B
3.613	84	Weighted Average
1.378		38.14% Pervious Area
2.235		61.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0650	0.19		**Sheet Flow, Lawn** Grass: Dense n= 0.240 P2= 3.37"
3.3	558	0.0191	2.81		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.1	82	0.0500	11.77	14.44	**Pipe Channel, Discharge** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
12.1	740	Total			

Subcatchment 8S: DA 2A



Summary for Subcatchment 9S: DA 2B

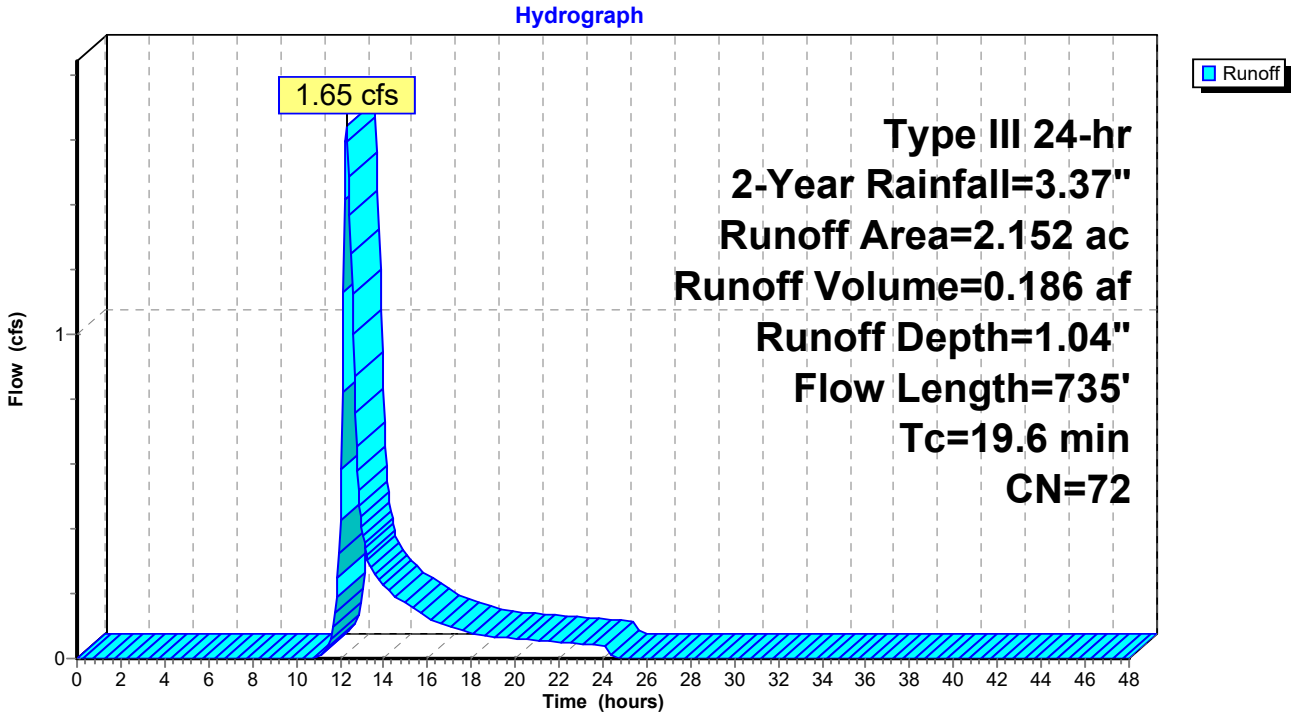
Runoff = 1.65 cfs @ 12.30 hrs, Volume= 0.186 af, Depth= 1.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.37"

Area (ac)	CN	Description
0.661	98	Paved parking, HSG B
0.746	55	Woods, Good, HSG B
0.669	61	>75% Grass cover, Good, HSG B
0.076	98	Water Surface, 0% imp, HSG B
2.152	72	Weighted Average
1.491		69.28% Pervious Area
0.661		30.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0450	0.11		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
2.1	100	0.0250	0.79		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.2	38	0.3333	4.04		**Shallow Concentrated Flow, Grass** Short Grass Pasture Kv= 7.0 fps
1.8	314	0.0200	2.87		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.2	108	0.0200	7.44	9.14	**Pipe Channel, Pipe** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.2	75		5.67		**Lake or Reservoir,** Mean Depth= 1.00'
19.6	735	Total			

Subcatchment 9S: DA 2B



Summary for Subcatchment 11S: DA 1C

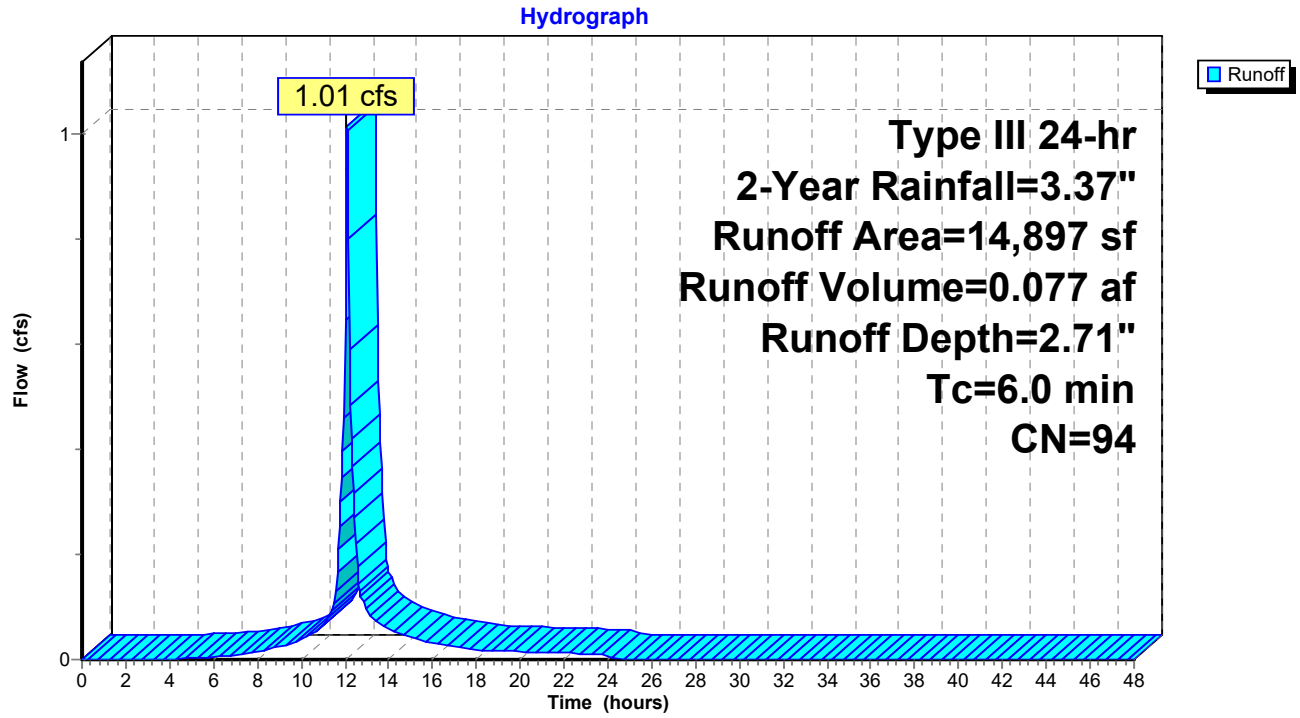
Runoff = 1.01 cfs @ 12.09 hrs, Volume= 0.077 af, Depth= 2.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.37"

Area (sf)	CN	Description
12,458	98	Paved parking, HSG C
2,439	74	>75% Grass cover, Good, HSG C
14,897	94	Weighted Average
2,439		16.37% Pervious Area
12,458		83.63% Impervious Area

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

Subcatchment 11S: DA 1C



Summary for Subcatchment 12S: DA 1D

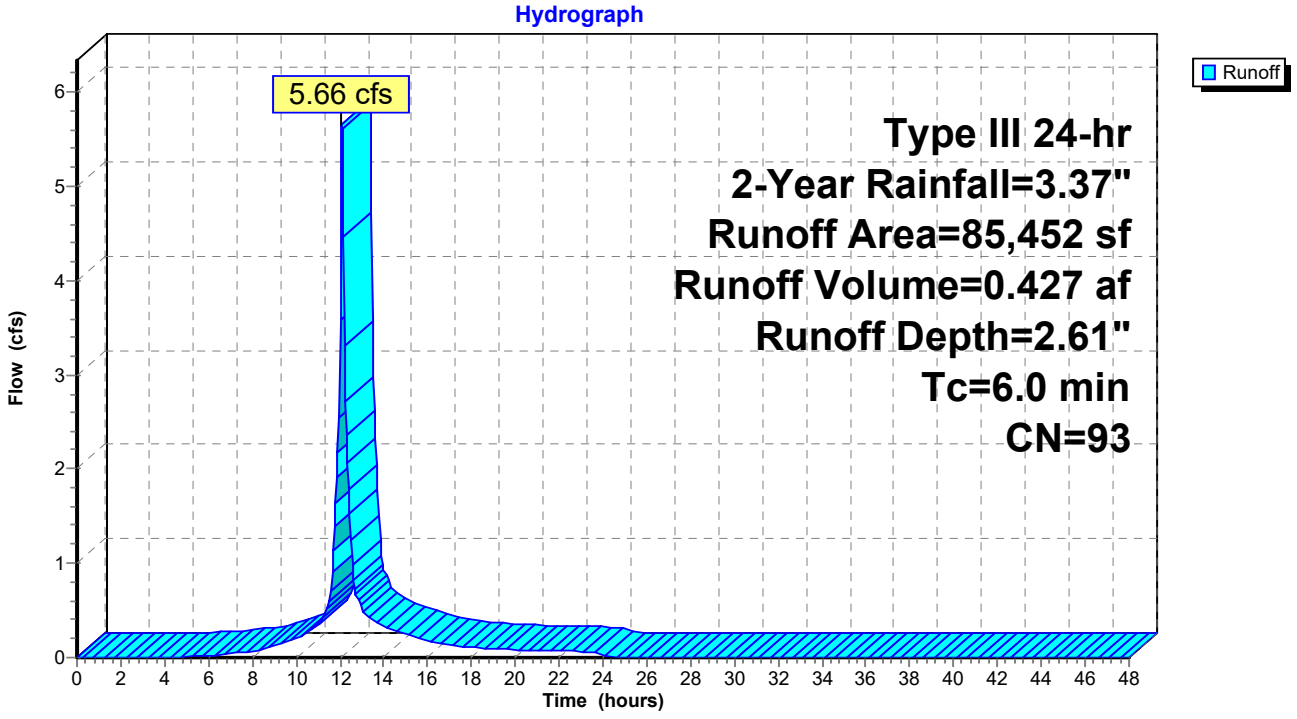
Runoff = 5.66 cfs @ 12.09 hrs, Volume= 0.427 af, Depth= 2.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.37"

Area (sf)	CN	Description
55,278	98	Paved parking, HSG C
6,098	98	Water Surface, 0% imp, HSG C
18,687	74	>75% Grass cover, Good, HSG C
5,389	98	Paved parking, HSG C
85,452	93	Weighted Average
24,785		29.00% Pervious Area
60,667		71.00% Impervious Area

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

Subcatchment 12S: DA 1D



Summary for Pond 2P: 30" RCP

Inflow Area = 56.590 ac, 19.92% Impervious, Inflow Depth > 1.08" for 2-Year event
Inflow = 6.57 cfs @ 12.17 hrs, Volume= 5.086 af
Outflow = 6.57 cfs @ 12.17 hrs, Volume= 5.086 af, Atten= 0%, Lag= 0.0 min
Primary = 6.57 cfs @ 12.17 hrs, Volume= 5.086 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

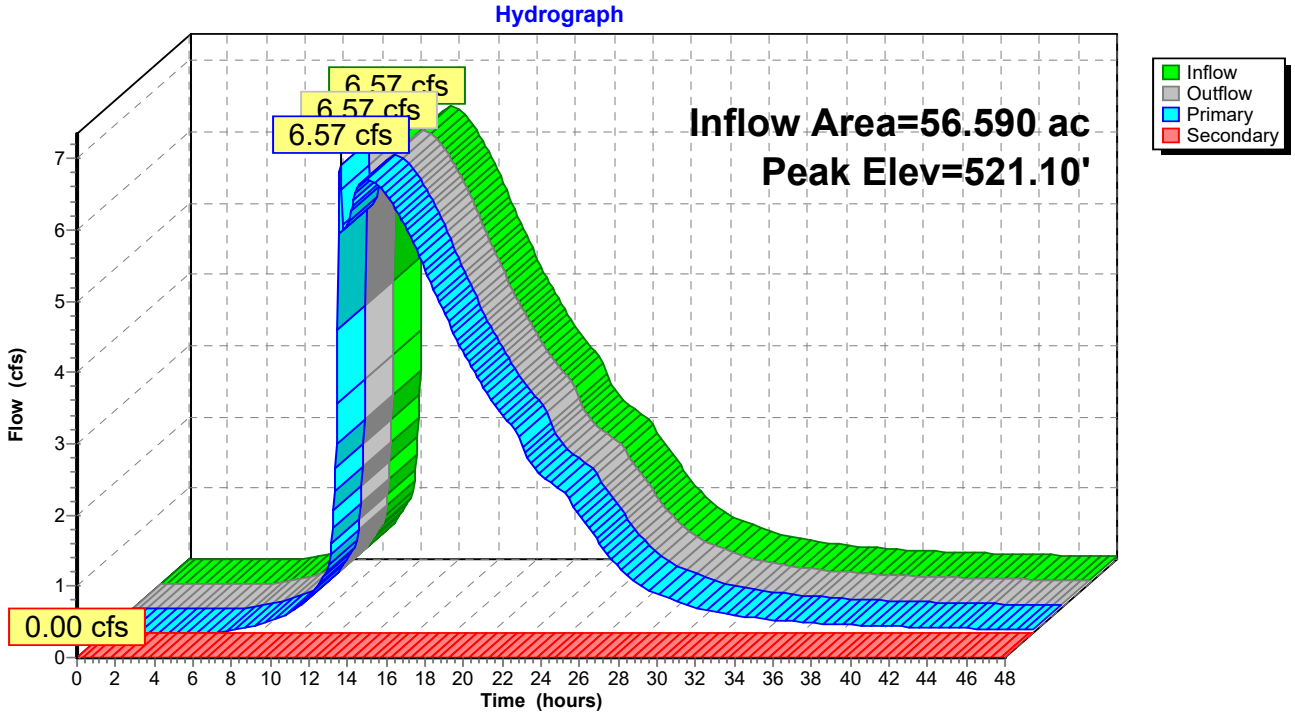
Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 521.10' @ 12.17 hrs
Flood Elev= 527.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	519.92'	**30.0" Round 30" RC** L= 80.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 519.92' / 519.62' S= 0.0037 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 4.91 sf
#2	Secondary	527.20'	**30.0' long x 10.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=6.46 cfs @ 12.17 hrs HW=521.09' (Free Discharge)
└**1=30" RC** (Barrel Controls 6.46 cfs @ 4.22 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=519.92' (Free Discharge)
└**2=Overflow** (Controls 0.00 cfs)

Pond 2P: 30" RCP



Summary for Pond 4P: Pond

Inflow Area = 52.568 ac, 15.62% Impervious, Inflow Depth = 0.99" for 2-Year event
Inflow = 30.36 cfs @ 12.32 hrs, Volume= 4.352 af
Outflow = 5.50 cfs @ 13.96 hrs, Volume= 4.245 af, Atten= 82%, Lag= 98.5 min
Primary = 5.50 cfs @ 13.96 hrs, Volume= 4.245 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 524.63' @ 13.96 hrs Surf.Area= 1.922 ac Storage= 1.899 af

Plug-Flow detention time= 276.6 min calculated for 4.241 af (97% of inflow)
Center-of-Mass det. time= 263.8 min (1,137.5 - 873.7)

Volume	Invert	Avail.Storage	Storage Description
#1	523.45'	16.273 af	**Pond Storage (Irregular)**Listed below

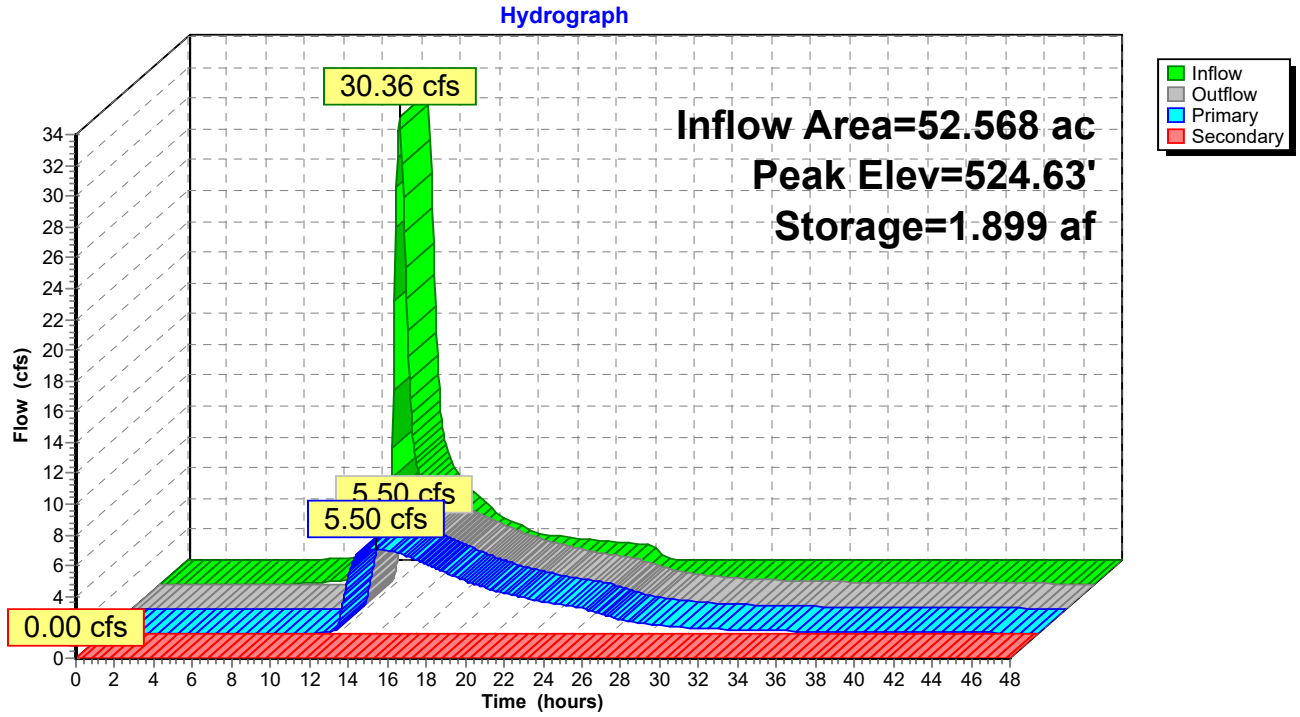
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
523.45	0.636	1,389.1	0.000	0.000	0.636
524.00	1.723	1,270.7	0.624	0.624	1.212
526.00	2.359	1,494.7	4.065	4.690	2.345
528.00	2.936	1,638.1	5.284	9.974	3.169
530.00	3.368	1,700.4	6.299	16.273	3.556

Device	Routing	Invert	Outlet Devices
#1	Primary	520.91'	**30.0" Round 30" HDPE** L= 110.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 520.91' / 520.64' S= 0.0024 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	521.46'	**30.0" Round 30" HDPE** L= 86.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 521.46' / 520.91' S= 0.0063 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#3	Device 2	521.41'	**24.0" Round 24" HDPE** L= 157.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 521.41' / 521.40' S= 0.0001 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#4	Device 3	523.45'	**18.0" Round 18" HDPE** L= 117.9' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 523.45' / 521.82' S= 0.0138 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#5	Secondary	529.90'	**50.0' long x 25.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=5.50 cfs @ 13.96 hrs HW=524.63' TW=521.07' (Dynamic Tailwater)
└─**1=30" HDPE** (Passes 5.50 cfs of 30.23 cfs potential flow)
└─**2=30" HDPE** (Passes 5.50 cfs of 30.40 cfs potential flow)
└─**3=24" HDPE** (Passes 5.50 cfs of 15.02 cfs potential flow)
└─**4=18" HDPE** (Inlet Controls 5.50 cfs @ 3.69 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=523.45' TW=519.92' (Dynamic Tailwater)
└─**5=Overflow** (Controls 0.00 cfs)

Pond 4P: Pond



Summary for Pond 10P: Apartment Detention Basin

Inflow Area = 2.152 ac, 30.72% Impervious, Inflow Depth = 1.04" for 2-Year event
Inflow = 1.65 cfs @ 12.30 hrs, Volume= 0.186 af
Outflow = 1.61 cfs @ 12.35 hrs, Volume= 0.186 af, Atten= 2%, Lag= 2.8 min
Primary = 1.61 cfs @ 12.35 hrs, Volume= 0.186 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 536.68' @ 12.35 hrs Surf.Area= 604 sf Storage= 228 cf

Plug-Flow detention time= 2.9 min calculated for 0.186 af (100% of inflow)
Center-of-Mass det. time= 3.0 min (880.9 - 877.9)

Volume	Invert	Avail.Storage	Storage Description
#1	536.00'	7,026 cf	**Detention Basin (Irregular)**Listed below (Recalc)

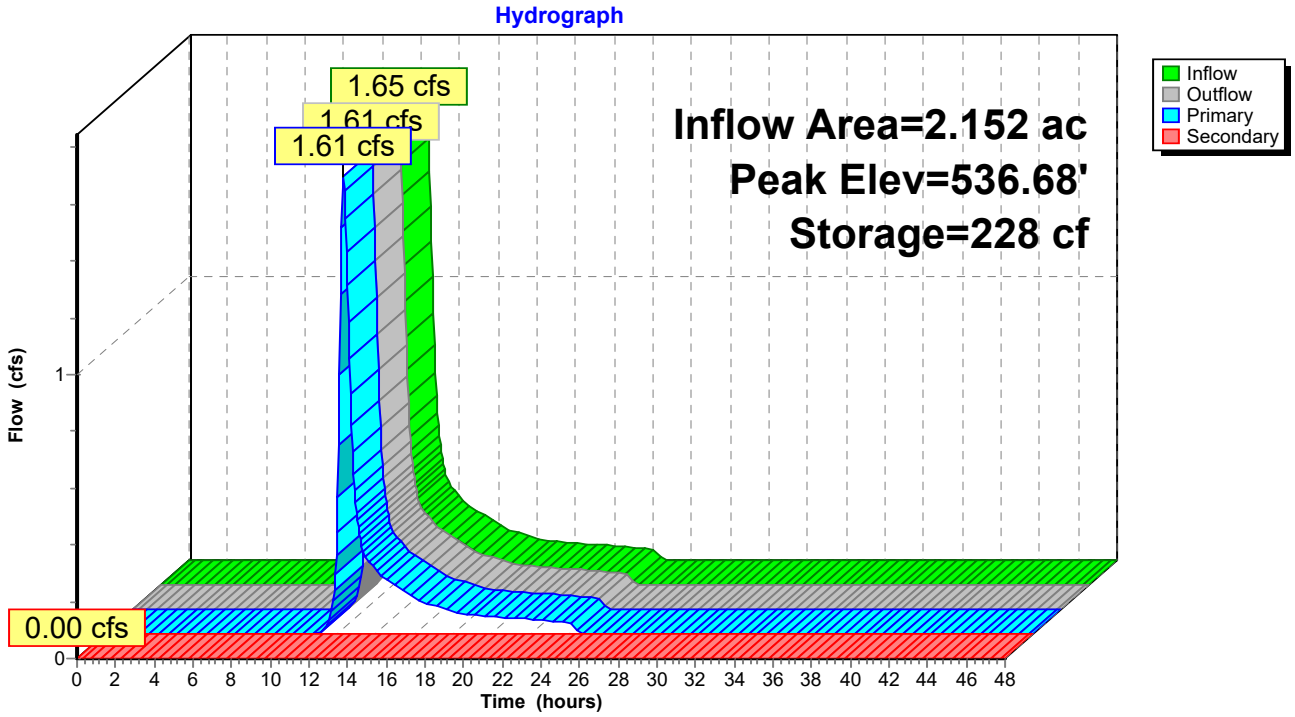
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
536.00	100	40.0	0	0	100
536.50	467	110.5	131	131	945
537.60	1,559	173.6	1,056	1,186	2,380
540.00	3,429	242.5	5,840	7,026	4,716

Device	Routing	Invert	Outlet Devices
#1	Primary	536.00'	**12.0" Round Culvert** L= 75.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 536.00' / 534.50' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	539.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=1.61 cfs @ 12.35 hrs HW=536.68' TW=524.18' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 1.61 cfs @ 2.81 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=536.00' TW=523.45' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 10P: Apartment Detention Basin



Summary for Pond 13P: Water Quality Basin

[42] Hint: Gap in defined storage above volume #1 at 524.25'

Inflow Area = 1.962 ac, 71.00% Impervious, Inflow Depth = 2.61" for 2-Year event
Inflow = 5.66 cfs @ 12.09 hrs, Volume= 0.427 af
Outflow = 0.57 cfs @ 12.90 hrs, Volume= 0.425 af, Atten= 90%, Lag= 48.7 min
Primary = 0.57 cfs @ 12.90 hrs, Volume= 0.425 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 526.67' @ 12.90 hrs Surf.Area= 5,194 sf Storage= 7,748 cf

Plug-Flow detention time= 148.7 min calculated for 0.424 af (100% of inflow)
Center-of-Mass det. time= 146.1 min (937.0 - 790.9)

Volume	Invert	Avail.Storage	Storage Description
#1	522.25'	290 cf	**2.00'W x 181.00'L x 2.00'H Underdrain Trench** 724 cf Overall x 40.0% Voids
#2	524.75'	27,446 cf	**Water Quality swale (Irregular)**Listed below (Recalc)
		27,735 cf	Total Available Storage

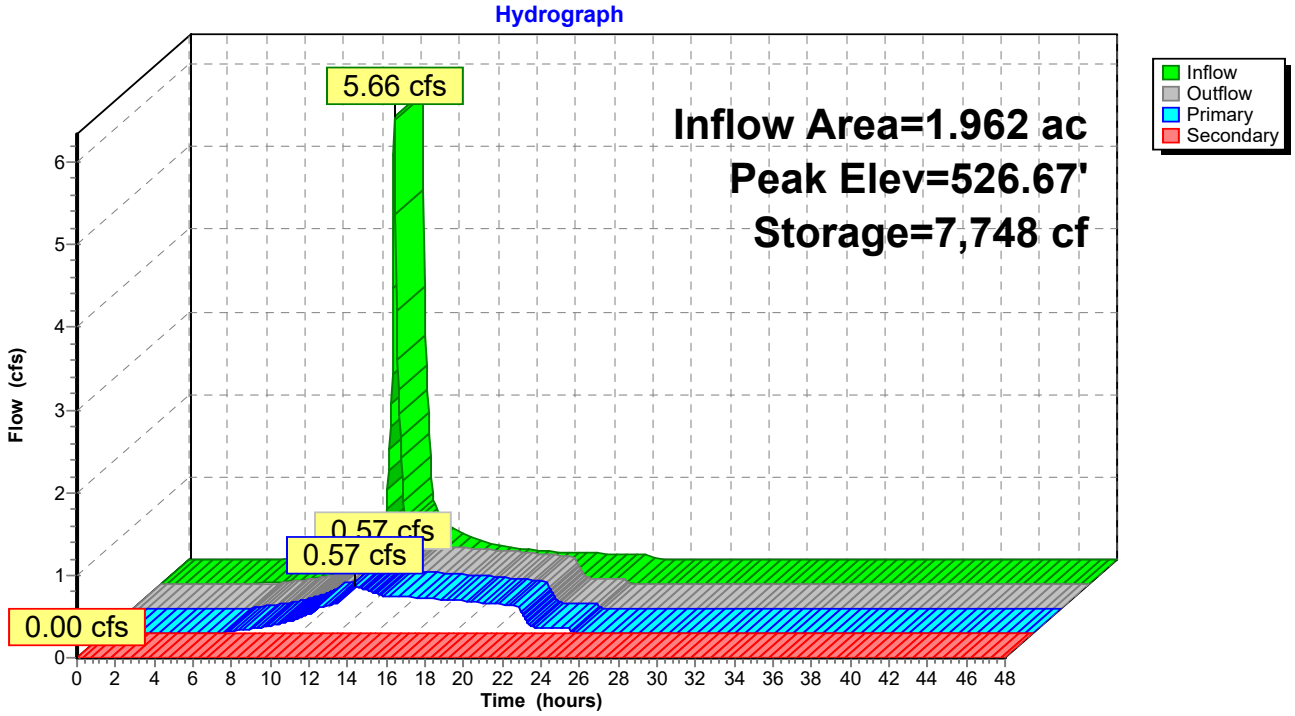
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
524.75	2,969	471.4	0	0	2,969
525.00	3,207	477.3	772	772	3,430
526.00	4,185	500.8	3,685	4,457	5,323
528.00	6,268	535.7	10,383	14,840	8,383
529.75	8,181	557.7	12,606	27,446	10,523

Device	Routing	Invert	Outlet Devices
#1	Primary	522.50'	**24.0" Round 24" HDPE** L= 75.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 522.50' / 521.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	522.75'	**3.0" Vert. Underdrain** C= 0.600 Limited to weir flow at low heads
#3	Device 1	526.50'	**6.0" W x 6.0" H Vert. 6" Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	527.00'	**18.0" W x 6.0" H Vert. 18x6 Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	528.25'	**2.0" x 2.0" Horiz. Top of Frame X 20.00 columns** X 20 rows C= 0.600 in 48.0" x 48.0" Grate (69% open area) Limited to weir flow at low heads
#6	Secondary	528.75'	**10.0' long x 8.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=0.57 cfs @ 12.90 hrs HW=526.67' TW=521.06' (Dynamic Tailwater)
└─**1=24" HDPE** (Passes 0.57 cfs of 26.92 cfs potential flow)
  └─**2=Underdrain** (Orifice Controls 0.46 cfs @ 9.38 fps)
  └─**3=6" Orifice** (Orifice Controls 0.11 cfs @ 1.31 fps)
  └─**4=18x6 Orifice** (Controls 0.00 cfs)
  └─**5=Top of Frame** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=522.25' TW=519.92' (Dynamic Tailwater)
└─**6=Emergency Spillway** (Controls 0.00 cfs)

Pond 13P: Water Quality Basin



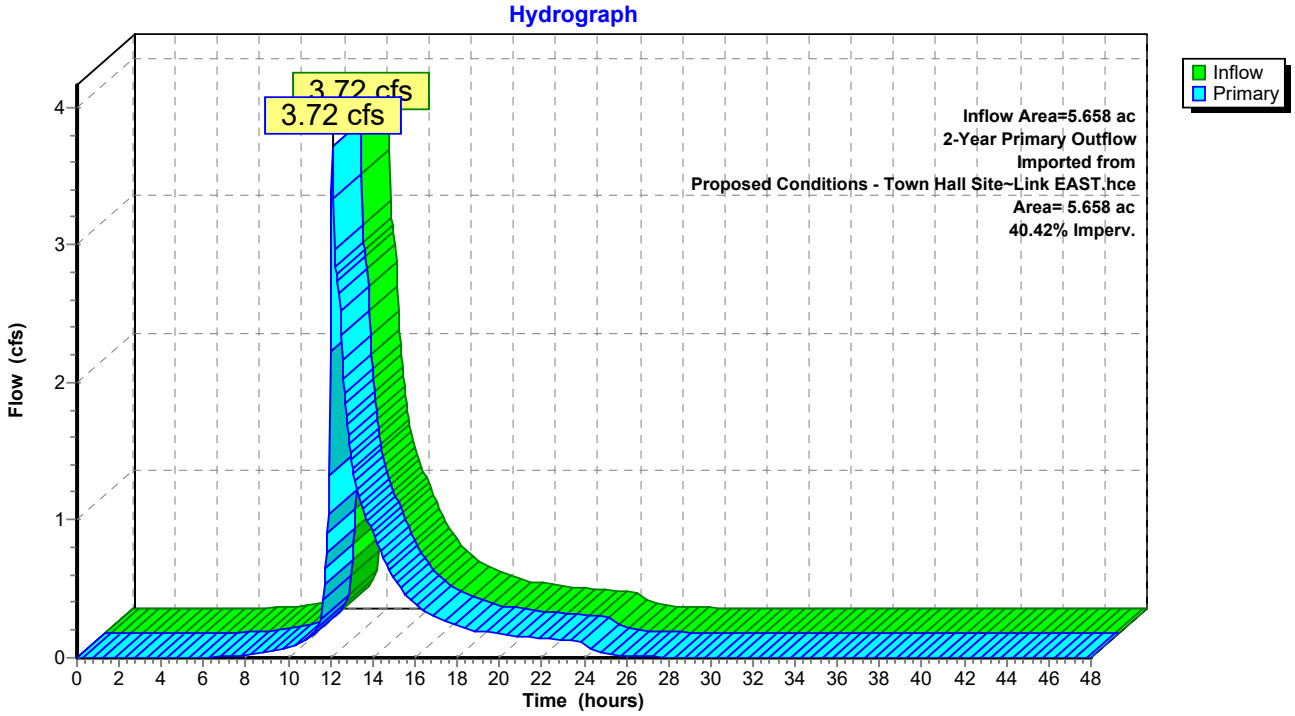
Summary for Link 14L: DA 2D - From Town Hall

Inflow Area = 5.658 ac, 40.42% Impervious, Inflow Depth = 1.23" for 2-Year event
Inflow = 3.72 cfs @ 12.10 hrs, Volume= 0.582 af
Primary = 3.72 cfs @ 12.10 hrs, Volume= 0.582 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

2-Year Primary Outflow Imported from Proposed Conditions - Town Hall Site~Link EAST.hce

Link 14L: DA 2D - From Town Hall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: DA 1A Runoff Area=2.061 ac 80.93% Impervious Runoff Depth=4.16"
Flow Length=532' Tc=11.0 min CN=91 Runoff=8.09 cfs 0.714 af

Subcatchment 3S: DA 2C Runoff Area=38.645 ac 2.85% Impervious Runoff Depth=1.93"
Flow Length=2,588' Tc=22.6 min UI Adjusted CN=67 Runoff=53.90 cfs 6.214 af

Subcatchment 7S: DA 1B Runoff Area=94,000 sf 75.97% Impervious Runoff Depth=4.27"
Flow Length=669' Tc=6.0 min CN=92 Runoff=9.98 cfs 0.767 af

Subcatchment 8S: DA 2A Runoff Area=3.613 ac 61.86% Impervious Runoff Depth=3.44"
Flow Length=740' Tc=12.1 min CN=84 Runoff=11.77 cfs 1.034 af

Subcatchment 9S: DA 2B Runoff Area=2.152 ac 30.72% Impervious Runoff Depth=2.34"
Flow Length=735' Tc=19.6 min CN=72 Runoff=3.94 cfs 0.419 af

Subcatchment 11S: DA 1C Runoff Area=14,897 sf 83.63% Impervious Runoff Depth=4.49"
Tc=6.0 min CN=94 Runoff=1.63 cfs 0.128 af

Subcatchment 12S: DA 1D Runoff Area=85,452 sf 71.00% Impervious Runoff Depth=4.37"
Tc=6.0 min CN=93 Runoff=9.22 cfs 0.715 af

Pond 2P: 30" RCP Peak Elev=521.77' Inflow=14.64 cfs 11.130 af
Primary=14.64 cfs 11.130 af Secondary=0.00 cfs 0.000 af Outflow=14.64 cfs 11.130 af

Pond 4P: Pond Peak Elev=526.00' Storage=4.684 af Inflow=75.99 cfs 9.823 af
Primary=11.41 cfs 9.703 af Secondary=0.00 cfs 0.000 af Outflow=11.41 cfs 9.703 af

Pond 10P: Apartment Detention Basin Peak Elev=537.36' Storage=846 cf Inflow=3.94 cfs 0.419 af
Primary=3.50 cfs 0.419 af Secondary=0.00 cfs 0.000 af Outflow=3.50 cfs 0.419 af

Pond 13P: Water Quality Basin Peak Elev=527.40' Storage=11,563 cf Inflow=9.22 cfs 0.715 af
Primary=2.68 cfs 0.714 af Secondary=0.00 cfs 0.000 af Outflow=2.68 cfs 0.714 af

10-Ye**Link** imary Outflow Imported from Proposed Conditions - Town Hall Site~Link EAST.hce Inflow=7.46 cfs 1.261 af
Area= 5.658 ac 40.42% Imperv. Primary=7.46 cfs 1.261 af

Total Runoff Area = 50.933 ac Runoff Volume = 9.991 af Average Runoff Depth = 2.35"
82.36% Pervious = 41.948 ac 17.64% Impervious = 8.985 ac

Summary for Subcatchment 1S: DA 1A

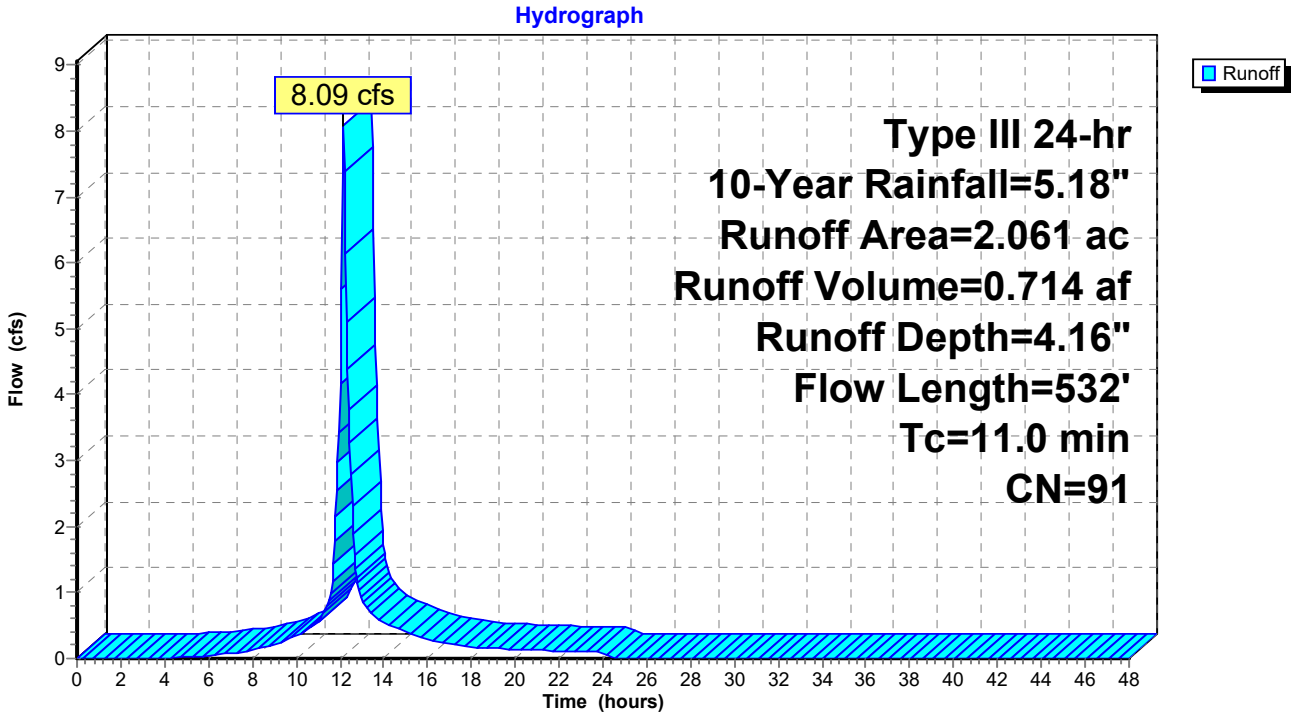
Runoff = 8.09 cfs @ 12.15 hrs, Volume= 0.714 af, Depth= 4.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.18"

Area (ac)	CN	Description
0.201	98	Paved parking, HSG C
1.260	98	Paved parking, HSG B
0.207	98	Paved parking, HSG C
0.074	74	>75% Grass cover, Good, HSG C
0.319	61	>75% Grass cover, Good, HSG B
2.061	91	Weighted Average
0.393		19.07% Pervious Area
1.668		80.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	40	0.0100	0.08		**Sheet Flow, Lawn** Grass: Dense n= 0.240 P2= 3.37"
1.7	239	0.0126	2.28		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.5	253	0.0200	8.41	14.86	**Pipe Channel, HDPE Drain** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
11.0	532	Total			

Subcatchment 1S: DA 1A



Summary for Subcatchment 3S: DA 2C

[47] Hint: Peak is 157% of capacity of segment #3

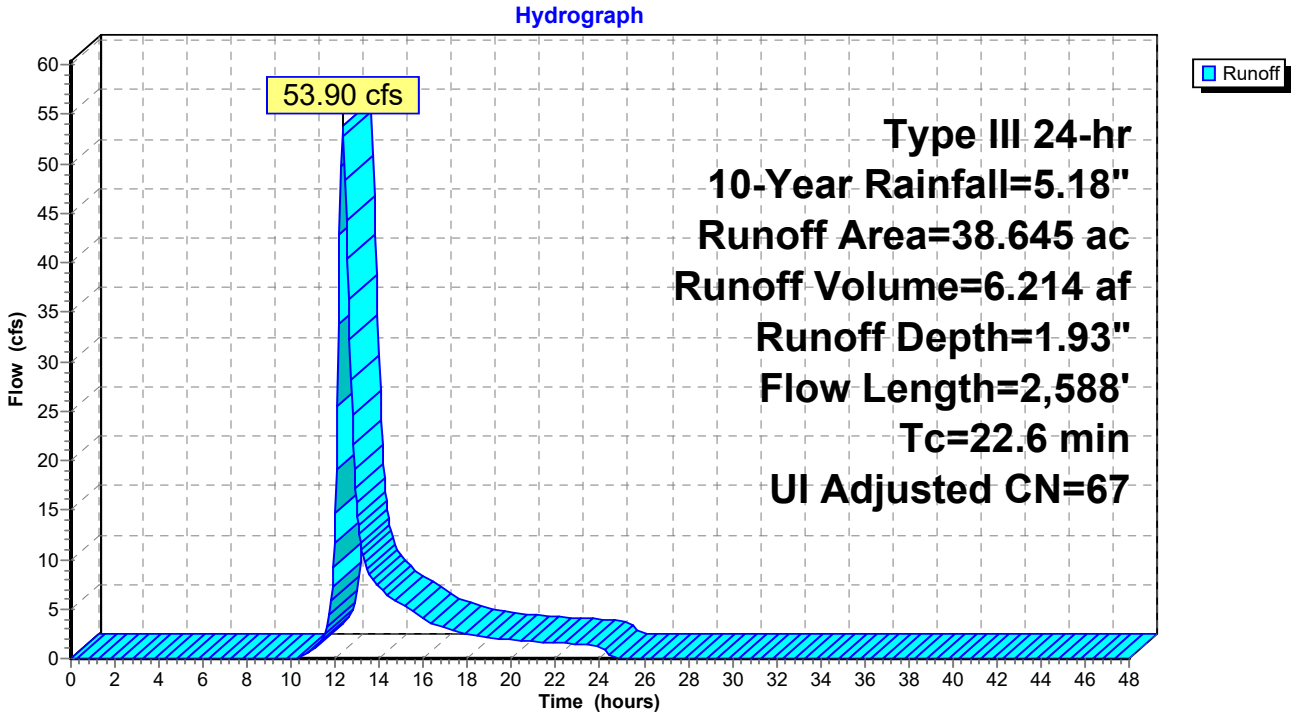
Runoff = 53.90 cfs @ 12.33 hrs, Volume= 6.214 af, Depth= 1.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.18"

Area (ac)	CN	Adj	Description
10.670	77		Woods, Good, HSG D
0.839	98		Water Surface, 0% imp, HSG D
13.926	55		Woods, Good, HSG B
11.541	70		Woods, Good, HSG C
0.066	98		Paved parking, HSG C
0.110	98		Roofs, HSG C
0.057	98		Paved parking, HSG B
0.566	61		>75% Grass cover, Good, HSG B
0.870	98		Unconnected roofs, HSG B
38.645	68	67	Weighted Average, UI Adjusted
37.542			97.15% Pervious Area
1.103			2.85% Impervious Area
0.870			78.88% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0850	0.14		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
5.1	598	0.1539	1.96		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
5.2	1,600	0.0262	5.16	34.37	**Parabolic Channel, Channel** W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.035 Earth, dense weeds
0.6	290		8.02		**Lake or Reservoir, Pond** Mean Depth= 2.00'
22.6	2,588	Total			

Subcatchment 3S: DA 2C



Summary for Subcatchment 7S: DA 1B

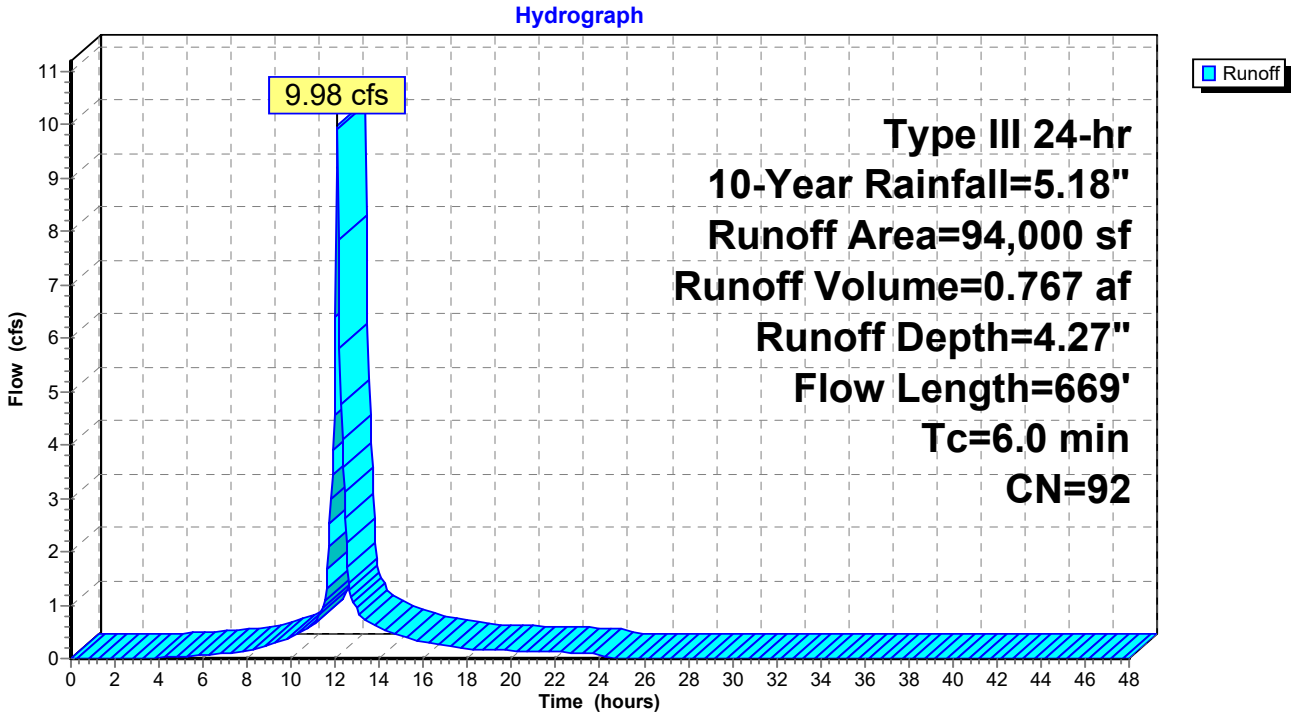
Runoff = 9.98 cfs @ 12.09 hrs, Volume= 0.767 af, Depth= 4.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.18"

Area (sf)	CN	Description
71,413	98	Paved parking, HSG B
11,784	86	Newly graded area, HSG B
10,803	61	>75% Grass cover, Good, HSG B
94,000	92	Weighted Average
22,587		24.03% Pervious Area
71,413		75.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.41		**Sheet Flow, Play areas** Smooth surfaces n= 0.011 P2= 3.37"
0.1	40	0.1500	6.24		**Shallow Concentrated Flow, Play areas** Unpaved Kv= 16.1 fps
2.2	362	0.0175	2.69		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.3	167	0.0200	8.41	14.86	**Pipe Channel, HDPE** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
3.8	669	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 7S: DA 1B



Summary for Subcatchment 8S: DA 2A

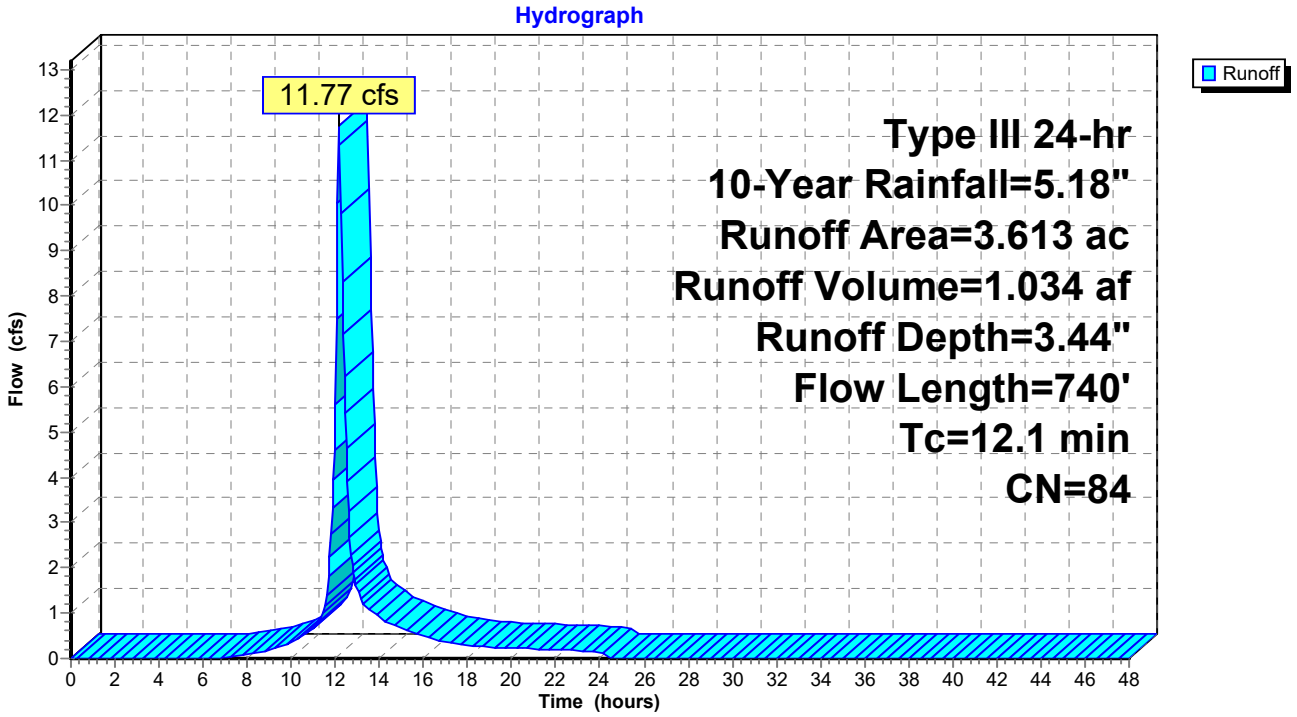
Runoff = 11.77 cfs @ 12.17 hrs, Volume= 1.034 af, Depth= 3.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.18"

Area (ac)	CN	Description
1.953	98	Paved parking, HSG B
0.152	98	Roofs, HSG B
0.394	61	>75% Grass cover, Good, HSG B
0.054	55	Woods, Good, HSG B
0.930	61	>75% Grass cover, Good, HSG B
0.130	98	Paved parking, HSG B
3.613	84	Weighted Average
1.378		38.14% Pervious Area
2.235		61.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0650	0.19		**Sheet Flow, Lawn** Grass: Dense n= 0.240 P2= 3.37"
3.3	558	0.0191	2.81		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.1	82	0.0500	11.77	14.44	**Pipe Channel, Discharge** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
12.1	740	Total			

Subcatchment 8S: DA 2A



Summary for Subcatchment 9S: DA 2B

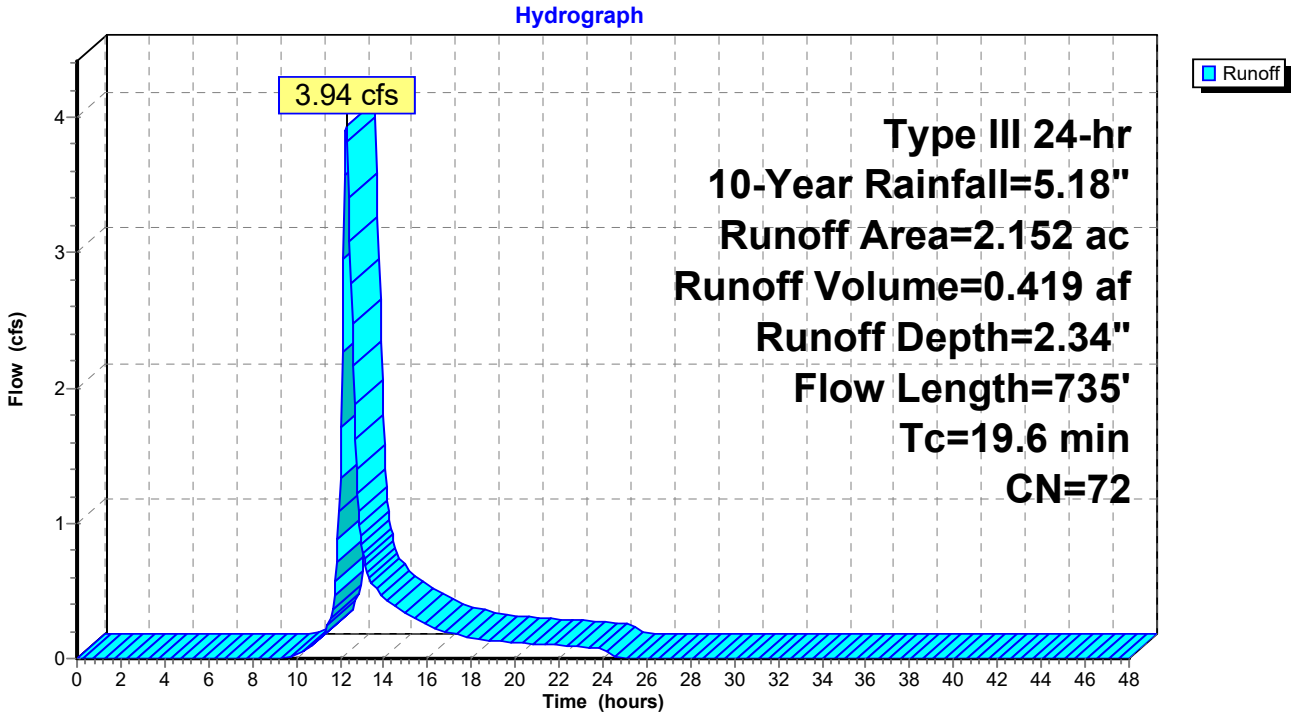
Runoff = 3.94 cfs @ 12.28 hrs, Volume= 0.419 af, Depth= 2.34"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.18"

Area (ac)	CN	Description
0.661	98	Paved parking, HSG B
0.746	55	Woods, Good, HSG B
0.669	61	>75% Grass cover, Good, HSG B
0.076	98	Water Surface, 0% imp, HSG B
2.152	72	Weighted Average
1.491		69.28% Pervious Area
0.661		30.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0450	0.11		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
2.1	100	0.0250	0.79		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.2	38	0.3333	4.04		**Shallow Concentrated Flow, Grass** Short Grass Pasture Kv= 7.0 fps
1.8	314	0.0200	2.87		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.2	108	0.0200	7.44	9.14	**Pipe Channel, Pipe** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.2	75		5.67		**Lake or Reservoir,** Mean Depth= 1.00'
19.6	735	Total			

Subcatchment 9S: DA 2B



Summary for Subcatchment 11S: DA 1C

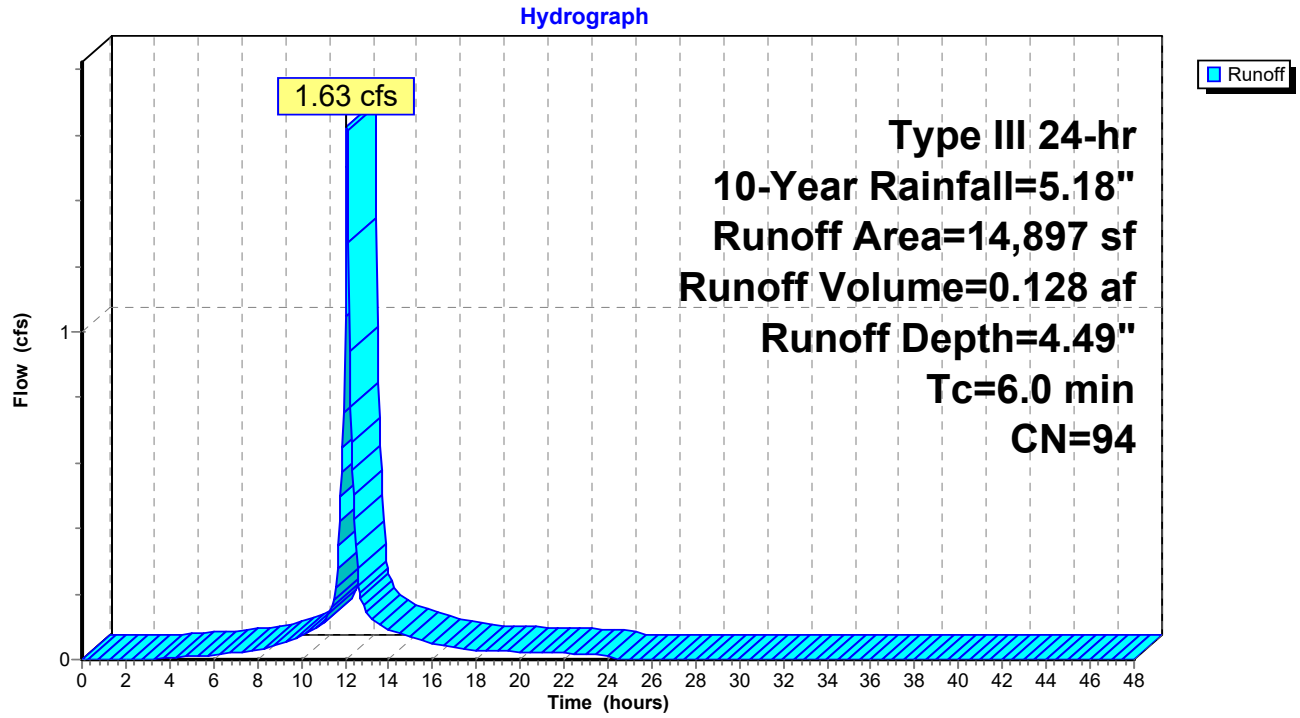
Runoff = 1.63 cfs @ 12.09 hrs, Volume= 0.128 af, Depth= 4.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.18"

Area (sf)	CN	Description
12,458	98	Paved parking, HSG C
2,439	74	>75% Grass cover, Good, HSG C
14,897	94	Weighted Average
2,439		16.37% Pervious Area
12,458		83.63% Impervious Area

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

Subcatchment 11S: DA 1C



Summary for Subcatchment 12S: DA 1D

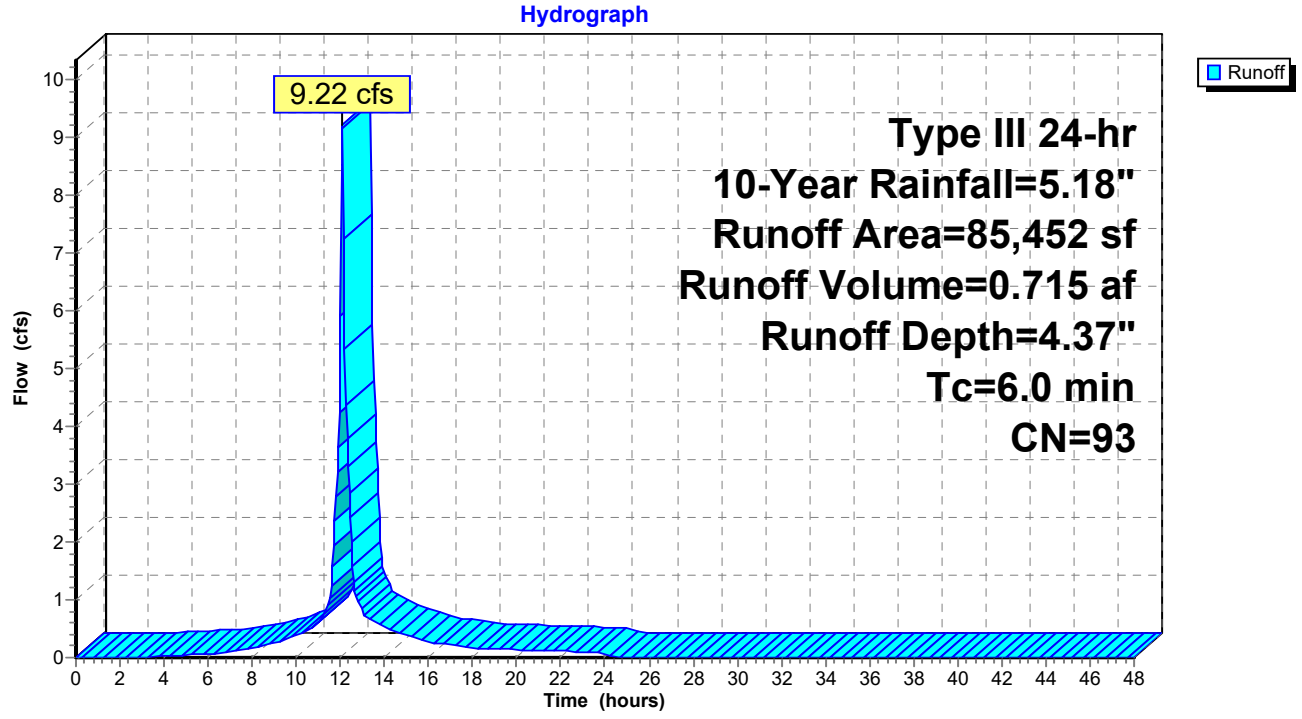
Runoff = 9.22 cfs @ 12.09 hrs, Volume= 0.715 af, Depth= 4.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=5.18"

Area (sf)	CN	Description
55,278	98	Paved parking, HSG C
6,098	98	Water Surface, 0% imp, HSG C
18,687	74	>75% Grass cover, Good, HSG C
5,389	98	Paved parking, HSG C
85,452	93	Weighted Average
24,785		29.00% Pervious Area
60,667		71.00% Impervious Area

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

Subcatchment 12S: DA 1D



Summary for Pond 2P: 30" RCP

Inflow Area = 56.590 ac, 19.92% Impervious, Inflow Depth > 2.36" for 10-Year event
Inflow = 14.64 cfs @ 12.43 hrs, Volume= 11.130 af
Outflow = 14.64 cfs @ 12.43 hrs, Volume= 11.130 af, Atten= 0%, Lag= 0.0 min
Primary = 14.64 cfs @ 12.43 hrs, Volume= 11.130 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

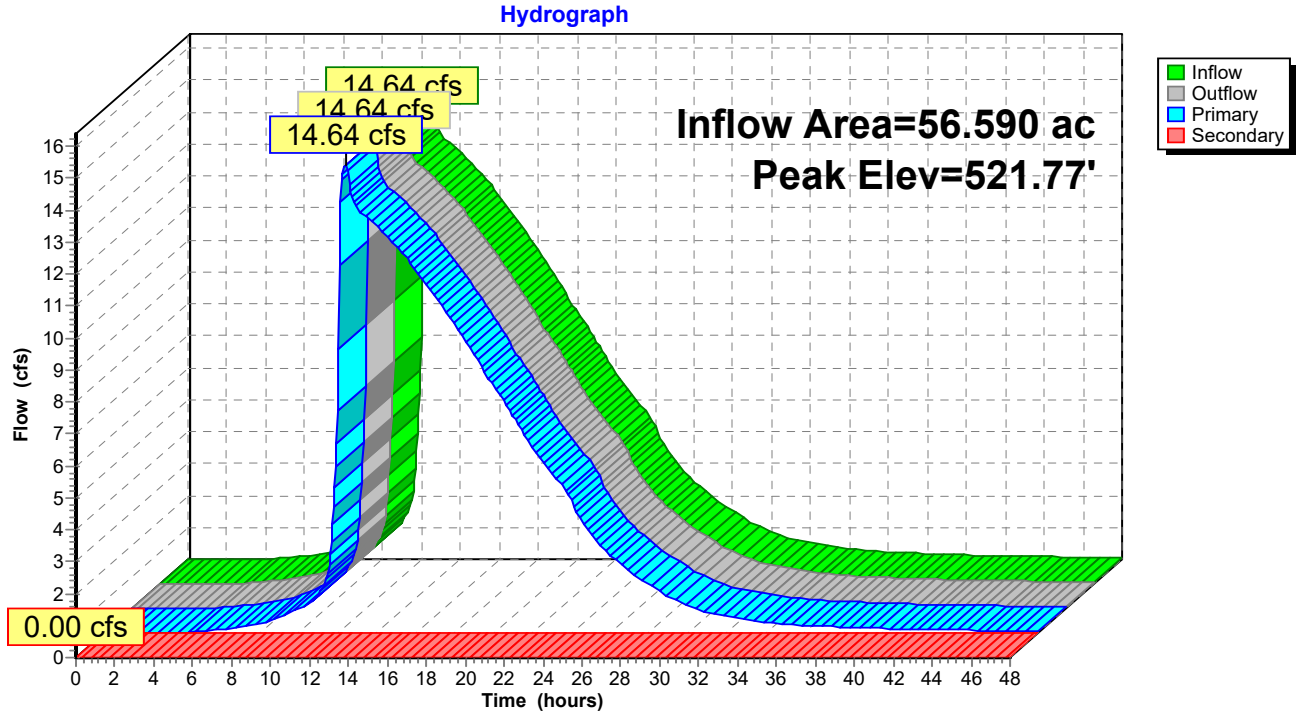
Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 521.77' @ 12.43 hrs
Flood Elev= 527.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	519.92'	**30.0" Round 30" RC** L= 80.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 519.92' / 519.62' S= 0.0037 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 4.91 sf
#2	Secondary	527.20'	**30.0' long x 10.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=14.62 cfs @ 12.43 hrs HW=521.76' (Free Discharge)
└**1=30" RC** (Barrel Controls 14.62 cfs @ 5.24 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=519.92' (Free Discharge)
└**2=Overflow** (Controls 0.00 cfs)

Pond 2P: 30" RCP



Summary for Pond 4P: Pond

Inflow Area = 52.568 ac, 15.62% Impervious, Inflow Depth = 2.24" for 10-Year event
Inflow = 75.99 cfs @ 12.30 hrs, Volume= 9.823 af
Outflow = 11.41 cfs @ 13.89 hrs, Volume= 9.703 af, Atten= 85%, Lag= 95.4 min
Primary = 11.41 cfs @ 13.89 hrs, Volume= 9.703 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 526.00' @ 13.89 hrs Surf.Area= 2.358 ac Storage= 4.684 af

Plug-Flow detention time= 275.4 min calculated for 9.693 af (99% of inflow)
Center-of-Mass det. time= 269.3 min (1,123.5 - 854.1)

Volume	Invert	Avail.Storage	Storage Description
#1	523.45'	16.273 af	**Pond Storage (Irregular)**Listed below

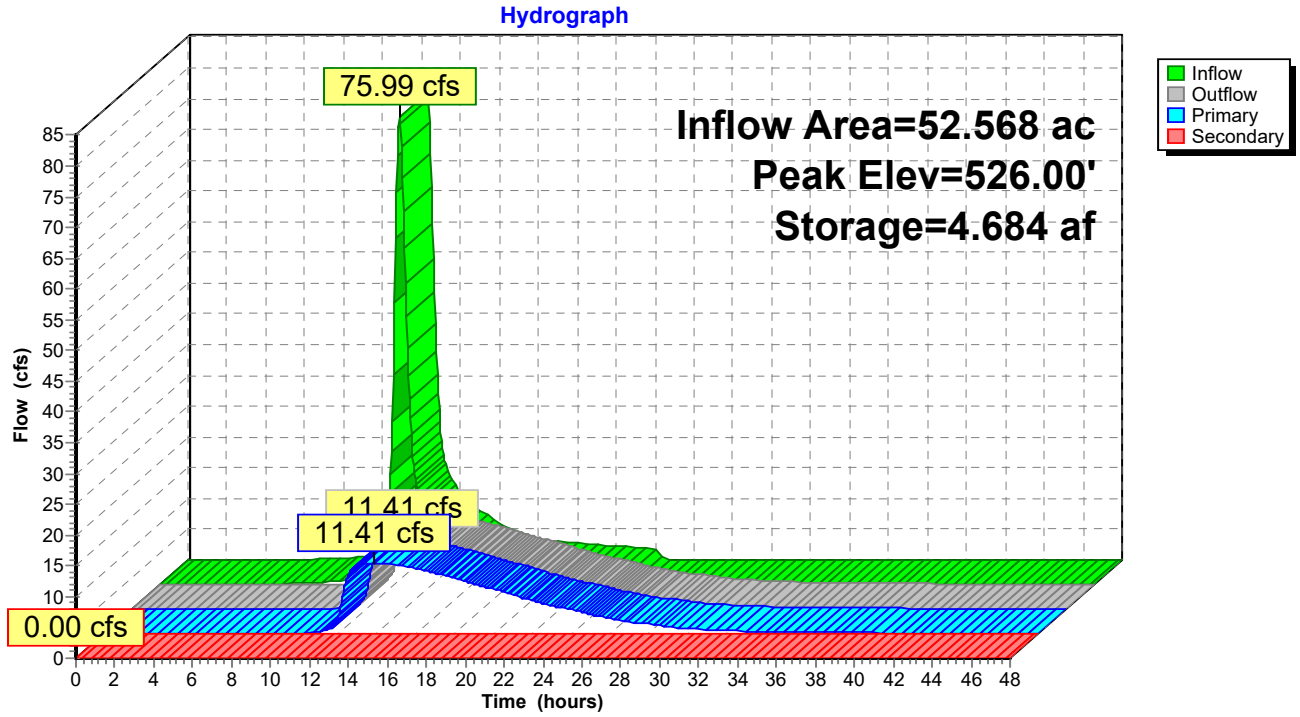
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
523.45	0.636	1,389.1	0.000	0.000	0.636
524.00	1.723	1,270.7	0.624	0.624	1.212
526.00	2.359	1,494.7	4.065	4.690	2.345
528.00	2.936	1,638.1	5.284	9.974	3.169
530.00	3.368	1,700.4	6.299	16.273	3.556

Device	Routing	Invert	Outlet Devices
#1	Primary	520.91'	**30.0" Round 30" HDPE** L= 110.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 520.91' / 520.64' S= 0.0024 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	521.46'	**30.0" Round 30" HDPE** L= 86.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 521.46' / 520.91' S= 0.0063 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#3	Device 2	521.41'	**24.0" Round 24" HDPE** L= 157.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 521.41' / 521.40' S= 0.0001 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#4	Device 3	523.45'	**18.0" Round 18" HDPE** L= 117.9' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 523.45' / 521.82' S= 0.0138 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#5	Secondary	529.90'	**50.0' long x 25.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=11.41 cfs @ 13.89 hrs HW=526.00' TW=521.63' (Dynamic Tailwater)
└─**1=30" HDPE** (Passes 11.41 cfs of 41.90 cfs potential flow)
└─**2=30" HDPE** (Passes 11.41 cfs of 41.75 cfs potential flow)
└─**3=24" HDPE** (Passes 11.41 cfs of 21.85 cfs potential flow)
└─**4=18" HDPE** (Inlet Controls 11.41 cfs @ 6.45 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=523.45' TW=519.92' (Dynamic Tailwater)
└─**5=Overflow** (Controls 0.00 cfs)

Pond 4P: Pond



Summary for Pond 10P: Apartment Detention Basin

Inflow Area = 2.152 ac, 30.72% Impervious, Inflow Depth = 2.34" for 10-Year event
Inflow = 3.94 cfs @ 12.28 hrs, Volume= 0.419 af
Outflow = 3.50 cfs @ 12.39 hrs, Volume= 0.419 af, Atten= 11%, Lag= 6.4 min
Primary = 3.50 cfs @ 12.39 hrs, Volume= 0.419 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 537.36' @ 12.39 hrs Surf.Area= 1,265 sf Storage= 846 cf

Plug-Flow detention time= 3.7 min calculated for 0.419 af (100% of inflow)
Center-of-Mass det. time= 3.0 min (856.3 - 853.3)

Volume	Invert	Avail.Storage	Storage Description
#1	536.00'	7,026 cf	**Detention Basin (Irregular)**Listed below (Recalc)

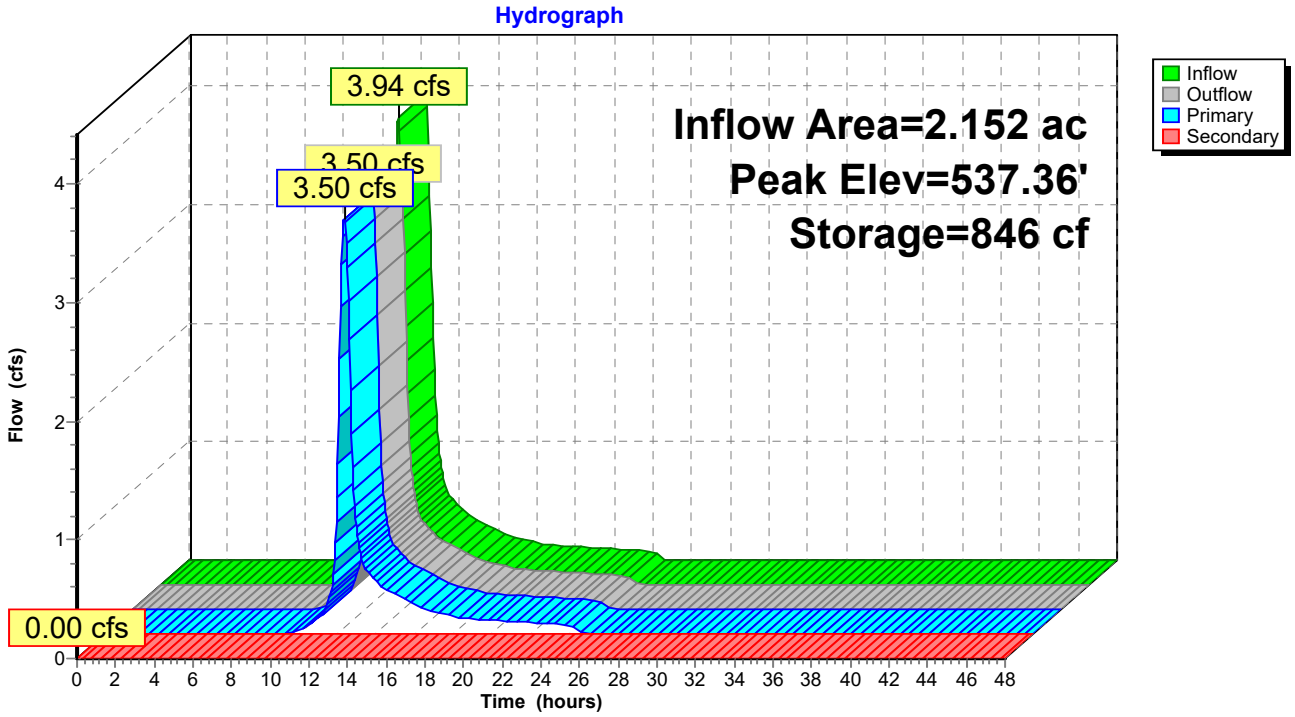
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
536.00	100	40.0	0	0	100
536.50	467	110.5	131	131	945
537.60	1,559	173.6	1,056	1,186	2,380
540.00	3,429	242.5	5,840	7,026	4,716

Device	Routing	Invert	Outlet Devices
#1	Primary	536.00'	**12.0" Round Culvert** L= 75.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 536.00' / 534.50' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	539.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=3.50 cfs @ 12.39 hrs HW=537.35' TW=525.09' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 3.50 cfs @ 4.45 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=536.00' TW=523.45' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 10P: Apartment Detention Basin



Summary for Pond 13P: Water Quality Basin

[42] Hint: Gap in defined storage above volume #1 at 524.25'

Inflow Area = 1.962 ac, 71.00% Impervious, Inflow Depth = 4.37" for 10-Year event
Inflow = 9.22 cfs @ 12.09 hrs, Volume= 0.715 af
Outflow = 2.68 cfs @ 12.42 hrs, Volume= 0.714 af, Atten= 71%, Lag= 20.1 min
Primary = 2.68 cfs @ 12.42 hrs, Volume= 0.714 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 527.40' @ 12.42 hrs Surf.Area= 5,960 sf Storage= 11,563 cf

Plug-Flow detention time= 131.2 min calculated for 0.714 af (100% of inflow)
Center-of-Mass det. time= 128.9 min (906.2 - 777.2)

Volume	Invert	Avail.Storage	Storage Description
#1	522.25'	290 cf	**2.00'W x 181.00'L x 2.00'H Underdrain Trench** 724 cf Overall x 40.0% Voids
#2	524.75'	27,446 cf	**Water Quality swale (Irregular)**Listed below (Recalc)
		27,735 cf	Total Available Storage

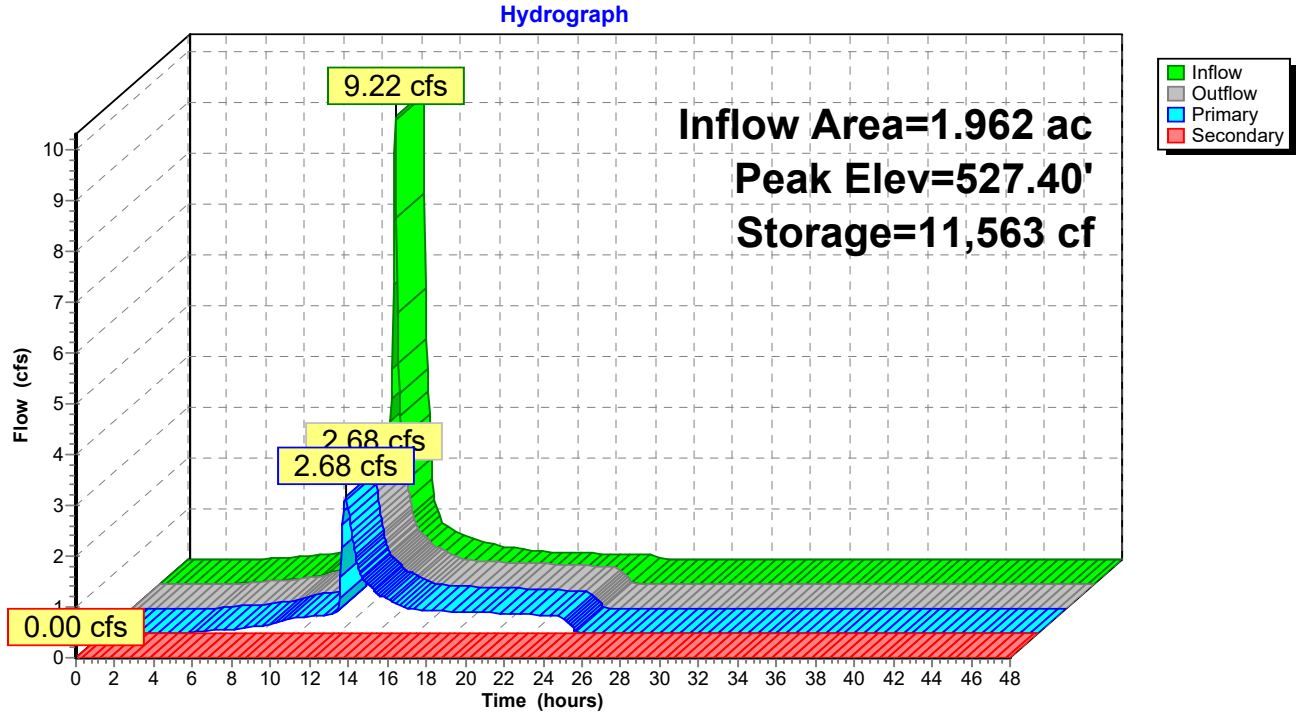
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
524.75	2,969	471.4	0	0	2,969
525.00	3,207	477.3	772	772	3,430
526.00	4,185	500.8	3,685	4,457	5,323
528.00	6,268	535.7	10,383	14,840	8,383
529.75	8,181	557.7	12,606	27,446	10,523

Device	Routing	Invert	Outlet Devices
#1	Primary	522.50'	**24.0" Round 24" HDPE** L= 75.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 522.50' / 521.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	522.75'	**3.0" Vert. Underdrain** C= 0.600 Limited to weir flow at low heads
#3	Device 1	526.50'	**6.0" W x 6.0" H Vert. 6" Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	527.00'	**18.0" W x 6.0" H Vert. 18x6 Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	528.25'	**2.0" x 2.0" Horiz. Top of Frame X 20.00 columns** X 20 rows C= 0.600 in 48.0" x 48.0" Grate (69% open area) Limited to weir flow at low heads
#6	Secondary	528.75'	**10.0' long x 8.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=2.67 cfs @ 12.42 hrs HW=527.40' TW=521.76' (Dynamic Tailwater)
└─**1=24" HDPE** (Passes 2.67 cfs of 29.86 cfs potential flow)
  ├─**2=Underdrain** (Orifice Controls 0.50 cfs @ 10.24 fps)
  ├─**3=6" Orifice** (Orifice Controls 0.96 cfs @ 3.85 fps)
  ├─**4=18x6 Orifice** (Orifice Controls 1.20 cfs @ 2.02 fps)
  └─**5=Top of Frame** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=522.25' TW=519.92' (Dynamic Tailwater)
└─**6=Emergency Spillway** (Controls 0.00 cfs)

Pond 13P: Water Quality Basin



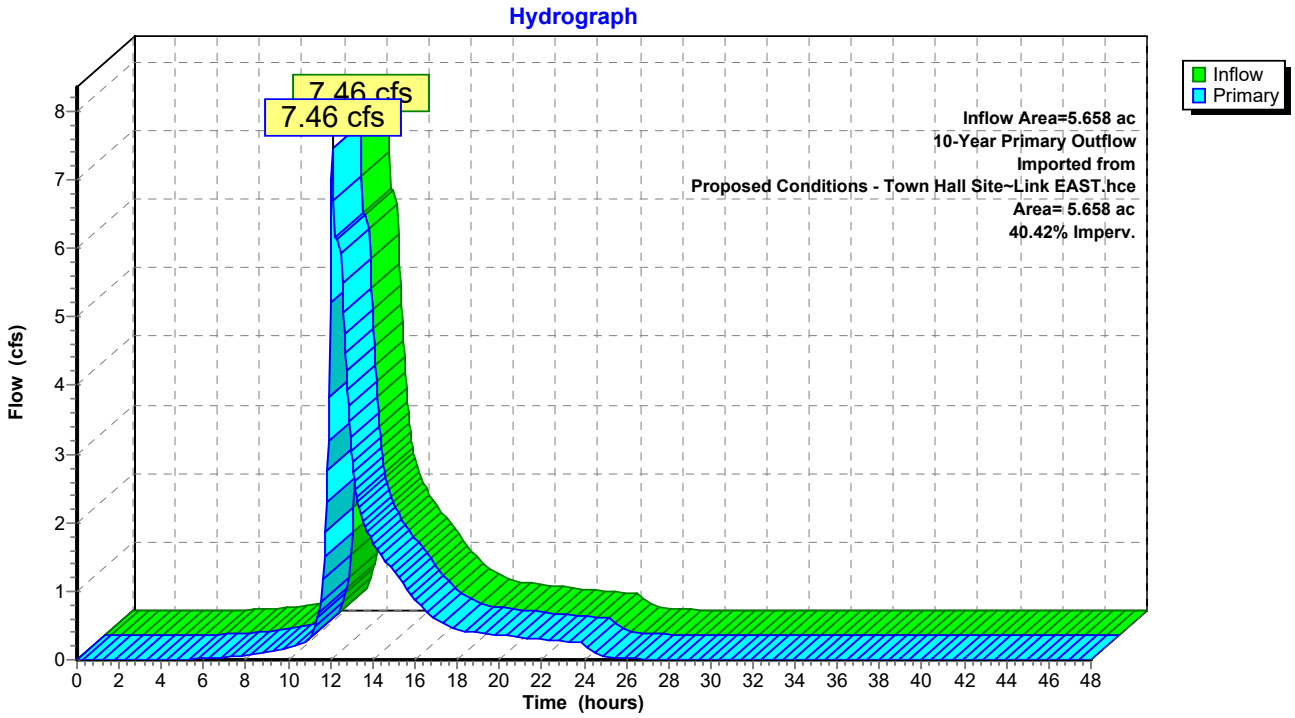
Summary for Link 14L: DA 2D - From Town Hall

Inflow Area = 5.658 ac, 40.42% Impervious, Inflow Depth = 2.67" for 10-Year event
Inflow = 7.46 cfs @ 12.09 hrs, Volume= 1.261 af
Primary = 7.46 cfs @ 12.09 hrs, Volume= 1.261 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

10-Year Primary Outflow Imported from Proposed Conditions - Town Hall Site~Link EAST.hce

Link 14L: DA 2D - From Town Hall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: DA 1A Runoff Area=2.061 ac 80.93% Impervious Runoff Depth=5.25"
Flow Length=532' Tc=11.0 min CN=91 Runoff=10.09 cfs 0.902 af

Subcatchment 3S: DA 2C Runoff Area=38.645 ac 2.85% Impervious Runoff Depth=2.76"
Flow Length=2,588' Tc=22.6 min UI Adjusted CN=67 Runoff=78.79 cfs 8.884 af

Subcatchment 7S: DA 1B Runoff Area=94,000 sf 75.97% Impervious Runoff Depth=5.36"
Flow Length=669' Tc=6.0 min CN=92 Runoff=12.39 cfs 0.965 af

Subcatchment 8S: DA 2A Runoff Area=3.613 ac 61.86% Impervious Runoff Depth=4.48"
Flow Length=740' Tc=12.1 min CN=84 Runoff=15.22 cfs 1.348 af

Subcatchment 9S: DA 2B Runoff Area=2.152 ac 30.72% Impervious Runoff Depth=3.24"
Flow Length=735' Tc=19.6 min CN=72 Runoff=5.53 cfs 0.581 af

Subcatchment 11S: DA 1C Runoff Area=14,897 sf 83.63% Impervious Runoff Depth=5.59"
Tc=6.0 min CN=94 Runoff=2.01 cfs 0.159 af

Subcatchment 12S: DA 1D Runoff Area=85,452 sf 71.00% Impervious Runoff Depth=5.48"
Tc=6.0 min CN=93 Runoff=11.39 cfs 0.896 af

Pond 2P: 30" RCP Peak Elev=522.21' Inflow=20.72 cfs 15.345 af
Primary=20.72 cfs 15.345 af Secondary=0.00 cfs 0.000 af Outflow=20.72 cfs 15.345 af

Pond 4P: Pond Peak Elev=526.85' Storage=6.939 af Inflow=108.84 cfs 13.679 af
Primary=13.85 cfs 13.549 af Secondary=0.00 cfs 0.000 af Outflow=13.85 cfs 13.549 af

Pond 10P: Apartment Detention Basin Peak Elev=537.89' Storage=1,673 cf Inflow=5.53 cfs 0.581 af
Primary=4.47 cfs 0.581 af Secondary=0.00 cfs 0.000 af Outflow=4.47 cfs 0.581 af

Pond 13P: Water Quality Basin Peak Elev=527.73' Storage=13,496 cf Inflow=11.39 cfs 0.896 af
Primary=4.19 cfs 0.894 af Secondary=0.00 cfs 0.000 af Outflow=4.19 cfs 0.894 af

25-Year Lnk Primary Outflow Imported from Proposed Conditions - Town Hall Site~Link EAST.hce Inflow=10.76 cfs 1.742 af
Area= 5.658 ac 40.42% Imperv. Primary=10.76 cfs 1.742 af

Total Runoff Area = 50.933 ac Runoff Volume = 13.735 af Average Runoff Depth = 3.24"
82.36% Pervious = 41.948 ac 17.64% Impervious = 8.985 ac

Summary for Subcatchment 1S: DA 1A

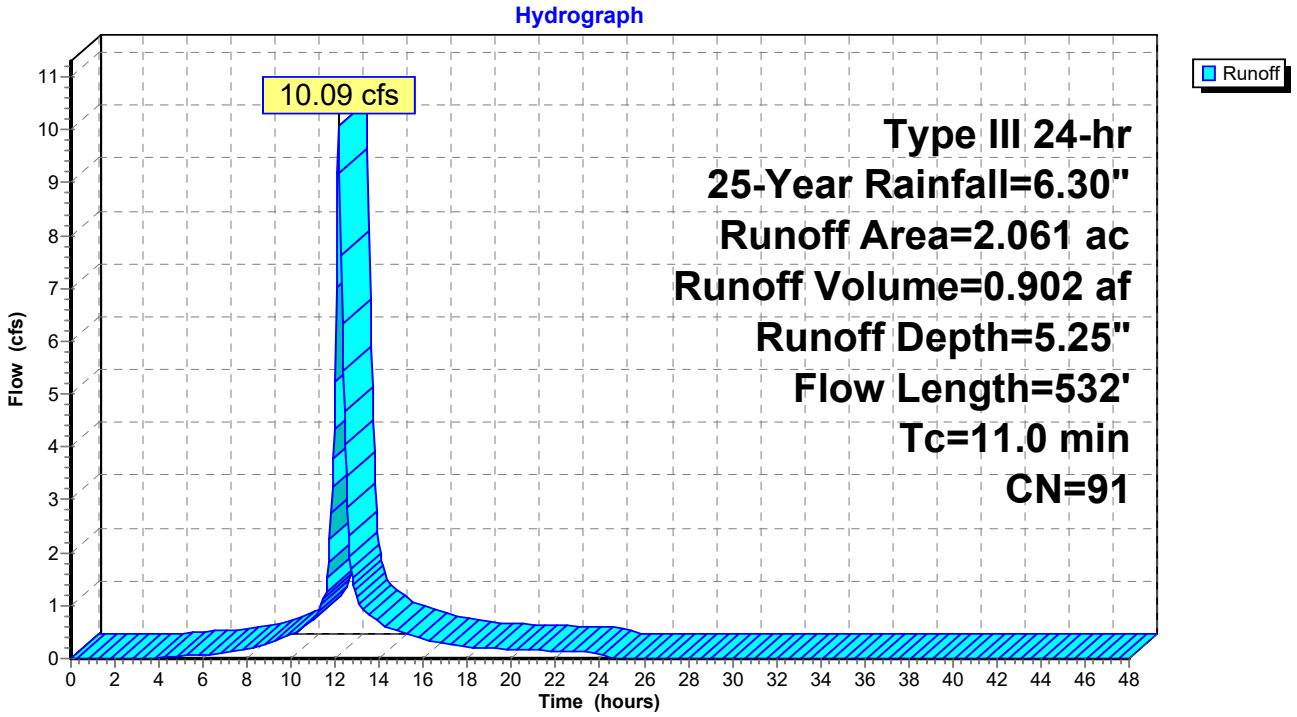
Runoff = 10.09 cfs @ 12.15 hrs, Volume= 0.902 af, Depth= 5.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=6.30"

Area (ac)	CN	Description
0.201	98	Paved parking, HSG C
1.260	98	Paved parking, HSG B
0.207	98	Paved parking, HSG C
0.074	74	>75% Grass cover, Good, HSG C
0.319	61	>75% Grass cover, Good, HSG B
2.061	91	Weighted Average
0.393		19.07% Pervious Area
1.668		80.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	40	0.0100	0.08		**Sheet Flow, Lawn** Grass: Dense n= 0.240 P2= 3.37"
1.7	239	0.0126	2.28		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.5	253	0.0200	8.41	14.86	**Pipe Channel, HDPE Drain** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
11.0	532	Total			

Subcatchment 1S: DA 1A



Summary for Subcatchment 3S: DA 2C

[47] Hint: Peak is 229% of capacity of segment #3

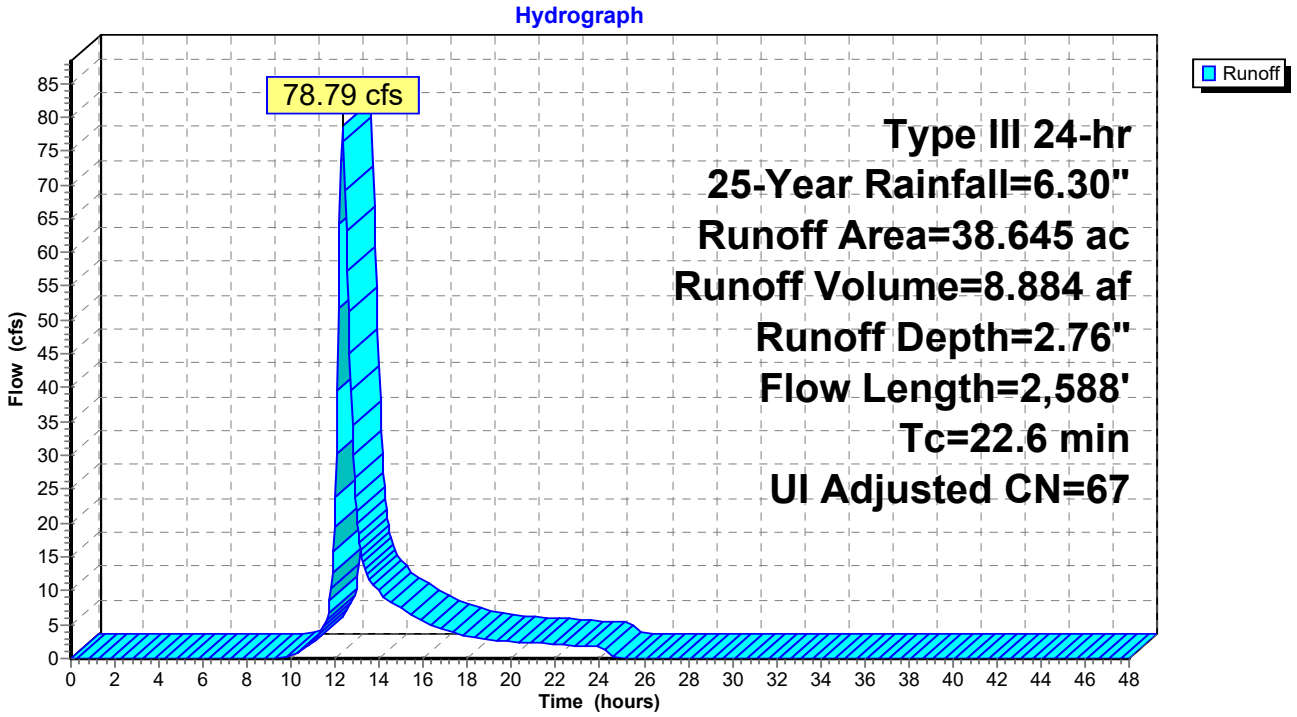
Runoff = 78.79 cfs @ 12.32 hrs, Volume= 8.884 af, Depth= 2.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=6.30"

Area (ac)	CN	Adj	Description
10.670	77		Woods, Good, HSG D
0.839	98		Water Surface, 0% imp, HSG D
13.926	55		Woods, Good, HSG B
11.541	70		Woods, Good, HSG C
0.066	98		Paved parking, HSG C
0.110	98		Roofs, HSG C
0.057	98		Paved parking, HSG B
0.566	61		>75% Grass cover, Good, HSG B
0.870	98		Unconnected roofs, HSG B
38.645	68	67	Weighted Average, UI Adjusted
37.542			97.15% Pervious Area
1.103			2.85% Impervious Area
0.870			78.88% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0850	0.14		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
5.1	598	0.1539	1.96		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
5.2	1,600	0.0262	5.16	34.37	**Parabolic Channel, Channel** W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.035 Earth, dense weeds
0.6	290		8.02		**Lake or Reservoir, Pond** Mean Depth= 2.00'
22.6	2,588	Total			

Subcatchment 3S: DA 2C



Summary for Subcatchment 7S: DA 1B

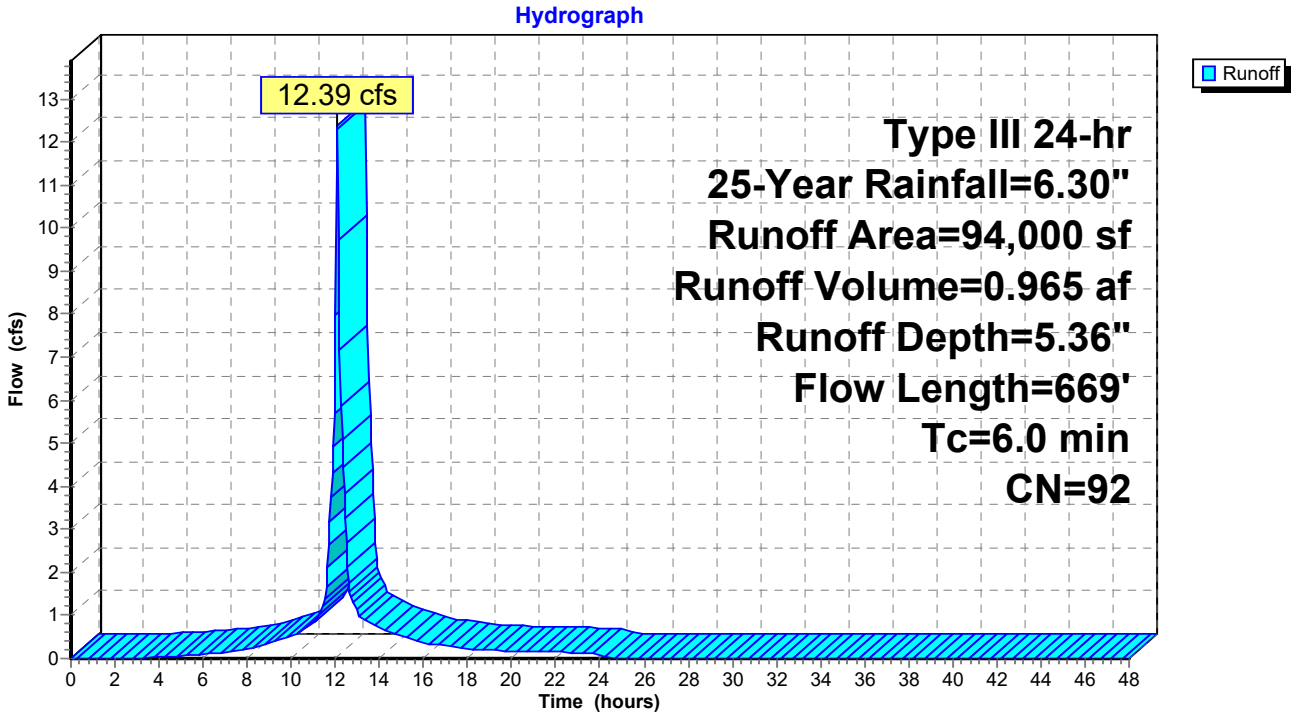
Runoff = 12.39 cfs @ 12.09 hrs, Volume= 0.965 af, Depth= 5.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=6.30"

Area (sf)	CN	Description
71,413	98	Paved parking, HSG B
11,784	86	Newly graded area, HSG B
10,803	61	>75% Grass cover, Good, HSG B
94,000	92	Weighted Average
22,587		24.03% Pervious Area
71,413		75.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.41		**Sheet Flow, Play areas** Smooth surfaces n= 0.011 P2= 3.37"
0.1	40	0.1500	6.24		**Shallow Concentrated Flow, Play areas** Unpaved Kv= 16.1 fps
2.2	362	0.0175	2.69		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.3	167	0.0200	8.41	14.86	**Pipe Channel, HDPE** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
3.8	669	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 7S: DA 1B



Summary for Subcatchment 8S: DA 2A

[47] Hint: Peak is 105% of capacity of segment #3

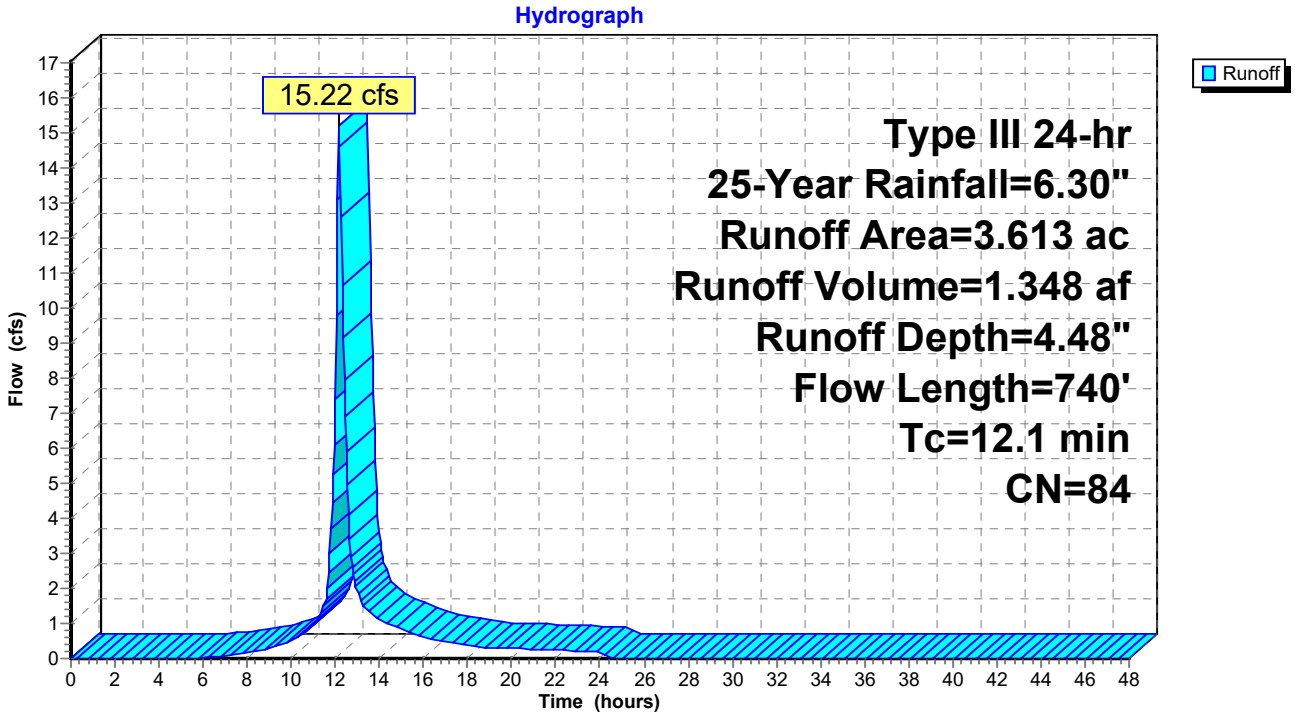
Runoff = 15.22 cfs @ 12.16 hrs, Volume= 1.348 af, Depth= 4.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=6.30"

Area (ac)	CN	Description
1.953	98	Paved parking, HSG B
0.152	98	Roofs, HSG B
0.394	61	>75% Grass cover, Good, HSG B
0.054	55	Woods, Good, HSG B
0.930	61	>75% Grass cover, Good, HSG B
0.130	98	Paved parking, HSG B
3.613	84	Weighted Average
1.378		38.14% Pervious Area
2.235		61.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0650	0.19		**Sheet Flow, Lawn** Grass: Dense n= 0.240 P2= 3.37"
3.3	558	0.0191	2.81		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.1	82	0.0500	11.77	14.44	**Pipe Channel, Discharge** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
12.1	740	Total			

Subcatchment 8S: DA 2A



Summary for Subcatchment 9S: DA 2B

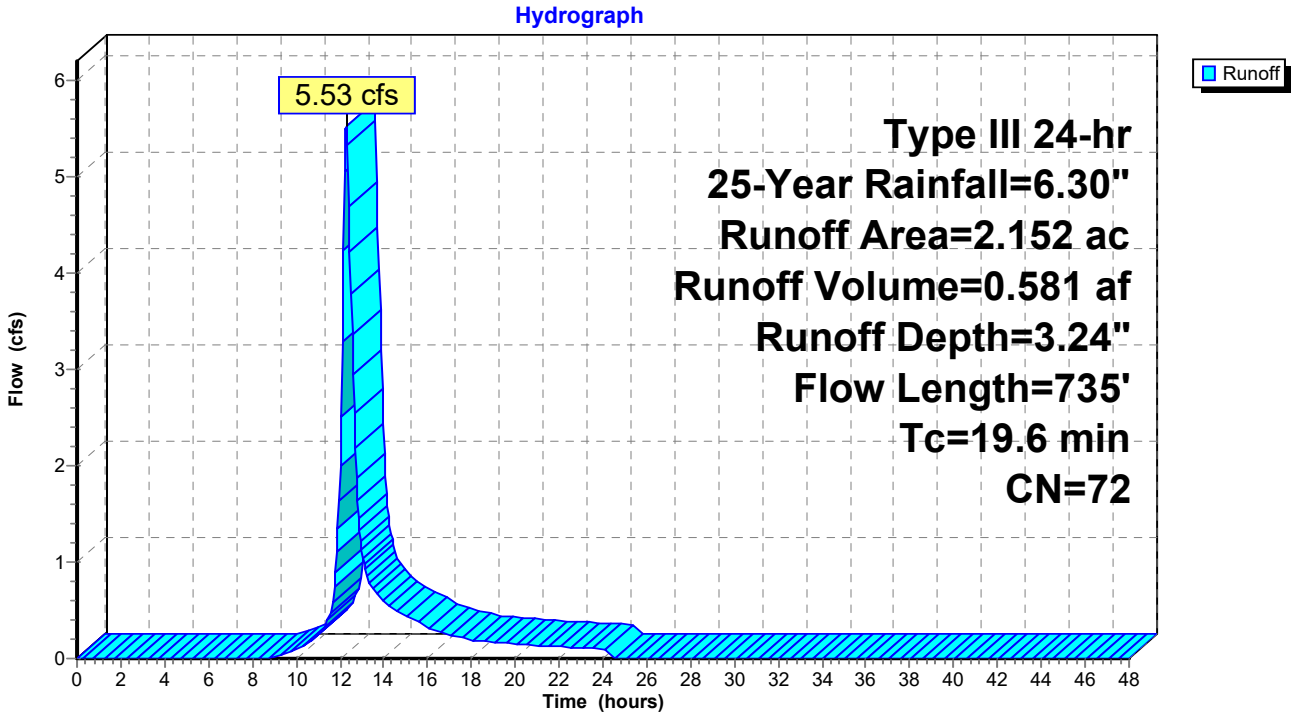
Runoff = 5.53 cfs @ 12.27 hrs, Volume= 0.581 af, Depth= 3.24"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=6.30"

Area (ac)	CN	Description
0.661	98	Paved parking, HSG B
0.746	55	Woods, Good, HSG B
0.669	61	>75% Grass cover, Good, HSG B
0.076	98	Water Surface, 0% imp, HSG B
2.152	72	Weighted Average
1.491		69.28% Pervious Area
0.661		30.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0450	0.11		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
2.1	100	0.0250	0.79		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.2	38	0.3333	4.04		**Shallow Concentrated Flow, Grass** Short Grass Pasture Kv= 7.0 fps
1.8	314	0.0200	2.87		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.2	108	0.0200	7.44	9.14	**Pipe Channel, Pipe** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.2	75		5.67		**Lake or Reservoir,** Mean Depth= 1.00'
19.6	735	Total			

Subcatchment 9S: DA 2B



Summary for Subcatchment 11S: DA 1C

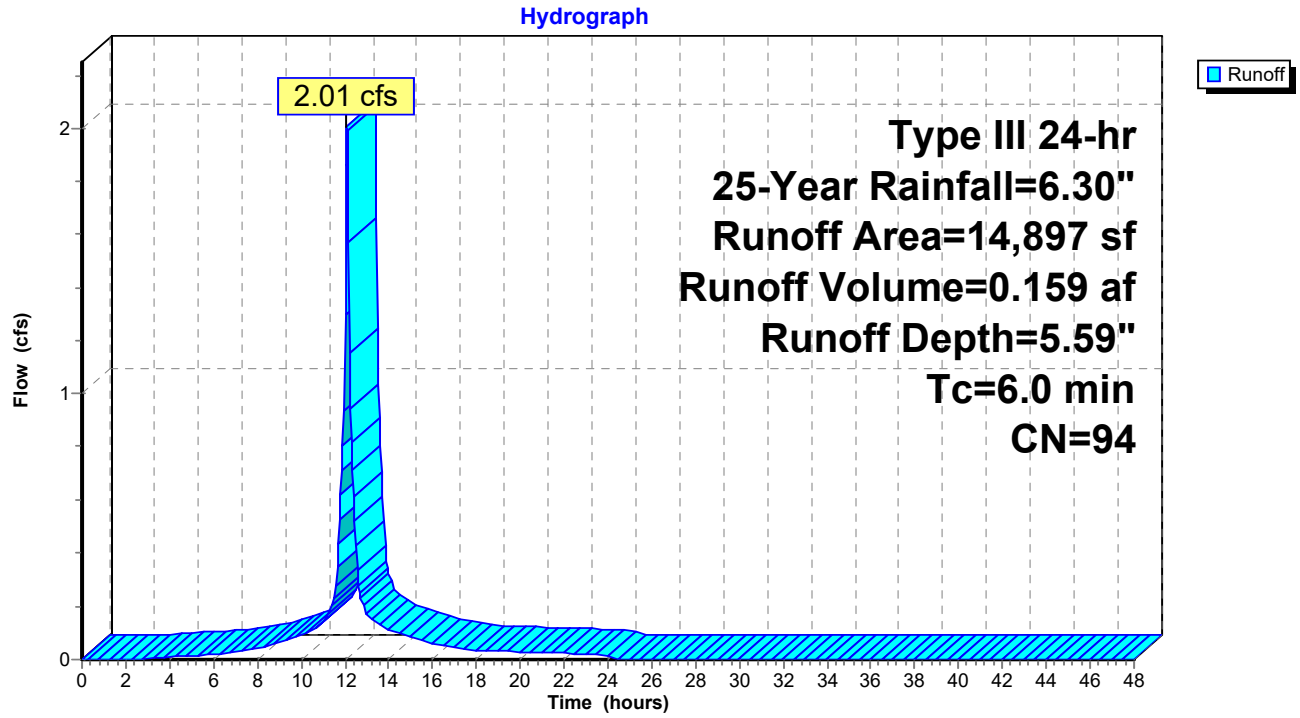
Runoff = 2.01 cfs @ 12.09 hrs, Volume= 0.159 af, Depth= 5.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=6.30"

Area (sf)	CN	Description
12,458	98	Paved parking, HSG C
2,439	74	>75% Grass cover, Good, HSG C
14,897	94	Weighted Average
2,439		16.37% Pervious Area
12,458		83.63% Impervious Area

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

Subcatchment 11S: DA 1C



Summary for Subcatchment 12S: DA 1D

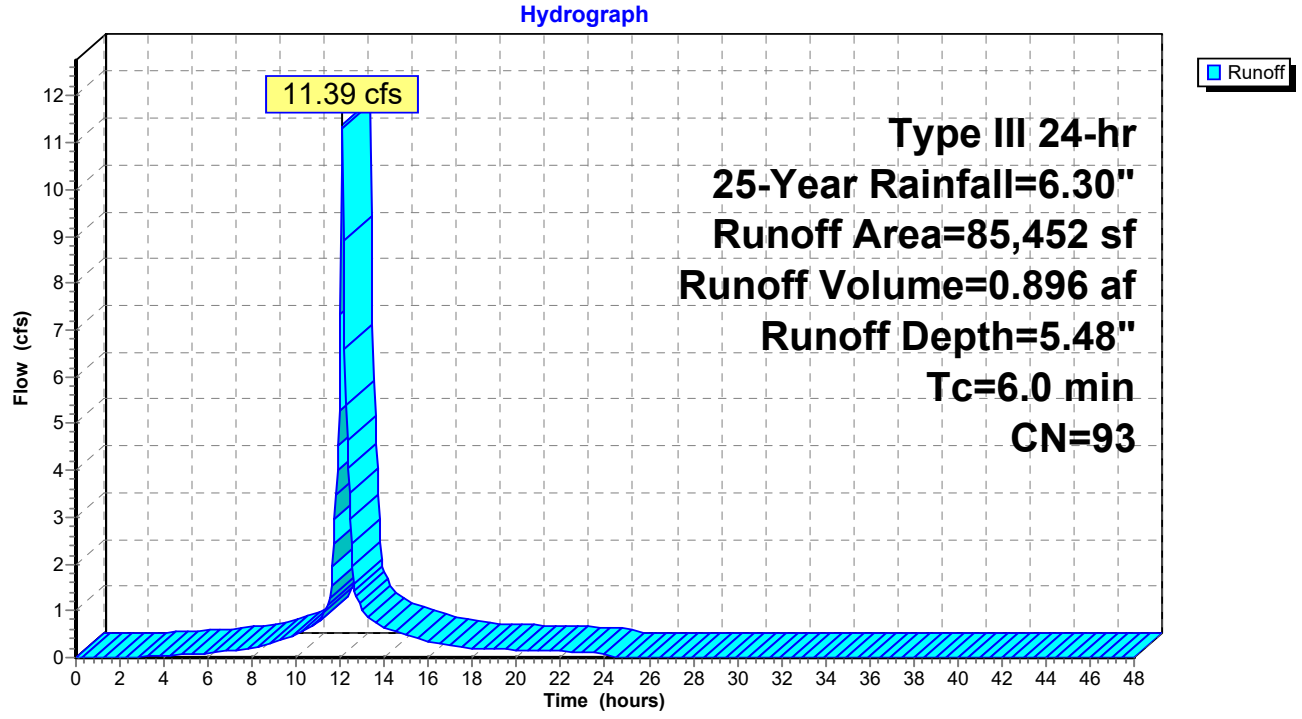
Runoff = 11.39 cfs @ 12.09 hrs, Volume= 0.896 af, Depth= 5.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=6.30"

Area (sf)	CN	Description
55,278	98	Paved parking, HSG C
6,098	98	Water Surface, 0% imp, HSG C
18,687	74	>75% Grass cover, Good, HSG C
5,389	98	Paved parking, HSG C
85,452	93	Weighted Average
24,785		29.00% Pervious Area
60,667		71.00% Impervious Area

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

Subcatchment 12S: DA 1D



Summary for Pond 2P: 30" RCP

Inflow Area = 56.590 ac, 19.92% Impervious, Inflow Depth > 3.25" for 25-Year event
Inflow = 20.72 cfs @ 12.20 hrs, Volume= 15.345 af
Outflow = 20.72 cfs @ 12.20 hrs, Volume= 15.345 af, Atten= 0%, Lag= 0.0 min
Primary = 20.72 cfs @ 12.20 hrs, Volume= 15.345 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

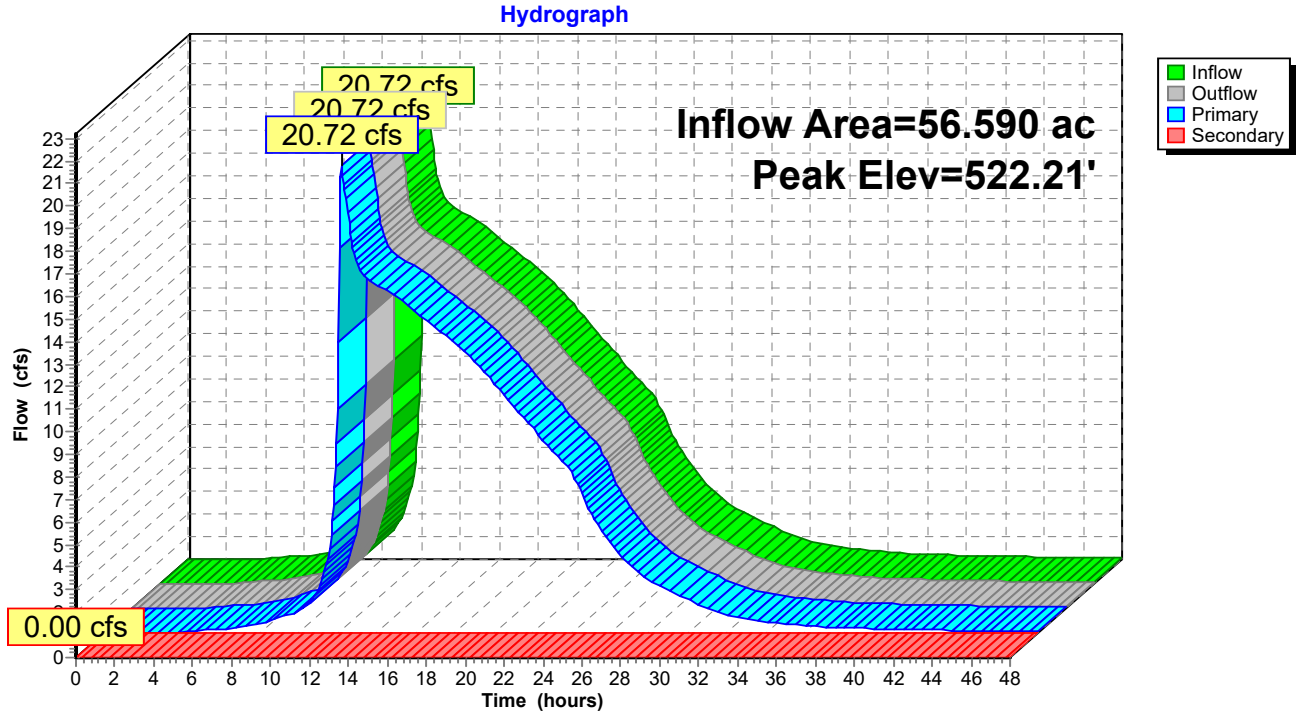
Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 522.21' @ 12.20 hrs
Flood Elev= 527.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	519.92'	**30.0" Round 30" RC** L= 80.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 519.92' / 519.62' S= 0.0037 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 4.91 sf
#2	Secondary	527.20'	**30.0' long x 10.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=20.71 cfs @ 12.20 hrs HW=522.21' (Free Discharge)
└**1=30" RC** (Barrel Controls 20.71 cfs @ 5.76 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=519.92' (Free Discharge)
└**2=Overflow** (Controls 0.00 cfs)

Pond 2P: 30" RCP



Summary for Pond 4P: Pond

Inflow Area = 52.568 ac, 15.62% Impervious, Inflow Depth = 3.12" for 25-Year event
Inflow = 108.84 cfs @ 12.30 hrs, Volume= 13.679 af
Outflow = 13.85 cfs @ 14.12 hrs, Volume= 13.549 af, Atten= 87%, Lag= 109.5 min
Primary = 13.85 cfs @ 14.12 hrs, Volume= 13.549 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 526.85' @ 14.12 hrs Surf.Area= 2.605 ac Storage= 6.939 af

Plug-Flow detention time= 308.1 min calculated for 13.549 af (99% of inflow)
Center-of-Mass det. time= 302.3 min (1,147.8 - 845.5)

Volume	Invert	Avail.Storage	Storage Description
#1	523.45'	16.273 af	**Pond Storage (Irregular)**Listed below

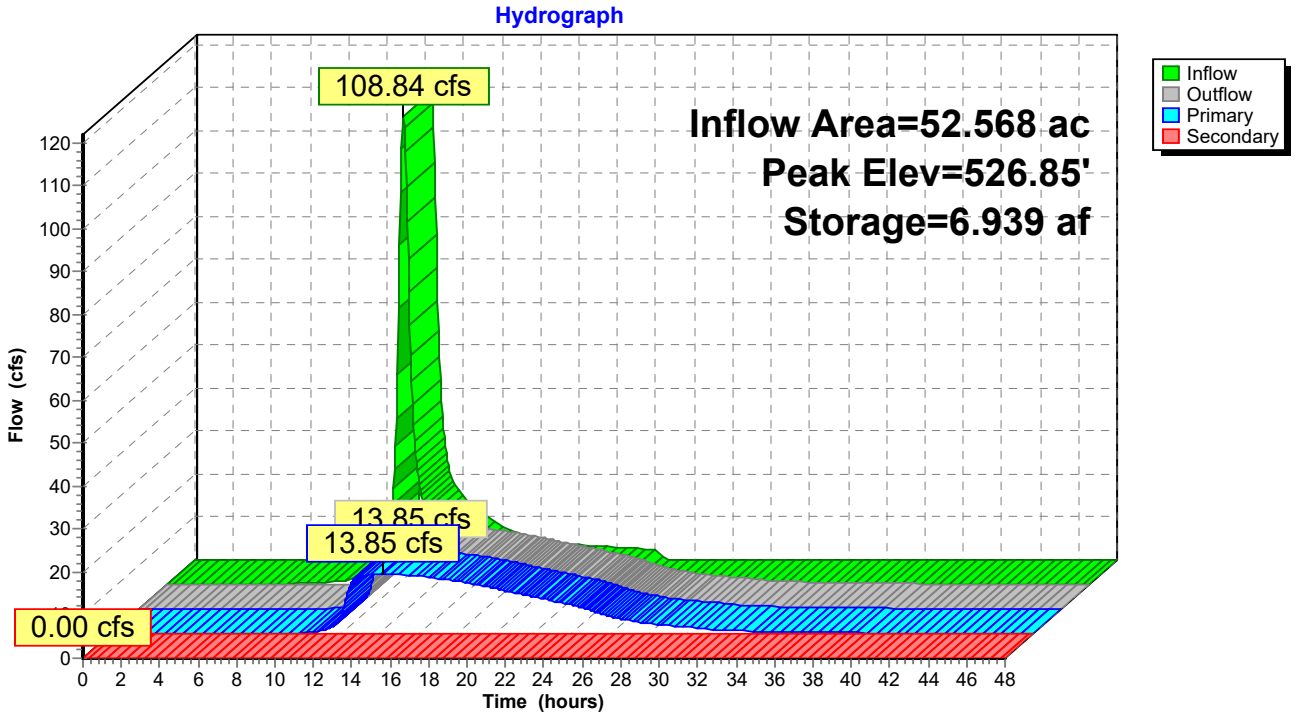
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
523.45	0.636	1,389.1	0.000	0.000	0.636
524.00	1.723	1,270.7	0.624	0.624	1.212
526.00	2.359	1,494.7	4.065	4.690	2.345
528.00	2.936	1,638.1	5.284	9.974	3.169
530.00	3.368	1,700.4	6.299	16.273	3.556

Device	Routing	Invert	Outlet Devices
#1	Primary	520.91'	**30.0" Round 30" HDPE** L= 110.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 520.91' / 520.64' S= 0.0024 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	521.46'	**30.0" Round 30" HDPE** L= 86.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 521.46' / 520.91' S= 0.0063 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#3	Device 2	521.41'	**24.0" Round 24" HDPE** L= 157.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 521.41' / 521.40' S= 0.0001 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#4	Device 3	523.45'	**18.0" Round 18" HDPE** L= 117.9' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 523.45' / 521.82' S= 0.0138 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#5	Secondary	529.90'	**50.0' long x 25.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=13.85 cfs @ 14.12 hrs HW=526.85' TW=521.82' (Dynamic Tailwater)
└─**1=30" HDPE** (Passes 13.85 cfs of 47.75 cfs potential flow)
└─**2=30" HDPE** (Passes 13.85 cfs of 48.10 cfs potential flow)
└─**3=24" HDPE** (Passes 13.85 cfs of 25.19 cfs potential flow)
└─**4=18" HDPE** (Inlet Controls 13.85 cfs @ 7.84 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=523.45' TW=519.92' (Dynamic Tailwater)
└─**5=Overflow** (Controls 0.00 cfs)

Pond 4P: Pond



Summary for Pond 10P: Apartment Detention Basin

Inflow Area = 2.152 ac, 30.72% Impervious, Inflow Depth = 3.24" for 25-Year event
Inflow = 5.53 cfs @ 12.27 hrs, Volume= 0.581 af
Outflow = 4.47 cfs @ 12.43 hrs, Volume= 0.581 af, Atten= 19%, Lag= 9.1 min
Primary = 4.47 cfs @ 12.43 hrs, Volume= 0.581 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 537.89' @ 12.43 hrs Surf.Area= 1,749 sf Storage= 1,673 cf

Plug-Flow detention time= 4.3 min calculated for 0.581 af (100% of inflow)
Center-of-Mass det. time= 3.6 min (847.4 - 843.8)

Volume	Invert	Avail.Storage	Storage Description
#1	536.00'	7,026 cf	**Detention Basin (Irregular)**Listed below (Recalc)

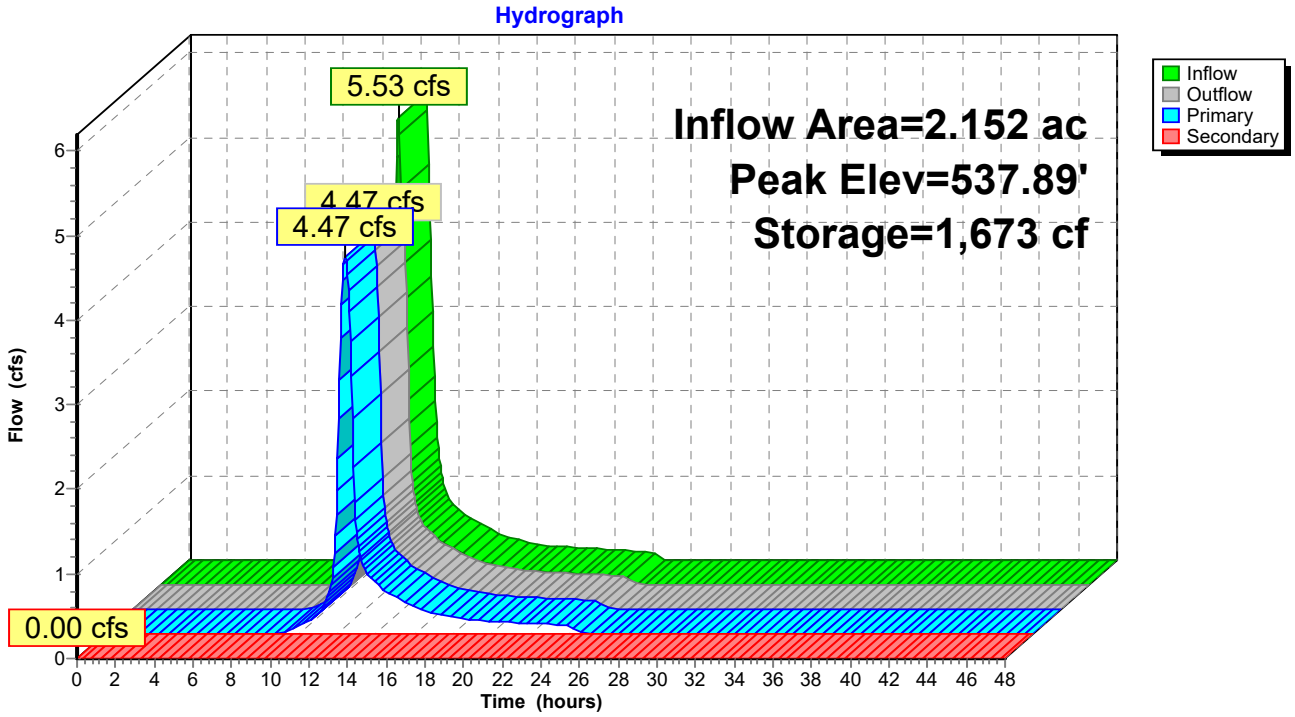
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
536.00	100	40.0	0	0	100
536.50	467	110.5	131	131	945
537.60	1,559	173.6	1,056	1,186	2,380
540.00	3,429	242.5	5,840	7,026	4,716

Device	Routing	Invert	Outlet Devices
#1	Primary	536.00'	**12.0" Round Culvert** L= 75.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 536.00' / 534.50' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	539.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.46 cfs @ 12.43 hrs HW=537.89' TW=525.89' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 4.46 cfs @ 5.67 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=536.00' TW=523.45' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 10P: Apartment Detention Basin



Summary for Pond 13P: Water Quality Basin

[42] Hint: Gap in defined storage above volume #1 at 524.25'

Inflow Area = 1.962 ac, 71.00% Impervious, Inflow Depth = 5.48" for 25-Year event
Inflow = 11.39 cfs @ 12.09 hrs, Volume= 0.896 af
Outflow = 4.19 cfs @ 12.34 hrs, Volume= 0.894 af, Atten= 63%, Lag= 15.2 min
Primary = 4.19 cfs @ 12.34 hrs, Volume= 0.894 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 527.73' @ 12.34 hrs Surf.Area= 6,328 sf Storage= 13,496 cf

Plug-Flow detention time= 120.4 min calculated for 0.893 af (100% of inflow)
Center-of-Mass det. time= 119.1 min (890.8 - 771.6)

Volume	Invert	Avail.Storage	Storage Description
#1	522.25'	290 cf	**2.00'W x 181.00'L x 2.00'H Underdrain Trench** 724 cf Overall x 40.0% Voids
#2	524.75'	27,446 cf	**Water Quality swale (Irregular)**Listed below (Recalc)
		27,735 cf	Total Available Storage

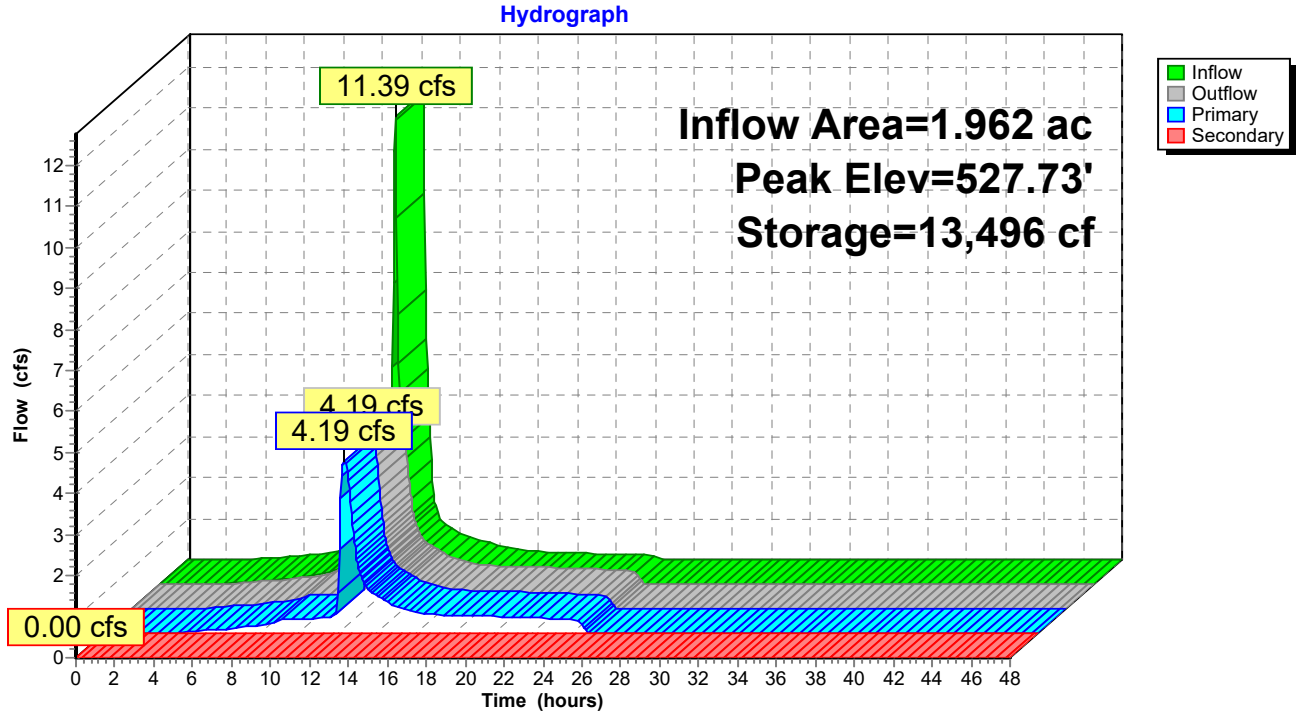
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
524.75	2,969	471.4	0	0	2,969
525.00	3,207	477.3	772	772	3,430
526.00	4,185	500.8	3,685	4,457	5,323
528.00	6,268	535.7	10,383	14,840	8,383
529.75	8,181	557.7	12,606	27,446	10,523

Device	Routing	Invert	Outlet Devices
#1	Primary	522.50'	**24.0" Round 24" HDPE** L= 75.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 522.50' / 521.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	522.75'	**3.0" Vert. Underdrain** C= 0.600 Limited to weir flow at low heads
#3	Device 1	526.50'	**6.0" W x 6.0" H Vert. 6" Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	527.00'	**18.0" W x 6.0" H Vert. 18x6 Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	528.25'	**2.0" x 2.0" Horiz. Top of Frame X 20.00 columns** X 20 rows C= 0.600 in 48.0" x 48.0" Grate (69% open area) Limited to weir flow at low heads
#6	Secondary	528.75'	**10.0' long x 8.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=4.19 cfs @ 12.34 hrs HW=527.73' TW=522.14' (Dynamic Tailwater)
└─**1=24" HDPE** (Passes 4.19 cfs of 31.12 cfs potential flow)
  └─**2=Underdrain** (Orifice Controls 0.52 cfs @ 10.61 fps)
  └─**3=6" Orifice** (Orifice Controls 1.19 cfs @ 4.76 fps)
  └─**4=18x6 Orifice** (Orifice Controls 2.48 cfs @ 3.30 fps)
  └─**5=Top of Frame** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=522.25' TW=519.92' (Dynamic Tailwater)
└─**6=Emergency Spillway** (Controls 0.00 cfs)

Pond 13P: Water Quality Basin



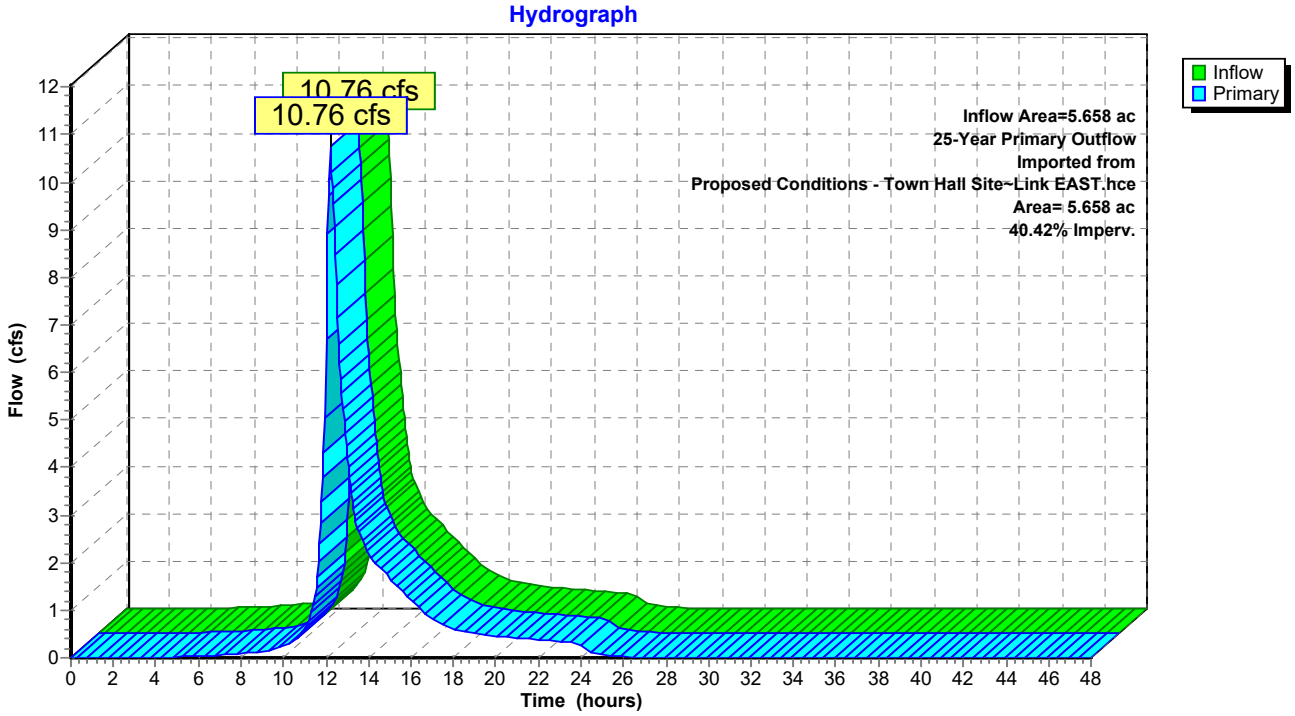
Summary for Link 14L: DA 2D - From Town Hall

Inflow Area = 5.658 ac, 40.42% Impervious, Inflow Depth = 3.70" for 25-Year event
Inflow = 10.76 cfs @ 12.20 hrs, Volume= 1.742 af
Primary = 10.76 cfs @ 12.20 hrs, Volume= 1.742 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

25-Year Primary Outflow Imported from Proposed Conditions - Town Hall Site~Link EAST.hce

Link 14L: DA 2D - From Town Hall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: DA 1A Runoff Area=2.061 ac 80.93% Impervious Runoff Depth=6.08"
Flow Length=532' Tc=11.0 min CN=91 Runoff=11.58 cfs 1.044 af

Subcatchment 3S: DA 2C Runoff Area=38.645 ac 2.85% Impervious Runoff Depth=3.42"
Flow Length=2,588' Tc=22.6 min UI Adjusted CN=67 Runoff=98.41 cfs 11.010 af

Subcatchment 7S: DA 1B Runoff Area=94,000 sf 75.97% Impervious Runoff Depth=6.19"
Flow Length=669' Tc=6.0 min CN=92 Runoff=14.19 cfs 1.114 af

Subcatchment 8S: DA 2A Runoff Area=3.613 ac 61.86% Impervious Runoff Depth=5.27"
Flow Length=740' Tc=12.1 min CN=84 Runoff=17.81 cfs 1.588 af

Subcatchment 9S: DA 2B Runoff Area=2.152 ac 30.72% Impervious Runoff Depth=3.95"
Flow Length=735' Tc=19.6 min CN=72 Runoff=6.76 cfs 0.708 af

Subcatchment 11S: DA 1C Runoff Area=14,897 sf 83.63% Impervious Runoff Depth=6.43"
Tc=6.0 min CN=94 Runoff=2.29 cfs 0.183 af

Subcatchment 12S: DA 1D Runoff Area=85,452 sf 71.00% Impervious Runoff Depth=6.31"
Tc=6.0 min CN=93 Runoff=13.02 cfs 1.032 af

Pond 2P: 30" RCP Peak Elev=522.50' Inflow=24.63 cfs 18.644 af
Primary=24.63 cfs 18.644 af Secondary=0.00 cfs 0.000 af Outflow=24.63 cfs 18.644 af

Pond 4P: Pond Peak Elev=527.57' Storage=8.832 af Inflow=133.55 cfs 16.711 af
Primary=15.29 cfs 16.571 af Secondary=0.00 cfs 0.000 af Outflow=15.29 cfs 16.571 af

Pond 10P: Apartment Detention Basin Peak Elev=538.33' Storage=2,500 cf Inflow=6.76 cfs 0.708 af
Primary=5.12 cfs 0.708 af Secondary=0.00 cfs 0.000 af Outflow=5.12 cfs 0.708 af

Pond 13P: Water Quality Basin Peak Elev=528.01' Storage=15,213 cf Inflow=13.02 cfs 1.032 af
Primary=5.03 cfs 1.030 af Secondary=0.00 cfs 0.000 af Outflow=5.03 cfs 1.030 af

50-Year Lnk Primary Outflow Imported from Proposed Conditions - Town Hall Site~Link EAST.hce Inflow=13.98 cfs 2.108 af
Area= 5.658 ac 40.42% Imperv. Primary=13.98 cfs 2.108 af

Total Runoff Area = 50.933 ac Runoff Volume = 16.678 af Average Runoff Depth = 3.93"
82.36% Pervious = 41.948 ac 17.64% Impervious = 8.985 ac

Summary for Subcatchment 1S: DA 1A

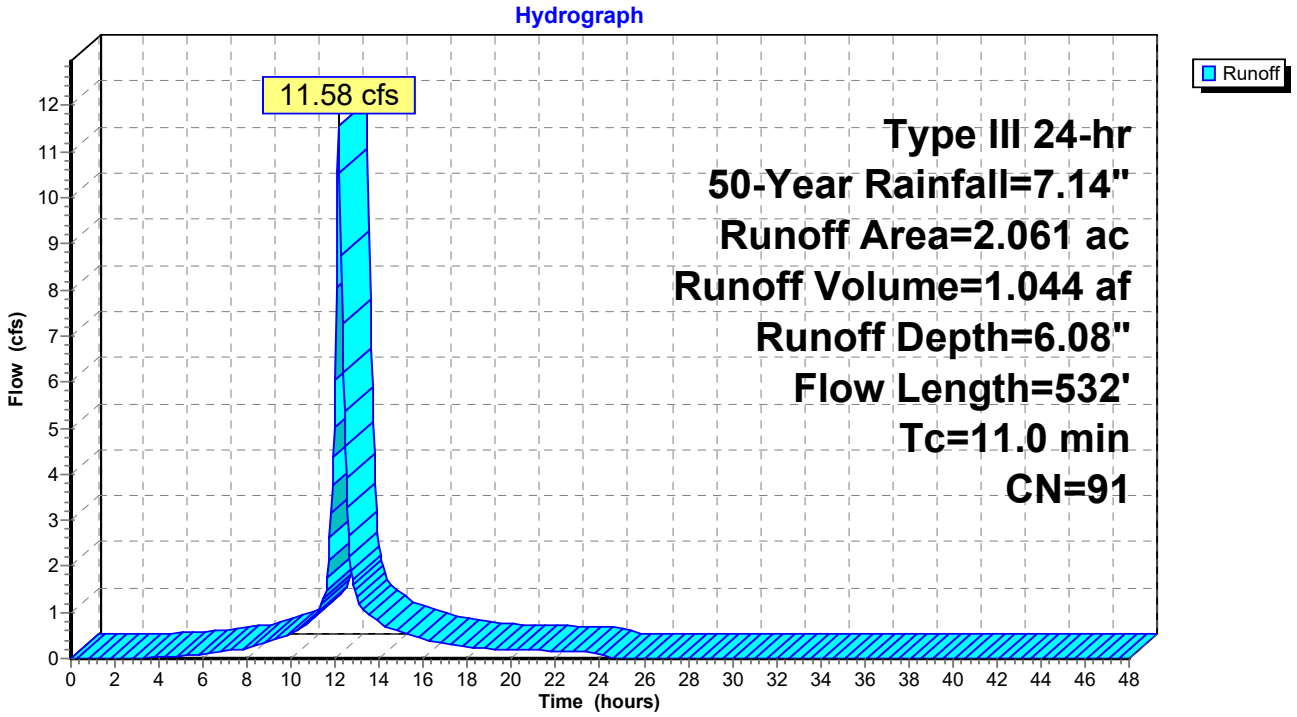
Runoff = 11.58 cfs @ 12.15 hrs, Volume= 1.044 af, Depth= 6.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=7.14"

Area (ac)	CN	Description
0.201	98	Paved parking, HSG C
1.260	98	Paved parking, HSG B
0.207	98	Paved parking, HSG C
0.074	74	>75% Grass cover, Good, HSG C
0.319	61	>75% Grass cover, Good, HSG B
2.061	91	Weighted Average
0.393		19.07% Pervious Area
1.668		80.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	40	0.0100	0.08		**Sheet Flow, Lawn** Grass: Dense n= 0.240 P2= 3.37"
1.7	239	0.0126	2.28		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.5	253	0.0200	8.41	14.86	**Pipe Channel, HDPE Drain** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
11.0	532	Total			

Subcatchment 1S: DA 1A



Summary for Subcatchment 3S: DA 2C

[47] Hint: Peak is 286% of capacity of segment #3

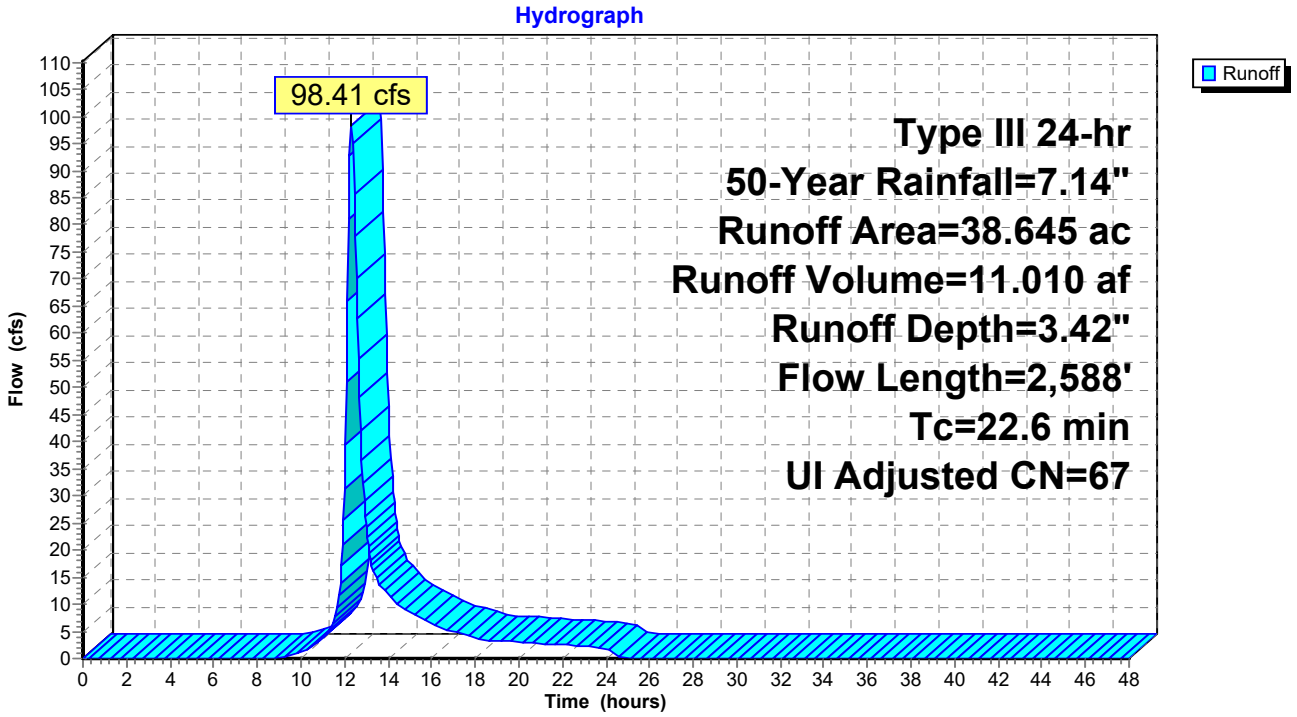
Runoff = 98.41 cfs @ 12.32 hrs, Volume= 11.010 af, Depth= 3.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=7.14"

Area (ac)	CN	Adj	Description
10.670	77		Woods, Good, HSG D
0.839	98		Water Surface, 0% imp, HSG D
13.926	55		Woods, Good, HSG B
11.541	70		Woods, Good, HSG C
0.066	98		Paved parking, HSG C
0.110	98		Roofs, HSG C
0.057	98		Paved parking, HSG B
0.566	61		>75% Grass cover, Good, HSG B
0.870	98		Unconnected roofs, HSG B
38.645	68	67	Weighted Average, UI Adjusted
37.542			97.15% Pervious Area
1.103			2.85% Impervious Area
0.870			78.88% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0850	0.14		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
5.1	598	0.1539	1.96		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
5.2	1,600	0.0262	5.16	34.37	**Parabolic Channel, Channel** W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.035 Earth, dense weeds
0.6	290		8.02		**Lake or Reservoir, Pond** Mean Depth= 2.00'
22.6	2,588	Total			

Subcatchment 3S: DA 2C



Summary for Subcatchment 7S: DA 1B

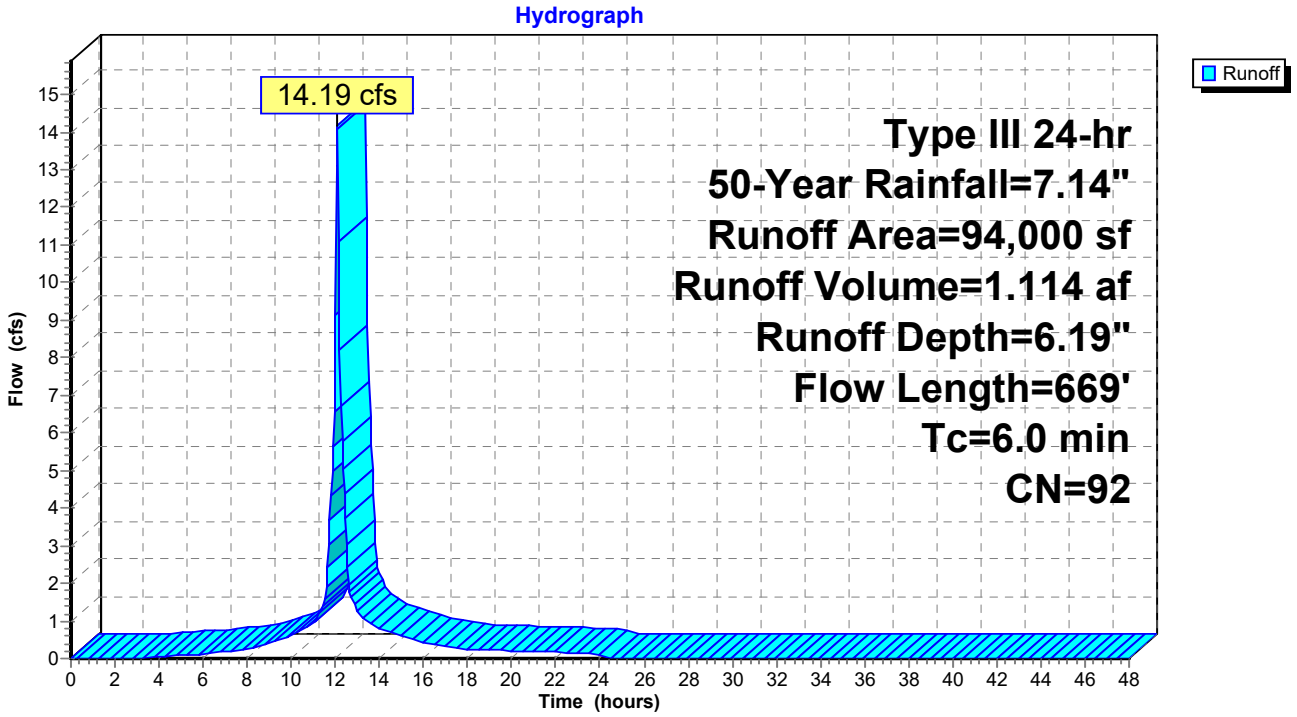
Runoff = 14.19 cfs @ 12.09 hrs, Volume= 1.114 af, Depth= 6.19"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=7.14"

Area (sf)	CN	Description
71,413	98	Paved parking, HSG B
11,784	86	Newly graded area, HSG B
10,803	61	>75% Grass cover, Good, HSG B
94,000	92	Weighted Average
22,587		24.03% Pervious Area
71,413		75.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.41		**Sheet Flow, Play areas** Smooth surfaces n= 0.011 P2= 3.37"
0.1	40	0.1500	6.24		**Shallow Concentrated Flow, Play areas** Unpaved Kv= 16.1 fps
2.2	362	0.0175	2.69		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.3	167	0.0200	8.41	14.86	**Pipe Channel, HDPE** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
3.8	669	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 7S: DA 1B



Summary for Subcatchment 8S: DA 2A

[47] Hint: Peak is 123% of capacity of segment #3

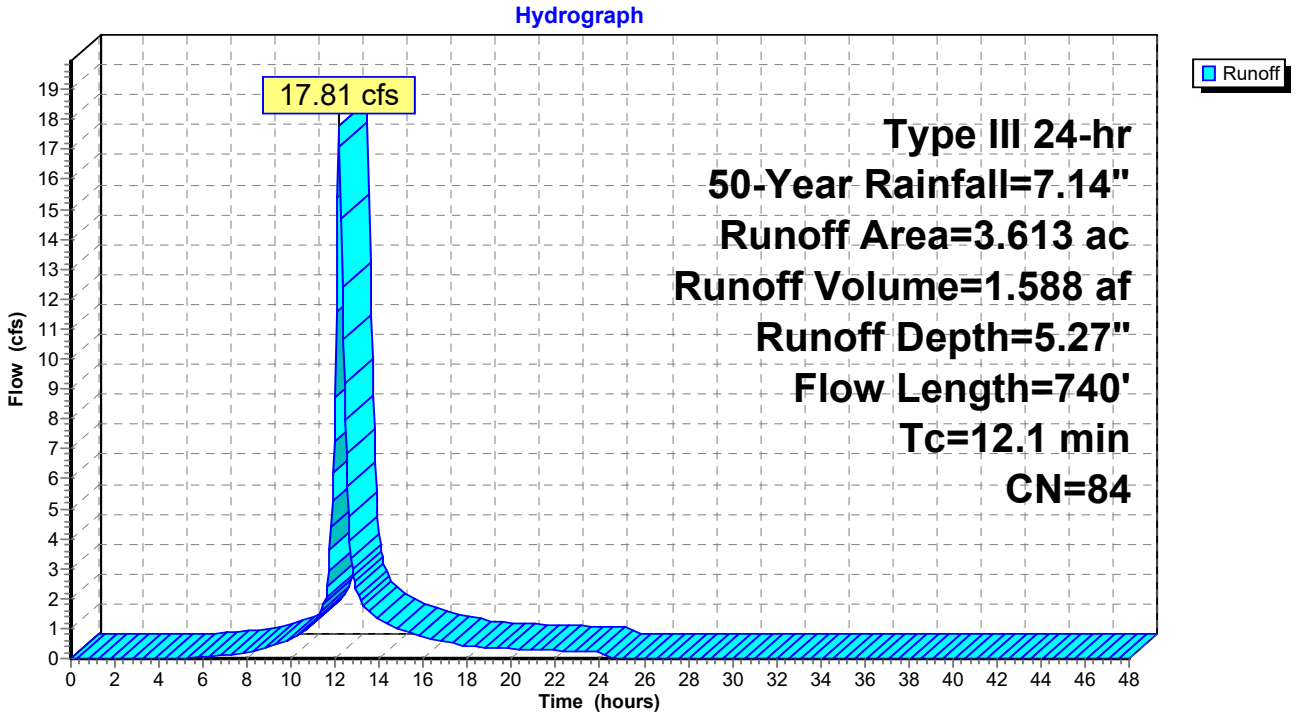
Runoff = 17.81 cfs @ 12.16 hrs, Volume= 1.588 af, Depth= 5.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=7.14"

Area (ac)	CN	Description
1.953	98	Paved parking, HSG B
0.152	98	Roofs, HSG B
0.394	61	>75% Grass cover, Good, HSG B
0.054	55	Woods, Good, HSG B
0.930	61	>75% Grass cover, Good, HSG B
0.130	98	Paved parking, HSG B
3.613	84	Weighted Average
1.378		38.14% Pervious Area
2.235		61.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0650	0.19		**Sheet Flow, Lawn** Grass: Dense n= 0.240 P2= 3.37"
3.3	558	0.0191	2.81		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.1	82	0.0500	11.77	14.44	**Pipe Channel, Discharge** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
12.1	740	Total			

Subcatchment 8S: DA 2A



Summary for Subcatchment 9S: DA 2B

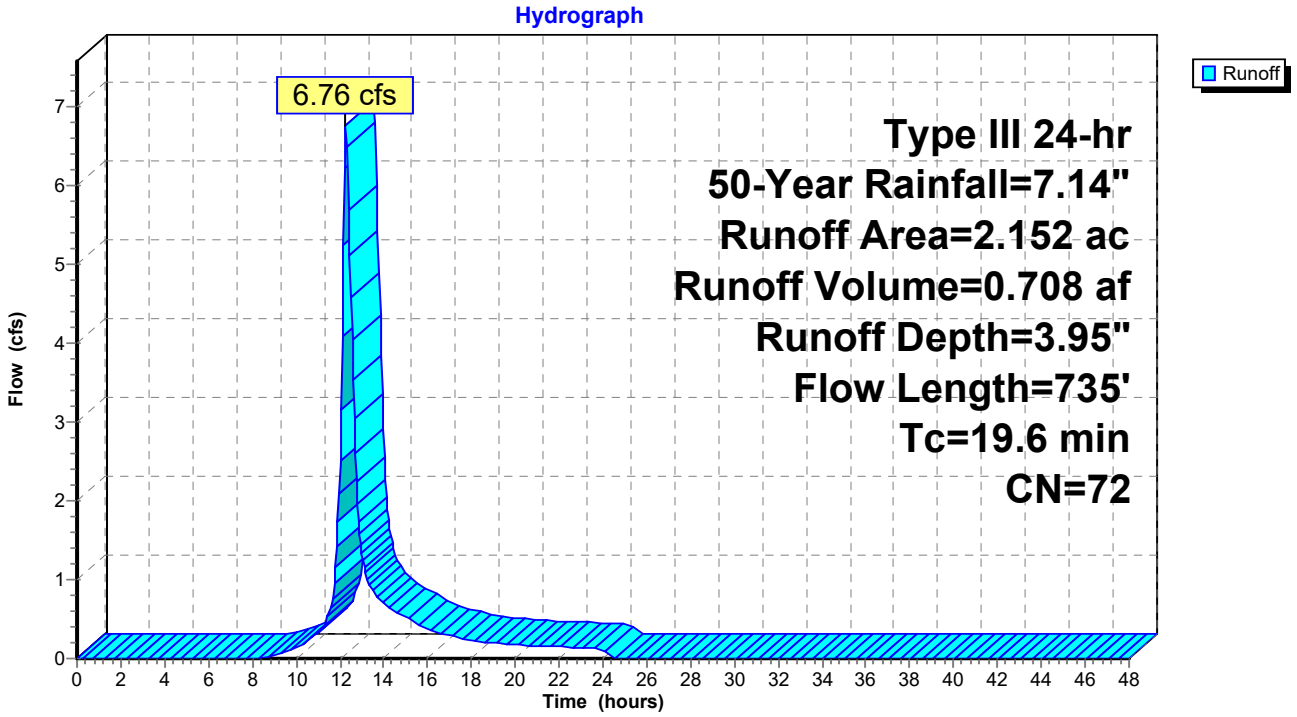
Runoff = 6.76 cfs @ 12.27 hrs, Volume= 0.708 af, Depth= 3.95"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=7.14"

Area (ac)	CN	Description
0.661	98	Paved parking, HSG B
0.746	55	Woods, Good, HSG B
0.669	61	>75% Grass cover, Good, HSG B
0.076	98	Water Surface, 0% imp, HSG B
2.152	72	Weighted Average
1.491		69.28% Pervious Area
0.661		30.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0450	0.11		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
2.1	100	0.0250	0.79		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.2	38	0.3333	4.04		**Shallow Concentrated Flow, Grass** Short Grass Pasture Kv= 7.0 fps
1.8	314	0.0200	2.87		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.2	108	0.0200	7.44	9.14	**Pipe Channel, Pipe** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.2	75		5.67		**Lake or Reservoir,** Mean Depth= 1.00'
19.6	735	Total			

Subcatchment 9S: DA 2B



Summary for Subcatchment 11S: DA 1C

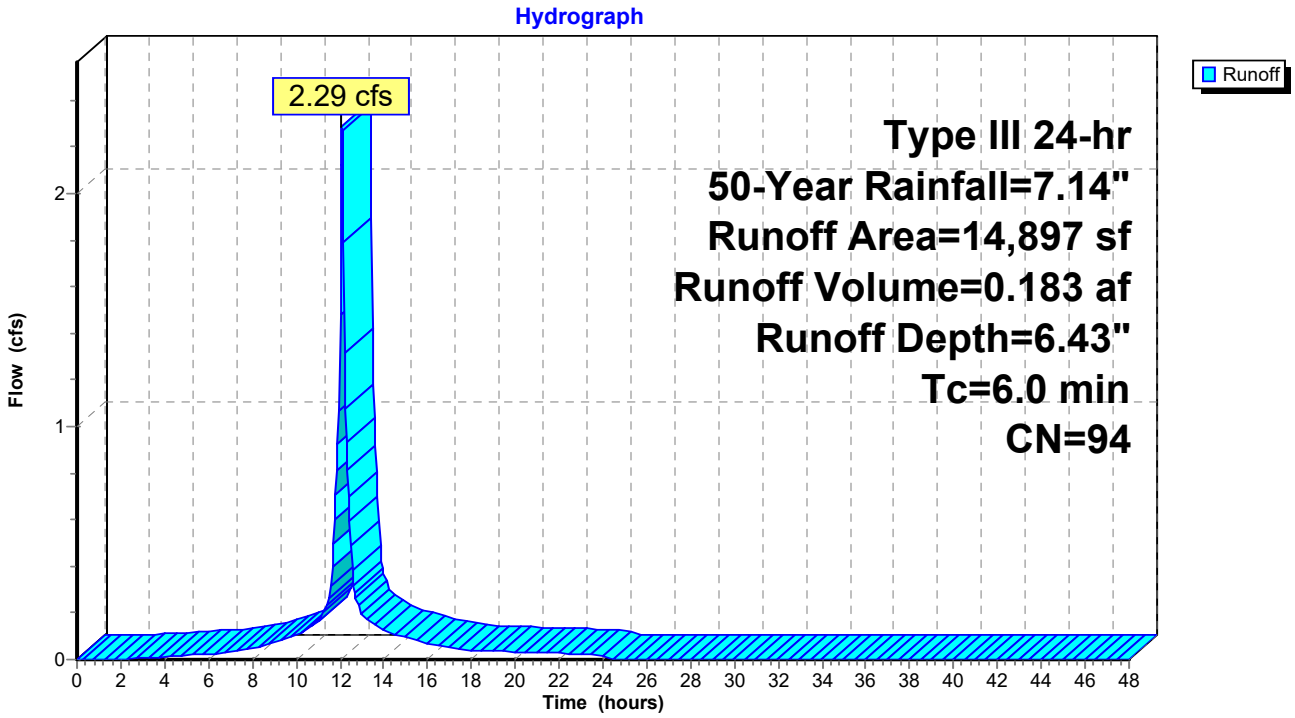
Runoff = 2.29 cfs @ 12.09 hrs, Volume= 0.183 af, Depth= 6.43"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=7.14"

Area (sf)	CN	Description
12,458	98	Paved parking, HSG C
2,439	74	>75% Grass cover, Good, HSG C
14,897	94	Weighted Average
2,439		16.37% Pervious Area
12,458		83.63% Impervious Area

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

Subcatchment 11S: DA 1C



Summary for Subcatchment 12S: DA 1D

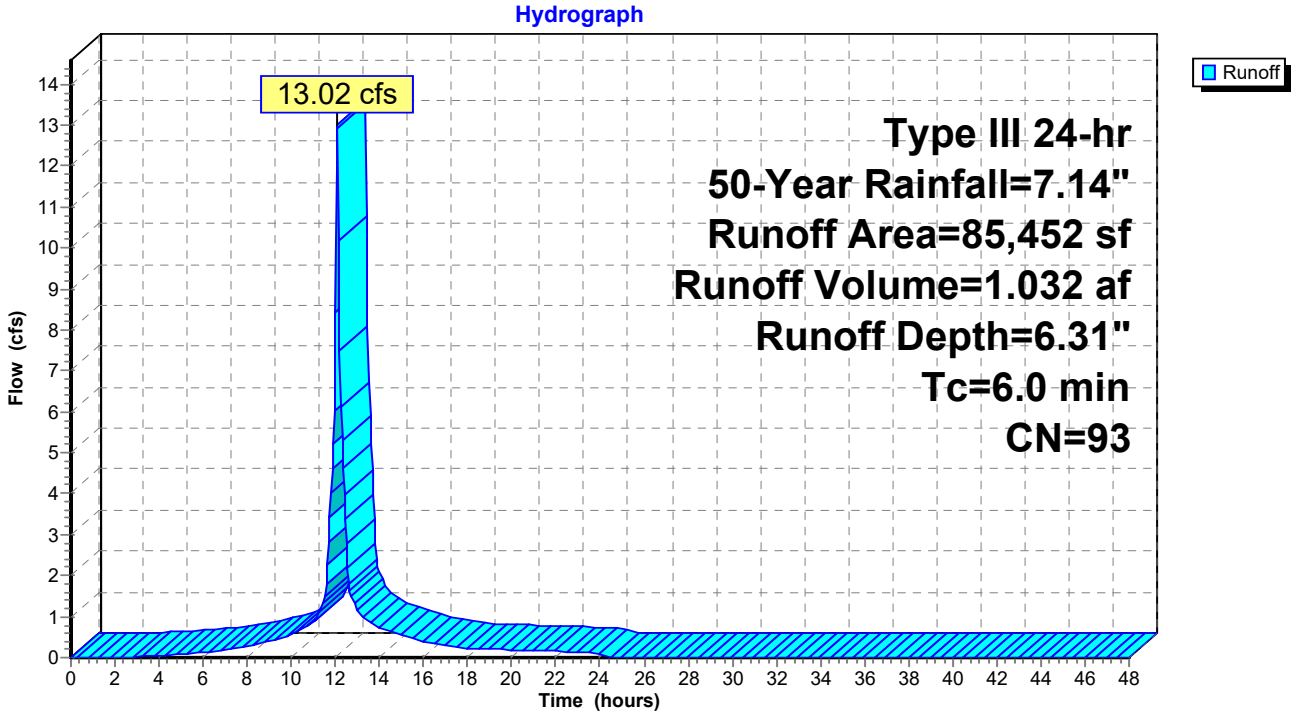
Runoff = 13.02 cfs @ 12.09 hrs, Volume= 1.032 af, Depth= 6.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 50-Year Rainfall=7.14"

Area (sf)	CN	Description
55,278	98	Paved parking, HSG C
6,098	98	Water Surface, 0% imp, HSG C
18,687	74	>75% Grass cover, Good, HSG C
5,389	98	Paved parking, HSG C
85,452	93	Weighted Average
24,785		29.00% Pervious Area
60,667		71.00% Impervious Area

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

Subcatchment 12S: DA 1D



Summary for Pond 2P: 30" RCP

Inflow Area = 56.590 ac, 19.92% Impervious, Inflow Depth > 3.95" for 50-Year event
Inflow = 24.63 cfs @ 12.19 hrs, Volume= 18.644 af
Outflow = 24.63 cfs @ 12.19 hrs, Volume= 18.644 af, Atten= 0%, Lag= 0.0 min
Primary = 24.63 cfs @ 12.19 hrs, Volume= 18.644 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

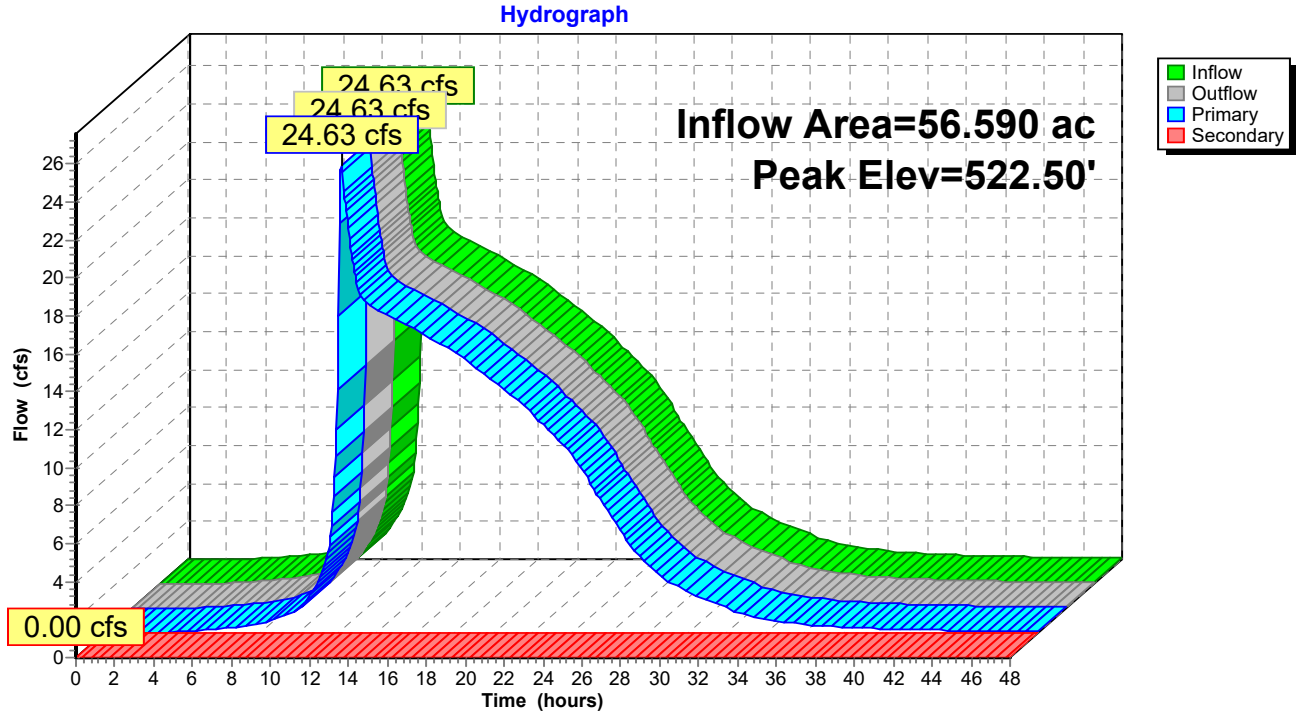
Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 522.50' @ 12.19 hrs
Flood Elev= 527.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	519.92'	**30.0" Round 30" RC** L= 80.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 519.92' / 519.62' S= 0.0037 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 4.91 sf
#2	Secondary	527.20'	**30.0' long x 10.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=24.53 cfs @ 12.19 hrs HW=522.50' (Free Discharge)
└**1=30" RC** (Barrel Controls 24.53 cfs @ 6.03 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=519.92' (Free Discharge)
└**2=Overflow** (Controls 0.00 cfs)

Pond 2P: 30" RCP



Summary for Pond 4P: Pond

Inflow Area = 52.568 ac, 15.62% Impervious, Inflow Depth = 3.81" for 50-Year event
Inflow = 133.55 cfs @ 12.29 hrs, Volume= 16.711 af
Outflow = 15.29 cfs @ 14.31 hrs, Volume= 16.571 af, Atten= 89%, Lag= 121.0 min
Primary = 15.29 cfs @ 14.31 hrs, Volume= 16.571 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 527.57' @ 14.31 hrs Surf.Area= 2.811 ac Storage= 8.832 af

Plug-Flow detention time= 337.6 min calculated for 16.554 af (99% of inflow)
Center-of-Mass det. time= 333.6 min (1,173.7 - 840.1)

Volume	Invert	Avail.Storage	Storage Description
#1	523.45'	16.273 af	**Pond Storage (Irregular)**Listed below

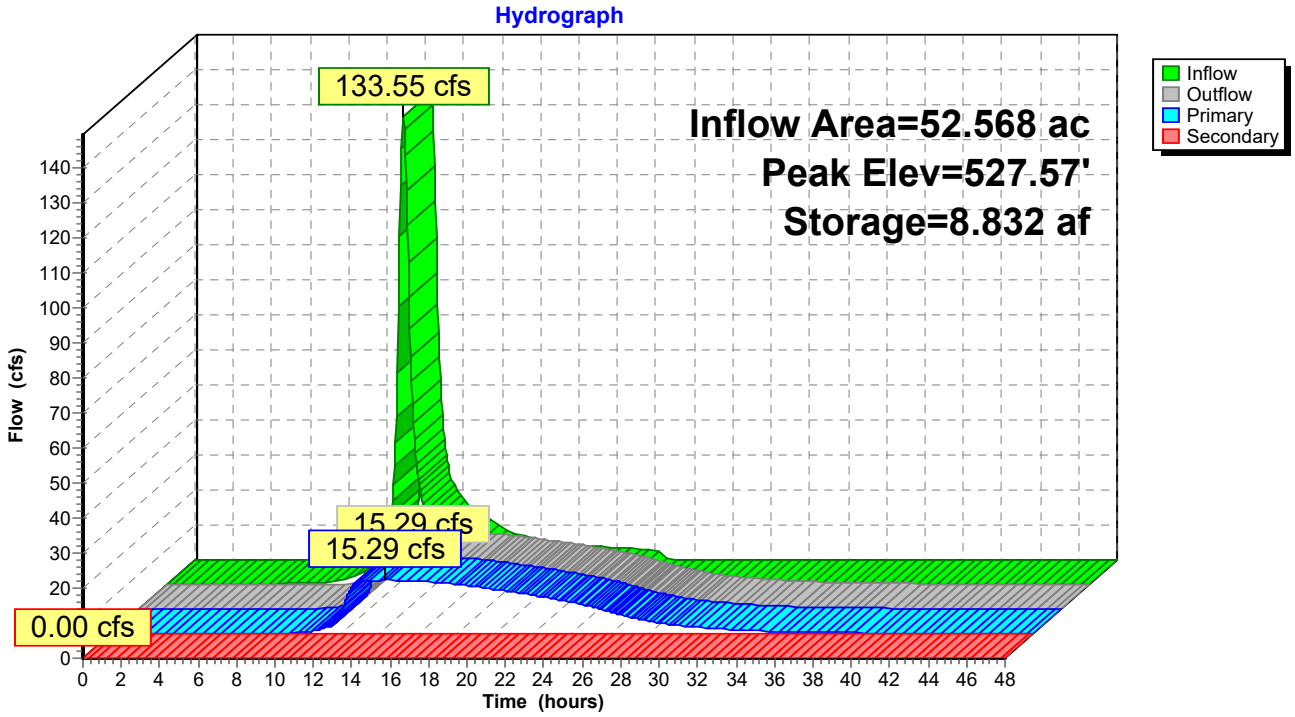
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
523.45	0.636	1,389.1	0.000	0.000	0.636
524.00	1.723	1,270.7	0.624	0.624	1.212
526.00	2.359	1,494.7	4.065	4.690	2.345
528.00	2.936	1,638.1	5.284	9.974	3.169
530.00	3.368	1,700.4	6.299	16.273	3.556

Device	Routing	Invert	Outlet Devices
#1	Primary	520.91'	**30.0" Round 30" HDPE** L= 110.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 520.91' / 520.64' S= 0.0024 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	521.46'	**30.0" Round 30" HDPE** L= 86.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 521.46' / 520.91' S= 0.0063 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#3	Device 2	521.41'	**24.0" Round 24" HDPE** L= 157.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 521.41' / 521.40' S= 0.0001 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#4	Device 3	523.45'	**18.0" Round 18" HDPE** L= 117.9' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 523.45' / 521.82' S= 0.0138 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#5	Secondary	529.90'	**50.0' long x 25.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=15.29 cfs @ 14.31 hrs HW=527.57' TW=521.93' (Dynamic Tailwater)
└─**1=30" HDPE** (Passes 15.29 cfs of 52.16 cfs potential flow)
└─**2=30" HDPE** (Passes 15.29 cfs of 52.09 cfs potential flow)
└─**3=24" HDPE** (Passes 15.29 cfs of 27.68 cfs potential flow)
└─**4=18" HDPE** (Barrel Controls 15.29 cfs @ 8.65 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=523.45' TW=519.92' (Dynamic Tailwater)
└─**5=Overflow** (Controls 0.00 cfs)

Pond 4P: Pond



Summary for Pond 10P: Apartment Detention Basin

Inflow Area = 2.152 ac, 30.72% Impervious, Inflow Depth = 3.95" for 50-Year event
Inflow = 6.76 cfs @ 12.27 hrs, Volume= 0.708 af
Outflow = 5.12 cfs @ 12.45 hrs, Volume= 0.708 af, Atten= 24%, Lag= 10.8 min
Primary = 5.12 cfs @ 12.45 hrs, Volume= 0.708 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 538.33' @ 12.45 hrs Surf.Area= 2,051 sf Storage= 2,500 cf

Plug-Flow detention time= 4.8 min calculated for 0.708 af (100% of inflow)
Center-of-Mass det. time= 4.1 min (842.3 - 838.2)

Volume	Invert	Avail.Storage	Storage Description
#1	536.00'	7,026 cf	**Detention Basin (Irregular)**Listed below (Recalc)

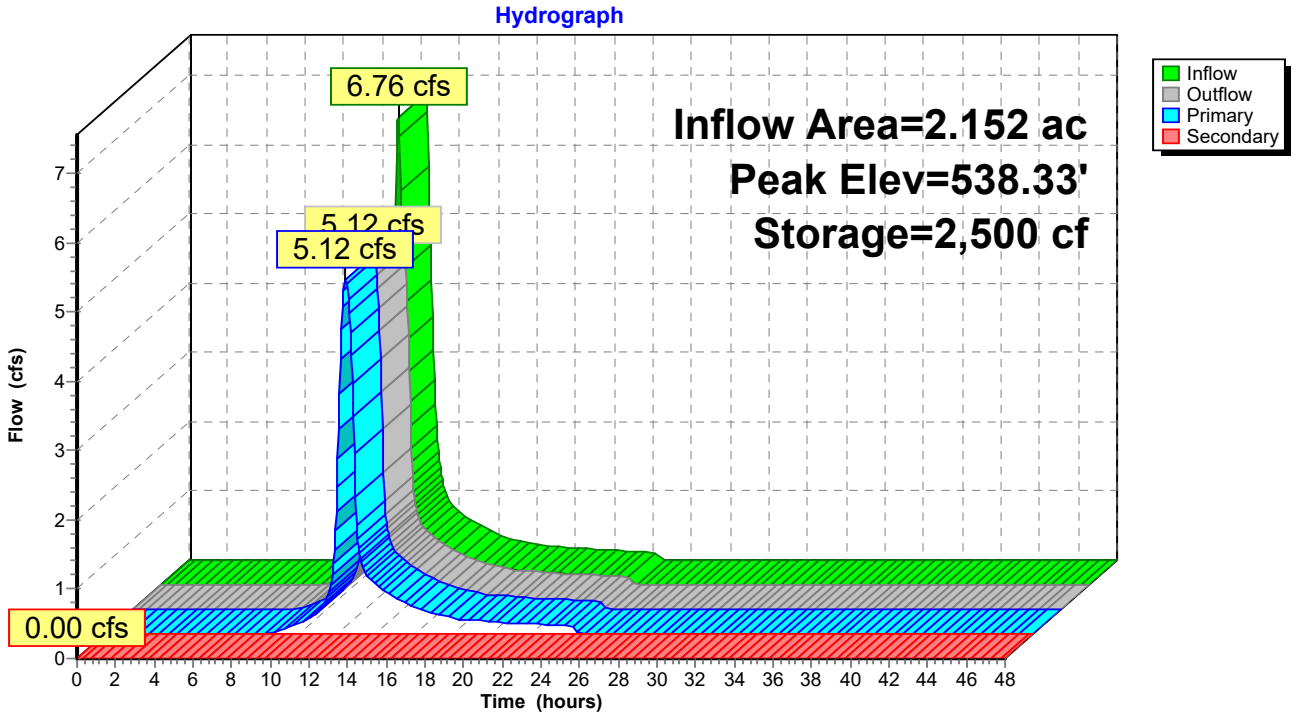
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
536.00	100	40.0	0	0	100
536.50	467	110.5	131	131	945
537.60	1,559	173.6	1,056	1,186	2,380
540.00	3,429	242.5	5,840	7,026	4,716

Device	Routing	Invert	Outlet Devices
#1	Primary	536.00'	**12.0" Round Culvert** L= 75.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 536.00' / 534.50' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	539.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=5.11 cfs @ 12.45 hrs HW=538.33' TW=526.44' (Dynamic Tailwater)
1=Culvert (Inlet Controls 5.11 cfs @ 6.51 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=536.00' TW=523.45' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 10P: Apartment Detention Basin



Summary for Pond 13P: Water Quality Basin

[42] Hint: Gap in defined storage above volume #1 at 524.25'

Inflow Area = 1.962 ac, 71.00% Impervious, Inflow Depth = 6.31" for 50-Year event
Inflow = 13.02 cfs @ 12.09 hrs, Volume= 1.032 af
Outflow = 5.03 cfs @ 12.32 hrs, Volume= 1.030 af, Atten= 61%, Lag= 14.0 min
Primary = 5.03 cfs @ 12.32 hrs, Volume= 1.030 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 528.01' @ 12.32 hrs Surf.Area= 6,644 sf Storage= 15,213 cf

Plug-Flow detention time= 115.9 min calculated for 1.030 af (100% of inflow)
Center-of-Mass det. time= 114.2 min (882.4 - 768.3)

Volume	Invert	Avail.Storage	Storage Description
#1	522.25'	290 cf	**2.00'W x 181.00'L x 2.00'H Underdrain Trench** 724 cf Overall x 40.0% Voids
#2	524.75'	27,446 cf	**Water Quality swale (Irregular)**Listed below (Recalc)
		27,735 cf	Total Available Storage

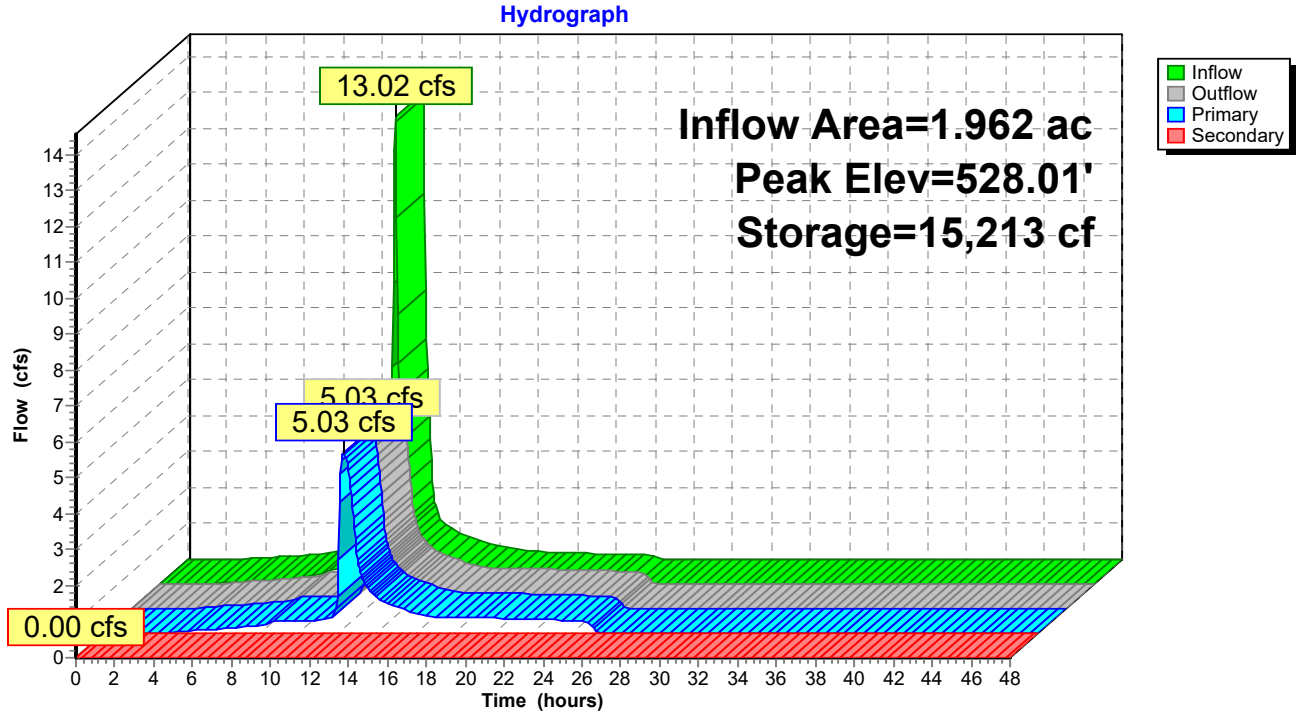
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
524.75	2,969	471.4	0	0	2,969
525.00	3,207	477.3	772	772	3,430
526.00	4,185	500.8	3,685	4,457	5,323
528.00	6,268	535.7	10,383	14,840	8,383
529.75	8,181	557.7	12,606	27,446	10,523

Device	Routing	Invert	Outlet Devices
#1	Primary	522.50'	**24.0" Round 24" HDPE** L= 75.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 522.50' / 521.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	522.75'	**3.0" Vert. Underdrain** C= 0.600 Limited to weir flow at low heads
#3	Device 1	526.50'	**6.0" W x 6.0" H Vert. 6" Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	527.00'	**18.0" W x 6.0" H Vert. 18x6 Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	528.25'	**2.0" x 2.0" Horiz. Top of Frame X 20.00 columns** X 20 rows C= 0.600 in 48.0" x 48.0" Grate (69% open area) Limited to weir flow at low heads
#6	Secondary	528.75'	**10.0' long x 8.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=5.02 cfs @ 12.32 hrs HW=528.01' TW=522.39' (Dynamic Tailwater)
└─**1=24" HDPE** (Passes 5.02 cfs of 32.13 cfs potential flow)
  └─**2=Underdrain** (Orifice Controls 0.54 cfs @ 10.91 fps)
  └─**3=6" Orifice** (Orifice Controls 1.35 cfs @ 5.40 fps)
  └─**4=18x6 Orifice** (Orifice Controls 3.14 cfs @ 4.18 fps)
  └─**5=Top of Frame** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=522.25' TW=519.92' (Dynamic Tailwater)
└─**6=Emergency Spillway** (Controls 0.00 cfs)

Pond 13P: Water Quality Basin



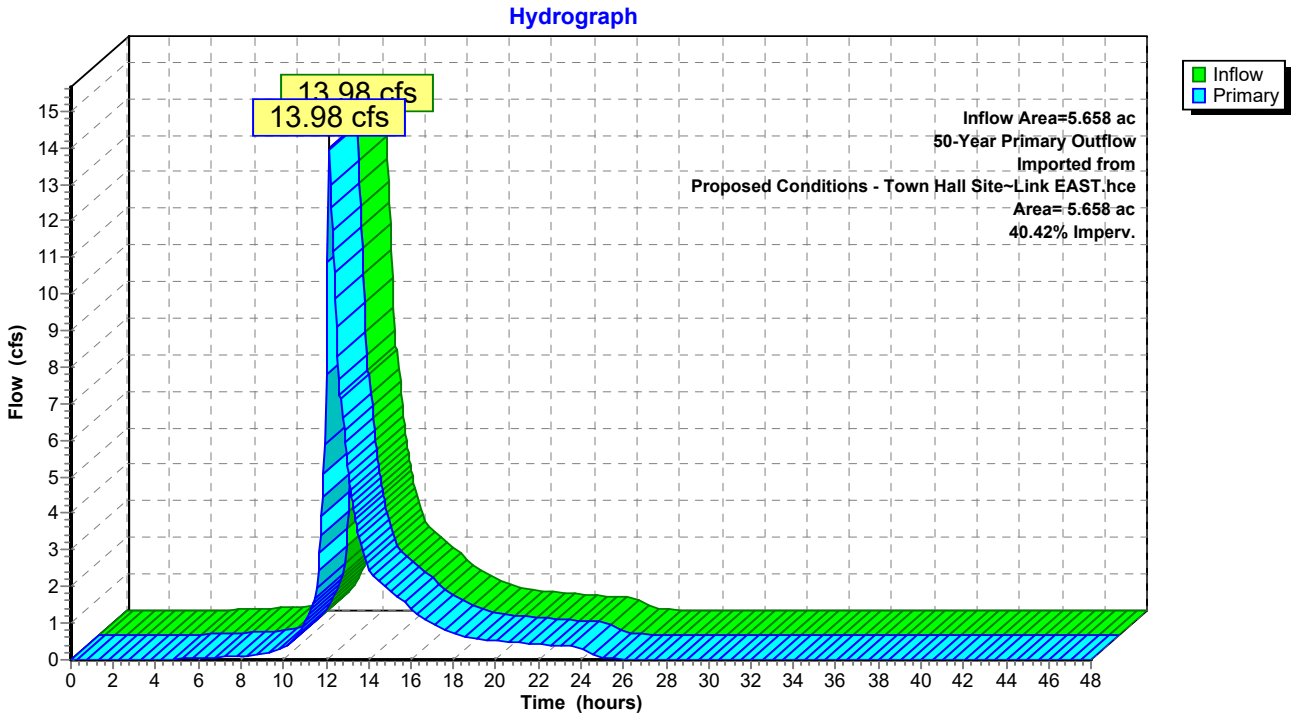
Summary for Link 14L: DA 2D - From Town Hall

Inflow Area = 5.658 ac, 40.42% Impervious, Inflow Depth = 4.47" for 50-Year event
Inflow = 13.98 cfs @ 12.13 hrs, Volume= 2.108 af
Primary = 13.98 cfs @ 12.13 hrs, Volume= 2.108 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

50-Year Primary Outflow Imported from Proposed Conditions - Town Hall Site~Link EAST.hce

Link 14L: DA 2D - From Town Hall



Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: DA 1A Runoff Area=2.061 ac 80.93% Impervious Runoff Depth=6.96"
Flow Length=532' Tc=11.0 min CN=91 Runoff=13.17 cfs 1.196 af

Subcatchment 3S: DA 2C Runoff Area=38.645 ac 2.85% Impervious Runoff Depth=4.15"
Flow Length=2,588' Tc=22.6 min UI Adjusted CN=67 Runoff=120.09 cfs 13.379 af

Subcatchment 7S: DA 1B Runoff Area=94,000 sf 75.97% Impervious Runoff Depth=7.08"
Flow Length=669' Tc=6.0 min CN=92 Runoff=16.10 cfs 1.274 af

Subcatchment 8S: DA 2A Runoff Area=3.613 ac 61.86% Impervious Runoff Depth=6.13"
Flow Length=740' Tc=12.1 min CN=84 Runoff=20.57 cfs 1.847 af

Subcatchment 9S: DA 2B Runoff Area=2.152 ac 30.72% Impervious Runoff Depth=4.73"
Flow Length=735' Tc=19.6 min CN=72 Runoff=8.10 cfs 0.848 af

Subcatchment 11S: DA 1C Runoff Area=14,897 sf 83.63% Impervious Runoff Depth=7.32"
Tc=6.0 min CN=94 Runoff=2.59 cfs 0.209 af

Subcatchment 12S: DA 1D Runoff Area=85,452 sf 71.00% Impervious Runoff Depth=7.20"
Tc=6.0 min CN=93 Runoff=14.75 cfs 1.177 af

Pond 2P: 30" RCP Peak Elev=522.81' Inflow=28.38 cfs 22.280 af
Primary=28.38 cfs 22.280 af Secondary=0.00 cfs 0.000 af Outflow=28.38 cfs 22.280 af

Pond 4P: Pond Peak Elev=528.33' Storage=11.001 af Inflow=160.70 cfs 20.062 af
Primary=16.59 cfs 19.908 af Secondary=0.00 cfs 0.000 af Outflow=16.59 cfs 19.908 af

Pond 10P: Apartment Detention Basin Peak Elev=538.80' Storage=3,557 cf Inflow=8.10 cfs 0.848 af
Primary=5.74 cfs 0.848 af Secondary=0.00 cfs 0.000 af Outflow=5.74 cfs 0.848 af

Pond 13P: Water Quality Basin Peak Elev=528.29' Storage=17,015 cf Inflow=14.75 cfs 1.177 af
Primary=6.20 cfs 1.176 af Secondary=0.00 cfs 0.000 af Outflow=6.20 cfs 1.176 af

100-Year Primary Outflow Imported from Proposed Conditions - Town Hall Site~Link EAST.hce Inflow=17.21 cfs 2.505 af
Link Area= 5.658 ac 40.42% Imperv. Primary=17.21 cfs 2.505 af

Total Runoff Area = 50.933 ac Runoff Volume = 19.930 af Average Runoff Depth = 4.70"
82.36% Pervious = 41.948 ac 17.64% Impervious = 8.985 ac

Summary for Subcatchment 1S: DA 1A

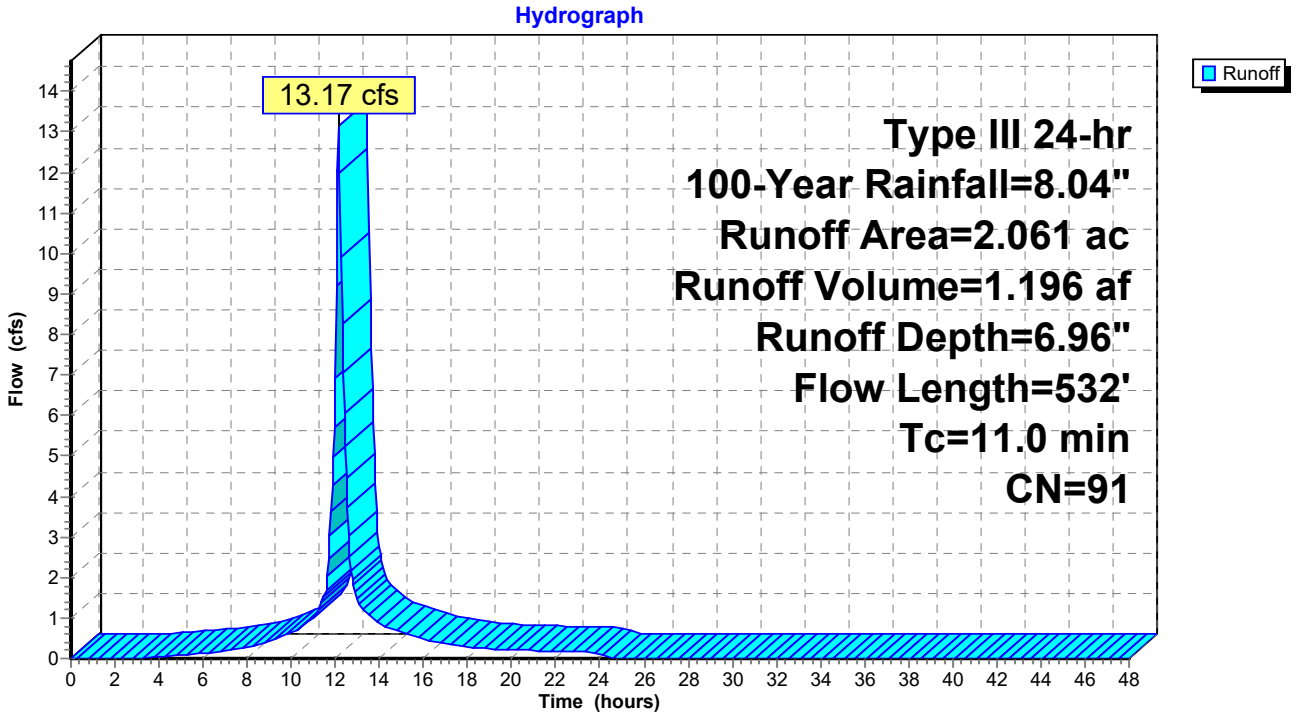
Runoff = 13.17 cfs @ 12.15 hrs, Volume= 1.196 af, Depth= 6.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.04"

Area (ac)	CN	Description
0.201	98	Paved parking, HSG C
1.260	98	Paved parking, HSG B
0.207	98	Paved parking, HSG C
0.074	74	>75% Grass cover, Good, HSG C
0.319	61	>75% Grass cover, Good, HSG B
2.061	91	Weighted Average
0.393		19.07% Pervious Area
1.668		80.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.8	40	0.0100	0.08		**Sheet Flow, Lawn** Grass: Dense n= 0.240 P2= 3.37"
1.7	239	0.0126	2.28		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.5	253	0.0200	8.41	14.86	**Pipe Channel, HDPE Drain** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
11.0	532	Total			

Subcatchment 1S: DA 1A



Summary for Subcatchment 3S: DA 2C

[47] Hint: Peak is 349% of capacity of segment #3

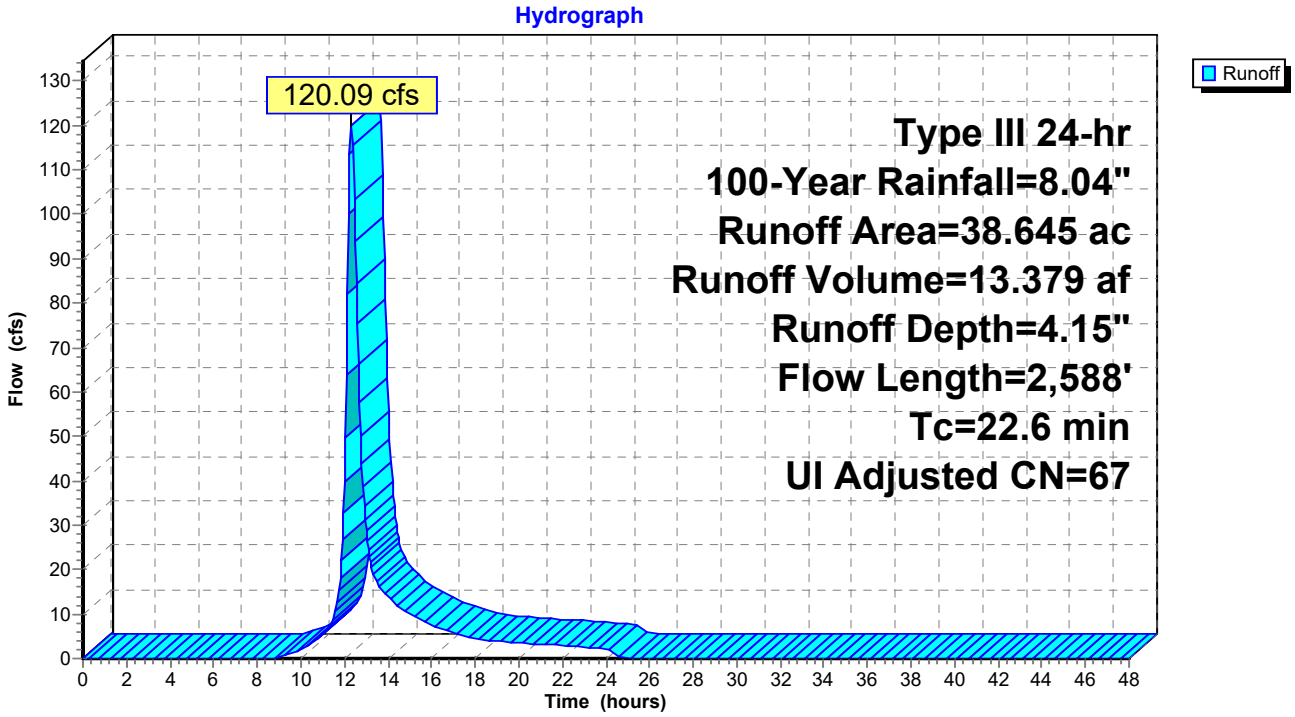
Runoff = 120.09 cfs @ 12.32 hrs, Volume= 13.379 af, Depth= 4.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.04"

Area (ac)	CN	Adj	Description
10.670	77		Woods, Good, HSG D
0.839	98		Water Surface, 0% imp, HSG D
13.926	55		Woods, Good, HSG B
11.541	70		Woods, Good, HSG C
0.066	98		Paved parking, HSG C
0.110	98		Roofs, HSG C
0.057	98		Paved parking, HSG B
0.566	61		>75% Grass cover, Good, HSG B
0.870	98		Unconnected roofs, HSG B
38.645	68	67	Weighted Average, UI Adjusted
37.542			97.15% Pervious Area
1.103			2.85% Impervious Area
0.870			78.88% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.7	100	0.0850	0.14		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
5.1	598	0.1539	1.96		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
5.2	1,600	0.0262	5.16	34.37	**Parabolic Channel, Channel** W=10.00' D=1.00' Area=6.7 sf Perim=10.3' n= 0.035 Earth, dense weeds
0.6	290		8.02		**Lake or Reservoir, Pond** Mean Depth= 2.00'
22.6	2,588	Total			

Subcatchment 3S: DA 2C



Summary for Subcatchment 7S: DA 1B

[47] Hint: Peak is 108% of capacity of segment #4

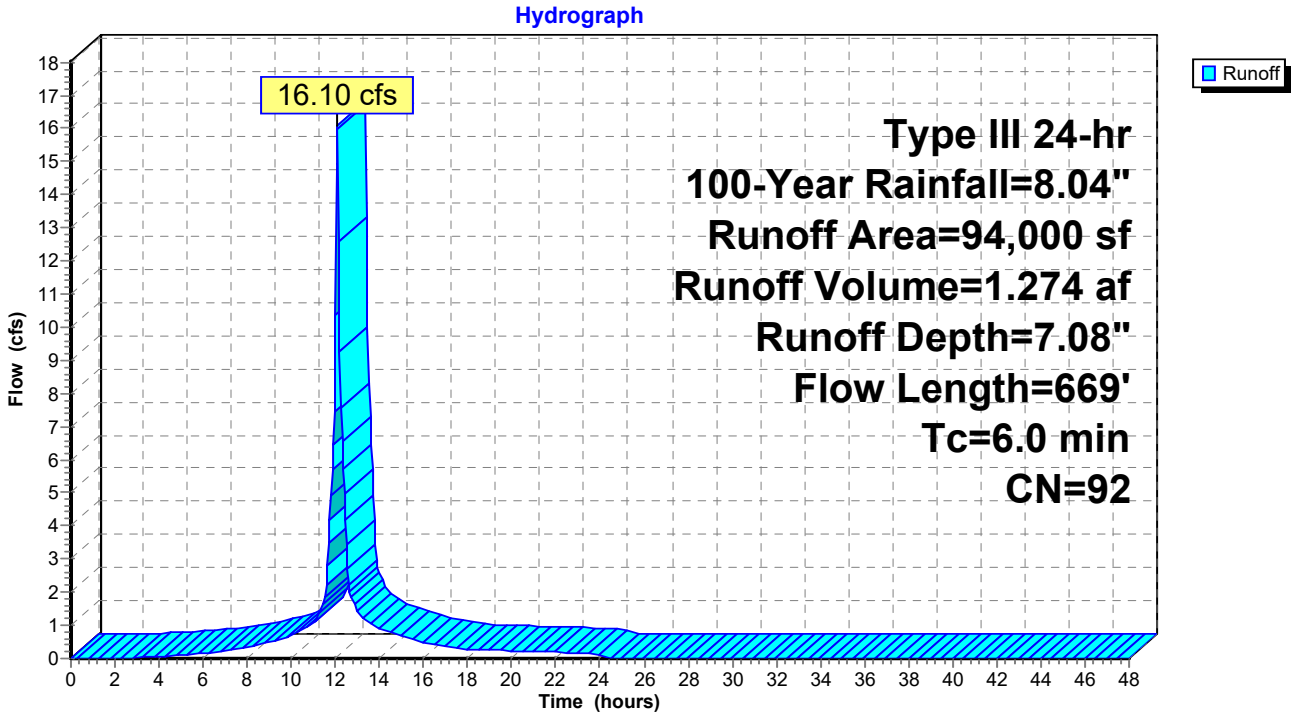
Runoff = 16.10 cfs @ 12.09 hrs, Volume= 1.274 af, Depth= 7.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.04"

Area (sf)	CN	Description
71,413	98	Paved parking, HSG B
11,784	86	Newly graded area, HSG B
10,803	61	>75% Grass cover, Good, HSG B
94,000	92	Weighted Average
22,587		24.03% Pervious Area
71,413		75.97% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0200	1.41		**Sheet Flow, Play areas** Smooth surfaces n= 0.011 P2= 3.37"
0.1	40	0.1500	6.24		**Shallow Concentrated Flow, Play areas** Unpaved Kv= 16.1 fps
2.2	362	0.0175	2.69		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.3	167	0.0200	8.41	14.86	**Pipe Channel, HDPE** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
3.8	669	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 7S: DA 1B



Summary for Subcatchment 8S: DA 2A

[47] Hint: Peak is 142% of capacity of segment #3

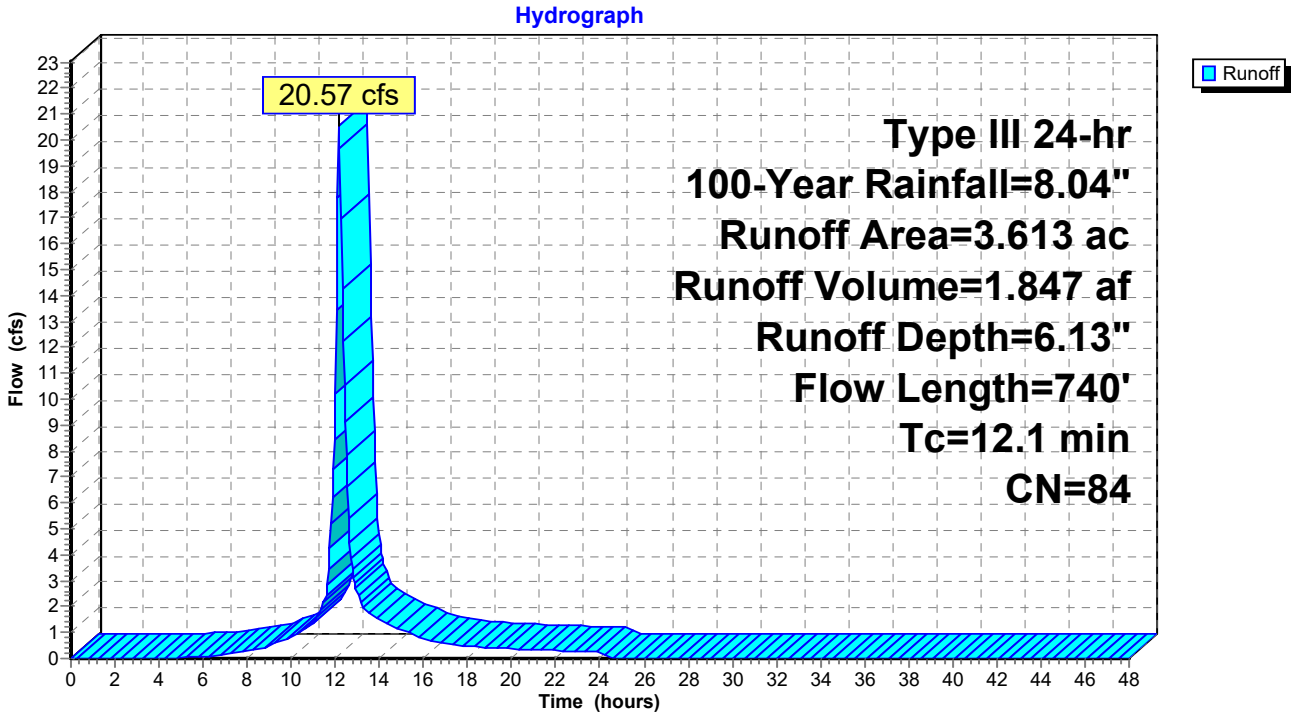
Runoff = 20.57 cfs @ 12.16 hrs, Volume= 1.847 af, Depth= 6.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.04"

Area (ac)	CN	Description
1.953	98	Paved parking, HSG B
0.152	98	Roofs, HSG B
0.394	61	>75% Grass cover, Good, HSG B
0.054	55	Woods, Good, HSG B
0.930	61	>75% Grass cover, Good, HSG B
0.130	98	Paved parking, HSG B
3.613	84	Weighted Average
1.378		38.14% Pervious Area
2.235		61.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.7	100	0.0650	0.19		**Sheet Flow, Lawn** Grass: Dense n= 0.240 P2= 3.37"
3.3	558	0.0191	2.81		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.1	82	0.0500	11.77	14.44	**Pipe Channel, Discharge** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
12.1	740	Total			

Subcatchment 8S: DA 2A



Summary for Subcatchment 9S: DA 2B

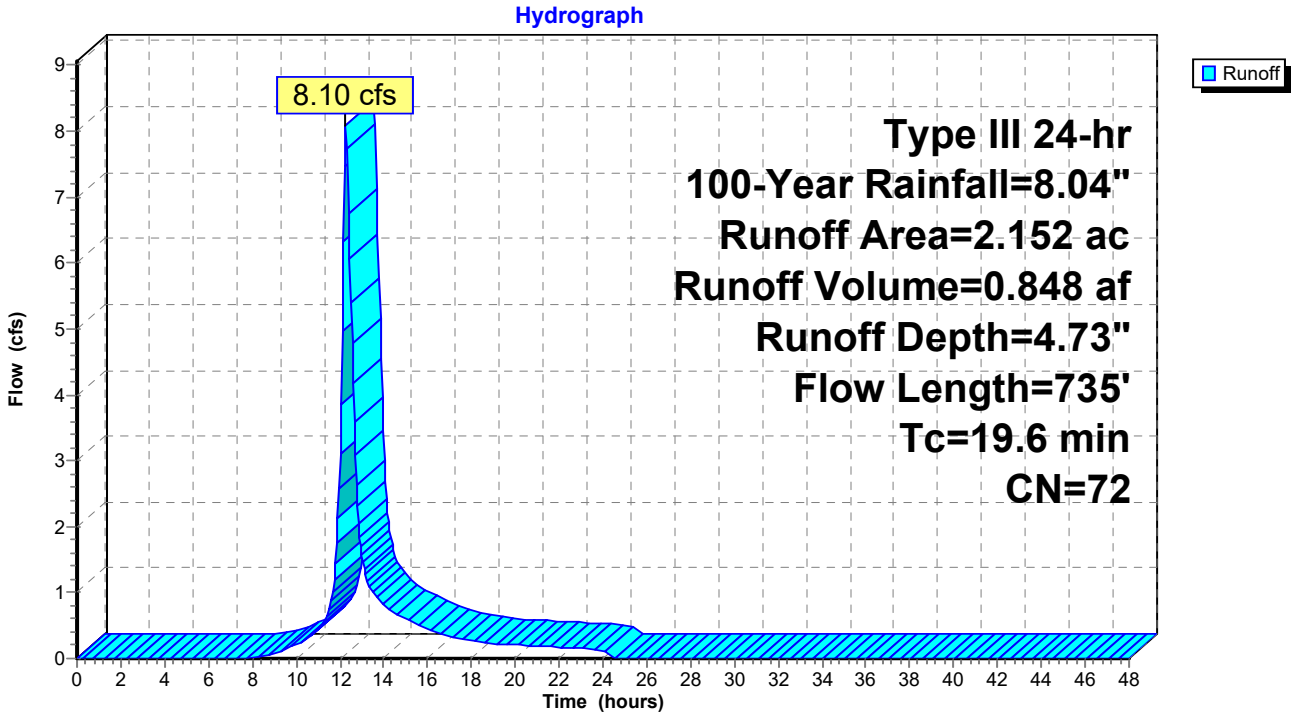
Runoff = 8.10 cfs @ 12.27 hrs, Volume= 0.848 af, Depth= 4.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.04"

Area (ac)	CN	Description
0.661	98	Paved parking, HSG B
0.746	55	Woods, Good, HSG B
0.669	61	>75% Grass cover, Good, HSG B
0.076	98	Water Surface, 0% imp, HSG B
2.152	72	Weighted Average
1.491		69.28% Pervious Area
0.661		30.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.1	100	0.0450	0.11		**Sheet Flow, Woods** Woods: Light underbrush n= 0.400 P2= 3.37"
2.1	100	0.0250	0.79		**Shallow Concentrated Flow, Woods** Woodland Kv= 5.0 fps
0.2	38	0.3333	4.04		**Shallow Concentrated Flow, Grass** Short Grass Pasture Kv= 7.0 fps
1.8	314	0.0200	2.87		**Shallow Concentrated Flow, Gutter** Paved Kv= 20.3 fps
0.2	108	0.0200	7.44	9.14	**Pipe Channel, Pipe** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.2	75		5.67		**Lake or Reservoir,** Mean Depth= 1.00'
19.6	735	Total			

Subcatchment 9S: DA 2B



Summary for Subcatchment 11S: DA 1C

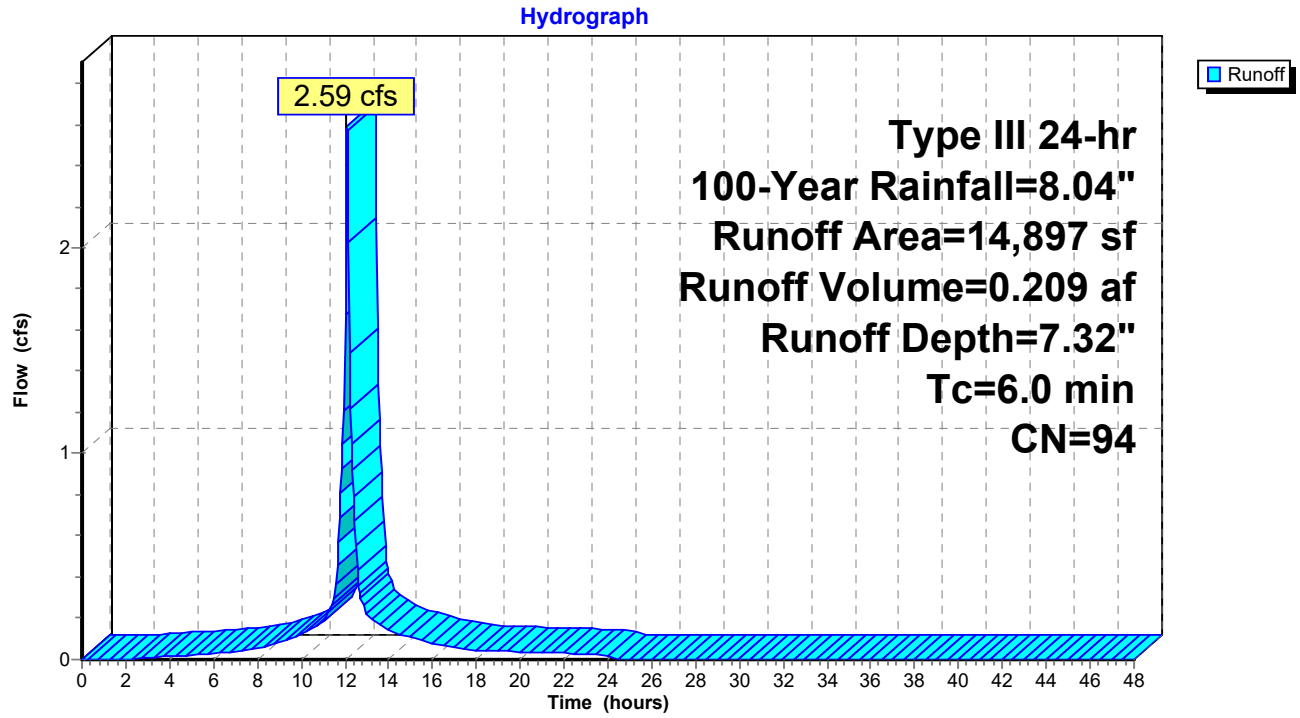
Runoff = 2.59 cfs @ 12.09 hrs, Volume= 0.209 af, Depth= 7.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.04"

Area (sf)	CN	Description
12,458	98	Paved parking, HSG C
2,439	74	>75% Grass cover, Good, HSG C
14,897	94	Weighted Average
2,439		16.37% Pervious Area
12,458		83.63% Impervious Area

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

Subcatchment 11S: DA 1C



Summary for Subcatchment 12S: DA 1D

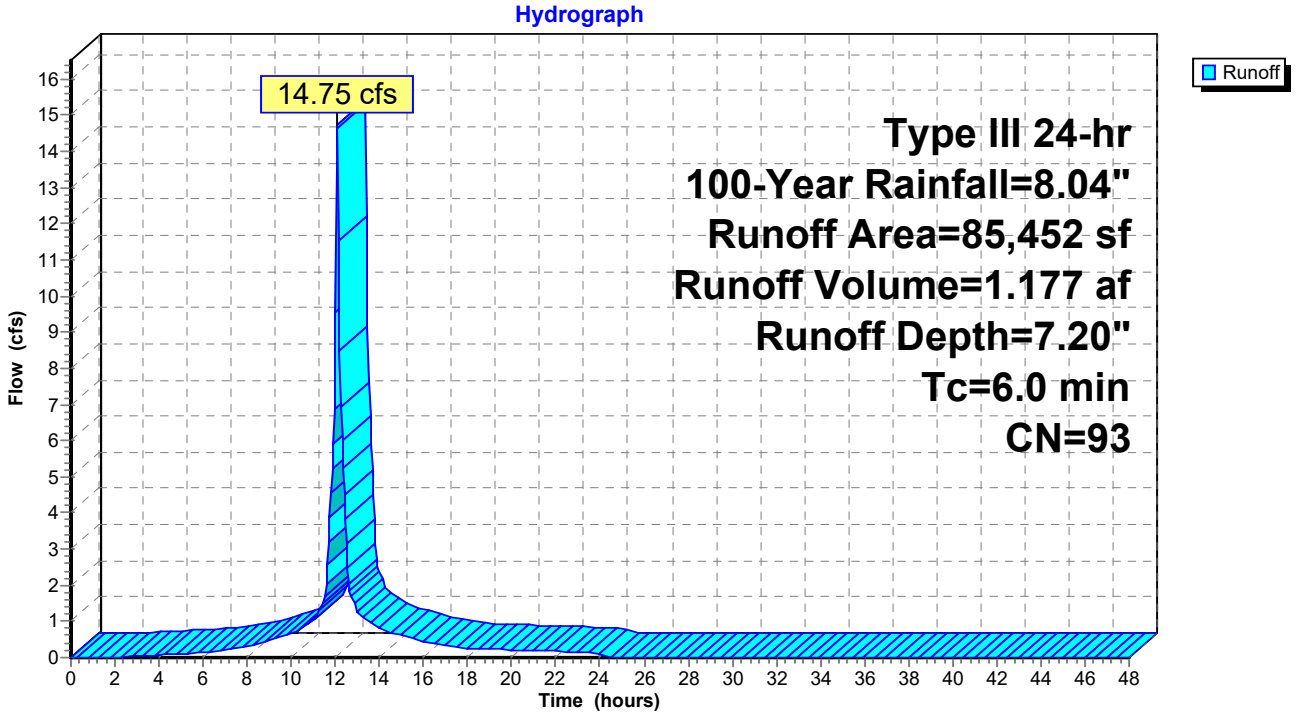
Runoff = 14.75 cfs @ 12.09 hrs, Volume= 1.177 af, Depth= 7.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.04"

Area (sf)	CN	Description
55,278	98	Paved parking, HSG C
6,098	98	Water Surface, 0% imp, HSG C
18,687	74	>75% Grass cover, Good, HSG C
5,389	98	Paved parking, HSG C
85,452	93	Weighted Average
24,785		29.00% Pervious Area
60,667		71.00% Impervious Area

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

Subcatchment 12S: DA 1D



Summary for Pond 2P: 30" RCP

Inflow Area = 56.590 ac, 19.92% Impervious, Inflow Depth > 4.72" for 100-Year event
Inflow = 28.38 cfs @ 12.18 hrs, Volume= 22.280 af
Outflow = 28.38 cfs @ 12.18 hrs, Volume= 22.280 af, Atten= 0%, Lag= 0.0 min
Primary = 28.38 cfs @ 12.18 hrs, Volume= 22.280 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

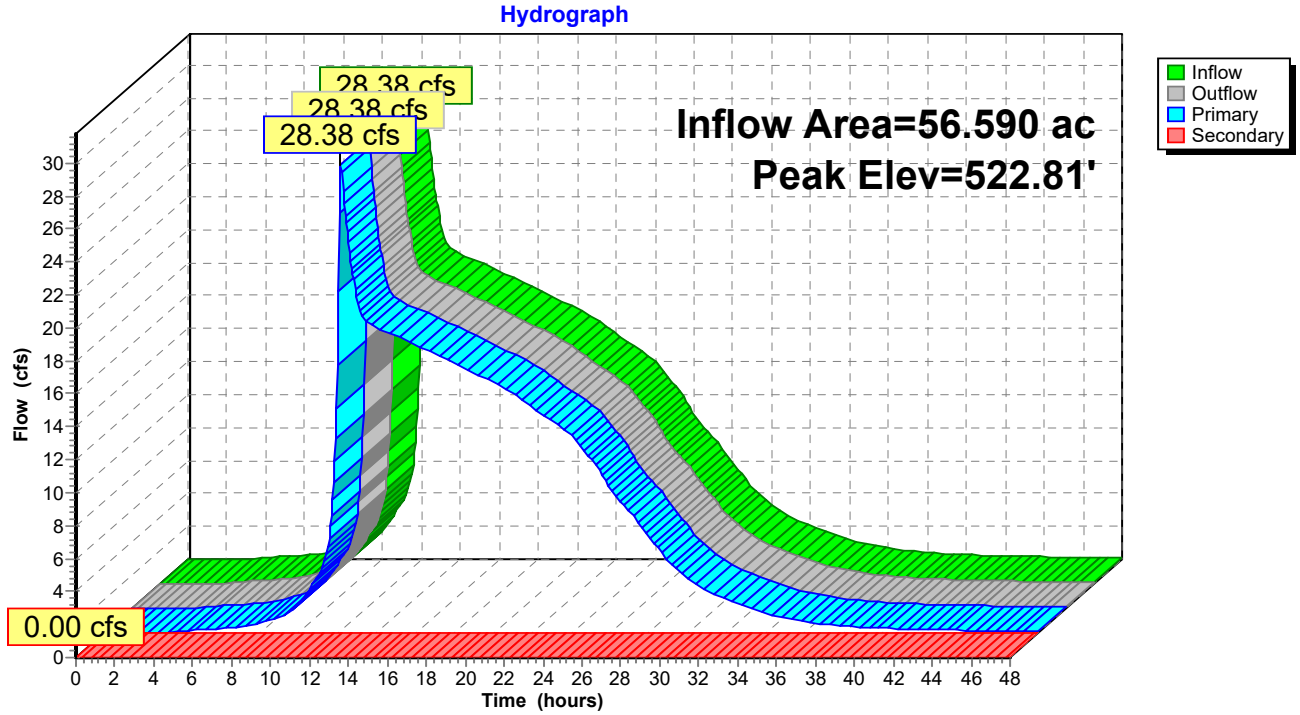
Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 522.81' @ 12.18 hrs
Flood Elev= 527.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	519.92'	**30.0" Round 30" RC** L= 80.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 519.92' / 519.62' S= 0.0037 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 4.91 sf
#2	Secondary	527.20'	**30.0' long x 10.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=28.28 cfs @ 12.18 hrs HW=522.80' (Free Discharge)
└**1=30" RC** (Barrel Controls 28.28 cfs @ 6.27 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=519.92' (Free Discharge)
└**2=Overflow** (Controls 0.00 cfs)

Pond 2P: 30" RCP



Summary for Pond 4P: Pond

Inflow Area = 52.568 ac, 15.62% Impervious, Inflow Depth = 4.58" for 100-Year event
Inflow = 160.70 cfs @ 12.29 hrs, Volume= 20.062 af
Outflow = 16.59 cfs @ 14.55 hrs, Volume= 19.908 af, Atten= 90%, Lag= 135.9 min
Primary = 16.59 cfs @ 14.55 hrs, Volume= 19.908 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 528.33' @ 14.55 hrs Surf.Area= 3.006 ac Storage= 11.001 af

Plug-Flow detention time= 373.9 min calculated for 19.888 af (99% of inflow)
Center-of-Mass det. time= 370.3 min (1,205.6 - 835.3)

Volume	Invert	Avail.Storage	Storage Description
#1	523.45'	16.273 af	**Pond Storage (Irregular)**Listed below

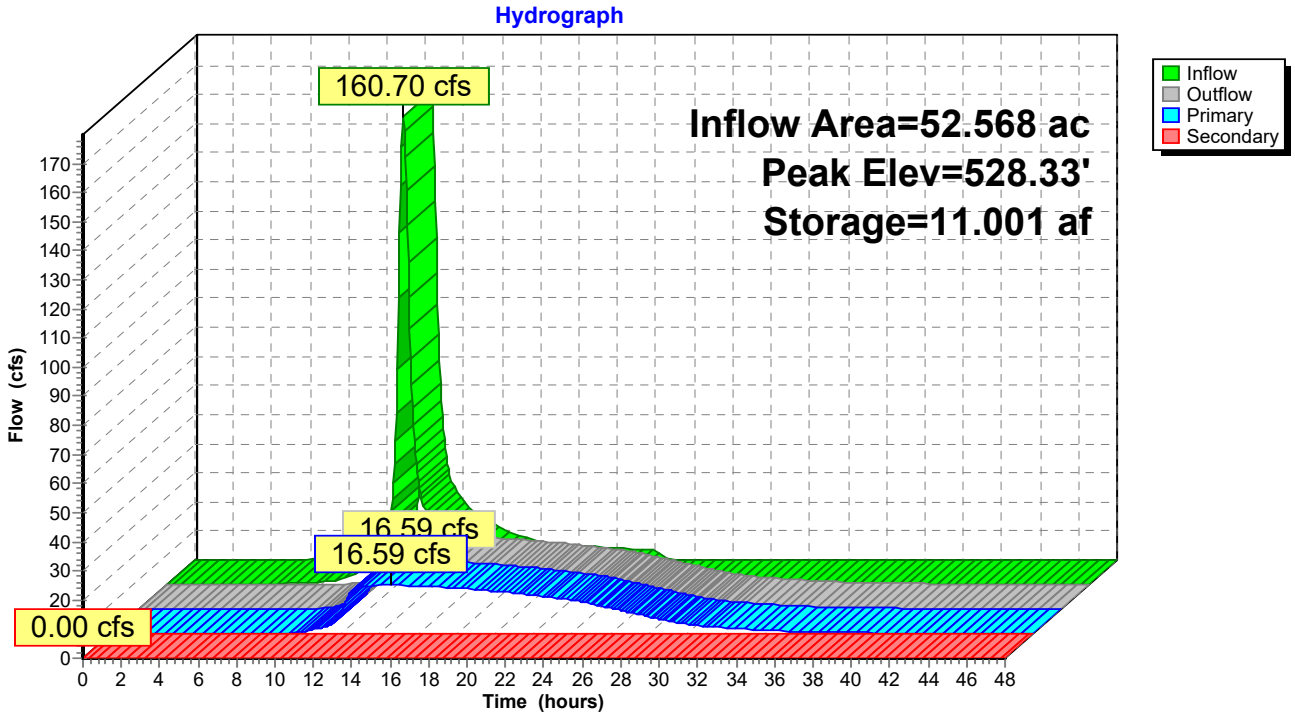
Elevation (feet)	Surf.Area (acres)	Perim. (feet)	Inc.Store (acre-feet)	Cum.Store (acre-feet)	Wet.Area (acres)
523.45	0.636	1,389.1	0.000	0.000	0.636
524.00	1.723	1,270.7	0.624	0.624	1.212
526.00	2.359	1,494.7	4.065	4.690	2.345
528.00	2.936	1,638.1	5.284	9.974	3.169
530.00	3.368	1,700.4	6.299	16.273	3.556

Device	Routing	Invert	Outlet Devices
#1	Primary	520.91'	**30.0" Round 30" HDPE** L= 110.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 520.91' / 520.64' S= 0.0024 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#2	Device 1	521.46'	**30.0" Round 30" HDPE** L= 86.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 521.46' / 520.91' S= 0.0063 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 4.91 sf
#3	Device 2	521.41'	**24.0" Round 24" HDPE** L= 157.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 521.41' / 521.40' S= 0.0001 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#4	Device 3	523.45'	**18.0" Round 18" HDPE** L= 117.9' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 523.45' / 521.82' S= 0.0138 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#5	Secondary	529.90'	**50.0' long x 25.0' breadth Overflow** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=16.59 cfs @ 14.55 hrs HW=528.33' TW=522.03' (Dynamic Tailwater)
└─**1=30" HDPE** (Passes 16.59 cfs of 56.45 cfs potential flow)
└─**2=30" HDPE** (Passes 16.59 cfs of 56.01 cfs potential flow)
└─**3=24" HDPE** (Passes 16.59 cfs of 30.09 cfs potential flow)
└─**4=18" HDPE** (Barrel Controls 16.59 cfs @ 9.39 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=523.45' TW=519.92' (Dynamic Tailwater)
└─**5=Overflow** (Controls 0.00 cfs)

Pond 4P: Pond



Summary for Pond 10P: Apartment Detention Basin

Inflow Area = 2.152 ac, 30.72% Impervious, Inflow Depth = 4.73" for 100-Year event
Inflow = 8.10 cfs @ 12.27 hrs, Volume= 0.848 af
Outflow = 5.74 cfs @ 12.47 hrs, Volume= 0.848 af, Atten= 29%, Lag= 12.3 min
Primary = 5.74 cfs @ 12.47 hrs, Volume= 0.848 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 538.80' @ 12.47 hrs Surf.Area= 2,407 sf Storage= 3,557 cf

Plug-Flow detention time= 4.8 min calculated for 0.847 af (100% of inflow)
Center-of-Mass det. time= 4.9 min (837.8 - 833.0)

Volume	Invert	Avail.Storage	Storage Description
#1	536.00'	7,026 cf	**Detention Basin (Irregular)**Listed below (Recalc)

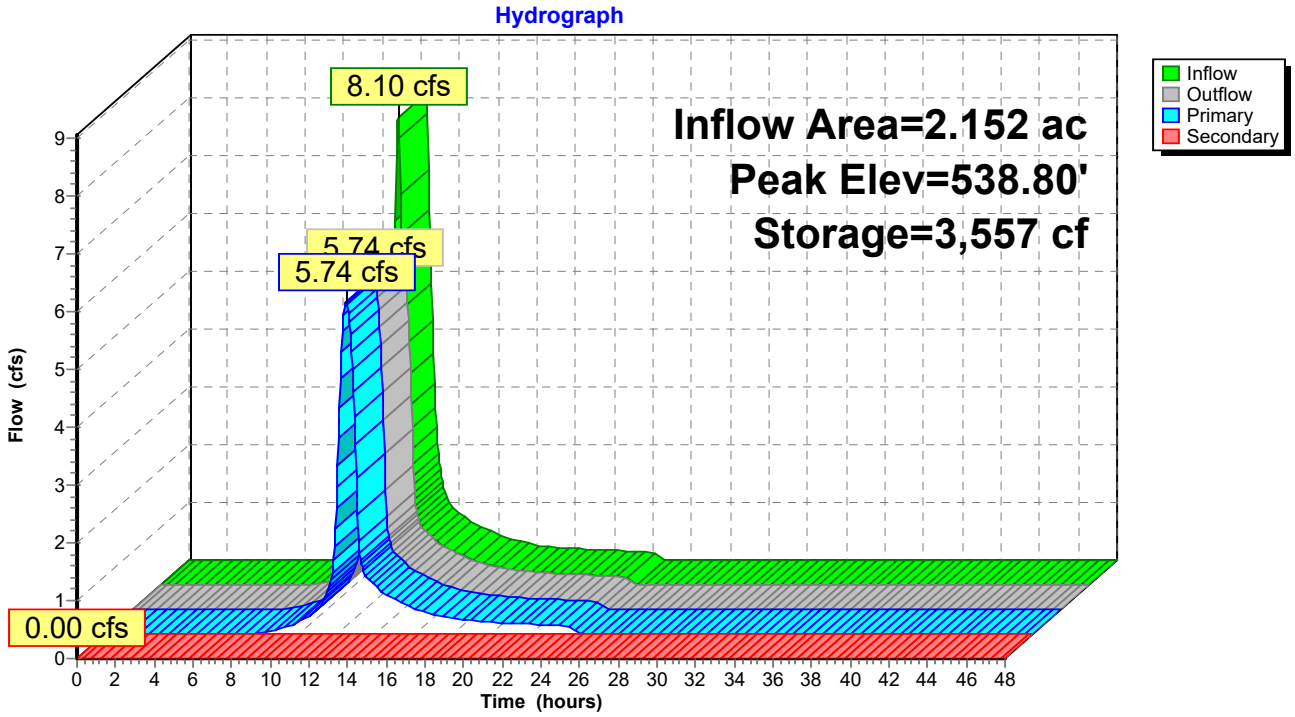
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
536.00	100	40.0	0	0	100
536.50	467	110.5	131	131	945
537.60	1,559	173.6	1,056	1,186	2,380
540.00	3,429	242.5	5,840	7,026	4,716

Device	Routing	Invert	Outlet Devices
#1	Primary	536.00'	**12.0" Round Culvert** L= 75.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 536.00' / 534.50' S= 0.0200 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#2	Secondary	539.50'	**20.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=5.73 cfs @ 12.47 hrs HW=538.80' TW=527.03' (Dynamic Tailwater)
↑—**1=Culvert** (Inlet Controls 5.73 cfs @ 7.30 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=536.00' TW=523.45' (Dynamic Tailwater)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 10P: Apartment Detention Basin



Summary for Pond 13P: Water Quality Basin

[42] Hint: Gap in defined storage above volume #1 at 524.25'

Inflow Area = 1.962 ac, 71.00% Impervious, Inflow Depth = 7.20" for 100-Year event
Inflow = 14.75 cfs @ 12.09 hrs, Volume= 1.177 af
Outflow = 6.20 cfs @ 12.30 hrs, Volume= 1.176 af, Atten= 58%, Lag= 12.6 min
Primary = 6.20 cfs @ 12.30 hrs, Volume= 1.176 af
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Peak Elev= 528.29' @ 12.30 hrs Surf.Area= 6,933 sf Storage= 17,015 cf

Plug-Flow detention time= 110.9 min calculated for 1.175 af (100% of inflow)
Center-of-Mass det. time= 110.0 min (875.3 - 765.2)

Volume	Invert	Avail.Storage	Storage Description
#1	522.25'	290 cf	**2.00'W x 181.00'L x 2.00'H Underdrain Trench** 724 cf Overall x 40.0% Voids
#2	524.75'	27,446 cf	**Water Quality swale (Irregular)**Listed below (Recalc)
		27,735 cf	Total Available Storage

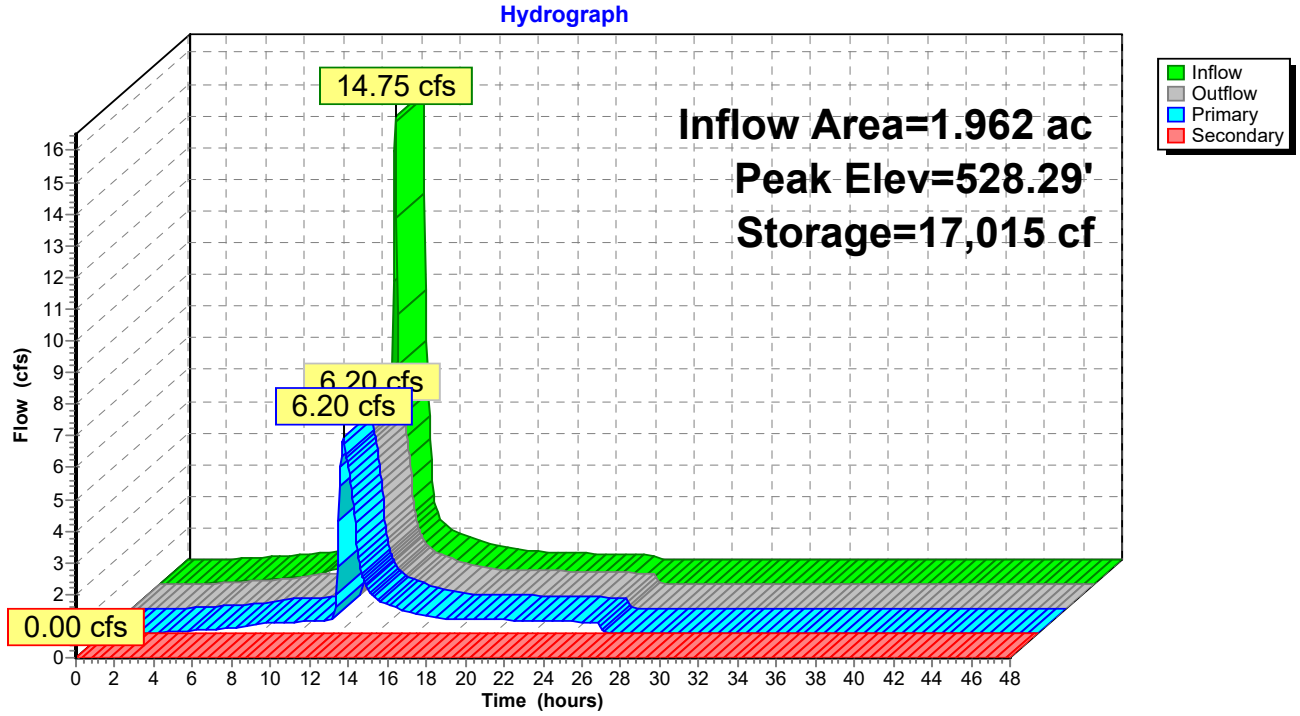
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
524.75	2,969	471.4	0	0	2,969
525.00	3,207	477.3	772	772	3,430
526.00	4,185	500.8	3,685	4,457	5,323
528.00	6,268	535.7	10,383	14,840	8,383
529.75	8,181	557.7	12,606	27,446	10,523

Device	Routing	Invert	Outlet Devices
#1	Primary	522.50'	**24.0" Round 24" HDPE** L= 75.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 522.50' / 521.75' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	522.75'	**3.0" Vert. Underdrain** C= 0.600 Limited to weir flow at low heads
#3	Device 1	526.50'	**6.0" W x 6.0" H Vert. 6" Orifice** C= 0.600 Limited to weir flow at low heads
#4	Device 1	527.00'	**18.0" W x 6.0" H Vert. 18x6 Orifice** C= 0.600 Limited to weir flow at low heads
#5	Device 1	528.25'	**2.0" x 2.0" Horiz. Top of Frame X 20.00 columns** X 20 rows C= 0.600 in 48.0" x 48.0" Grate (69% open area) Limited to weir flow at low heads
#6	Secondary	528.75'	**10.0' long x 8.0' breadth Emergency Spillway** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=6.19 cfs @ 12.30 hrs HW=528.29' TW=522.68' (Dynamic Tailwater)
└─**1=24" HDPE** (Passes 6.19 cfs of 33.12 cfs potential flow)
  ├─**2=Underdrain** (Orifice Controls 0.55 cfs @ 11.21 fps)
  ├─**3=6" Orifice** (Orifice Controls 1.49 cfs @ 5.97 fps)
  ├─**4=18x6 Orifice** (Orifice Controls 3.68 cfs @ 4.91 fps)
  └─**5=Top of Frame** (Weir Controls 0.46 cfs @ 0.68 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=522.25' TW=519.92' (Dynamic Tailwater)
└─**6=Emergency Spillway** (Controls 0.00 cfs)

Pond 13P: Water Quality Basin



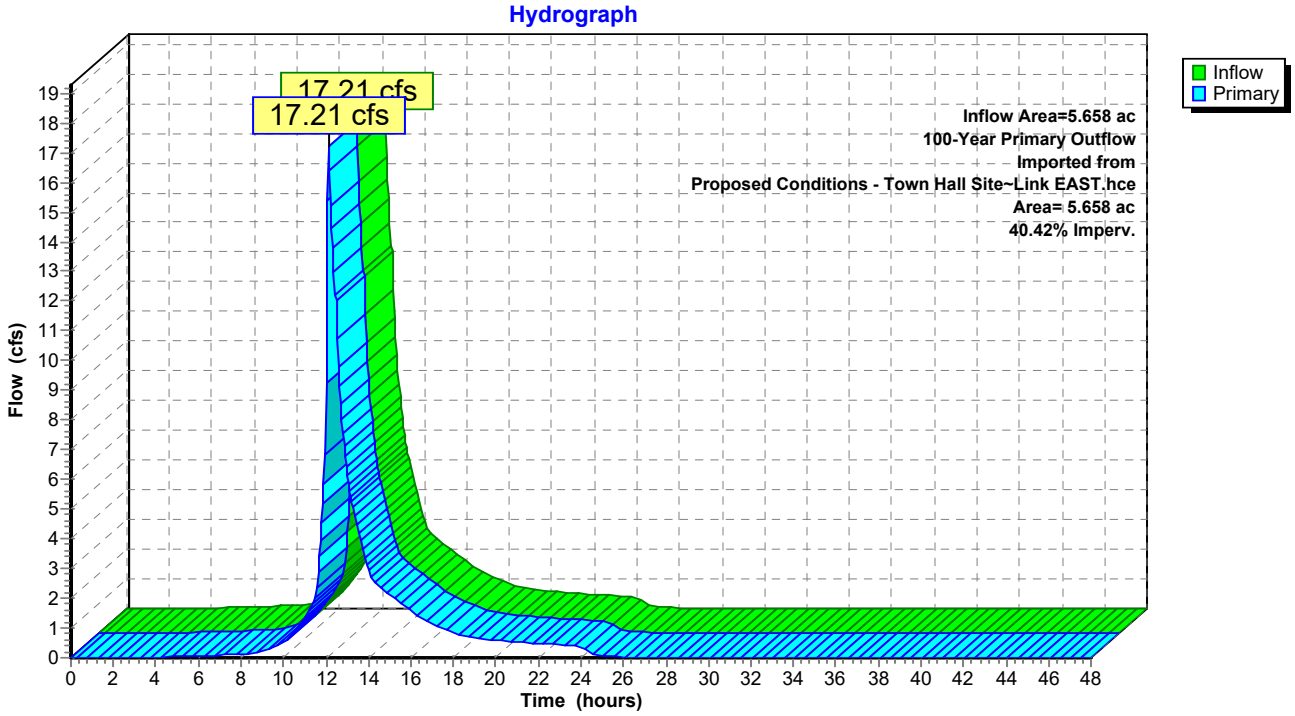
Summary for Link 14L: DA 2D - From Town Hall

Inflow Area = 5.658 ac, 40.42% Impervious, Inflow Depth = 5.31" for 100-Year event
Inflow = 17.21 cfs @ 12.11 hrs, Volume= 2.505 af
Primary = 17.21 cfs @ 12.11 hrs, Volume= 2.505 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

100-Year Primary Outflow Imported from Proposed Conditions - Town Hall Site~Link EAST.hce

Link 14L: DA 2D - From Town Hall



Appendix C
Supporting Stormwater Calculations

Appendix C

Pipe Sizing Calculations

Manning's Equation for Open Channel Flow

$$Q = \frac{1.49}{n} A R^{2/3} S^{1/2}$$

Maximum pipe capacities for the trunk line drains are presented below as compared to the peak flow rates calculated using the Rational Method for the contributing watersheds or the HydroCAD modeling results as applicable. Pipes are sized with capacity for the 25-year design storm minimum.

Type CL CB to Drainage Manhole (15-inch HDPE at S = 0.02)

Q=	**9.16**	**CFS**	Flow Capacity
n=	0.013		Roughness Coefficient
A=	1.23	SF	Area of Pipe
R=	0.3125	FT	Hydraulic Radius = A/P
S=	0.02	FT/FT	Pipe Slope
r=	0.625	FT	Pipe Radius
P=	3.93	FT	Pipe Perimeter

Design Flow Rate

C_f=	1.1	
C=	0.95	
I=	9.02	in/hour
A=	0.031	acre
Q=	**0.3**	**CFS**

CAPACITY FOR 25-YEAR EVENT (MIN)

Type CG CB to Drainage Manhole (24-inch HDPE at S=0.01)

Q=	**22.68**	**CFS**	Flow Rate
n=	0.013		Roughness Coefficient
A=	3.14	SF	Area of Pipe
R=	0.5	FT	Hydraulic Radius = A/P
S=	0.01	FT/FT	Pipe Slope
r=	1	FT	Pipe Radius
P=	6.28	FT	Pipe Perimeter

Design Flow Rate

Q= 11.39 CFS

(25-year inflow to Water Quality Basin)

CAPACITY FOR 25-YEAR EVENT (MIN)

Outlet Control Structure to DMH (24-inch HDPE at S = 0.01)

Q=	**22.68**	**CFS**	Flow Rate
n=	0.013		Roughness Coefficient
A=	3.14	SF	Area of Pipe
R=	0.5	FT	Hydraulic Radius = A/P
S=	0.01	FT/FT	Pipe Slope
r=	1	FT	Pipe Radius
P=	6.28	FT	Pipe Perimeter

Design Flow Rate

Q= 11.39 CFS

(25-year inflow to Water Quality Basin)

CAPACITY FOR 25-YEAR EVENT (MIN)

Type C CB 1 to Water Quality Basin (15-inch HDPE at S = 0.01)

Q=	**6.48**	**CFS**	Flow Rate
n=	0.013		Roughness Coefficient
A=	1.23	SF	Area of Pipe
R=	0.3125	FT	Hydraulic Radius = A/P
S=	0.01	FT/FT	Pipe Slope
r=	0.625	FT	Pipe Radius
P=	3.93	FT	Pipe Perimeter

Design Flow Rate

C_f=	1.1	
C=	0.95	
I=	9.02	in/hour
A=	0.141	acre
Q=	**1.3**	**CFS**

CAPACITY FOR 25-YEAR EVENT (MIN)

Appendix C

Pipe Sizing Calculations

Type C CB 2 to Type C CB 1 (15-inch HDPE at S = 0.01)

Q=	**6.48**	**CFS**	Flow Rate
n=	0.013		Roughness Coefficient
A=	1.23	SF	Area of Pipe
R=	0.3125	FT	Hydraulic Radius = A/P
S=	0.01	FT/FT	Pipe Slope
r=	0.625	FT	Pipe Radius
P=	3.93	FT	Pipe Perimeter

Design Flow Rate

C_f=	1.1	
C=	0.95	
I=	9.02	in/hour
A=	0.1	acre
Q=	**0.9**	**CFS**

CAPACITY FOR 25-YEAR EVENT (MIN)

Roof Drainage* (8-inch PVC at S = 0.02)

Q=	**1.97**	**CFS**	Flow Rate
n=	0.011		Roughness Coefficient
A=	0.34	SF	Area of Pipe
R=	0.165	FT	Hydraulic Radius = A/P
S=	0.02	FT/FT	Pipe Slope
r=	0.33	FT	Pipe Radius
P=	2.07	FT	Pipe Perimeter

Design Flow Rate

C_f=	1.1	
C=	0.95	
I=	9.02	in/hour
A=	0.13	acre
Q=	**1.2**	**CFS**

CAPACITY FOR 25-YEAR EVENT (MIN)

**2015 International Plumbing Code specifies a rainfall intensity of 2.75 inches/hour for roof drain sizing. Proposed sizing is conservative.*

Appendix C

Preformed Scour Hole Sizing Calculations

Empirical Preformed Scour Hole Equations:

Type 1: Scour Hole Depression = one-half pipe rise, m (ft)

$d_{50} = (0.0276\ R_p^2 / TW)\ (Q/R_p^{2.5})^{1.333}$ ($d_{50} = (0.0125 R_p^2/TW)\ (Q/R_p^{2.5})^{1.333}$) **(11.35)**

Type 1 and 2 preformed scour hole dimensions (See Figure 11-15)

$C = 3S_p + 6F$	Basin Length m (ft)	
$B = 2S_p + 6F$	Basin Inlet and Outlet Width m (ft)	**(11.37)**
$F = 0.5R_p$ (Type 1) or R_p (Type 2)	Basin Depression m (ft)	

Table 11-14 solves the above set of equations for Type 1 and 2 preformed scour holes for various pipe sizes.

The type of riprap required is as follows:

Modified	$d_{50} < 0.13$m (0.42 ft)
Intermediate	0.13m (0.42 ft) $< d_{50} <$ 0.20m (0.67 ft)
Standard	0.20m (0.67 ft) $< d_{50} <$ 0.38m (1.25 ft)
Special Design	0.38m (1.25 ft) $< d_{50}$

L_a = length of apron, m (ft)
S_p = inside diameter for circular sections or maximum inside pipe span for non-circular sections, m (ft)
Q = pipe (design) discharge, cms (cfs)
TW = tailwater depth, m (ft)
R_p = maximum inside pipe rise, m (ft)
Note: $S_p = R_p$ = inside diameter for circular sections

Discharge

S_P=	15	Inches	Pipe Diameter
Q=	14.8	CFS	100-year flow for watershed (conservative design)
d_{50}=	0.34	FT	Equation 11.35, Use Modified Riprap
F=	0.63	FT	Equation 11.37
C=	7.5	FT	Equation 11.37
B=	6.25	FT	Equation 11.37

Water Quality Volume - Market Square (South) Full Buildout

WQV = (1")(R)(A)/12

WQV = Water Quality Volume (acre-feet)

R = Runoff Co-Efficient = 0.005 + 0.009(I)

I = Impervious Area (%)

A = Site Area (acres)

IA=	1.27	acres
I =	69.04	%
R =	0.63	
A =	1.84	acres
WQV =	0.10	acre-feet
=	**4,179.18**	**cubic feet**

6,958 cubic feet of storage provided below elevation **526.50** in Water Quality Basin
Lowest unfiltered outlet elevation = **526.50**

Appendix C

Sediment Trap and MS-2 Phase Water Quality Volume Calculations

Temporary Sediment Trap Sizing - Current Phase (MS-2 Building Only)

134 cubic yards of storage per acre of disturbed area required.

Disturbed Area =	0.7000	acres
Storage Volume Required =	93.8	cubic yards
=	2532.6	cubic feet
Storage Volume Provided =	**5,720**	cubic feet between **525.50** and **528.25** (Top of Frame)
		Orifices blocked during active construction.

Water Quality Volume - Current Phase (MS-2 Building Only)

WQV = (1")(R)(A)/12

WQV = Water Quality Volume (acre-feet)

R = Runoff Co-Efficient = 0.005 + 0.009(I)

I = Impervious Area (%)

A = Site Area (acres)

IA=	0.42	acres
I =	59.57	%
R =	0.54	
A =	0.70	acres

WQV =	0.03	acre-feet
=	**1,375.04**	**cubic feet**

1,629 cubic feet of storage provided between elevation **525.50** and **526.50**

Lowest outlet elevation = **526.50**

Time to Drain through Underdrain Filter

$$A_f = \frac{(WQV)(d)}{[(k)(t)(h+d)]}$$

where: A_f = filter bed surface area (ft2)
WQV = water quality volume (ft3)
d = filter bed depth (ft)
k = hydraulic conductivity of filter media (ft/day)
t = time for the water quality volume to drain from the system (24 hours)
h = average height of water above filter bed during water quality design storm

Af=	145.11111	sf
WQV=	4,179.20	cf
d=	2.5	ft
k=	1	ft/day
t=	24	hours
h=	0.5	ft

Filter Surface Area Provided = 362 square feet (181 feet long x 2.0 feet wide)

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Facsimile: (860) 848-4003

May 13, 2020

East Hampton Planning and Zoning Commission
Attn: Mr. Jeremy DeCarli, Director of Planning
1 Community Drive
East Hampton, CT 06424

Re: Edgewater Hill Enterprises, LLC – Application for site plan approval for Market Square-2

Dear Jeremy:

As you are aware, this office represents Edgewater Hill Enterprises, LLC, Edgewater Hill Properties, LLC, Edgewater Hill Apartments, LLC and Edgewater Homes I, LLC, the current developers of the Edgewater Hill Master Planned Community located on the easterly side of East High Street in East Hampton, Connecticut. On behalf of our client, Edgewater Hill Enterprises, LLC, we hereby submit to the Town of East Hampton Planning and Zoning Commission, for consideration, a site plan application for the development of a project designated as "Market Square-2" within the Market Square section of the Edgewater Hill Master Planned Community.

The site plan application submitted herewith is consistent with the approved Master Plan for the Edgewater Hill Community, approved by the East Hampton Planning and Zoning Commission in 2012. Market Square-2 is a proposed three (3) story mixed use component of the Market Square Section of Edgewater Hill. The site plan contemplates commercial/restaurant development on the first floor and multi-family residential apartments on the second and third floors. The project will interconnect to public water and public sewer.

Submitted herewith and constituting the application to the Town of East Hampton Planning and Zoning Commission are the following:

1. Eleven (11) copies of the "Minimum Requirements for Submission of Application to Planning and Zoning Commission", which has been completed and executed by the applicant.

2. Eleven (11) copies of the Town of East Hampton Planning and Zoning Commission Application Form for site plan approval and for Lake Pocotopaug Protection Area approval, including the completed Planning and Zoning Fee Schedule attached thereto.

3. Eleven (11) copies of the List of Abutting Property Owners, including property owners located across the street from the application parcel.

4. Copies of the notices of the pendency of the application which have been mailed by this office, on behalf of the applicant, to all abutting property owners in accordance with the requirements of Section 9.4.F of the East Hampton Zoning Regulations.

5. Eleven (11) prints of the site plan entitled "Site Development Plan Proposed Mixed Use Building (MS-2) prepared for Edgewater Hill Enterprises, LLC 000 East High Street (CT Route 66) East Hampton, Connecticut May 2020 Applicants/Property Owners: Edgewater Hill Enterprises, LLC 138 East High Street, East Hampton, CT 06424 Edgewater Hill Enterprises, LLC 138 East High Street East Hampton, CT 06424 Property Info: 000 East High Street Assessor's ID: 10A/85/5C Area: 59.41 +/- Acres 128 East High Street Assessor's ID: 10A/85/10 Area: 1.47 +/- Acres Sheets 1 0f 12 to 12 of 12" prepared by Boundaries, LLC.

6. Eleven (11) prints of the architectural floor plans and elevations of Market Square-2 entitled "Edgewater Hill:MS-2" dated 05.15.2020 consisting of 6 sheets prepared by Amenta/Emma.

7. An Authorization signed by the owner and applicant authorizing the law firm of Heller, Heller & McCoy and the engineering/surveying firm of Boundaries, L.L.C. to represent its interests in all proceedings before the Town of East Hampton Planning and Zoning Commission with respect to the site plan application and the Lake Pocotopaug Protection Area application.

8. Three (3) copies of the Stormwater Management Report for the project entitled "Stormwater Management Report Prepared For: Edgewater Hill Enterprises, LLC Proposed Mixed Use Building (MS-2) 000 East High Street (CT Route 66) East Hampton, Connecticut May 2020 Prepared By: Boundaries LLC Project I.D. No. 20-2795-2".

9. Eleven (11) copies of the Minutes of the July 24, 2014 meeting of the Town of East Hampton Water Pollution Control Authority resolving to authorize the interconnection of all buildings in the Market Square section of the Edgewater Hill Master Planned Community to the Town of East Hampton municipal sewer system.

10. Our client's check payable to "Town of East Hampton" in the amount of $1,885.00 representing payment of the application fee for the site plan application, calculated in accordance with the Planning and Zoning Fee Schedule attached to the Site Plan Application.

Request is hereby made that you place this matter on the agenda of the June 3, 2020 meeting Town of East Hampton Planning and Zoning Commission.

Should you have any questions concerning the application, or need any additional information, please feel free to contact the undersigned.

Very truly yours,

Harry B. Heller

HBH/rmb

Cc: Mr. John Faulise
Mr. David McKay
Mr. Stephen J. Motto

TOWN OF EAST HAMPTON
Planning and Zoning Commission
1-860-267-7450
www.easthamptonct.gov

RECEIVED
MAY 22 2020
BY

PZC-20-012

PZC _____
Date _____

Fee Paid $210.00
Check # 3281-3291
Rec'd. By _____

LOCATION 11 North Main Street MAP 01A BLK 39A LOT 28A

PROJECT NAME _____ ZONE _____

APPLICANT Theatre Square PHONE 860-267-6623
ADDRESS 11 North Main Street EMAIL Chuck.Haller1@gmail.com

CONTACT PERSON Chuck Haller PHONE _____
EMAIL _____

OWNER Chuck Haller. PHONE 860-558-6000
ADDRESS 412 Boston Rd Middletown CT 06457 EMAIL Chuck.Haller1@gmail.com

SURVEYOR/ENGINEER Greg Warren PHONE _____
ADDRESS _____ EMAIL _____

ATTORNEY Michael Boiczyk PHONE 860-225-9463
ADDRESS 24 Cedar Street New Britain CT. 06052 EMAIL mboiczyk@weber carrier.com

APPLICATION TYPE *(application must be completed in FULL in order to be accepted)*

___1. SUBDIVISION /RESUBDIVISION /CONSERVATION SUBDIVISION NO. OF LOTS_____
___3. SITE PLAN_____MODIFICATION_____Residential_____Commercial_____
___4. SPECIAL PERMIT---SECTION_____OF THE ZONING REGS. FOR_____
___5. ZONE CHANGE---FROM_____TO_____
___6. AMENDMENT TO ZONING REGULATIONS
___7. LAKE POCOTOPAUG PROTECTION AREA _____
___8. ACTIVE ADULT NO OF UNITS_____
___7. OTHER (DESCRIBE) Amendment to site plan

APPLICATION REQUIREMENTS: This application and 10 sets of plans shall be submitted to the Land Use Office and shall be received by the Commission at the next regularly scheduled meeting. *(see meeting schedule for deadline dates)*

A complete application shall consist of an application, fees, maps /plans(A-2 survey) ,engineers report including drainage calculations and watershed calculations(pre and post), bond estimates, hydrology report, environmental studies, waiver requests and traffic study where applicable

Preliminary discussions are highly recommended for subdivisions 5 lots & over and for larger Special Permit Applications
Abutters notice receipts (green cards)must be handed in to the Planning Office prior to the meeting

APPLICANTS SIGNATURE_____ DATE 5/21/20

OWNER'S SIGNATURE Chuck Haller DATE 5/21/20

The owner and applicant hereby grant the East Hampton Planning and Zoning Commission and/or it's agents permission to enter upon the property to which the application is requested for the purpose of inspection and enforcement of the Zoning Regulations and Subdivision Regulations of the Town of East Hampton.

Form PZC1 5/20

25 x 25 deck + crosswalk

PLANNING AND ZONING FEE SCHEDULE

Note: Each application requires an additional $60 fee to be submitted to the State (effective 10/09)		**$ 60.00**
SUBDIVISION APPLICATION & CONSERVATION SUBDIVISION		
No. of lots _____		
A fee of $500 plus the sum of	$ 150/ lot	_____
1-5 lots	$ 150/ lot	_____

Plus a developer's fee of 3% of the bond filed for subdivisions requiring public improvements to be paid at the time bonds are filed with the Town and prior to any construction

SITE PLAN REVIEW

Residential/Commercial	$ 150	_____

Commercial, Industrial, Designed Development: Calculated by total sq ft of impervious surface

New Construction
Square Feet 22 x 25

Less than 3000 Sq Ft	$ 150	✓
3001 to 5,000 Sq Ft	$ 250	_____
5001 to 10,000 Sq ft	$ 600	_____
10,001 to 15,000 Sq ft	$ 1100	_____
For every additional 5000 Sq Ft	$ 500	_____

SPECIAL PERMIT

Special Permit	$ 150	_____

Commercial, Industrial, Designed Development: Calculated by total sq ft of impervious surface

New Construction
Square Feet _____

Less than 3000 Sq Ft	$ 150	_____
Less than 5000Sq Ft	$ 300	_____
5001 to 10,000 Sq Ft	$ 600	_____
10,001 to 15,000Sq Ft	$ 1100	_____
For every additional 5000 Sq FT	$ 500	_____

For Special Permits involving Commercial Properties fees increase by $50

SITE PLAN MODIFICAT ION

Minor Amendment	$ 50	_____
Major Amendment	$ 100	_____
ZONING OR SUBDIVISION REGULATION TEXT CHANGE	$ 300	_____
CHANGE IN ZONING MAP	$ 500	_____
LAKE POCOTOPAUG PROTECTION AREA	$ 75	_____
APPLICATION FOR MULTI-FAMILY, ACTIVE ADULT AND HOD	$ 1000	_____
Number of unit's _____		
Plus the sum of	$100/unit	_____
	Total	_____

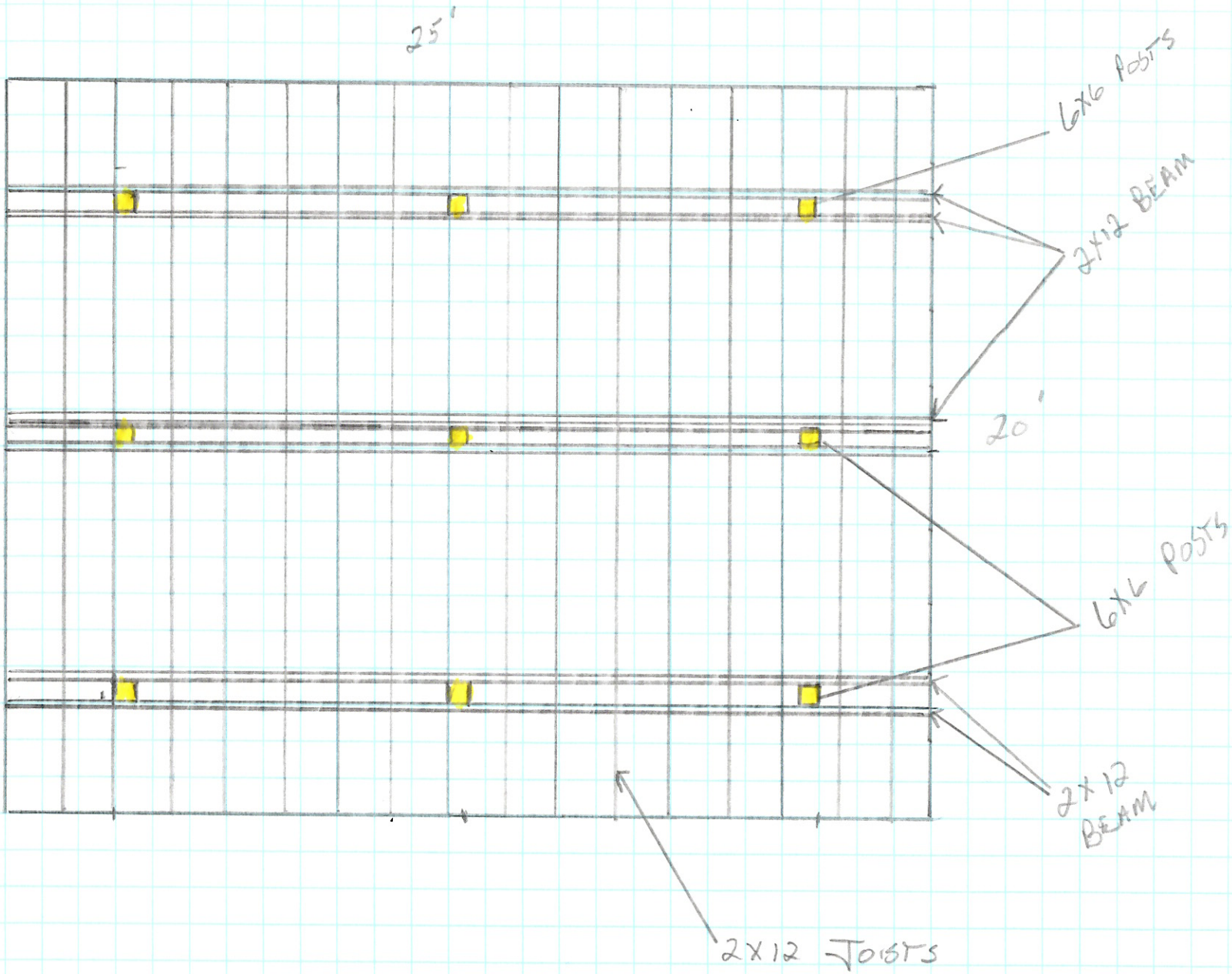
Theater Square
244 Middletown Avenue
East Hampton, CT. 06424
(860) 267-6623

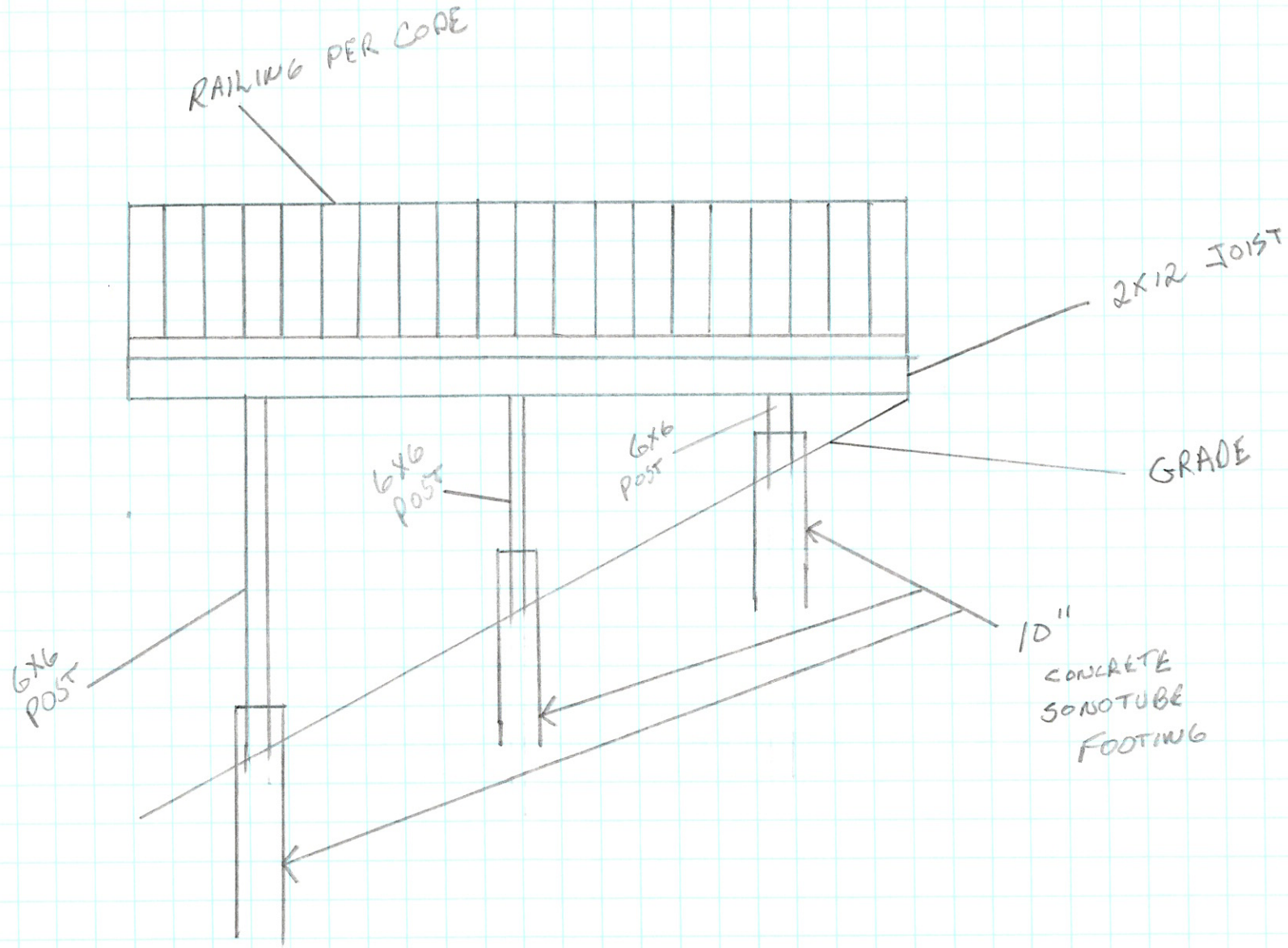
May 21, 2020

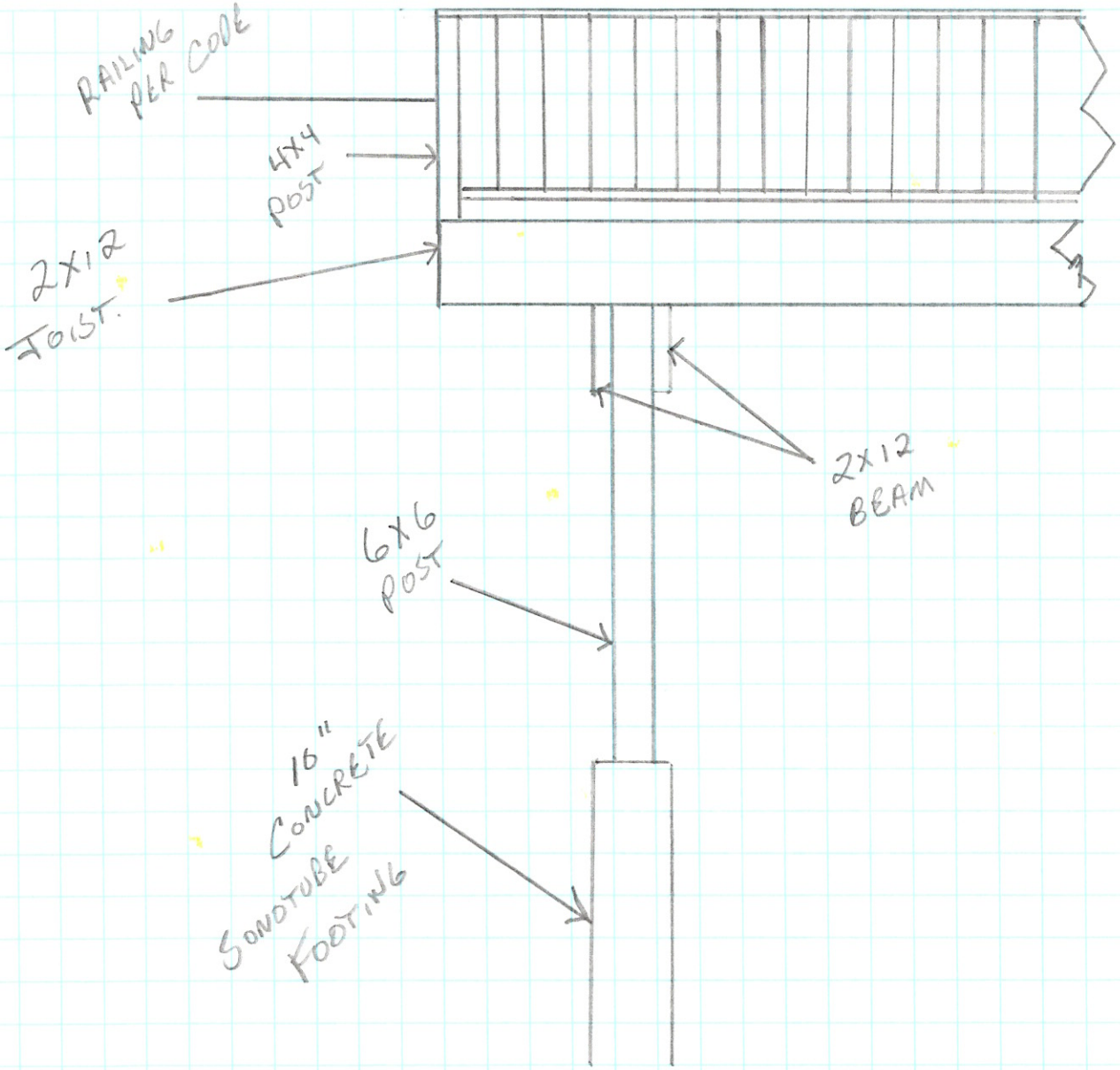
RE: Deck / Wall 11 North Main Street East Hampton CT.

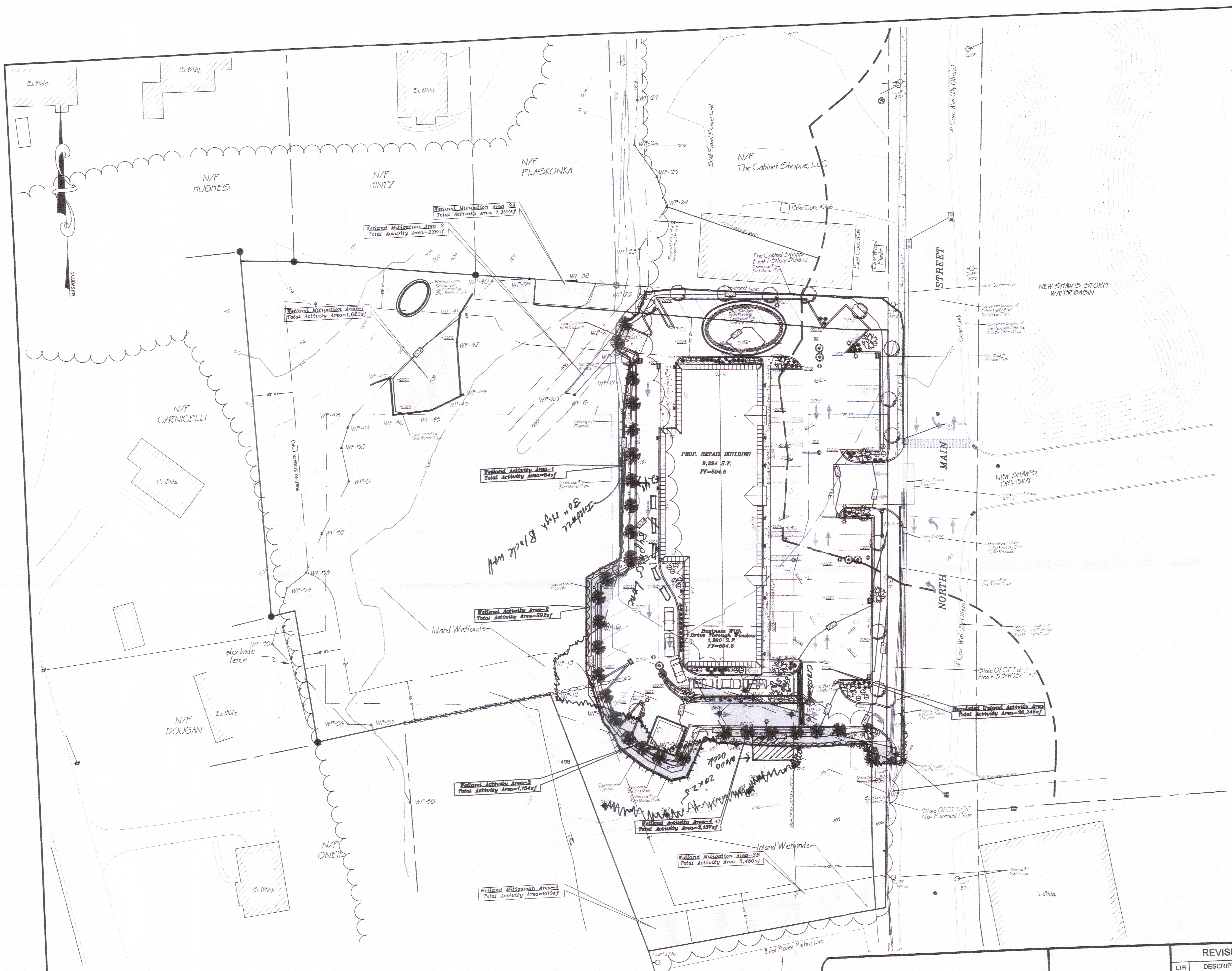
Construction will consist of the following:

Auger drill five 42" deep holes for sonotube footings
Back fill, Seed & Hay any disturbed area around pier
Install wood deck 2' high with approved railings


25'
6x6 Posts
2x12 BEAM
20'
6x6 Posts
2x12 BEAM
2x12 Joists


RAILING PER CODE
2X12 JOIST
6X6 POST
6X6 POST
6X6 POST
GRADE
10"
CONCRETE SONOTUBE FOOTING


RAILING PER CODE
4X4 POST
2X12 JOIST.
2X12 BEAM
6X6 POST
16" CONCRETE SONOTUBE FOOTING



MITIGATION PLAN NOTES

1.) ALL MITIGATION ACTIVITIES ARE TO BE ACCOMPLISHED UNDER THE SUPERVISION OF A CERTIFIED SOIL SCIENTISTS OR EQUALLY QUALIFIED PERSON.

2.) ALL MITIGATION RELATED WORK IS TO BE CONDUCTED IN THE DRY SEASON ONLY.

3.) ALL MITIGATION WORK AREAS ARE TO BE FIELD LOCATED AND APPROVED BY THE SUPERVISING PROJECT SOIL SCIENTIST. THE TOWN SHALL BE GIVEN A MINIMUM ONE (1) WEEK NOTICE PRIOR TO COMMENCEMENT OF MITIGATION ACTIVITIES SUCH THAT A TOWN REPRESENTATIVE MAY ELECT TO INSPECT MITIGATION AREAS PRIOR TO AND DURING ANY CONSTRUCTION ACTIVITIES.

4.) PROPOSED WETLAND MITIGATION AREAS 1 & 2 ARE TO BE COMPLETED WITH THE INTENTION OF CREATING FLOOD STORAGE TO COMPENSATE FOR STORAGE LOST DUE TO WETLAND FILLING ACTIVITIES. THESE AREAS ARE ALSO DESIGNED TO REPLICATE SURROUNDING ON-SITE WETLAND AREAS. MITIGATION AREAS 1 & 2 TO BE DEVELOPED AS FOLLOW:

A. SILT FENCE AND HAYBALES ARE TO BE PLACED ALONG THE PERIMETER OF THE MITIGATION AREAS 1 & 2 PRIOR TO CONSTRUCTION. SILT FENCE AND HAY BALES ARE ALSO TO BE PLACED ALONG BOTH SIDES OF THE WETLAND/WATERCOURSE AT WETLAND FLAG #22 WHERE A "PLANK" BRIDGE WILL BE PLACED TO PROVIDE ACCESS FOR CONSTRUCTION EQUIPMENT (MINI-EXCAVATOR AND BOBCAT OR EQUAL) AND PERSONNEL. EQUIPMENT AND PERSONNEL SHALL ACCESS MITIGATION AREA-1 ALONG AN 8-FOOT SWATH ADJACENT TO THE NORTHERN PROPERTY BOUNDARY BY WETLANDS FLAG #38, #39 AND #40 ON TOP OF THE ACCUMULATED YARD DEBRIS. THE MITIGATION AREAS SHALL BE ACCESSED FROM THE UPLAND SIDE BETWEEN WETLAND FLAGS #41 AND #47.

B. WETLAND MITIGATION AREA-2 IS TO BE ACCESSED OVERLAND BETWEEN WETLAND FLAGS #18 AND #21.

C. BOTH MITIGATION AREAS (1 & 2) ARE TO BE EXCAVATED TO A BOTTOM ELEVATION OF 499 FEET ABOVE MEAN SEA LEVEL (MSL). ALL EXCAVATED SOIL AND 12-INCH LESS FILL MATERIAL IS TO BE REMOVED FOR REUSE ON UPLAND AREAS OF THE SITE. LARGE BOULDERS/STONES ARE TO BE PLACED ALONG THE NEWLY CREATED UPLAND BORDER TO STABILIZE THE SLOPE.

D. ORGANIC TOPSOIL FROM WETLAND ACTIVITY AREAS 1, 2 AND 4 ARE TO BE PLACED INTO WETLAND MITIGATION AREA-1 TO AN ELEVATION OF 500-FEET. IT IS ASSUMED THAT NATIVE WETLAND SOILS WILL BE ENCOUNTERED BENEATH THE FILL TO BE REMOVED FROM MITIGATION AREA-2. ORGANIC WETLAND SOILS ARE TO BE ADDED TO THIS AREA AS REQUIRED.

E. SIX (6) BALLED AND BURLAPPED (B&B) 6 TO 8-FOOT RED MAPLES (ACER RUBRUM) ARE TO BE PLACED IN MITIGATION AREA-1 AND THREE (3) SIMILAR PLANTINGS ARE TO BE PLACED ALONG MITIGATION AREA-2. TEN (10) SPICE BUSH (LINDERA BENZOIN) AND FOUR (4) HIGHBUSH BLUEBERRY (VACCINIUM CORYBOSUM) ARE TO BE PLANTED IN MITIGATION AREA-1. SIX (6) SPICE BUSH AND TWO (2) HIGHBUSH BLUEBERRY PLANTINGS ARE TO BE PLACED IN MITIGATION AREA-2. SHRUB PLANTINGS ARE TO BE A MINIMUM OF THREE (3) FEET. BOTH MITIGATION AREAS 1 & 2 ARE TO BE PLANTED WITH "NEW ENGLAND WETMIX" AFTER TREE AND SHRUB PLANTING. TREE AND SHRUB PLANTING LOCATIONS ARE TO BE FIELD SELECTED BY THE SUPERVISING WETLAND SCIENTIST.

F. BOTH MITIGATION AREAS 1 & 2 ARE TO BE MONITORED FOR TWO (2) YEARS TO ENSURE PLANTINGS HAVE TAKEN HOLD. SPRING SEED CASTING MAY BE REQUIRED TO ESTABLISH HERBACEOUS VEGETATION. ADDITIONAL PLANTINGS ARE TO BE INSTALLED SHOULD INITIAL PLANTINGS FAIL TO SURVIVE.

5.) AFTER MITIGATION AREA-1 IS COMPLETED, LAWN DEBRIS FROM ALONG WETLAND FLAGS #38 THROUGH #40 (MITIGATION AREA-3A) ARE TO BE REMOVED AS EQUIPMENT AND PERSONNEL EXIT THE WETLAND AREA. AN 8-FOOT HIGH BY 85-FOOT+/- LONG CHAIN LINK FENCE IS TO BE INSTALLED ALONG THE PROPERTY BOUNDARY IN THE AREA TO MITIGATE FUTURE DUMPING OF LAWN DEBRIS INTO THE WETLAND.

6.) MITIGATION AREA-3B CONSISTS OF THE HAND REMOVAL OF DEBRIS ALONG THE SOUTHERN PROPERTY BOUNDARY AND THE INSTALLATION OF AN 8-FOOT HIGH FENCE ALONG THE SOUTHERN PROPERTY BOUNDARY TO MITIGATE FUTURE DUMPING.

7.) MITIGATION AREA-4 CONSISTS OF THE HAND REMOVAL OF INVASIVE PHRAGMITES IN THE SOUTHWEST CORNER OF THE SITE. THE REMOVAL AREA IS TO BE MONITORED FOR TWO (2) YEARS WHERE ADDITIONAL REMOVAL OF PHRAGMITES IS TO OCCUR AS REQUIRED.

MITIGATION ACTIVITY CALCULATIONS

TOTAL INLAND WETLAND ACTIVITIES = 84+592+1,154+2,137 = 3,967SF
NOTE THAT APPROXIMATELY 200SF OF WHICH WILL BE BY CT DOT FOR WORK RELATED TO THE NORTH MAIN STREET IMPROVEMENTS

TOTAL UPLAND ACTIVITIES = 36,245SF (NOT INCLUDING MITIGATION AREAS)

TOTAL FILLED FLOOD STORAGE = 1877SF x 12" = 1,877CF+/-

MITIGATION AREA-1 PROVIDED FLOOD STORAGE = 1,623 x 2' = 3,246CF+/-

MITIGATION AREAS-1&2 PROVIDED WETLAND AREA = 1,623 + 236 = 1,859SF+/-

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

CHATHAM ENGINEERING, Inc
CONSULTING ENGINEERS
42 East High Street
East Hampton, Connecticut 06424
Tel. 860-267-4100 Fax 860-267-8891

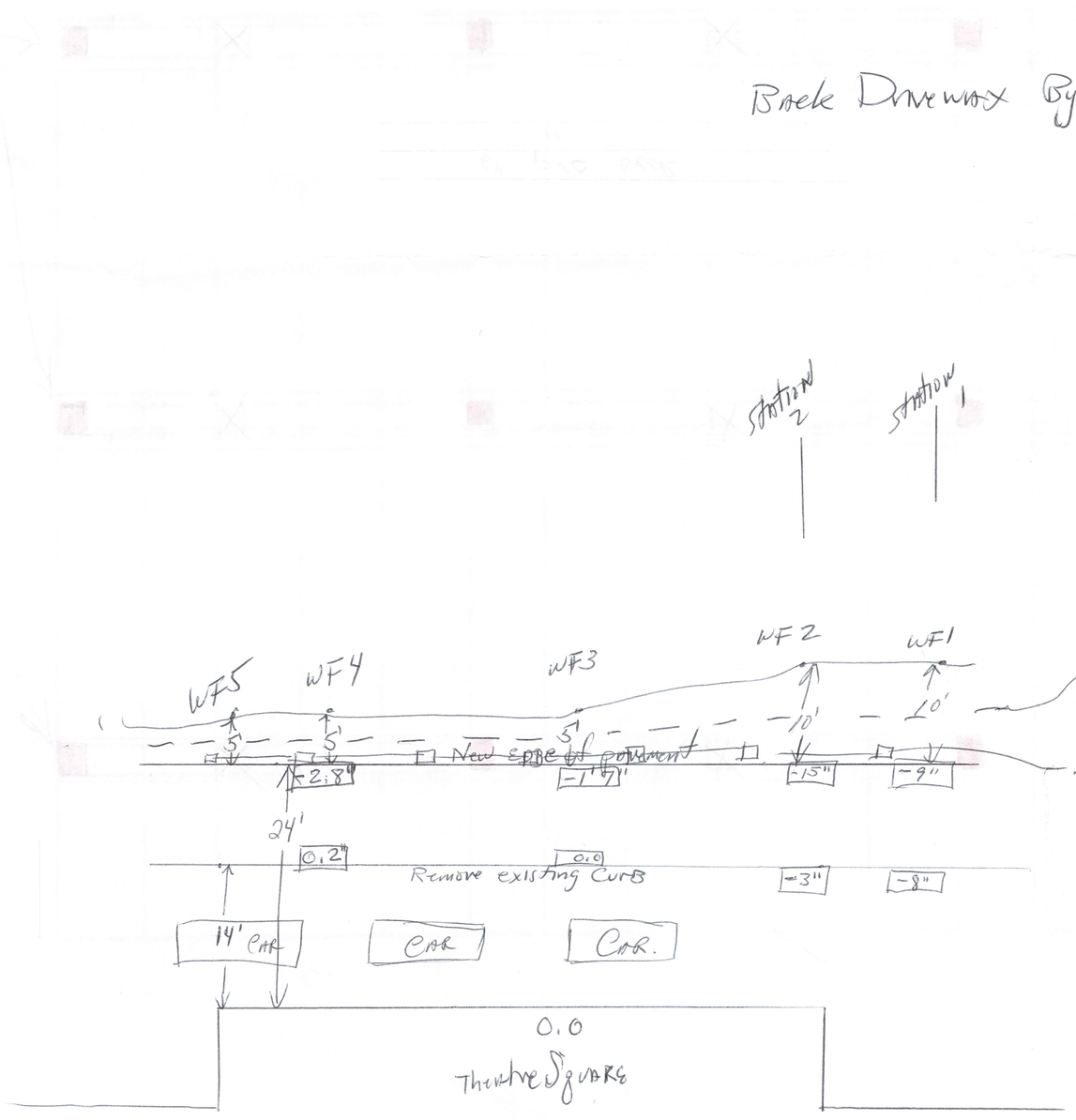
REVISIONS

LTR	DESCRIPTION	DATE
A	Submit for Permit Review	6/23/06
B	Revised per Client Review	6/27/06
C	Revised per Staff Coments	9/21/06
D	Revised per Staff Coments	10/10/06
E	Revised per Staff Coments	10/30/06

WETLAND MITIGATION PLAN
for
THEATER SQUARE
A Commercial Development
PREPARED FOR
Theater Square, LLC
FOR PROPERTY LOCATED AT
North Main Street
TOWN OF EAST HAMPTON, CONNECTICUT

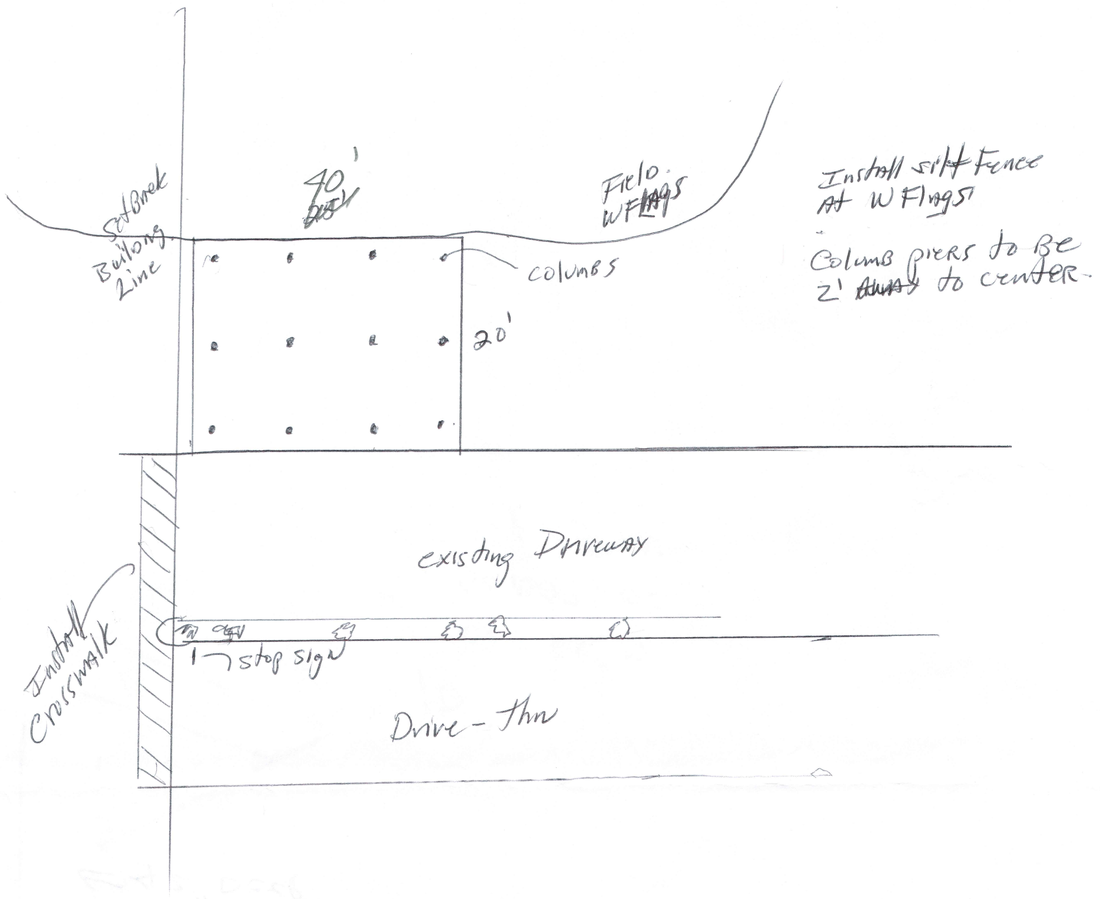
Sheet No.
S-08
SHEET 8 OF 10
Scale: 1" = 30'
Date: JUNE 200
Project No.

Brick Driveway Bypass



Theatre Square.
Deck 20' x 25'
composit wood deck.

1" = 10'



TOWN OF EAST HAMPTON
Planning and Zoning Commission
1-860-267-7450
www.easthamptonct.gov

RECEIVED
JAN 31 2020
TIME

PZC PZC-20-003
Date 1/30/20

Fee Paid $920-
Check # 611313117-8
Rec'd. By

LOCATION 50 Main St.
MAP 02A BLK 47 LOT 25

PROJECT NAME 50 Main St.
ZONE

APPLICANT Lisa Sherman
Mailing ADDRESS Cum: PO Box 446 Middletown CT 06457
PHONE (860) 682-5157
EMAIL 2RealtorLisaS@gmail.com

CONTACT PERSON Lisa Sherman
PHONE
EMAIL

OWNER H.U.D. Home
ADDRESS
PHONE
EMAIL

SURVEYOR/ENGINEER
ADDRESS
PHONE
EMAIL

ATTORNEY
ADDRESS
PHONE
EMAIL

APPLICATION TYPE *(application must be completed in FULL in order to be accepted)*

___1. SUBDIVISION /RESUBDIVISION /CONSERVATION SUBDIVISION NO. OF LOTS___
X 3. SITE PLAN___MODIFICATION___Residential X Commercial___
___4. SPECIAL PERMIT---SECTION___OF THE ZONING REGS. FOR___
X 5. ZONE CHANGE---FROM R-1 TO P0/R TO
X 6. AMENDMENT TO ZONING REGULATIONS 5.4.4 P0/R Zone
___7. LAKE POCOTOPAUG PROTECTION AREA___
___8. ACTIVE ADULT NO OF UNITS___
___7. OTHER (DESCRIBE)___

APPLICATION REQUIREMENTS: This application and 10 sets of plans shall be submitted to the Planning Office and shall be received by the Commission at the next regularly scheduled meeting. *(see meeting schedule for deadline dates)*

A complete application shall consist of an application, fees, maps /plans(A-2 survey) ,engineers report including drainage calculations and watershed calculations(pre and post), bond estimates, hydrology report, environmental studies, waiver requests and traffic study where applicable

Preliminary discussions are highly recommended for subdivisions 5 lots & over and for larger Special Permit Applications
Abutters notice receipts (green cards)must be handed in to the Planning Office prior to the meeting

APPLICANTS SIGNATURE Lisa Sherman DATE 1/30/20

OWNER'S SIGNATURE DATE

The owner and applicant hereby grant the East Hampton Planning and Zoning Commission and/or it's agents permission to enter upon the property to which the application is requested for the purpose of inspection and enforcement of the Zoning Regulations and Subdivision Regulations of the Town of East Hampton.

Current: Section 5.4. PO/R Zone - Professional Office / Residential

A. Purpose

The purpose of this zone is to allow for professional uses in the areas fronting on both sides of West High (Rt. 66) between North Main Street and North Maple Street, both side of Main Street up to a distance of 400' south from the intersection of West High Street, while retaining the residential character of the area.

Proposed: Section 5.4. PO/R Zone - Professional Office / Residential

A. Purpose

The purpose of this zone is to allow for professional uses in the areas fronting on both sides of West High (Rt. 66) between North Main Street and North Maple Street, both side of Main Street up to a distance of 400' south from the intersection of West High Street, and both side of Main Street up to a distance of 250 feet north of the northernmost boundary of the Village Center Zone supplementing uses in the adjacent C and VC Zones while retaining the residential character of the area.

Change to Zoning Regulations Section 5.4

Dated: 04/01/2020

1. What houses will have the zoning changed? (60, 56, 52, 50, 51 and 47)

2. Is the zone change consistent with any applicable comprehensive plan for the area?

    - What is the town's comprehensive plan for the Main Street area?
      If a comprehensive plan that directs the future use and development of this area does not exist, shouldn't one be developed before making zoning changes that will forever modify the character of the area?

    - Why is a zoning change being instigated by an individual for their own benefit? The change is being imposed on other property owners without their consent. Shouldn't the town be responsible for modifying the zoning regulations for the good of the entire community rather than for just one individual?

3. There are other properties already zoned for this type of office. Why not utilize a property with the desired zoning and there would be no need to rezone the Main St neighborhood.

    - Why is a zoning change for a neighborhood justified for one individual who wants to have a business in a currently residential property? Is this enough to justify a rezone of the neighborhood?

4. In the zoning regulations a real estate business does not qualify as a professional office.

    - Since a real estate office does not qualify as a professional office, will the office at 50 Main Street be classified as a business office or something else?

    - What is the zoning definition of a business office – no definition is contained in the regulations?

    - Is there a limitation on the number of non-family employees for a business office?

    - Are there square footage size limitations to a business office?

5. The zone change is not consistent with the surrounding neighborhood uses. The properties in the area are residential use only.

    - The zoning regulation change to Section 5.4 would expand what could be done in the other residential properties included in area of the zoning change. The residential area would essentially become a business area that allows many different types of offices and businesses. The types of offices would include professional offices, financial institutions, executive and administrative offices, and business offices (per Section 5.4 C.)

    - The rezoning would also open up the area to not only offices, but with a permit could include (Section 5.4 D.):

        - Shop for custom work, including repair, fabricating and making of such articles incidental to such work
        - Printing and publishing

- Public utility structures
- Fire and police stations and other municipal uses and structures
- Day care (effective: August 24, 2007)

- The increase in traffic at 50 Main St will be beyond the normal residential use.

- Depending on the changes made to the 50 Main St property, will surrounding property values decrease?

6. Sign

    - Lights: What will be allowed for type, wattage/intensity, color and light spill (**Light Spill** is when **light** falls outside the object to be illuminated), and the hours of illumination?

    - Can a sign be placed on the dwelling or out buildings?

    - How many signs are allowed?

    - The design, colors and placement of the sign should retain the residential character of the area. Will this be the case?

    - In Section 5.4 F, Special Provisions, 3. states There shall be no exterior evidence of the conduct of non-residential uses, except for the placement of signage complying with the provisions of these Regulations, as stated in Section 7.2.C. Does this apply to vehicles with signage for the business? Will all materials related to the business such as for sale signs and posts be stored indoors?

7. Parking Lot

    - Will additional paved parking be implemented for customers, staff and realtors?

    - Will there be lights in the parking areas – type, wattage, color, hours of illumination and light spill?

    - How will water runoff from any additional pavement be handled?

    - What are the number of parking spaces allowed by the zoning regulations?

8. What are the allowed hours of operation of the business since it is surrounded by residential properties?

Change to Zoning Regulations Section 5.4

Dated: 06/03/2020

1. From the June meeting agenda – "7. Old Business: B. Discussion: Update Sign Regulation to Include PO/R Zone Sign Standards". This agenda item needs to be resolved and the zoning regulations modified prior to the approval of Ms. Sherman's zoning changes.

2. Will Ms. Sherman be living in the house at 50 Main St? Will the ongoing renovations include a kitchen being added on the second floor, thus making it an apartment?

3. What houses will have the zoning changed? (60, 56, 52, 50, 51 and 47)

4. Is the zone change consistent with any applicable comprehensive plan for the area?

    - What is the town's comprehensive plan for the Main Street area?
      If a comprehensive plan that directs the future use and development of this area does not exist, shouldn't one be developed before making zoning changes that will forever modify the character of the area?

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Office of PLANNING & ZONING OFFICIAL
JEREMY DECARLI
jdecarli@easthamptonct.gov

INTERDEPARTMENTAL REFERRAL

Re: Application to the Planning and Zoning Commission

The following Application has been made to the East Hampton Planning and Zoning Commission. Please review the attached documents. We ask that you please submit any comments you may have to the Planning and Zoning Department prior to the date indicated below. If you have any questions, please contact the department.

PROPERTY LOCATION: 50 Main St.

PROJECT NAME: Zone Change

APPLICANT: Lisa Sherman **DAYTIME PHONE:** 860-682-5157

MAILING ADDRESS: PO Box 446 Middletown CT 06457

P&Z APPLICATION #: PZC-20-004

MEETING/HEARING DATE: March 4, 2020

COMMENTS: I have no issues with this application

If you have no comment, please sign on the line below.

Name: Dennis Woessner

Position: Chief of Police

Date: February 5, 2020

Office of the **PLANNING & ZONING OFFICIAL**
JEREMY DECARLI, AICP
jdecarli@easthamptonct.gov

STAFF REPORT

Application:	PZC-20-003 (Text Amendment) PZC-20-004 (Zone Change)
Application Type:	Text Amendment Zone Change – R-1 to RO/R
Location:	50 Main Street Map 02A/ Block 47/ Lot 25
Date:	March 4, 2020

Property Details:

- Currently in R-1 Zone
- 2.52 Acres
- Served by municipal sewer system and private well.

There are currently two applications before the Commission. The first is for a text amendment to the PO/R zone to allow properties along Main Street in the vicinity of the Village Center Zone to convert to the PO/R zone. The second is a zone change for the property known as 50 Main Street from its current zone of R-1 to PO/R.

If the zone change is approved, any non-residential use will have to be reviewed by the Planning and Zoning Commission which will require the property owner to apply for either a site plan or special permit (depending on the proposed use).

Staff Comments

At its core, the intent of the PO/R zone is to preserve the residential character of homes that lie in a transitional area between commercial and residential zones. Historically, this has meant the stretch of West High Street (Route 66) between Main and Maple Streets. However, Main Street, although zoned residential lies between the Village Center to the south and the Commercial Zone to the north along East and West High Streets. A text change was approved several years ago which would allow five (5) properties on the northern end of Main Street that are directly adjacent to the Commercial Zone to take advantage of the PO/R Zone. The application before the Commission now is to replicate that transition between the Village Center and the R-1 zone. The proposed text change would allow a total of six (6) properties along Main Street to take advantage of the PO/R zone.

The PO/R zone allows as-of-right all of the same uses as the R-1 Zone allows as-of-right. In addition, a number of low impact uses, such as professional offices, business offices, and financial institutions are allowed by Site Plan, while other uses, such as shops for custom work and printing and publishing offices are allowed by Special Permit.

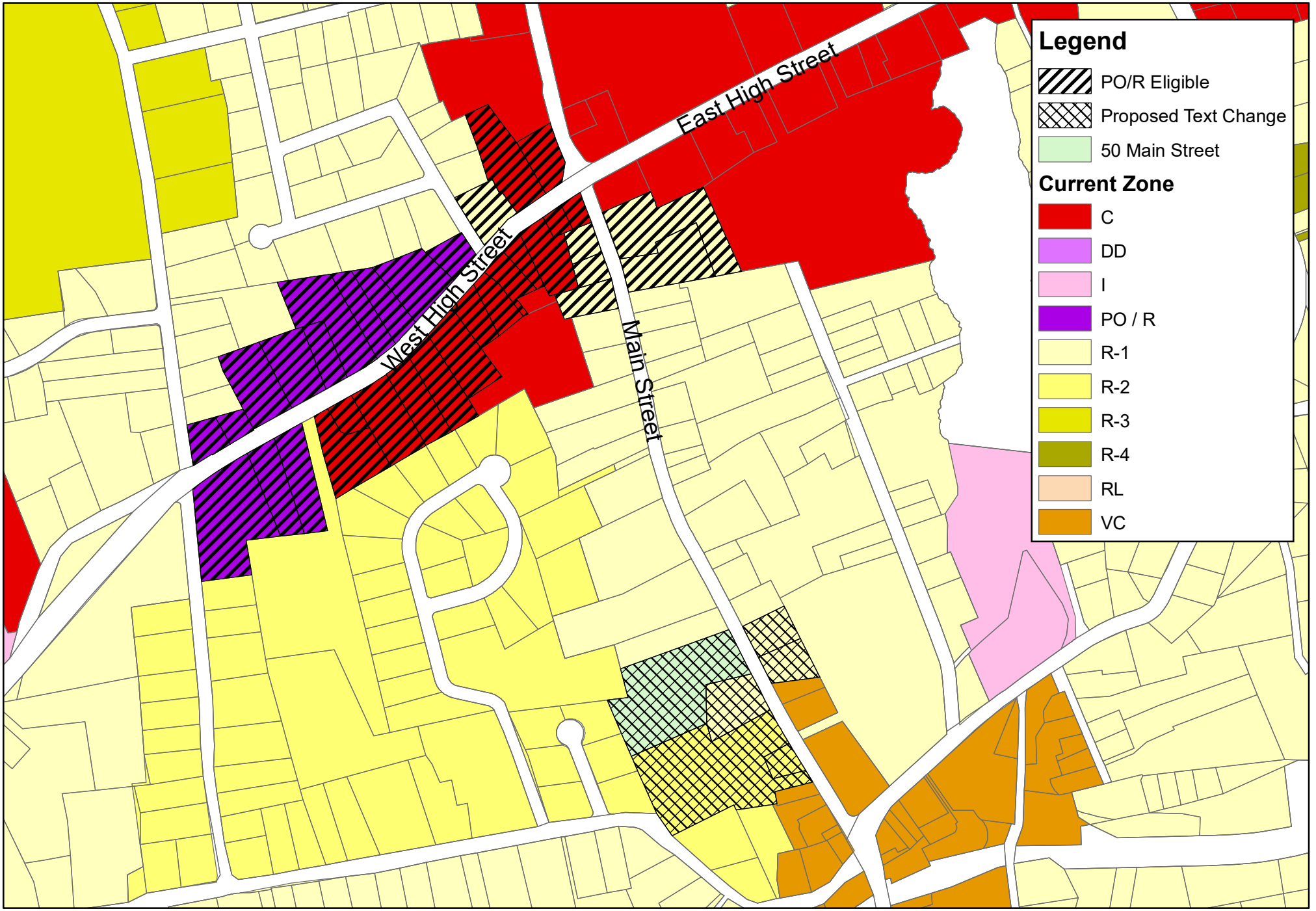
Consistency with POCD
It is the opinion of Staff that this text amendment is consistent with the POCD. In light of the fact that East Hampton does not allow home based occupations, providing a zone which allows for some commercial uses in an otherwise residential setting provides for an opportunity to work from home. The POCD emphasizes the need to promote business growth from within, which the PO/R promotes by allowing an individual to reside and work on the same property. In addition, the POCD recommends expanding business zones where appropriate. Main Street is home to many large historic homes that lend themselves well to business uses on the ground floor while affording the ability to maintain the residential

character of the structure and property. In addition, the neighborhood is served by the municipal sewer system. Finally, allowing for some business use along Main Street will help to drive traffic toward the Village Center. Increasing the viability of the Village Center and rehabilitating properties in and around the Village is a focal point of the POCD.

Decision Process
Each application must be acted upon separately. They can be heard together, but the Commission must be clear with the public that there are two separate applications which will be acted upon separately. The Text Amendment must be acted upon first, with an effective date set. If the Text Amendment is approved, the Zone Change can be acted upon, and an effective date should be set that is no sooner than the effective date of the Text Amendment. Without the Text Amendment, the Zone Change cannot be issued.

The Commission should clearly state on the record its reasons for the decision made and note any findings with regards to the POCD and consistency with the surrounding neighborhood.

PO/R Zone Text Amendment



This map is for planning puposes only and should not be used for conveyance or any other legal purpose.

0 125250 500 750 1,000 Feet

N W E S

The Rationale for Amendment

The rationale is to preserve the resident character while complimenting nearby existing uses. Of coarse, first and foremost is the main use as a residence, keeping the home look and to be able to put my real estate office in my home as well.

The home at 50 Main St. Is empty and in disrepair. Well, I happen to love old homes and this one suits all my needs. For whatever reason, I feel the need to fix this home and make it a happy place to live and work from.

My goal was to find a home and not a store front to work out of. "I think people should feel at home while shopping for a home." Important facts in choosing a home for this purpose was to be able to accommodate people with disabilities that have a hard time going house to house. Knowing this, one of my rooms will have a large pulldown screen giving the ability to shop homes without having to go in and out of homes that are difficult but still have the option of seeing them like they are walking through them.

This will give them many more options and a comfortable place to house hunt from. Accessibility to these homes make it very difficult for these buyers. Although, many homes can be easily modified to meet their needs.

To be perfectly honest there is not a lot of traffic for a real estate office. Homes do not come to us we go to them. Therefore, most of our work is on the road. I simply need a home to work from, a sign and to offer a little extra to those who need it. I did shop all of Middlesex County but this was perfect. What better way to reach my goal and preserve an old home at the same time!

Also, This is a growing town with so much to offer. I am looking forward to growing with it & being a part of the East Hampton community.

Have a Wonderful Night,
Lisa Sherman

Office of the **PLANNING & ZONING OFFICIAL**
JEREMY DECARLI, AICP
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PLANNER'S OPINION

To: Planning and Zoning Commission

Re: PO/R and Home Based Occupations

Date: May 6, 2020

The recent applications for a text amendment and a zone change at 50 Main Street from R-1, Lakeside and Village Residential to PO/R, Professional Office/ Residential has created angst among neighbors in the Main Street area and stirred a conversation about what is the proper zoning for Main Street. Main Street, as you know, is a mix of single family homes, and large homes that have been converted to multiple apartments. There is a varying degree of upkeep of these properties, with some being very well maintained, and others that are, quite frankly, in need of rehabilitation.

It has been and continues to be my opinion that through the planning and zoning process, the Town can do more to encourage a better use of its unique and historic Main Street to create an incentive that would encourage rehabilitation of properties. The use of the PO/R zone along Main Street seems to be a logical step toward this end. It would allow all of the single family uses to continue as-of-right. In addition, it would allow property owners to convert the ground floor of their properties to professional offices, which would allow for higher rental incomes, more in line with commercial pricing, or simply allow a resident to run a small business on the ground floor of their home. In addition to the potential financial and aesthetic benefits, it would also help to drive traffic, and business, toward the Village Center from Route 66. The PO/R zone includes requirements that retain the residential character and aesthetic of the property, which would serve to protect the historic and residential look and feel of the neighborhood.

The above notwithstanding, there was a showing of neighboring property owners and other interested residents at the March Public Hearing who voiced their opinion and opposition to the idea. The number was fairly small and the main concern seemed to be around the potential for a sign to be installed along Main Street at a residential property. While there was concerns raised relating to traffic, stormwater runoff and potential icing, and strangers in the area, the message was clear; the interested residents were concerned about having a large sign installed at this property displaying the name of the proposed real estate office.

In our research after the hearing, the Staff discovered that Section 7.2 of the Zoning Regulations, that which regulates signs, does not include provisions for signs within the PO/R zone, although the PO/R zone clearly indicates that signs in accordance with Section 7.2 are allowed in the zone. With this knowledge, it is my opinion that the Commission should amend the regulations to include guidance for signage in the PO/R zone. The language should consider the nature and purpose of the PO/R zone and limit the size and impact of signage within the zone. I have included proposed language to consider.

Regardless of the need to update the signage regulation, the reaction from neighbors puts the Commission at a crossroads. Do we consider the extension of the PO/R Zone onto Main Street, or consider alternatives? An extension of the PO/R zone would be specific to those properties which are included, forcing anyone who wants to run a small business out of their home into one of these properties. While the PO/R Zone is a great tool, it is limited to a narrow area and not accessible for residents, or prospective residents who do not own property within it.

It is my opinion that the Commission should consider the creation and adoption of a home based occupation permit. Currently, there are no provision in the regulations for someone who wants to operate

a home based business, and as such, the Town of East Hampton has lost roughly a dozen potential residents and businesses during my tenure. Home based occupations are a common occurrence in zoning regulations not only across the State, but also across the Country. A PAS report was issued by the APA in 1953 (attached) discussing the importance of creating home based occupation permits and reviewing the various ways in which these uses are being regulated across the country. Although there are many facets of this PAS report that are no longer relevant or would need amending due to the intervening years of case law and best practices, the basic principles discussed hold true today.

The Town of East Hampton allowed Home Based Occupations as a Special Permit use until the regulation re-write in 1990. Why this portion of the regulation was removed is somewhat of a mystery, but it has resulted in a hodge-podge of legal non-conforming home based businesses which exist without a current legal framework in addition to a number of individuals carrying out businesses on their properties without zoning approval. Although these businesses don't run afoul of the Zoning Regulations per se, we have heard from numerous residents who would prefer to have a legal framework within the regulations which would allow them to operate openly without fear of being cited with a violation.

It is my opinion that this does not create an additional enforcement burden on the staff. Residents and prospective business owners who are willing to go through the process of obtaining a Special Permit are not generally the types of folks who want to operate outside of the rules. There will always be a segment of the population that will test the limits, but it is likely that we are already aware of who these folks are. Our surrounding communities are taking advantage of this type of regulation and reaping the benefits. These home based businesses are typically of the type that do not add additional traffic generation to our streets, do not require additional services beyond those which are associated with residences, and add valuable personal property tax income to the town coffers. These businesses also supplement the already healthy list of services that the Town of East Hampton can offer to its residents.

Regulations can and often are crafted in such a way that limits their impact to neighboring property owners and the residential character of the surrounding neighborhood. Typically, the size of signage, the visibility of the business from the street, and the number of employees is limited. Often, appropriate businesses are those that are either sole proprietorships or have one employee. Some examples of regulations limit employees to immediate family members that already live on the property. Others allow a limited number of employees that live off the property.

It is my opinion that a two-tiered system would work best for East Hampton. The first tier would be as-of-right operations within the residential zones that would not require any permits. There are a large number of existing home based businesses that have no impact to neighboring property owners. These would be sole proprietors with no employees working within their home that do not engage with any customers, do not have a sign or any other physical evidence from the street, and do not have any other evidence from the outside of a business. Examples would be copy editors, graphic designers, sales people, etc.

The second tier would be businesses that are more obvious to neighbors and would be Subject to a Special Permit. Businesses that might fall into this category include contractors and print shops that operate out of their homes, realtors, accountants, photographers, and the like. This would allow the Town to create a registry and tax these businesses appropriately and fairly. In general, these businesses would have little impact to the surrounding neighborhood, but would include some physical evidence of their existence that must be regulated in order to adhere to the general residential character of the neighborhood.

Included with this letter are some examples of Home Occupation regulations from other towns for your consideration.

Proposed Revisions to Section 3.1 Lake Pocotopaug Protection Zone
For Discussion Purposes
Edited: January 7, 2020

A. Purpose

Lake Pocotopaug has experienced a gradual degradation of water quality since about 1970. The watershed area is intensely developed in many areas and is a primary source of storm water runoff that carries nutrients and pollutants that contribute to the eutrophication of the lake and degradation of its water quality. This Regulation recognizes the concerns raised by and is adopted in an effort to support and carry out the goals of the adopted "Lake Pocotopaug Nine Elements Watershed Based Plan".

This Regulation is intended to provide special protection to all land included in the watershed of Lake Pocotopaug and to minimize the negative environmental effects of development within the watershed area.

B. Goals

The goals of this overlay zone are:

A. To minimize the impervious surfaces and maximize infiltration of stormwater runoff;
B. To reduce stormwater flow and minimize soil erosion, stream channel instability, flooding, and habitat destruction;
C. To preserve and/or create vegetative buffers or native plantings to control and filter stormwater runoff;
D. To minimize disturbance of natural grades and vegetation and utilize existing topography for natural drainage systems;
E. To contain stormwater runoff on site and to reduce the volume of stormwater runoff before it reaches surface water bodies; and
F. To prevent and minimize potential groundwater pollution from improper waste disposal, release of hazardous materials, and other sources.

C. Applicability and Scope

The watershed is considered to be the area shown on the official Zoning Map as "Lake Pocotopaug Watershed." The provisions of these regulations shall be in addition to all other requirements of applicable statutes, codes, regulations, and ordinances. All development within the watershed shall be subject to this regulation and applications subject to action by the Planning and Zoning Commission shall be referred to the Conservation – Lake Pocotopaug Commission and are subject to a Public Hearing.

D. Requirements

The following requirements shall apply to all properties within the watershed:

A. The minimum building setback from Lake Pocotopaug and all tributaries (Hales, Christopher, Fawn, Clark, Days, O'Neil, Candlewood, Hazen, Bill Day, and Unnamed Brooks) shall be 50 feet regardless of underlying zone.
B. All properties directly adjacent to Lake Pocotopaug and any of the aforementioned tributaries require a planted buffer zone of at least 20% of the distance between the primary residential structure and the water way, or five (5) feet, whichever is less starting at the mean high water

mark (existing buffers must be maintained.). Provisions may be made for walking paths (not wider than six feet) and dock landings. (Views may be maintained by planting low growth bushes and trimming large growth trees.) This buffer should contain native plantings consisting of low and high vegetation. Property owners should refer to the "Protecting Lake Pocotopaug" documents for best management practices.

C. All projects resulting in more than 2,500 square feet of ground disturbance shall be referred to the Lake Consultant for a third party review. The applicant will be required to cover the cost of any such third party reviews.

D. An Erosion and Sedimentation Control Bond in accordance with Section 8.5.N shall be submitted for all projects resulting in more than 2,500 square feet of soil disturbance.

E. Seasonal Clearing Activity Limitations - The intent of seasonal clearing activity limitations is to limit the amount of exposed soils on site that are susceptible to erosion at any one time, thereby improving site stability during development and reducing potential for transport of dissolved pollutants and sediments off site. Preservation of existing trees on site also reduces the quantity and maintains the quality of stormwater leaving a site during and after development activities by encouraging interception, infiltration and evapotranspiration of rainfall and surface runoff.

   1. Administrative review and approval shall be required for all clearing.
   2. Clearing activity that will result in exposed soils exceeding 500 square feet shall not be permitted from October 1st through April 30th; however, the Planning & Zoning Official may approve an exemption to this requirement for the following activities:
      a. Routine maintenance and repair of erosion and sediment control measures;
      b. Activities located at or waterward of the mean high water mark subject to conditions of approval requiring commencement of clearing activity between October 1st and May 30th for purposes of minimizing surface water disturbance and site inundation by high water or wave action;
      c. Activities necessary to address an emergency that presents an unanticipated and imminent threat to public health, safety or the environment that requires immediate action. Upon abatement of the emergency situation, the clearing activity shall be reviewed for consistency with this section and may be subject to additional permit requirements; provided, that the applicant shall make a reasonable attempt to contact the Planning & Zoning Official prior to the activity. When prior notice is not feasible, notification of the action shall be submitted to the Planning & Zoning Official as soon as the emergency is addressed and no later than two business days following such action. Emergency construction does not include development of new permanent protective structures where none previously existed;
      d. The proposed activity does not involve the conversion of forest land and is outside critical areas and associated buffers.
      e. To ensure compliance with subsection 2 above, the East Hampton Land Use Office shall not issue development approvals requiring more than 500 square feet of land disturbance located within the Lake Pocotopaug watershed within two weeks prior to the watershed seasonal closure on October 1st.

f. Soil disturbance associated with an exempt clearing activity as defined above shall be minimized to the maximum extent practicable. The Planning & Zoning Official shall have the authority to condition an exempt activity to ensure that temporary erosion and sediment control measures will be implemented.

g. An exemption from the seasonal land clearing requirements of this section does not grant authorization for any work to be done in a manner that does not comply with other provisions of this chapter or other applicable development regulations.

F. Within the Lake Pocotopaug Watershed Overlay District, all clearing activities must conform to the following conditions:

A. Temporary erosion and sediment control shall be installed and inspected prior to any clearing activity. The Land Use Office Staff shall conduct periodic inspections to ensure the integrity of temporary erosion and sediment controls. Temporary erosion and sediment control measures include, but are not limited to, installation of silt fencing or filter socks, installation of check dams, covering of excavation piles, and mulching of exposed soils, as specified and in accordance with the 2002 CT E&S Guidelines.

B. Phased Clearing. Clearing activities shall be phased to limit the amount of exposed soil that occurs at any one time, based on site characteristics or constraints including, but not limited to, slopes, proximity to shorelines and wetlands. A phased clearing plan, shall be submitted for review and approval by the Planning & Zoning Official prior to any clearing activity and shall contain a detailed construction schedule or timeline. Failure to follow the phasing plan may result in fines in accordance with Section 9.4.

C. Soil Stabilization. All disturbed areas shall be provided with soil stabilization within two days of the time of disturbance. The phasing plan must specifically detail erosion and sediment controls.

E. Application Requirements

This section of the regulation specifically applies to any property where any one of the following activities is proposed:

- All new primary structure construction,
- Reconstruction (tear-down and rebuilds),
- Any property where a variance for setback or coverage is being sought,
- Any property where construction activity includes more than 750 square feet of disturbance.

In addition to the requirements listed in section 3.1.D above, applications for the above mentioned activities will not be considered complete and will not be acted upon unless and until the following items are submitted:

A. A signed statement on a form provided by the Land Use Office verifying that the applicant is aware of his/her responsibilities for best management practices during and after construction and testifying that they are aware of the potential for the assessment of fines should best management practices not be adhered to.

B. All applications as required by this Section shall include a Stormwater Management Plan and Data which shall include the following:
   a. A Narrative report prepared by a licensed engineer indicating:
      i. Any risk or threat to Lake Pocotopaug or its tributaries from site development, site improvements, or on-site operations proposed in the application..
      ii. Methods of assessment and best management practices to prevent and reduce any such risk or threat.
      iii. Supporting documentation, including calculations and engineering details shall be provided to illustrate the existing and proposed development's compliance with these regulations which shall be designed in accordance with the stormwater management design guidelines of either the "Connecticut Stormwater Quality Manual" or Connecticut DEEP's "Manual for the Best Management Practices for Stormwater Management."

D. A Site Plan indicating:
   a. All relevant data required for the application,
   b. Site topography,
   c. Location and area of all impervious surfaces on the site,
   d. Location and area of all turf cover,
   e. Location and area of all existing woodland areas,
   f. Location and area of all existing and proposed vegetative buffer areas,
   g. Location and description of all potential runoff and pollution sources including erosive soils, steep slopes, and impervious surfaces,
   h. Location and specifications of all existing and proposed stormwater best management practices.
   i. Provisions for eliminating runoff from the property to the street. This must take into account the topography of the property and any nearby catch basins or other drainage structures.

F. Best Management Practices

The following practices and methods shall be incorporated into all uses throughout the watershed wherever possible:

A. Vegetative swales, buffers, filter strips
B. Water control berms and level spreaders
C. Grassed drainage swales wet, or dry
D. Maintain or restore pre-development vegetation
E. Minimize creation of steep slopes
F. Bio-retention structures/residential rain gardens
G. Rain water harvesting/rain barrels
H. Dry retention ponds
I. Underground detention galleries
J. Proper location and reduction of impervious surface area on site
K. Disconnect flows from multiple impervious surfaces

L. Permeable pavement choices
M. Groundwater infiltration systems (curtain drains, dry well galleries, etc)
N. Site grading should be in such a manner so as to prevent any runoff from entering the lake, wetlands, or stream directly an instead directed to areas where it can infiltrate.
O. Replanting

G. Prohibited Uses

The following uses are prohibited within the watershed zone because of the potential for negative impacts to Lake Pocotopaug.

A. Direct discharge of stormwater into wetlands or waterways.
B. Direct discharge of stormwater into existing catch basins and other drainage structures that drain to wetlands and watercourses.
C. Underground fuel tanks
D. Fuel filling stations
E. Stockpiling or composting of manure within 200 feet of a wetland or watercourse.

Proposed Revisions to Section 3.1 Lake Pocotopaug Protection Zone
For Discussion Purposes
Edited: ~~November 6, 2019~~January 7, 2020

A. Purpose

Lake Pocotopaug has experienced a gradual degradation of water quality since about 1970. The watershed area is intensely developed in many areas and is a primary source of storm water runoff that ~~can carry~~carries nutrients and pollutants that contribute to the eutrophication of the lake and degradation of its water quality. This Regulation recognizes the concerns raised by and is adopted in an effort to support and carry out the goals of the adopted "Lake Pocotopaug Nine Elements Watershed Based Plan".

This Regulation is intended to provide special protection to all land included in the watershed of Lake Pocotopaug and to minimize the negative environmental effects of development within the watershed area.

B. Goals

The goals of this overlay zone are:

A. To minimize the impervious surfaces and maximize infiltration of stormwater runoff;
B. To reduce stormwater flow and minimize ~~the likelihood of~~ soil erosion, stream channel instability, flooding, and habitat destruction;
C. To preserve and/or create vegetative buffers or native plantings to control and filter stormwater runoff;
D. To minimize disturbance of natural grades and vegetation and utilize existing topography for natural drainage systems;
E. To contain stormwater runoff on site and~~, wherever possible,~~ to reduce the volume of stormwater runoff before it reaches surface water bodies; and
F. To prevent and minimize potential groundwater pollution from improper waste disposal, release of hazardous materials, and other sources.

C. Applicability and Scope

The watershed is considered to be the area shown on the official Zoning Map as "Lake Pocotopaug Watershed." The provisions of these regulations shall be in addition to all other requirements of applicable statutes, codes, regulations, and ordinances. All~~All~~ development within the watershed shall be subject to this regulation and applications subject to ~~requiring~~ action by the Planning and Zoning Commission shall be referred to the Conservation – Lake Pocotopaug Commission and are subject to a Public Hearing~~.~~.

~~This requirements listed in Section D of this regulation shall apply under any the following conditions:~~

~~1. All new construction,~~
~~2. Reconstruction (tear-down and rebuilds),~~
~~3. Any property where impervious coverage is proposed to be increased to beyond 15% of the total parcel area,~~
~~4. Any property where construction activity includes more than 5,000 square feet of disturbance.~~

D. Requirements

The following requirements shall apply to all properties within the watershed:

A. The minimum building setback from Lake Pocotopaug and all tributaries (Hales, Christopher, Fawn, Clark, Days, O'Neil, Candlewood, Hazen, Bill Day, and Unnamed Brooks) shall be 50 feet regardless of underlying zone.

B. All properties directly adjacent to Lake Pocotopaug and any of the aforementioned tributaries require a planted buffer zone of at least 20% of the distance between the primary residential structure and the water way, or five (5) feet, whichever is less starting at the mean high water mark (existing buffers must be maintained.). Provisions may be made for walking paths (not wider than six feet) and dock landings. (Views may be maintained by planting low growth bushes and trimming large growth trees.) This buffer should contain native plantings consisting of low and high vegetation. Property owners should refer to the "Protecting Lake Pocotopaug" documents for best management practices.

C. All projects resulting in more than 2,500 square feet of ground disturbance shall be referred to the Lake Consultant for a third party review. The applicant will be required to cover the cost of any such third party reviews.

D. An Erosion and Sedimentation Control Bond in accordance with Section 8.5.N shall be submitted for all projects resulting in more than 2,500 square feet of soil disturbance.

E. Seasonal Clearing Activity Limitations - The intent of seasonal clearing activity limitations is to limit the amount of exposed soils on site that are susceptible to erosion at any one time, thereby improving site stability during development and reducing potential for transport of dissolved pollutants and sediments off site. Preservation of existing trees on site also reduces the quantity and maintains the quality of stormwater leaving a site during and after development activities by encouraging interception, infiltration and evapotranspiration of rainfall and surface runoff.

   1. Administrative review and approval shall be required for all clearing.
   2. Clearing activity that will result in exposed soils exceeding 500 square feet shall not be permitted from October 1st through April 30th; however, the Planning & Zoning Official may approve an exemption to this requirement for the following activities:
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      b. Activities located at or waterward of the mean high water mark subject to conditions of approval requiring commencement of clearing activity between October 1st and May 30th for purposes of minimizing surface water disturbance and site inundation by high water or wave action;
      c. Activities necessary to address an emergency that presents an unanticipated and imminent threat to public health, safety or the environment that requires immediate action. Upon abatement of the emergency situation, the clearing activity shall be reviewed for consistency with this section and may be subject to additional permit requirements; provided, that the applicant shall make a reasonable attempt to contact the Planning & Zoning Official prior to the activity. When prior notice is not feasible, notification of the action shall be submitted to the Planning & Zoning Official as soon as the emergency is addressed and no later than two business days following such action.

Emergency construction does not include development of new permanent protective structures where none previously existed;

d. The proposed activity does not involve the conversion of forest land and is outside critical areas and associated buffers.

e. To ensure compliance with subsection 2 above, the East Hampton Land Use Office shall not issue development approvals requiring more than 500 square feet of land disturbance located within the Lake Pocotopaug watershed within two weeks prior to the watershed seasonal closure on October 1st.

f. Soil disturbance associated with an exempt clearing activity as defined above shall be minimized to the maximum extent practicable. The Planning & Zoning Official shall have the authority to condition an exempt activity to ensure that temporary erosion and sediment control measures will be implemented.

g. An exemption from the seasonal land clearing requirements of this section does not grant authorization for any work to be done in a manner that does not comply with other provisions of this chapter or other applicable development regulations.

F. Within the Lake Pocotopaug Watershed Overlay District, all clearing activities must conform to the following conditions:

A. Temporary erosion and sediment control shall be installed and inspected prior to any clearing activity. The Land Use Office Staff shall conduct periodic inspections to ensure the integrity of temporary erosion and sediment controls. Temporary erosion and sediment control measures include, but are not limited to, installation of silt fencing or filter socks, installation of check dams, covering of excavation piles, and mulching of exposed soils, as specified and in accordance with the 2002 CT E&S Guidelines.

B. Phased Clearing. Clearing activities shall be phased to limit the amount of exposed soil that occurs at any one time, based on site characteristics or constraints including, but not limited to, slopes, proximity to shorelines and wetlands. A phased clearing plan, shall be submitted for review and approval by the Planning & Zoning Official prior to any clearing activity and shall contain a detailed construction schedule or timeline. Failure to follow the phasing plan may result in fines in accordance with Section 9.4.

C. Soil Stabilization. All disturbed areas shall be provided with soil stabilization within two days of the time of disturbance. The phasing plan must specifically detail erosion and sediment controls.

E. Application Requirements

This section of the regulation specifically applies to any property where any one of the following activities is proposed:

- All new primary structure construction,
- Reconstruction (tear-down and rebuilds),
- Any property where a variance for setback or coverage is being sought,
- Any property where construction activity includes more than 750 square feet of disturbance.

In addition to the requirements listed in section 3.1.D above, applications for the above mentioned activities will not be considered complete and will not be acted upon unless and until the following items are submitted:

A. A signed statement on a form provided by the Land Use Office verifying that the applicant is aware of his/her responsibilities for best management practices during and after construction and testifying that they are aware of the potential for the assessment of fines should best management practices not be adhered to.

~~A. All areas fronting on Lake Pocotopaug and any of its tributaries (Hales, Christopher, Fawn, Clark, Days, O'Neil, Candle, Hazen, Bill Day, and Unnamed Brooks) require a planted buffer zone of at least 20% of the distance between the primary residential structure and the water way, or five (5) feet, whichever is less starting at the mean high water mark. Provisions may be made for walking paths (not wider than six feet) and dock landings. Property owners should refer to the "Protecting Lake Pocotopaug" documents for best management practices. This buffer should contain native plantings consisting of low and high vegetation. (Views may be maintained by planting low growth bushes and trimming large growth trees.)~~

~~B. All proposed site plans within the watershed shall include provisions for eliminating runoff from the property to the street. This must take into account the topography of the property and any nearby catch basis or other drainage structures.~~

~~C.~~B. All applications as required by this Section shall include a Stormwater Management Plan and Data which shall include the following:

a. A Narrative report prepared by a licensed engineer indicating:

i. Any risk or threat to Lake Pocotopaug or its tributaries~~or the water resources in the watershed~~ from site development, site improvements, or on-site operations proposed in the application. ~~and measures~~.

ii. Methods of assessment and best management practices to prevent and reduce any such risk or threat.

iii. Supporting documentation, including calculations and engineering details shall be provided to illustrate the existing and proposed development's compliance with these regulations which shall be designed in accordance with the stormwater management design guidelines of either the "Connecticut Stormwater Quality Manual" or Connecticut DEEP's "Manual for the Best Management Practices for Stormwater Management."

~~b.~~D. A Site Plan indicating:

~~i.~~a. All relevant data required for the application,

~~ii.~~b. Site topography,

~~iii.~~c. Location and area of all impervious surfaces on the site,

~~iv.~~d. Location and area of all turf cover,

~~v.~~e. Location and area of all existing woodland areas,

~~vi.~~f. Location and area of all existing and proposed vegetative buffer areas,

~~vii.~~g. Location and description of all potential runoff and pollution sources including erosive soils, steep slopes, and impervious surfaces,

h. Location and specifications of all existing and proposed stormwater best management practices.

~~viii.~~ Provisions for eliminating runoff from the property to the street. This must take into account the topography of the property and any nearby catch basins or other drainage structures[DJ1].

~~c. An Erosion and Sedimentation Control Bond in accordance with Section 8.5.N shall be submitted for all projects resulting in more than 5,000 square feet of soil disturbance.~~

~~d. Seasonal Clearing Activity Limitations - The intent of seasonal clearing activity limitations is to limit the amount of exposed soils on site that are susceptible to erosion at any one time, thereby improving site stability during development and reducing potential for transport of dissolved pollutants and sediments off site. Preservation of existing trees on site also reduces the quantity and maintains the quality of stormwater leaving a site during and after development activities by encouraging interception, infiltration and evapotranspiration of rainfall and surface runoff.~~

~~i. Administrative review and approval shall be required for all clearing activities associated with any development proposal.~~

~~ii. Clearing activity that will result in exposed soils exceeding 500 square feet shall not be permitted from October 1st through April 30th; provided, that:~~

~~i. The Planning & Zoning Official may approve an exemption to this requirement for the following activities:~~

~~1. Routine maintenance and repair of erosion and sediment control measures;~~

~~2. Activities located at or waterward of the mean high water mark subject to conditions of approval requiring commencement of clearing activity between October 1st and May 30th for purposes of minimizing surface water disturbance and site inundation by high water or wave action;~~

~~3. Activities necessary to address an emergency that presents an unanticipated and imminent threat to public health, safety or the environment that requires immediate action within a time too short to allow full compliance with this section. Upon abatement of the emergency situation, the clearing activity shall be reviewed for consistency with this section and may be subject to additional permit requirements; provided, that the applicant shall make a reasonable attempt to contact the Planning & Zoning Official prior to the activity. When prior notice is not feasible, notification of the action shall be submitted to the Planning & Zoning Official as soon as the emergency is addressed and no later than two business days following such action. Emergency construction does not include development of new permanent protective structures where none previously existed;~~

~~4. The proposed activity does not involve the conversion of forest land, is outside critical areas and associated buffers.~~

~~ii. To ensure compliance with subsection (ii) of this section, the East Hampton Land Use Office shall not issue development permits requiring more than 500 square feet of land disturbance located within the Lake Pocotopaug watershed within two weeks prior to the watershed seasonal closure on October 1st.~~

~~iii. Soil disturbance associated with an exempt clearing activity shall be minimized to the maximum extent practicable. The Planning & Zoning Official shall have the authority to~~

~~condition an exempt activity to ensure that temporary erosion and sediment control measures will be implemented.~~

~~iv. An exemption from the seasonal land clearing requirements of this section does not grant authorization for any work to be done in a manner that does not comply with other provisions of this chapter or other applicable development regulations.~~

~~v. Within the Lake Pocotopaug Watershed Overlay District, clearing activity must conform to the following conditions:~~

~~1. Temporary erosion and sediment control shall be installed and inspected prior to any clearing activity. The Planning & Zoning Official shall conduct periodic inspections to ensure the integrity of temporary erosion and sediment controls. Temporary erosion and sediment control measures include, but are not limited to, installation of silt fencing, installation of check dams, covering of excavation piles, and mulching of exposed soils, as specified and in accordance with the 2002 CT E&S Guidelines.~~

~~2. Phased Clearing. Construction activities and clearing activities shall be phased to limit the amount of exposed soil that occurs at any one time, if determined to be appropriate by the Planning & Zoning Official, based on site characteristics or constraints including, but not limited to, slopes, proximity to shorelines and wetlands. A phased clearing plan may be required. A phased clearing plan, if required, shall be submitted for review and approval by the Planning & Zoning Official prior to any clearing activity and shall contain a detailed construction schedule or timeline.~~

~~3.~~i. ~~Soil Stabilization. All disturbed areas shall be provided with soil stabilization within two days of the time of disturbance. The Planning & Zoning Official may approve an exemption to this requirement when a tree canopy area retention plan includes a soil stabilization plan. This plan component must specifically detail erosion and sediment control and stormwater runoff measures that provide runoff control equal to or greater than the protection provided by the standard two-day soil stabilization requirements of this section.~~

~~E.~~F. Best Management Practices

The following practices and methods shall be incorporated into all ~~stormwater management plans~~uses throughout the watershed wherever possible:

- A. Vegetative swales, buffers, filter strips
- B. Water control berms and level spreaders
- C. Grassed drainage swales wet, or dry
- D. Maintain or restore pre-development vegetation
- E. Minimize creation of steep slopes
- F. Bio-retention structures/residential rain gardens
- G. Rain water harvesting/rain barrels
- H. Dry retention ponds
- I. Underground detention galleries
- J. Proper location and reduction of impervious surface area on site
- K. Disconnect flows from multiple impervious surfaces

- L. Permeable pavement choices
- M. Groundwater infiltration systems (curtain drains, dry well galleries, etc)
- N. Site grading should be in such a manner so as to prevent any runoff from entering the lake, wetlands, or stream directly an instead directed to areas where it can infiltrate.
- O. Replanting

~~F.~~G. Prohibited Uses

The following uses are prohibited within the watershed zone because of the potential for negative impacts to Lake Pocotopaug.

~~1.~~A. Direct discharge of stormwater into wetlands or waterways.
~~2.~~B. Direct discharge of stormwater into existing catch basins and other drainage structures that drain to wetlands and watercourses.
~~3.~~C. Underground fuel ~~oil~~ tanks
~~4.~~D. Fuel filling stations
~~5.~~E. Stockpiling or composting of manure within 200 feet of a wetland or watercourse.