

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553
www.waterfordct.org

**AGENDA
REPRESENTATIVE TOWN MEETING
REGULAR MEETING
Monday, June 2, 2025
7:00pm – Waterford Town Hall**

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY 22 P 1:54
ATTEST: *[Signature]*
TOWN CLERK

- A. Pledge of Allegiance
- B. Roll Call
- C. To consider and act upon the minutes of the May 5, 2025 Meeting
- D. Correspondence
- E. Public Comment
- F. Committee reports and referrals
- G. Appointee & Liaison updates
- H. Transaction of Business on the Call:
 - 1. To consider and act upon a request from Finance Director Kim Allen to deposit a check for **\$10,000** from the **Cactus Jack Foundation** to be used for **Town of Waterford's Camp Dash Program**.
 - 2. To consider and act upon a recommendation from the Board of Finance for an additional appropriation of **\$85,000** from the **Undesignated fund balance #205-31520 of the Capital and Non-Recurring Expenditure Fund (CNR)** to the established project at 28 Industrial Drive, new account to be established.
 - 3. To consider and act upon a recommendation from the Board of Finance, pending the outcome of its May 28, 2025 meeting, for an appropriation of **\$197,000 to Line Item #20560-57884 (Chromebooks & iPad Equipment)** for the replacement of 400 Chromebooks, along with the purchase of iPads.
 - 4. To consider and act upon a recommendation from the Board of Finance, pending the outcome of its May 28, 2025 meeting, for an appropriation of **\$243,335 to Line Item # 20560-57883 (Energy Efficiency)** for LED, new transformers and new VFDs across the District.
 - 5. To consider and act upon a recommendation from the Board of Finance, pending the outcome of its May 28, 2025 meeting, for an appropriation of

\$25,000 from Designated Line Item #20511-57767 (Nevins Cottage Structural Repairs).

6. Utility Commission Presentation.
7. Fire Services Review Special Committee Presentation
8. To consider and act upon the recommendation of the Board of Finance, pending the outcome of its May 28, 2025 meeting, that an appropriation not to exceed **\$12,000,000** be approved, for the demolition of the existing building and the construction of a new **Town of Waterford Oswegatchie Fire Station at 441 Boston Post Rd** as follows:

To act upon the recommendation of the Board of Finance that an appropriation not to exceed \$12,000,000 be approved for demolition of the existing building and the construction of a new Town of Waterford Oswegatchie Fire Station at 441 Boston Post Road, Waterford as substantially described in the plans prepared by Silver Petrucelli & Associates' for the Oswegatchie Fire Station Building Committee (the "Project") dated January 24, 2025 and on file in the office of the Director of Planning and Development. The appropriation may be spent for design, demolition, renovation and construction costs, equipment, furnishings, materials, site improvements, survey costs, architects' fees, engineering fees, other consultants' fees, legal fees, net temporary interest and other financing costs and other expenses related to the project and financing; to authorize the Oswegatchie Fire Station Building Committee to determine the scope and particulars of the project to authorize the issue of up to \$12,000,000 bonds or notes, and temporary notes to finance, in part, said appropriation; to authorize the First Selectman and the Director of Finance to determine to amount, date, interest rates, maturities, redemption provisions, form and other details of the transfer agent, and paying agent for the obligations to designate one or more banks or trust companies to be certifying bank, registrar, transfer agent, and paying agent for the obligations, to provide for the keeping of a record of the obligations; to designate a financial advisor to the town in connection with the sale of the obligations; to see the obligations at public or private sale, to deliver the obligations and to perform all other acts which are necessary or appropriate to issue the obligations; to designate Shipman and Goodwin as bond counsel to approve the legality of the obligations; to declare the Town's official intent under Federal Income Tax Regulation Section 1.150-2 that project costs may be paid from temporary advances of available funds and that the Town reasonably expects to reimburse any such advances from the proceeds of borrowings; to authorize the First

Selectman and the Director of Finance to make representations and covenants to maintain the continued exemption from federal income taxation of interest on the obligations and to make representations and enter into written agreements for the benefit of holders of the obligations to provide secondary market disclosure information; and to authorize the First Selectman, the Director of Finance, the Oswegatchie Fire Station Building Committee and other proper officers and officials of the Town to execute and file all necessary applications, agreements and documents in order to obtains grants to finance the project.

9. To consider and act upon a recommendation from the Finance, Wage & Personnel Standing Committee of the RTM, postponed from the April 7, 2025 meeting, to annually increase elected official salaries by the percentage approved for non-union management effective July 1, 2025 to align salary increases.
10. To consider and act upon the attached resolution, postponed from the May 5, 2025 meeting, for a pilot program lasting one year to allow for all approved capital projects within the FY26 budget to move forward through the Finance Department without any further action by the Board of Selectmen, Board of Finance and the Representative Town Meeting.
11. To consider and act on an appointment to the Waterford Utility Commission. (Term 04/01/2025 – 03/31/2029)

I. New Business

J. Adjournment

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553
www.waterfordct.org

C

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY 16 P 4:48
ATTEST *[Signature]*
TOWN CLERK

MINUTES

REPRESENTATIVE TOWN MEETING *Amended
Annual Budget Meeting & Special Meeting
May 5, 7, 12 and 14, 2025

Moderator Paul Goldstein called the Annual Budget Meeting & Special Meeting of the Representative Town Meeting to order on May 5, 2025, at 7:00 P.M.

PLEDGE OF ALLEGIANCE

ROLL CALL

PRESENT: Kyrah Augmon-Bossa, Michael Bono (Arrived after Agenda Item C), Jennifer Bracciale, Mark Campo, Erica Casper, Mary Childs, Harry Colonis (Speaker Phone), Tim Condon, Thomas J. Dembek, Susan Driscoll, Tim Fioravanti, Narciss Greene, Paul S. Goldstein, Kristin Gonzalez, Ryan Healy, Christina Jessuck, Matthew Keatley, Lindsay Khan, Kate MacKenzie, Shawn Monahan, Ursula Moreshead, Kayla Mullen, Kathleen Mullen Kohl, Ted Olynciw, Danielle Steward-Gelinas, David Sugrue

ABSENT: None

EX-OFFICIO MEMBERS PRESENT: First Selectman Robert J. Brule, Board of Education Chair Pat Fedor, Board of Finance Chair Glenn Patterson, Selectman Richard Muckle.

EX-OFFICIO MEMBERS ABSENT: Selectman Greg Attanasio.

ALSO PRESENT: Town Clerk David L. Campo, and Director of Finance Kim Allen.

AGENDA ITEM C – April 7, 2025 & March 31, 2025 Minutes

MOTION by Steward-Gelinas, seconded by Keatley, to accept the April 7, 2025 and the March 31, 2025 Minutes with the following correction to the April 7, 2025 minutes: remove "Selectman Richard Muckle, Board of Education Chair Pat Fedor, Board of Finance Chair Glenn Patterson" from EX-OFFICIO

MEMBERS PRESENT

MOTION PASSED: Unanimous

PUBLIC COMMENT

Helen Kwasniewski, 227 Bloomingdale Rd, spoke in favor of increasing efficiency while reducing the budget.

Laurie Wolfley, resident and Board of Education member, 15 Anita Ave, spoke in support of the Board of Education Budget.

Glenn Patterson, resident and Board of Finance member, 7 Leary Dr, spoke in regard to a letter submitted by Bill Sheehan and himself. (See Attachment)

Laura Rodriguez, 20 Shore Rd, spoke in support of the Board of Education Budget and that a reduction could lead to the elimination of staff.

CORRESPONDENCE

The following correspondence was received: A letter from Board of Finance Members Bill Sheehan and Glenn Patterson. An email from Ethics Chair Betsy Ritter as to her availability to present for the Ethics Commission. RTM Moderator submitted during the Board of Education presentation the "Adjusted Equalized Net Grand List per Capita and AENGLC rank for the 169 towns" for FY25 and FY26. Copies of correspondence can be obtained through the office of the Town Clerk.

PROCEDURAL MATTERS

The Annual Budget Meeting is, in fact, an ongoing meeting called to order on May 5, 2025, recessed, then continued on May 7, May 12, and May 14, only to be adjourned after final action on May 14, 2025. Consideration of the Budget by department/agency follows the posted schedule.

CALL ITEM 1 – Board of Education and General Fund Budget

Consideration and action upon the General Fund Budget, which includes both Board of Education and General Government Budgets for the Fiscal Year July 1, 2025, through June 30, 2026, as recommended by the Board of Finance, and as may be modified by the determination of the Representative Town Meeting.

STANDING MOTION by Majority Leader Steward-Gelinas, seconded by Minority Leader Driscoll, to offer a standing motion to move each proposed budget for consideration in the order specified in the hearing schedules, with approvals at the series subtotal and the department total levels, with the understanding that all totals are considered tentatively approved until final action is taken at the end of our Budget hearing.

VOTING IN FAVOR: Unanimous

CONSERVATION OF HEALTH (10132) \$155,063

PRESENTATION: Ledge Light Health District Director Jennifer Muggeo

MOTION PASSED: 24-0-2 (Goldstein, Steward-Gelinas abstained)

PUBLIC HEALTH NURSING SERV (10133) \$21,600

PRESENTATION: Yale New Haven Health-Health at Home-Southeast Director Karen DeSantis

MOTION PASSED: Unanimous

SOCIAL SERVICES GRANTS/MISC (10120) \$103,510

MOTION PASSED: Unanimous

BOARD OF EDUCATION (10160) \$60,366,308 Amended total: \$59,828,308

PRESENTATION: Chairman of the Board of Education Pat Fedor, Superintendent of Schools Thomas Giard, BOE Director of Finance Joseph Mancini presented the details of the budget and stood for questions.

Lengthy discussion ensued.

MOTION by Steward-Gelinas, seconded by Colonis, to reduce the increase by \$538,000 for a new total for the Board of Education budget in the amount of \$59,828,308.

VOTING IN FAVOR OF REDUCTION: Bracciale, M. Campo, Colonis, Condon, Dembek, Goldstein, Healy, Jessuck, Keatley, MacKenzie, Monahan, Steward-Gelinas, Sugrue

VOTING AGAINST REDUCTION: Augmon-Bossa, Casper, Childs, Driscoll, Fioravanti, Gonzalez, Greene, Khan, Moreshead, Mullen, Mullen Kohl, Olynciw

ABSTAINED: Bono

MOTION TO REDUCE PASSED: 13-12-1

VOTING IN FAVOR OF AMENDED TOTAL (\$59,828,308): Bracciale, M. Campo, Colonis, Condon, Dembek, Goldstein, Healy, Jessuck, Keatley, MacKenzie, Monahan, Moreshead, Mullen, Olynciw, Steward-Gelinas, Sugrue

VOTING AGAINST AMENDED TOTAL: Augmon-Bossa, Casper, Childs, Driscoll, Fioravanti, Gonzalez, Greene, Khan, Mullen Kohl

ABSTAINED: Bono

MOTION TO APPROVE AMENDED TOTAL PASSED: 16-9-1

Recess at 9:46 P.M.

CALL TO ORDER

The Annual Budget Meeting of the Representative Town Meeting was resumed and called to order at 7:00 P.M. on Wednesday, May 7, 2025 by Moderator Goldstein.

PLEDGE OF ALLEGIANCE

PRESENT: Kyrach Augmon-Bossa, Jennifer Bracciale, Mark Campo, Erica Casper, Mary Childs, Harry Colonis (Speaker phone), Tim Condon, Thomas J. Dembek, Susan Driscoll, Tim Fioravanti, Narciss Greene, Paul S. Goldstein, Kristin Gonzalez, Ryan Healy, Christina Jessuck (Speaker phone), Matthew Keatley, Lindsay Khan, Kate MacKenzie, Shawn Monahan, Ursula Moreshead, Kayla Mullen, Kathleen Mullen Kohl, Ted Olynciw, Danielle Steward-Gelinas, David Sugrue

ABSENT: Michael Bono, Tim Condon

EX-OFFICIO MEMBERS PRESENT: First Selectman Robert J. Brule, Board of Finance Chair Glenn Patterson, Selectman Richard Muckle.

EX-OFFICIO MEMBERS ABSENT: Selectman Greg Attanasio, Board of Education Chair Pat Fedor

ALSO PRESENT: Town Clerk David L. Campo, and Director of Finance Kim Allen.

PUBLIC COMMENT

None

CORRESPONDENCE

A letter from Richard Muckle, 864 Vauxhall St Ext in regard to the Monday May 5, 2025 Budget Meeting. Copies of correspondence can be obtained through the office of the Town Clerk.

ETHICS COMMISSION (10143) \$900

MOTION PASSED: Unanimous

REGISTRARS OF VOTERS (10102) \$121,255

PRESENTATION: Democratic Registrar of Voters Bigi Ebbin, Republican Registrar of Voters Patricia Waters

MOTION PASSED: Unanimous

HUMAN RESOURCES DEPARTMENT (10145) \$244,204

PRESENTATION: Director of Human Resources Christine Walters

MOTION PASSED: Unanimous

RTM Member Jessuck left.

RETIREMENT COMMISSION (10116) \$7,760,257 Amended total: \$7,200,257

PRESENTATION: Retirement Commission Chair Susan Driscoll

Lengthy discussion ensued.

MOTION by Steward-Gelinas, seconded by Keatley, to reduce Line Item #10116-51949 by \$560,000 for a new total for the Retirement Commission Budget in the amount of \$7,200,257.

VOTING IN FAVOR OF REDUCTION: Augmon-Bossa, Bracciale, M. Campo, Childs, Colonis, Dembek, Fioravanti, Goldstein, Gonzalez, Healy, Keatley, Khan, MacKenzie, Monahan, Moreshead, Steward-Gelinas, Sugrue

VOTING AGAINST REDUCTION: Driscoll, Greene, Mullen, Mullen Kohl, Olynciw

ABSTAINED: Casper

MOTION TO REDUCE PASSED: 17-5-1

MOTION TO APPROVE AMENDED TOTAL PASSED: 20-3-0 (Driscoll, Mullen Kohl, & Olynciw voted against)

YOUTH & FAMILY SERVICES BUREAU (10119) \$307,435

PRESENTATION: Director of Human Services Dani Gorman, Program Coordinator Brandon Smith, Human Services Coordinator Heidi McSwain

MOTION PASSED: Unanimous

SENIOR CITIZENS COMMISSION (10135) \$523,586

PRESENTATION: Director of Human Services Dani Gorman, Assistant Director Terry Wheeler, Office Assistant Meghan Rossi

MOTION PASSED: 22-0-1 (Bracciale abstained)

BOARD OF ASSESSMENT APPEALS (10105) \$1,829

PRESENTATION: Assessor Paige Walton

MOTION PASSED: Unanimous

ASSESSOR (10104) \$319,641

PRESENTATION: Assessor Paige Walton

MOTION PASSED: Unanimous

CONTINGENCY (10121) \$265,000

PRESENTATION: Director of Finance Kim Allen

MOTION PASSED: Unanimous

DEBT SERVICE (10139) \$7,964,500

PRESENTATION: Director of Finance Kim Allen

MOTION PASSED: Unanimous

INSURANCE (10112) \$5,604,561

PRESENTATION: Director of Finance Kim Allen

MOTION PASSED: Unanimous

TOWN CLERK (10109) \$272,301

PRESENTATION: Town Clerk David L. Campo, CCTC

MOTION PASSED: Unanimous

REPRESENTATIVE TOWN MEETING (10117) \$18,903 Amended total: \$17,403

PRESENTATION: Town Clerk David L. Campo, CCTC

Lengthy discussion ensued.

MOTION by Childs, seconded by Driscoll, to reduce Line Item #10117-52010 by \$1,500 for a new total for the Representative Town Meeting Budget in the amount of \$17,403.

MOTION TO REDUCE PASSED: Unanimous

MOTION TO APPROVE AMENDED TOTAL PASSED: Unanimous

Recess at 8:25 P.M.

CALL TO ORDER

The Annual Budget Meeting of the Representative Town Meeting resumed at 7:00 P.M. on Monday, May 12, 2025, with the call to order by Moderator Goldstein.

PLEDGE OF ALLEGIANCE

ROLL CALL

PRESENT: Kyrach Augmon-Bossa, Michael Bono, Jennifer Bracciale, Mark Campo, Erica Casper, Mary Childs, Harry Colonis, Tim Condon, Thomas J. Dembek, Susan Driscoll, Tim Fioravanti, Paul S. Goldstein, Kristin Gonzalez, Narciss Greene, Christina Jessuck, Matthew Keatley, Lindsay Khan, Kate MacKenzie, Shawn Monahan, Ursula Moreshead, Kathleen Mullen Kohl, Ted Olynciw Danielle Steward-Gelinas, David Sugrue

ABSENT: Kayla Mullen

EX-OFFICIO MEMBERS PRESENT: First Selectman Robert J. Brule, Selectman Richard Muckle, and Board of Finance Chair Glenn Patterson

EX-OFFICIO MEMBERS ABSENT: Board of Education Chair Pat Fedor, and Selectman Greg Attanasio

ALSO PRESENT: Town Clerk David L. Campo, and Director of Finance Kim Allen.

PUBLIC COMMENT

Helen Kwasniewski, 227 Bloomingdale Rd, spoke in favor of increasing efficiency while reducing the budget.

Robert Kyne, 18 Dimmock Rd, spoke in favor of the Waterford Morning Swim Program.

Alan Briggs, 16 Quaker Ln, spoke in favor of the Waterford Morning Swim Program.

CORRESPONDENCE

None

ZONING BOARD OF APPEALS (10115) \$4,310

PRESENTATION: Planning Director Jonathan Mullen, AICP

MOTION PASSED: Unanimous

ECONOMIC DEVELOPMENT COMMISSION (10113) \$25,352

PRESENTATION: Planning Director Jonathan Mullen, AICP; Town Planner Mark Wujtewicz

MOTION PASSED: 24-0-1 (Mullen Kohl abstained)

CONSERVATION COMMISSION (10114) \$18,250

PRESENTATION: Planning Director Jonathan Mullen, AICP, Environmental Planner Maureen Fitzgerald

MOTION PASSED: Unanimous

PLANNING & ZONING COMMISSION (10110) \$695,016

PRESENTATION: Planning Director Jonathan Mullen, AICP; Town Planner Mark Wujtewicz;

Environmental Planner Maureen Fitzgerald

MOTION PASSED: Unanimous

FLOOD & EROSION CONTROL BOARD (10141) \$1,109

PRESENTATION: Planning Director Jonathan Mullen, AICP; Town Planner Mark Wujtewicz

MOTION PASSED: 24-0-1 (MacKenzie abstained)

BUILDING DEPARTMENT (10118) \$321,515

PRESENTATION: Planning Director Jonathan Mullen, AICP; Building Official Steve Cardelle

MOTION PASSED: Unanimous

BUILDING MAINTENANCE (10111) \$1,020,000

PRESENTATION: Director of Public Works Gary Schneider, Office Coordinator Sandy Kenniston

MOTION PASSED: Unanimous

PUBLIC WORKS DEPARTMENT (10130) \$5,154,902

PRESENTATION: Director of Public Works Gary Schneider, Office Coordinator Sandy Kenniston

MOTION PASSED: Unanimous

RECREATION & PARKS COMMISSION (10137) \$1,535,328

PRESENTATION: Director of Recreation and Parks Ryan McNamara, Assistant Director Tim Ceiplik

MOTION PASSED: 23-0-2 (Childs and Sugrue abstained)

BOARD OF SELECTMEN (10101) \$206,402

PRESENTATION: First Selectman Robert Brule

MOTION PASSED: Unanimous

Recess at 9:25 P.M.

CALL TO ORDER

The Annual Budget Meeting of the Representative Town Meeting resumed at 7:00 P.M. on Wednesday, May 14, 2025, with the call to order by Paul Goldstein.

PLEDGE OF ALLEGIANCE

ROLL CALL

PRESENT: Kyrar Augmon-Bossa, Jennifer Bracciale, Mark Campo (Speaker Phone), Erica Casper, Mary Childs, Harry Colonis, Tim Condon, Thomas J. Dembek, Susan Driscoll, Tim Fioravanti, Paul S. Goldstein, Kristin Gonzalez, Narciss Greene, Ryan Healy, Christina Jessuck, Matthew Keatley, Lindsay Khan, Kate MacKenzie, Shawn Monahan (Speaker Phone), Ursula Moreshead, Kayla Mullen, Kathleen Mullen Kohl,

Ted Olynciw, Danielle Steward-Gelinas, David Sugrue

ABSENT: Michael Bono

EX-OFFICIO MEMBERS PRESENT: First Selectman Robert J. Brule, Selectman Richard Muckle, Board of Education Chair Pat Fedor, Board of Finance Chair Glenn Patterson

EX-OFFICIO MEMBERS ABSENT: Selectman Greg Attanasio.

ALSO PRESENT: Town Attorney Robert Avena, Town Clerk David L. Campo, and Director of Finance Kim Allen.

PUBLIC COMMENT

Helen Kwasniewski, 227 Bloomingdale Rd, expressed concerns over the budget and reminded the body to vote wisely.

Marcia Benvenuti, 1 Raymond Ln, expressed concerns in regard to the reduction of the Board of Education request. (See Attachment)

Glenn Patterson, resident and Board of Finance member, 7 Leary Dr, spoke in regard to a letter submitted by Bill Sheehan and himself and that Item 3 should be referred to committee for possible codification. (See Attachment)

Bill Sheehan, resident and Board of Finance member, 22 laurel Crest, spoke in regard to a letter submitted by Glenn Patterson and himself and that Item 3 should be referred to committee for possible codification. (See Attachment)

CORRESPONDENCE

None

TAX COLLECTOR (10106) \$227,817

PRESENTATION: Tax Collector Alan Wilensky

MOTION PASSED: Unanimous

WATERFORD PUBLIC LIBRARY (10136) \$1,012,780

PRESENTATION: Library Director Christine Johnson, President of The Waterford Public Library Board of Trustees Miriam Wagner

MOTION PASSED: Unanimous

FINANCE DEPARTMENT (10107) \$784,326

PRESENTATION: Director of Finance Kim Allen

MOTION PASSED: Unanimous

BOARD OF FINANCE (10103) \$83,608

PRESENTATION: Board of Finance Chair Glenn Patterson

MOTION PASSED: Unanimous.

LEGAL DEPARTMENT (10108) \$295,000

PRESENTATION: Town Attorney Robert Avena

MOTION PASSED: Unanimous

EMERGENCY MANAGEMENT (10122) \$1,230,035

PRESENTATION: Director of Emergency Management Stephen Sinagra

MOTION PASSED: Unanimous.

FIRE SERVICES (10123) \$3,958,130

PRESENTATION: Director of Fire Services Michael Howley

MOTION PASSED: Unanimous

POLICE COMMISSION (10129) 47,250,097 Amended total: \$7,215,097

PRESENTATION: Chief of Police Marc Balestracci, Lieutenant David Ferland, Lieutenant Nicole VanOverloop, Lieutenant Patrick Flanagan, Administrative Sargent Michael Fedor, Office Coordinator Diane Driscoll

MOTION by Steward-Gelinas, seconded by Keatley, to reduce Line Item #10129-51420 by \$32,739 and Line Item #10129-51920 by \$2,261 for a new total for the Police Commission Budget in the amount of \$7,215,097

MOTION TO REDUCE PASSED: Unanimous

MOTION TO APPROVE AMENDED TOTAL PASSED: Unanimous

RTM Member M. Campo arrived by speaker phone

INFORMATION TECHNOLOGY (10147) \$1,214,796

PRESENTATION: Information Technology Manager Jeff Robillard

MOTION PASSED: Unanimous

CURRENT YEAR CAPITAL IMPROVEMENTS (10138) \$1,101,089

PRESENTATION: First Selectman Robert Brule

MOTION PASSED: 24-1-0 (Childs opposed)

TRANSFERS TO CAPITAL AND NON-RECURRING EXPENDITURE (10140) \$773,264

PRESENTATION: First Selectman Robert Brule

MOTION PASSED: 23-2-0 (Childs and Mullen Kohl opposed)

FINAL ACTION

GENERAL GOVERNMENT OPERATIONS \$40,162,318

MOTION by Steward-Gelinas, seconded by Keatley, to approve the General Government Operations Budget in the amount of \$40,162,318.

MOTION PASSED: Unanimous

CURRENT YEAR CAPITAL IMPROVEMENTS (10138) \$1,101,089

MOTION by Steward-Gelinas, seconded by Condon, to approve the Current Year Capital Improvements Budget in the amount of \$1,101,089.

MOTION PASSED: 24-1-0 (Childs opposed)

TRANSFERS TO CAPITAL AND NON-RECURRING EXPENDITURE (10140) \$773,264

MOTION by Steward-Gelinas, seconded by Keatley, to approve the Transfers to Capital and Non-Recurring Expenditure Fund Budget in the amount of \$773,264

MOTION PASSED: 24-1-0 (Childs opposed)

DEBT SERVICE (10139) \$7,964,500

MOTION by Steward-Gelinas, seconded by Keatley, to approve the Debt Service budget in the amount of \$7,964,500

MOTION PASSED: Unanimous.

BOARD OF EDUCATION: (10160) \$59,828,308

MOTION by Steward-Gelinas, seconded by Keatley, to approve the Board of Education Budget in the amount of \$59,828,308

MOTION PASSED: 24-0-1 (Mullen Kohl abstained)

TOTAL BUDGET FISCAL YEAR 2026 \$109,829,479

MOTION by Steward-Gelinas, seconded by Keatley, to approve a Total Budget for Fiscal Year 2026 in the amount of \$109,829,479

MOTION PASSED: Unanimous

CALL ITEM 2 – Tax Payment Schedule.

MOTION by Steward-Gelinas, seconded by Keatley, to establish the schedule of tax payments for real estate, personal property and motor vehicle tax bills for the next fiscal year as presented. (See Attachment)

VOTING IN FAVOR: Unanimous.

RTM Member Jessuck left.

CALL ITEM 3 – RTM Resolution

PRESENTATION: Town Attorney Robert Avena, Finance Director Kim Allen

MOTION by Steward-Gelinas, seconded by Dembek, to approve the attached resolution for a pilot program lasting one year to allow for all approved capital projects within the FY26 budget to move forward through the Finance Department without any further action by the Board of Selectman, Board of Finance and the Representative Town Meeting. (See Attachment)

MOTION by Mullen Kohl, seconded by Childs, to refer the item to a RTM Standing Committee for further review.

Withdrawn

Original motion withdrawn

MOTION by Steward-Gelinas, seconded by Condon, to postpone to the June Regular Meeting of the RTM.

MOTION TO POSTPONE PASSED: Unanimous

CALL ITEM 4 – 1 Tiffany Ave Sale

PRESENTATION: Town Attorney Robert Avena

MOTION by Steward-Gelinas, seconded by Dembek, to authorize the Board of Selectman and the Town's Purchasing Agent to sell 207 Boston Post Rd (AKA 1 Tiffany Ave) at auction.

VOTING IN FAVOR: Unanimous.

MOTION by Childs, seconded by Khan, to adjourn at 9:54 P.M.
VOTING IN FAVOR: Unanimous

Respectfully submitted,


David L. Campo, CCTC
Waterford Town Clerk

May 2, 2025

John W. "Bill" Sheehan
19 Laurel Crest Dr.
Waterford, CT 06385

Glenn Patterson
7 Leary Dr.
Waterford, CT 06385

Mr. Paul Goldstein
Moderator
Waterford Representative Town Meeting
15 Rope Ferry Road
Waterford, CT 06385

Mr., Goldstein

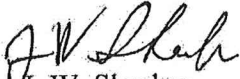
According to the Agenda of the Representative Town Meeting (RTM) for the Annual Budget Hearing and Special Meeting, the RTM will be considering a resolution for a pilot program for approved Capital Projects within the FY26 budget.

Rather than approving that resolution, in our capacity as individual members of the Board of Finance (BOF), we propose that the RTM send to a Standing Committee (possibly the Legislative and Administration Committee) the attached proposed change to the Code of Ordinances.

There is sufficient time between now and the FY2027 budget to pass the proposed ordinance and be ready in the FY2027 budget to have the best of both the designation procedure and the direct appropriation procedure.

We are sending this letter and proposed ordinance as individual members of the Board of Finance and not as a request or recommendation of the BOF.

Sincerely,


J. W. Sheehan


Glenn Patterson.

Copy to (with encl): Town Clerk Campo
First Selectman Brule

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY -2 P 2:38
ATTEST: 
TOWN CLERK

Proposed Ordinance Change for Capital Funds

3.04.020 - Reserve fund for capital and nonrecurring expenditures and Current Capital Fund established.

1. There is created a reserve fund for capital and nonrecurring expenditures.

a. The Reserve fund for capital and nonrecurring expenditures will have two types of funding- Appropriated and Designated.

1) If the expenditure requires accumulating funding over multiple years, the annual funding will be designated for the project. After the total funds needed for the expenditure are accumulated, the funds will be appropriated by action of the Board of Selectmen, the Board of Finance, and the Representative Town Meeting.

2) If the expenditure is well-defined and funding is complete in the initial request, the Board of Selectmen, the Board of Finance and the Representative Town Meeting shall appropriate the funds at the initial presentation.

3) If the expenditure is not well defined in the initial presentation, it will be designated and the Department or Board will have to return to the BOS, BOF, and RTM to become appropriated. This is likely to occur for an expenditure proposed in the First Selectman's Capital Plan.

b. The Current Capital Fund is established for expenditures that are expected to be completed in the Fiscal Year Proposed and funding will be considered appropriated when approved by the Board of Selectmen, Board of Finance, and Representative Town Meeting.

1) If the expenditure is not complete in the fiscal year proposed, it should be transferred to the Reserve fund for capital and nonrecurring Fund by action by the Board of Selectman, Board of Finance, and Representative Town Meeting before the end of the fiscal year.

2) If the expenditure is not complete in the fiscal year proposed and it is not transferred to the Reserve Fund, the remaining expenditure will be transferred to the Unassigned Fund Balance of the General Fund at the end of the fiscal year. If all that remains of the expenditure is final invoicing and payment then the funds may be encumbered to make those final payments in the next fiscal year.

b. The Board of Finance shall review the progress of projects in both funds quarterly.

c. Funds left after the completion of the expenditure shall be returned to the Unassigned Fund Balance of the General Fund if from the Current Capital Fund and to the Undesignated fund

Balance of the Capital and Nonrecurring Fund if from the Reserve fund for capital and nonrecurring expenditures.

2. Implementation

- a. This ordinance change will be effective with the fiscal year 2027 budget.*
- b. In June 2026 the Board of Finance will transfer any outstanding projects from the Capital Improvement Fund to the Capital Nonrecurring Expenditure Fund.*
- c. The Capital Improvement Fund will be renamed the Current Year Capital Fund.*

RTM public comment 5/14/25

RECEIVED FOR RECORD
WATERFORD, CT

I want to address the haphazard, inefficient way our town seems to be handling the recurring expenses of the BOE-like chrome books, capital improvements in general, and the burdens and benefits of a fully funded education budget.

First the sad saga of the chrome books. The BOE followed town instructions and placed the chrome books in capital improvements only to be denied and told to put them back in the operating budget. This occurred after the BOE finance committee started to fine tune and set the operating budget. It pushed the BOE budget up unexpectedly, making the budget higher than preferred. The administration and BOE found some savings and agreed upon a budget under 5%. One of the lowest in Southeastern Ct.

Now at the eleventh hour, the RTM decided the chrome books should be put back into the capital expenditures. This will require the BOE to go to the BOS, then the BOF, and then back to the RTM and request the funding. This flip-flopping mess has cost the taxpayers countless wasted hours of preparation and revision, will delay purchases, and it will make the BOE budget seem lower than it really is.

It and the the insurance cut artificially put the BOE budget at 3.85% and misleads the taxpayers. Next year when the BOE adds the chrome books back in the operating budget, because it is a recurring expense, it will automatically look higher when in reality it is not.

The 3.85% is just an illusion to fool the public. The BOE budget is really 4.85% and should reflect that.

Mr. Giard presented real data that shows that Waterford public schools are excelling in every way and out ranking many of our neighboring communities, while our costs are below those of our neighbors. WPS are doing an exceptional job with below average funding.

I am a senior. I am on a fixed income. I have lived in Waterford for over 65 years. I regularly volunteer in the preK-fifth grade classrooms at Great Neck School. I see the needs and the great lengths the administration and staff go to to do the best they can with less money. The benefits we reap from an exemplary school system far outweigh the few dollars saved by lowering the budget. We must be transparent and realistic about the process, the needs, and the costs of town business.

I urge you to stop this shell game, return the chrome books to the operating budget, and help keep WPS on top, by fully funding the BOE budget.

Submitted to be included in
the record,

by Marcia Benvenuti
1 Raymond Ln.
Waterford, CT

Statement of John W. "Bill" Sheehan
RTM Consideration of Resolution regarding Capital-Non-Recurring Requests
May 14, 2025

Thank you, Moderator Goldstein, for the opportunity to address the RTM about the Resolution Regarding the Appropriation of the FY26 Capital Non-Recurring Expenditure Requests.

Tonight, the RTM will consider a resolution for a pilot program lasting one year to allow all approved capital projects within the FY26 budget to be considered appropriated without any further action by the Board of Selectmen, Board of Finance, or the Representative Town Meeting.

I am recommending to the RTM that rather than approving this resolution, the RTM refer it to Committee for consideration and, if appropriate, a public hearing, and revision, before approval by the RTM.

1. Is the backup material provided by all the expenditure requests for the FY26 budget sufficient for a final appropriation decision by the RTM?
2. Does the appropriation of these expenditure requests impact the nineteen expenditures that are in a currently designated or partially designated status in the CNR?
3. Are any of these expenditure requests part of a multiyear funding request that will not be commenced until all of the funds are accumulated in the out years?
4. Although this resolution only discusses the CNR funding, is there any impact on the Current Capital Funding?

It is possible the Standing Committee will find other questions that need answering as it considers this resolution.

If there is a rush to get this resolution passed before the end of FY2025, it is possible for a standing committee to have a meeting, decide to have a public hearing, and fit that public Hearing into the calendar before the June RTM meeting. If a more leisurely schedule is allowed, then there is definitely enough time before the August RTM meeting.

Mr. Patterson and I submitted a letter to the RTM with a proposed ordinance that might answer some of these questions if it becomes part of the code of ordinances. However, this proposed ordinance also needs a Standing Committee consideration, including a public hearing, and Town Attorney review, before adoption.

Thank you for listening to my reasons for sending the resolution to a RTM Standing Committee for further consideration and revision.

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY 15 P 1:33
ATTEST: *Paul A. [Signature]*
TOWN CLERK

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553
www.waterfordct.org

2

RECEIVED FOR RECORD
WATERFORD, CT
2025 APR 15 11:14
ATTEST: David Campo
TOWN CLERK

To: Paul Goldstein, RTM Moderator
David Campo, Town Clerk

From: Alan Wilensky, CCMC
Waterford Tax Collector

Date: April 25, 2025

Subject: Tax Payment Schedule for Fiscal Year 2025 – 2026
For the RTM meeting agenda of May 14, 2025

I have the following recommendations for the schedule of tax payments for Fiscal Year 2025– 2026:

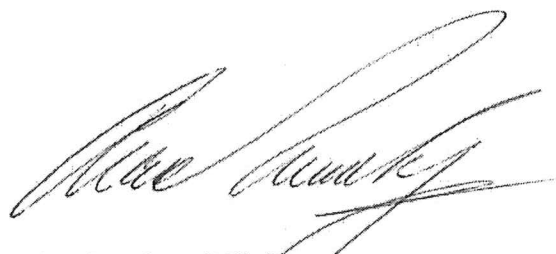
- Retain the two-payment system for Real Estate tax bills, providing for collections in July and January.
- Real Estate tax bills over \$100.00 would be collected in two equal installments, due July 1, 2025, and January 1, 2026.
- Real Estate tax bills of \$100.00 or less would be due in full July 1, 2025.
- Personal Property and Motor Vehicle tax bills would be due in full July 1, 2025.
- Motor Vehicle Supplemental tax bills will now be created twice per fiscal year. Vehicles registered between October 2, 2024 and March 31, 2025 will be billed in July 2025. Vehicles registered between April 1, 2025 and September 30, 2025 will be billed in January 2026.

This collection schedule is recommended in order to keep the Town in compliance with Connecticut General Statutes 12-142, 12-144, and 12-144a.

Sec. 12-142. Installments; due date. The legislative body of each municipality, upon approving any budget calling for the laying of a tax on property, shall determine whether such tax shall be due and payable in a single installment or in two semiannual installments or in four quarterly installments and shall, unless otherwise provided by law, designate the date or dates on which such installment or installments shall be due and payable, subject to the provisions of section 7-383, in any municipality in compliance with requirements concerning the uniform fiscal year under chapter 110; provided the last installment of any such tax shall be due and payable not later than forty-five days before the end of the fiscal year in which the first installment thereof is due and payable, and provided any special tax shall be due and payable in a single installment. In case of failure of the legislative body to determine when such tax shall be due and payable or whenever the date on which such tax shall be due and payable has been determined, however, (1) the preparation and mailing of rate bills for such tax is delayed until after the date such tax is due or (2) such tax is not applicable to certain property until after the date such tax is due, such tax shall be due and payable, with respect to all property or property which becomes subject to tax after the date such tax is due, whichever is applicable, not later than thirty days following the date on which rate bills for such tax are mailed or handed to persons liable therefor. Except as otherwise provided by law, the several installments of a tax due in two or four installments shall be equal, but any taxpayer may pay two or more of such installments when the first is due.

Sec. 12-144. Payment of taxes of not more than one hundred dollars. Any property tax due in any municipality of this state in an amount not in excess of one hundred dollars shall be due and payable in a single payment when so determined by the appropriating body of such municipality.

Sec. 12-144a. Payment of tax on motor vehicles. Irrespective of the provisions of sections 12-142 and 12-144, the appropriating body of each municipality, upon approving any budget calling for the laying of a tax on property, shall determine whether such tax as it applies to motor vehicles shall be due and payable in a single installment.



Alan Wilensky, CCMC
Waterford Tax Collector

RTM Resolution

WHEREAS, the Town of Waterford, through its Board of Selectmen and Board of Finance, present a yearly budget to the RTM for its review and approval; and

WHEREAS, the FY2026 budget presented to the RTM contains capital budget requests for both current year capital improvements and capital non-recurring requests; and

WHEREAS, traditionally capital non-recurring requests in the approved yearly budget are required to be presented a second time to the BOF and RTM for a specific re-voted appropriation.

NOW, THEREFORE, the RTM hereby resolves and approves for fiscal year 2026 a pilot program to permit funds and projects approved in the 2026 budget to be acted upon by the Town Finance Department without a separate, further appropriation vote by the Board of Finance and RTM.

So voted this ____ day of May, 2025.

RECEIVED FOR RECORD
WATERFORD, CT

2025 APR 28 10 31

ATTEST: *David Campo*
TOWN CLERK

Paul Goldstein
RTM Moderator

Attest: _____
David Campo
Waterford Town Clerk



Mr. Joseph P. Mancini
Director of Finance

Mr. Thomas W. Giard III
Superintendent of Schools

D

April 25, 2025

Mr. Moderator,

Please see the quarterly report for Waterford Public Schools through 03/31/2025. The next period will cover year to date actuals through the month of June.

Thanks,

Respectively,

Joseph Mancini
Director of Finance

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY -2 A 11:37
ATTEST:
TOWN CLERK

15 Rope Ferry Road • P.O. Box 284 • Waterford, CT 06385
Phone: 860-444-5849 • Fax: 860-444-5870 • www.waterfordschools.org

Waterford Public School
2024-2025 Budget

04/25/2025

Account Number / Description	Adopted Budget 7/1/2024 - 6/30/2025	Year to Date Spent 7/1/2024 - 03/31/2025	Encumb/Req's/Reserves 7/1/2024 - 6/30/2025	Forecasted Expenditures / Offsets 7/1/2024 - 6/30/2025	Delta to budget 7/1/2024 - 6/30/2025
111 SALARIES, CERTIFIED	25,488,093	15,849,018	9,424,966		214,109
112 SALARIES, SUPPORT	7,305,037	5,359,869	1,882,649		62,519
119 SALARIES, OTHER	729,969	595,225	-	100,000	34,744
121 TEMPORARY PAY, CERTIFIED	1,352,028	1,253,800	1,073	488,143	(390,989)
122 TEMPORARY PAY, SUPPORT	195,100	183,224	-	48,000	(36,124)
132 OVERTIME, SUPPORT	133,370	116,156	-		17,214
212 HEALTH INSURANCE	7,807,026	7,741,767	6,969	19,750	38,540
215 LIFE INSURANCE	74,500	50,498	31,811	-	(7,810)
219 LONG TERM DISABILITY	3,978	2,984	995	-	-
220 FICA, EMPLOYER'S CONTRIBUTION	1,077,195	775,691	-	285,000	36,504
240 REIMBURSEMENTS	107,800	108,773	-		(973)
250 UNEMPLOYMENT COMP	30,000	8,627	415		20,958
260 WORKERS' COMP	346,500	338,378	-	-	8,122
290 UNUSED SICK LEAVE	233,882	164,000	-		69,882
291 RETIREMENT INCENTIVE	21,000	24,000	-	-	(3,000)
321 INSTRUCTIONAL SERVICE-CONTRACTED	108,353	98,808	-	-	9,545
322 PROFESSIONAL DEVELOPMENT	73,050	27,017	1,468	44,565	(0)
323 CURRICULUM DEVELOPMENT	30,000	55,877	-	-	(25,877)
330 OTHER PROF/TECHNICAL SERVICES	1,437,584	600,859	290,624	190,397	355,704
331 LEGAL SERVICES	114,504	93,728	48,694	-	(27,917)
410 WATER SERVICE	29,976	20,989	9,116	-	(128)
411 SEWER SERVICE	64,431	37,627	26,804	-	0
430 MAINTENANCE & REPAIR	401,344	323,200	121,836	-	(43,692)
440 RENTALS	3,500	563	100	-	2,837

Waterford Public School
2024-2025 Budget

04/25/2025

Account Number / Description	Adopted Budget 7/1/2024 - 6/30/2025	Year to Date Spent 7/1/2024 - 03/31/2025	Encumb/Req's/Reserves 7/1/2024 - 6/30/2025	Forecasted Expenditures / Offsets 7/1/2024 - 6/30/2025	Delta to budget 7/1/2024 - 6/30/2025
510 TRANSPORTATION, PUPIL	2,743,742	2,557,423	230,054	65,000	(108,736)
520 FIRE/PROPERTY INSURANCE	128,129	108,770	-	-	19,359
521 LIABILITY INSURANCE	155,000	215,295	-	-	(60,295)
529 OTHER INSURANCE	20,339	18,146	-	-	2,193
530 COMMUNICATIONS	74,527	53,499	21,117	-	(88)
531 POSTAGE	16,000	8,076	400	-	7,524
540 ADVERTISING	5,000	1,436	-	-	3,564
560 TUITION, OTHER PUBLIC	1,415,478	978,128	499,923	(186,514)	123,942
563 TUITION, PRIVATE	1,697,507	803,552	653,383	-	240,572
580 TRAVEL & CONFERENCES	165,038	113,884	42,326	-	8,828
590 OTHER PURCHASED SERVICES	129,427	120,438	13,588	-	(4,599)
611 INSTRUCTIONAL SUPPLIES	404,954	243,191	72,802	89,000	(38)
612 SOFTWARE	762,283	657,876	1,265	105,000	(1,858)
613 MAINTENANCE SUPPLIES	361,400	379,457	47,720	-	(65,777)
620 FUEL OIL	4,373	6,406	-	-	(2,033)
621 ELECTRICITY	1,029,517	1,109,141	29,522	250,000	(359,147)
622 NATURAL GAS	306,000	126,927	179,073	-	-
623 PROPANE	43,948	29,005	15,089	-	(146)
627 TRANSPORTATION SUPPLIES	235,000	122,725	-	112,275	(0)
641 TEXTBOOKS	177,500	109,026	94,780	-	(26,306)
642 LIBRARY BOOKS, PERIODICALS	34,150	25,230	1,741	7,179	0
690 OTHER SUPPLIES, MATERIALS	272,880	199,655	20,460	52,764	0
730 EQUIPMENT	222,905	172,791	9,604	40,510	0
810 DUES & FEES	37,864	29,841	430	7,593	(0)
100 GENERAL FUND - OPERATING	57,611,181	42,020,596	13,780,796	1,698,662	111,127

Waterford Public School
2024-2025 Budget

04/25/2025

Account Number / Description	Adopted Budget		Year to Date Spent		Encumb/Req's/Reserves		Forecasted Expenditures / Offsets		Delta to budget	
	7/1/2024 - 6/30/2025		7/1/2024 - 03/31/2025		7/1/2024 - 6/30/2025		7/1/2024 - 6/30/2025		7/1/2024 - 6/30/2025	
Grants	Adopted Budget		Year to Date Spent		Encumb/Req's/Reserves		Forecasted Expenditures / Offsets		Delta to budget	
	Remaining Life of the Grant		7/1/2024-03/31/2025		7/1/2024 - 6/30/2025		Remainder of Grant			
Title 1 - Part A Improving Basic Programs -FY2024/2025	22,048				11,175		10,873		-	
Title 1 - Part A Improving Basic Programs -FY2025/2026	341,335		325,732				15,603		-	
IDEA 611 - FY2024 Indiv W/Disabilities (Year 2)	149,160		80,671		63,001		5,488		-	
IDEA 611 - FY2025 Indiv W/Disabilities (Year 1)	615,692		337,197				278,496		-	
IDEA 619-Preschool Year 2	20,321		17,470				2,851		-	
IDEA 619-Preschool Year 1	20,405						20,405		-	
Title IIA - Part A	53,264		51,786		-		1,478		(0)	
Title IIA Part A year 24/26	42,988						42,988		-	
Title III - FY25	13,611		6,125		377		7,109		(0)	
Title IV, Part A	12,394		12,395						-	
Adult Education	11,052		11,052						-	
Idea Part B	5,000		5,000						-	
Idea Part B (TSA)	10,000		10,000						-	
Medicaid	237,882		31,320						-	
Grants total	1,555,153		888,747		74,553		206,563		(0)	
							591,853			

MODERATOR'S REPORT

Representative Town Meeting
April 7, 2025

F

Matters Currently in Standing Committees

LEGISLATION & ADMINISTRATION

Review how the RTM considers recommendations for committee assignments,
RTC 06/06/22
Public Act 22-3, an act concerning remote meetings under the freedom of
information act, RTC 02/06/23
Review of a "Public Comment Ordinance" RTC 02/06/23
Police Commission expansion to seven members, RTC 10/02/23
Review of ordinances included within Senior Citizens Commission and Youth &
Family Services Bureau, RTC 08/07/24
Review of Chapter 2.50 Ethics Commission of the Waterford code of Ordinances,
RTC 10/07/24

EDUCATION

FINANCE, WAGE & PERSONNEL

PUBLIC HEALTH, RECREATION & ENVIRONMENT

Review of Feral Cat Management, RTC 12/05/2022
Creation of a Special Revenue Fund, RTC 04/07/2025

PUBLIC PROTECTION & SAFETY

Open Burn Ordinance, RTC 12/04/23
ATV and Dirt Bike Ordinance Consideration, RTC 10/02/23
Review of assigned duties to the Director of Fire Services, RTC 06/03/24
Survivors Benefits in the Line of Duty, RTC 02/03/2025

PUBLIC WORKS, PLANNING & DEVELOPMENT

Short Term Rentals, RTC 12/06/21

RTC: referred to committee

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553
www.waterfordct.org

1

TO: Paul Goldstein
RTM Moderator

FROM: Kim Allen, Director of Finance

COPY: Rob Brule, First Selectman
Dani Gorman, Youth & Family Services

RE: Contributed Gift Approval

DATE: May 1, 2025

Per Waterford Ordinance 3.05.030 (Contributed Gifts Fund), all third party receipts over \$10,000 require the approval of the Representative Town Meeting.

The Cactus Jack Foundation has donated \$10,000 to Youth & Family Services to be used for the Town of Waterford's Camp Dash Program. As directed, funds will be utilized to provide scholarships to Waterford youth so that they can attend the summer program.

I respectfully request the RTM's approval for the donation to be deposited into the Youth & Family Services Special Revenue Fund to be used to support children support services and programs.

Respectfully,

Kimberly Allen

Kimberly Allen

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY - 11 P 1:16
ATTEST: *Dani Gorman*
TOWN CLERK

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553
www.waterfordct.org

To: Kimberly Allen, Director of Finance

From: Dani Gorman, Human Services Administrator

Cc: Rob Brule, First Selectman

David Campo, Town Clerk

Mike Buscetto, Chairman of Youth and Family Services Advisory Board

Re: Contributed Gift Approval

Date: May 1, 20025

I respectfully ask, on behalf of the Youth and Family Services Board, that you notify the Town Clerk through a memo to RTM Moderator Goldstein that an item be placed on the agenda of an upcoming meeting to accept a contributed gift from the Cactus Jack Foundation in the amount of \$10,000. As you have notified us in the past, the applicable ordinance is 3.05.030.

Once approved, the donation will be placed in the department's special revenue fund as directed by the foundation for Camp DASH.

ATTEST: *Dani Gorman*
TOWN CLERK

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY - 11 P 1:16

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553
www.waterfordct.org

2

April 22, 2025

Mr. Paul Goldstein, Moderator
Representative Town Meeting
15 Rope Ferry Road
Waterford, CT 06385

Dear Moderator Goldstein:

At the meeting of the Board of Finance held Wednesday, April 9, 2025, it was voted to recommend the Representative Town Meeting to make an additional appropriation of **\$85,000 from the Undesignated Fund Balance #205-31520 of the Capital and Non-Recurring Expenditure Fund (CNR)** to the established project at 28 Industrial Drive, new account to be created.

I respectfully request you place this item on the agenda of the next meeting of the Representative Town Meeting. Copies of backup justification are attached hereto.

Respectfully submitted,

Glenn Patterson

Glenn Patterson, Chairman
Board of Finance

Enclosure: Planning & Zoning, 28 Industrial Drive Project

GP/rlh

Cc: Town Clerk

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY 19 A 8:42
ATTEST: *Paul J. Dwyer*
TOWN CLERK

FIFTEEN ROPE FERRY ROAD



WATERFORD, CT 06385-2886

DEPARTMENT OF PLANNING AND DEVELOPMENT

MEMORANDUM

TO: Rob Brule, First Selectman

FROM: Jonathan Mullen AICP, Planning Director 

DATE: March 6, 2025

TITLE: Request for the appropriation funds to complete infrastructure improvements associated with a Court stipulated judgement for 28 Industrial Drive

This request is for an appropriation in the amount of \$85,000 for a new capital project for infrastructure improvements associated with a court stipulated judgement for 28 Industrial Drive.

Please see the attached back up material.

3/18/25, BOS- approved

DOCKET NO.: KNL-CV-12-6014470-S : SUPERIOR COURT
KOBYLICK BROTHERS, LLC, ET AL : J.D. OF NEW LONDON
vs. : AT NEW LONDON
TOWN OF WATERFORD PLANNING AND ZONING COMMISSION : NOVEMBER 19, 2024

JOINT STIPULATION FOR JUDGMENT

The parties in the above-referenced matter hereby Stipulate to Judgment as follows, and agree that Judgment may enter, granting a re-subdivision to the Plaintiffs pursuant to the following:

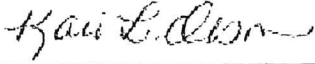
The re-subdivision must conform in all respects pursuant to the Resubdivision plan entitled "Resubdivision Plan, 28 Industrial Drive, Waterford, Connecticut, Prepared for Kobyluck Construction Company" dated November 2011 and revised November 4, 2024, with the special conditions attached hereto as Exhibit 1, and subject to the attached minutes hereto as Exhibit 2, page 3 and 4.

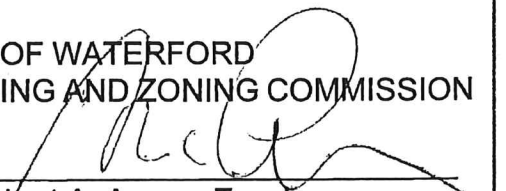
THE PLAINTIFFS,

THE DEFENDANT,

KOBYLUCK BROTHERS, LLC
and KOBYLUCK CONSTRUCTION, INC.

TOWN OF WATERFORD
PLANNING AND ZONING COMMISSION

By: 

By: 

Kari L. Olson, Esquire
Murtha Cullina LLP
280 Trumbull Street
Hartford, CT 06103
Tel #: (860) 240-6000
E-mail: kolson@murthalaw.com
Juris No.: 40248
Their Attorney

Robert A. Avena, Esquire
Suisman Shapiro, Attorneys-at-Law
20 South Anguilla Road
P.O. Box 1445
Pawcatuck, CT 06379
Tel #: (860) 650-8008
E-mail: ravena@sswbagg.com
Juris No.: 062114
Its Attorney



Re: Kobyluck Brothers LLC et. al., v. Town of Waterford Planning and Zoning Commission
Proposed Stipulated Judgment for the Resubdivision of 28 Industrial Drive Waterford Planning
and Zoning Commission Application PL-11-7.

Modifications are to the Resubdivision Plan set entitled "Resubdivision Plan, 28 Industrial Drive, Waterford, Connecticut, Prepared for Kobyluck Construction Company dated November 2011 as revised through November 4, 2024.

1. Setbacks shall be shown as required in accordance with Section 3.34.3 of the Zoning Regulations. Setback lines shall include the boundaries of the Upland Review Areas and dedicated Conservation Easement Area.
2. Plan shall show the location of all inland wetland and watercourse and upland review areas and dedicated Conservation Easement Area on all plan sheets.
3. Label "Minimum Buildable Square (150 x 150)" to "Minimum Square (150 x 150)".
4. Approval by the Town Attorney relative to form and substance of the proposed language regarding the access and drainage easements and right to discharge stormwater in favor of the Town of Waterford.
5. Approval by the Town Attorney relative to form and substance regarding the agreement language for the shared cost of the installation of drainage improvements to the end of Industrial Drive, to be coordinated between Owner, Town of Waterford Department of Public Works and Town of Waterford Inland Wetland Approval prior to endorsement of the final plans, as shown on Sheets 1 & 3 of the Resubdivision Plan set entitled "Resubdivision Plan, 28 Industrial Drive, Waterford, Connecticut, Prepared for Kobyluck Construction Company dated November 2011 as revised through November 4, 2024.
6. The Conservation Easement shall be reviewed and approved by the Town Attorney relative to form and substance prior to endorsement of the final plans.
7. All Special Conditions listed in Exhibit 1 of the Joint Stipulation for Judgement between Kobyluck Brothers, LLC et al and Town of Waterford Conservation Commission dated October 25, 2023 shall be incorporated into this decision as if fully set forth herein.

EXHIBIT 1

**PLANNING AND ZONING COMMISSION
MEETING M I N U T E S**

RECEIVED FOR RECORD
WATERFORD, CT

Planning & Zoning Commission
Auditorium

2024 November 13, 2024
6:30 PM

Members Present: Chairman Greg Massad, Karen Barnett and Tim Conderino
Member Absent: Tim Bleasdale and Victor Ebersole
Alternates Present: Doris Crum
Alternates Absent: Joseph DiBuono
Staff Present: Jonathan Mullen, AICP, Planning Director, Mark Wujtewicz, Planner,
Katrina Kotfer, Recording Secretary

ATTEST: *[Signature]*
TOWN CLERK

1. CALL TO ORDER AND APPOINTMENT OF ALTERNATES

G. Massad called the meeting to order at 6:40 PM. D. Crum was seated for T. Bleasdale.

2. APPROVAL OF MINUTES

MOTION: Motion made by T. Conderino, seconded by K. Barnett, to approve the October 22, 2024 meeting minutes noting the correction on page 3, fourth sentence remove "Old Norwich Road".

VOTE: 4-0

MOTION: Motion made by D. Crum, seconded T. Conderino, to approve the October 22, 2024 special meeting minutes.

VOTE: 4-0

3. PLEDGE OF ALLEGIANCE

4. APPLICATION RECEIPT

M. Wujtewicz noted that a new application had been received for a site plan/special permit for modifications to WalMart. The application will be scheduled for a public hearing at a future meeting.

Chairman Massad modified the agenda and moved Item 6 earlier in the meeting.

6. PUBLIC HEARING

#PL-24-14 Request of 1721, LLC applicant and owner, for a Site Plan approval for a 24-unit multi-family community for property located at 430 Mohegan Avenue Parkway and 23B Old Norwich Road, R-20 zone, in accordance with CGS 8-30g and as shown on plans entitled "Roberts Village Drive, CGS 8-30g Affordable Housing, Site Development Plans for Conservation Commission Review, Revised 8/28/2024".

PUBLIC HEARING MUST CLOSE BY:

11/14/2024

G. Massad reopened the public hearing at 6:41pm.

M. Wujtewicz, read the exhibit list, items 18-33 into the record.

EXHIBIT 18 - Letter from Ursula Moreshead dated October 22, 2024

EXHIBIT 19 - Letter from Vivian Carr

EXHIBIT 2

- EXHIBIT 20 - Letter from Steve Cole
- EXHIBIT 21 - Letter from Therese Foss (2 pages)
- EXHIBIT 22 - Letter from Crystal Leahy dated October 22, 2024
- EXHIBIT 23 - Email from Amy Arnold dated October 23, 2024
- EXHIBIT 24 - Email from Attorney William R. Sweeney to Mark Wujtewicz, Jonathan Mullen and Attorney, Robert Avena dated October 24, 2024
- EXHIBIT 25 - Waterford Planning and Zoning Commission meeting minutes January 27, 2020 (3 pages)
- EXHIBIT 26 - Driveway Easement, 23 Old Norwich Road (7 pages)
- EXHIBIT 27 - Proposal for Peer-Review Traffic Engineering/Transportation Planning Services Proposed Affordable Housing Project at Robert Village Drive Waterford, Connecticut (8 pages)
- EXHIBIT 28 - Proposed Affordable Housing Project Peer Review of the Traffic Impact Report dated November 8, 2024 from SLR International Corporation (2 pages)
- EXHIBIT 29 - Email from Diana Deedy to Jonathan Mullen dated November 10, 2024
- EXHIBIT 30 - Letter from Therese Foss to Planning & Zoning Commission dated November 11, 2024 (6 pages)
- EXHIBIT 31 - Petition of Residents of Senkow Drive and Roberts Court received November 12, 2024 (2 pages)
- EXHIBIT 32 - Email from Steve Cole dated Saturday November 9, 2024 forwarded to Katrina Kotfer, Jonathan Mullen and Robert Avena (4 pages)
- EXHIBIT 33 - Email from Amy Arnold dated Tuesday, November 12, 2024 forwarded to Katrina Kotfer and Jonathan Mullen (7 pages)

Vivian Carr, 5 Roberts Court, spoke regarding construction timeline concerns.

Wayne & Amy Arnold, 23 Old Norwich Road, spoke regarding their concerns that this project will use their shared driveway.

Present for the applicant were Scott Hesketh, PE, Hesketh & Associates, and Dan Delgrosso, Principle, 1721, LLC.

S. Hesketh submitted written responses (Exhibit 34) to the Commission's concerns raised at the previous meeting and also to the Peer Review of the Traffic Impact Report by SLR International Corporation dated November 8, 2024 (Exhibit 28)

- EXHIBIT 34 - Traffic Impact Report Roberts Village Housing dated November 12, 2024 from F.A. Hesketh & Associates, Inc.

He noted that he had reviewed his notes from his work on an earlier potential project at the site for access to Old Norwich Road. He stated for the record that in his professional opinion a proposed access to Old Norwich Road is not an option. He also reviewed with the Commission the investigation he had conducted into potential access onto Mohegan Avenue Parkway. D. DelGrosso stated that he had an estimate for access to Mohegan Avenue Parkway that would be \$250,000. S. Hesketh stated his client is willing to add a stop sign and stop bar at the egress from Roberts Village Drive to Roberts Court as a condition of approval.

K. Barnett inquired as to what the speed limit is for Old Norwich Road. S. Hesketh stated that did not know.

G. Massad asked the developer if he had an estimate to submit for the record that shows the proposed \$250,000 cost to access Mohegan Avenue Parkway. D. DelGrosso did not have any documentation to add to the record.

G. Massad asked S. Hesketh how the number of 87 trips per day was determined. S. Hesketh noted he used the ITE traffic generator.

Therese Foss, 10 Senkow Drive, spoke about the traffic analysis.

Ethan Gray, 16 Senkow Drive, spoke about his concerns with safety.

Merin Moltz, 7 Roberts Court, spoke about the cul de sac and submitted a letter, exhibit 35 into the record.

Anthony Russo, SLR International Corporation, spoke from a speaker phone supporting his analysis contained in the Peer Review of the Traffic Impact Report by SLR International Corporation dated November 8, 2024 (Exhibit 28).

S. Hesketh asked the chair if he could ask A. Russo 3 rebuttal questions.

Has SLR designed a project with more than 35 units? Is it his testimony that the project is unsafe? Is he familiar with the Town of Waterford Subdivision regulations?

G. Massad asked three times if anyone from the audience would like to speak regarding the application.

MOTION: Motion made by T. Conderino, seconded by D. Crum, to close the public hearing at 7:45 pm.

VOTE: 4-0

7. APPLICATION REVIEW

#PL-24-14 Request of 1721, LLC applicant and owner, for a Site Plan approval for a 24-unit multi-family community for property located at 430 Mohegan Avenue Parkway and 23B Old Norwich Road, R-20 zone, in accordance with CGS 8-30g and as shown on plans entitled "Roberts Village Drive, CGS 8-30g Affordable Housing, Site Development Plans for Conservation Commission Review, Revised 8/28/2024".

ACTION REQUIRED BY:

11/14/2024

The application review was continued to the November 14, 2024 special meeting.

5. **KOBYLUCK BROTHERS, LLC et.al., v. TOWN OF WATERFORD PLANNING & ZONING COMMISSION; DOCKET NUMBER KNL-CV-6014470-S (RESUBDIVISION)**

To consider and act upon a Proposed Settlement of the Superior Court Administrative Appeal entitled Kobyluck Brothers, LLC., et. al, v Town of Waterford Planning & Zoning Commission Docket Number KNL-CV-12-6014470-S, pursuant to new revised plans and conditions, and to instruct the Town Attorney to enter a Court Stipulated Judgment pursuant to the revised plans and conditions.

MOTION: Motion made by T. Conderino, seconded by K. Barnett, to consider and act upon a Proposed Settlement of the Superior Court Administrative Appeal entitled Kobyluck Brothers, LLC., et. al, v Town of Waterford Planning & Zoning Commission Docket Number KNL-CV-12-6014470-S, pursuant to

new revised plans and conditions, and to instruct the Town Attorney to enter a Court Stipulated Judgment pursuant to the revised plans and conditions.

VOTE: 3-0-1(D. Crum abstained)

KOBYLUCK BROTHERS, LLC et.al., v. TOWN OF WATERFORD PLANNING & ZONING COMMISSION; DOCKET NUMBER KNL-CV-6014469-S (SPECIAL PERMIT & SITE PLAN)

To consider and act upon a Proposed Settlement of the Superior Court Administrative Appeal entitled Kobyluck Brothers, LLC., et. al, v Town of Waterford Planning & Zoning Commission Docket Number KNL-CV-12-6014469-S, pursuant to new revised plans and conditions, and to instruct the Town Attorney to enter a Court Stipulated Judgment pursuant to the revised plans and conditions.

MOTION: Motion made by T. Conderino, seconded by K. Barnett, to consider and act upon a Proposed Settlement of the Superior Court Administrative Appeal entitled Kobyluck Brothers, LLC., et. al, v Town of Waterford Planning & Zoning Commission Docket Number KNL-CV-12-6014469-S, pursuant to new revised plans and conditions, and to instruct the Town Attorney to enter a Court Stipulated Judgment pursuant to the revised plans and conditions.

VOTE: 3-0-1 (D. Crum abstained)

8. ADMINISTRATIVE REVIEW

Planning and Zoning Commission 2025 Schedule of Meetings

MOTION: Motion made by K. Barnett, seconded by D. Crum to approved the proposed 2025 Planning and Zoning Commission meeting schedule with the modification that the two meetings in August will be August 5, 2025 and August 19, 2025.

VOTE: 4-0

9. CORRESPONDENCE

No correspondence was received.

10. COMMISSION BUSINESS

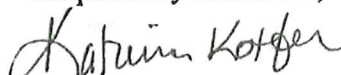
No discussion occurred.

11. ADJOURNMENT

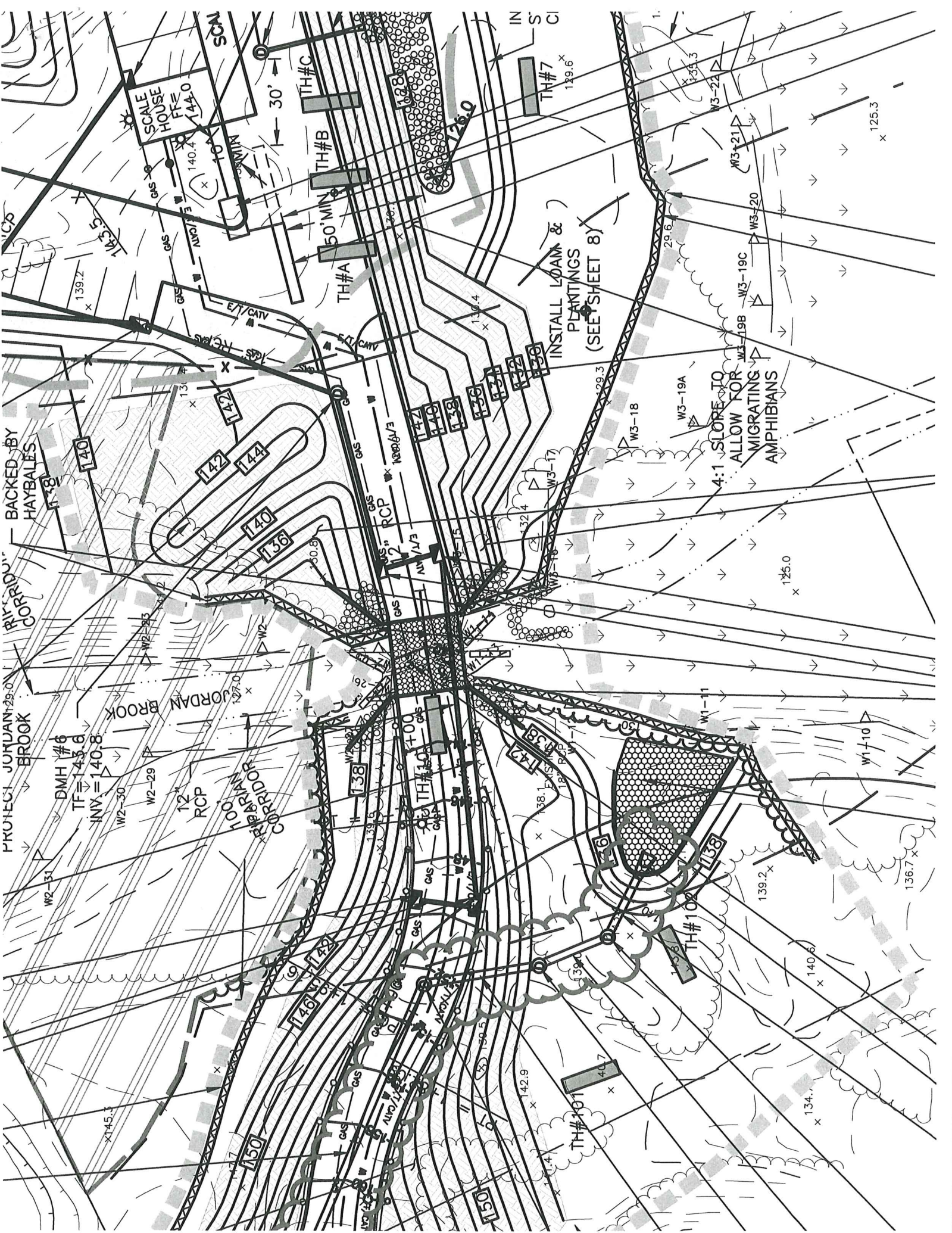
MOTION: Motion made by K. Barnett, seconded by T. Conderino to adjourn at 7:55 pm.

VOTE: 4-0

Respectfully Submitted,


Katrina Kotfer
Recording Secretary

Industrial Drive Drainage (Materials Only)				
Item	Estimated Quantity	Unit	Unit Price	Total
Vortechincs 9000	1	EA	\$20,000.00	\$20,000.00
Type "C" CB	2	EA	\$3,000.00	\$6,000.00
15" HDPE 0-10' deep, Between CB's	28	LF	2 Pipes at \$400 each	\$800.00
15" HDPE 0-10' deep, From CB to DMH #5	18	LF	1 Pipe at \$400 each	\$400.00
DMH #5 > than 10' deep	1	EA	\$4,500.00	\$4,500.00
30" HDPE 0-10' deep, From DMH#5 to DMH #5A	33	LF	2 Pipes at \$800 each	\$1,600.00
DMH #5A < than 10' deep	1	EA	\$4,500.00	\$4,500.00
18" HDPE 0-10' deep, from DMH#5A to Vortechincs	8	LF	1 Pipe at \$450 each	\$450.00
18" HDPE 0-10' deep, from Vortechincs to DMH#5B	8	LF	1 Pipe at \$450 each	\$450.00
30" HDPE > than 10' deep, From DMH#5A to DMH#5B	8	LF	1 Pipe at \$800 each	\$800.00
DMH #5B > than 10' deep	1	EA	\$4,500.00	\$4,500.00
30" HDPE > than 10' deep, From DMH#5B to DMH #4	36	LF	2 Pipes at \$800 each	\$1,600.00
DMH #4 > than 10' deep	1	EA	\$4,500.00	\$4,500.00
30" HDPE > than 10' deep, From DMH#4 to DMH #3	117	LF	6 Pipes at \$800 each	\$4,800.00
DMH #3 > than 10' deep	1	EA	\$4,500.00	\$4,500.00
30" HDPE > than 10' deep, From DMH#3 to DMH #2	34	LF	2 Pipes at \$800 each	\$1,600.00
DMH #2 > than 10' deep	1	EA	\$4,500.00	\$4,500.00
30" HDPE > than 10' deep, From DMH#2 to DMH #1	22	LF	2 Pipes at \$800 each	\$1,600.00
DMH #1 > than 10' deep	1	EA	\$4,500.00	\$4,500.00
30" RCP > than 10' deep, From DMH#1 to Flared End	25	LF	2 Pipes at \$800 each	\$1,600.00
30" Flared End	1	EA	\$400.00	\$400.00
Modified Rip Rap	150	CY	\$75.00	\$11,250.00
			TOTALS	\$84,850.00



PROTECT JORDAN BROOK
CORRIDOR
BACKED BY
HAYBALES

DMH #6
TF=143.6
INV=140.8

JORDAN BROOK
100' WIDE
CORRIDOR
12" RCP

SCALE
HOUSE
FT=144.0

TH#A
50' MIN
TH#B
TH#C

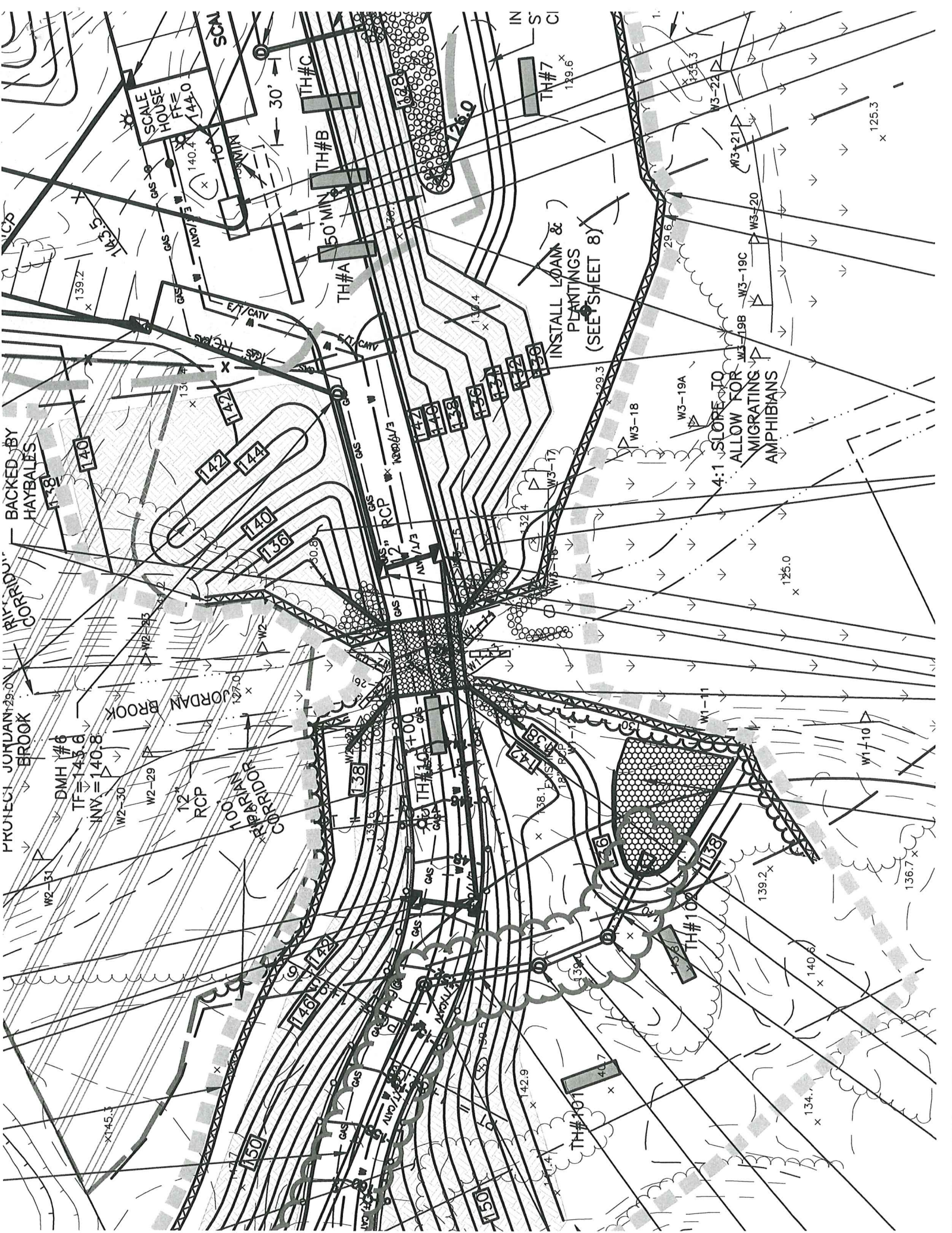
INSTALL LOANS &
PLANTINGS
(SEE SHEET 8)

4:1 SLOPE TO
ALLOW FOR
MIGRATING
AMPHIBIANS

TH#101

TH#102

TH#7





Mr. Joseph P. Mancini
Director of Finance and Operations

Mr. Thomas W. Giard III
Superintendent of Schools

3

May 6, 2025

Mr. Robert Brule
First Selectman, Town of Waterford
15 Rope Ferry Road
Waterford, CT 06385

Dear Mr. Brule:

At the direction of the Waterford RTM and with the support of the Waterford Board of Education I am submitting a request for supplemental appropriation in the amount of \$197,000.

This amount is for two efforts. The first being the purchase of 400 ACER Chromebooks. This is for the replacement of 400 Chromebooks purchased in June of 2020. The pricing listed on the quote is consistent with state pricing. The second effort would be for the purchase of iPads with the remaining \$17,100.

Respectively,

Joseph P. Mancini
Director of Finance and Operations

CC: Board of Education
Board of Finance
Superintendent

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY 19 A 8:54
ATTEST *David H. Lange*
TOWN CLERK

**Vivacity Tech PBC**

641 Fairview Ave N, Suite #150 Saint Paul, MN, 55104
877-731-2069 | vivacitytech.com

Quote # QUO3008505**Expiration Date**

5/31/2025

Account #

73015

Account Name

Waterford School District

Project Name

(400) Acer 511 w/ 4yr EMP+ + VSuite

Prepared For**Mark Geer**

mgeer@waterfordschools.org

Sales Representative**Mark Baker**

Territory Manager

(612) 416-3099

mbaker@vivacitytech.com

Product	SKU	Quantity	Price	Total Price
VT-SP-PLACE-ITEM Acer Chromebook 511 C736-C09R - Intel N100/4GB/32GB - 11in/Non-Touch - New	NX.KD4AA.002	400	\$300.00	\$120,000.00
VT64NT - V Suite Package - 4 Years of Empower Plus (VT-4YR-EMPLUS-NT) - Dream Subscription (VT6DRM) - Student Repair Academy (VT6SRA)	VT64NT	400		
VT-4YR-EMPLUS-NT 4-Year Empower Plus Warranty (Non-Touch) Vivacity Tech EMPOWER+ Warranty: Includes choice of Vivacity case (excludes backpacks) and Blue Light Blocking Screen Protector installed by Vivacity Tech technicians Available for Education-Grade Chromebooks Covers both manufacturer's defects and accidental damage Priority repair for all covered devices No deductibles, claim limits, or shipping charges Battery and power adapter replaced up to 10% of the covered fleet Theft and loss reimbursements are available with valid police report Self-Maintainer option available By purchasing a Vivacity Branded Warranty, you agree to the terms and conditions of the warranty. Full T&C's are available on the Dream portal or upon request.	VT4YR-EMPLUS-NT	400	\$100.00	\$40,000.00
VT6DRM Dream Subscription	VT6DRM	400	\$0.00	\$0.00

**Vivacity Tech PBC**

641 Fairview Ave N, Suite #150 Saint Paul, MN, 55104
877-731-2069 | vivacitytech.com

Quote # QUO3008505

Product	SKU	Quantity	Price	Total Price
VT6SRA Student Repair Academy Subscription	VT6SRA	400	\$0.00	\$0.00
CROSSWDISEDUNEW Chrome OS Education License	CROSSWDISEDUNEW	400	\$32.00	\$12,800.00
VTPART-11BL-GS Vivacity Tech Blue Light Blocking Tempered Glass Screen Protector for 11.6" Clamshell	VTPART-11BL-GS	400	\$0.00	\$0.00
SVC-SPI Vivacity Tech Screen Protector Installation Service	SVC-SPI	400	\$0.00	\$0.00
VT-EMPLUS-SHELL Empower Plus Warranty Shell Add-on Includes Rugged Hard Shell Case for Acer Chromebook 511 C736 / C736T	VT-EMPLUS-SHELL	400	\$10.00	\$4,000.00
SVC-CCA Vivacity Tech Chromebook/Case Assembly Service	SVC-CCA	400	\$0.00	\$0.00

**Vivacity Tech PBC**

641 Fairview Ave N, Suite #150 Saint Paul, MN, 55104
877-731-2069 | vivacitytech.com

Quote # QUO3008505

Product	SKU	Quantity	Price	Total Price
SVC-WG Vivacity Tech White Glove Service - Enroll Device in Console - Update OS to current version (to the date the service is performed)	SVC-WG	400	\$3.00	\$1,200.00
SVC-VT-ATAG Vivacity Tech Asset Tagging Service - VT Provided	SVC-VT-ATAG	400	\$3.00	\$1,200.00
FEE-S&H Vivacity Tech Shipping & Handling	FEE-S&H	1	\$700.00	\$700.00

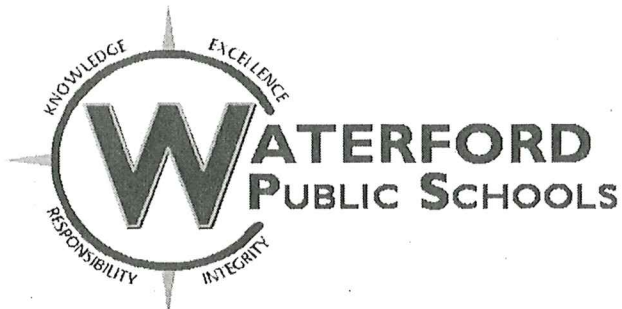
Credit Card Payments are Subject to a 3% Convenience Fee

Vivacity Tech reserves the right to assign any order to our vendor Assignment of Funds programs. The programs are a beneficial way for Vivacity to accommodate to education or government end user orders. Please note that under these programs, the remittance address may change and additional paperwork may be required. Should this order be allocated to one of these programs, the Vivacity procurement team will follow-up further communication. We thank you in advance for your assistance in facilitating Vivacity's participation in these beneficial partnership programs. Pricing provided on Quotes expires on the expiration date stated on each Quote or while supplies last. If pricing is no longer accurate at the time of purchase your dedicated Account Manager will work with you to create an updated Quote.

*Assumes four annual payments on an FMV basis. Pricing is intended to be general.
Please connect with your sales rep for other leasing options or a specific quote.

Sub Total	\$179,900.00
Tax	\$0.00
Grand Total	\$179,900.00
<i>Lease cost per year*</i>	\$48,123.25

Vivacity Tech PBC is the first and only Public Benefit Corporation to provide technology hardware to schools.
We're excited about this opportunity to work with you and your school district!



Mr. Joseph P. Mancini
Director of Finance and Operations

Mr. Thomas W. Giard III
Superintendent of Schools

4

May 6, 2025

Mr. Robert Brule
First Selectman, Town of Waterford
15 Rope Ferry Road
Waterford, CT 06385

Dear Mr. Brule:

At the direction of the Waterford Board of Finance and with the support of the Waterford Board of Education I am submitting a request for a supplemental appropriation in the amount of \$243,335

This amount represents the final 12 months of payments for the on-bill financing and reflective of the timeframe of July 1, 2025 through June 30, 2025. This amount will complete the 48 month repayment plan on the \$2.1 million dollar project which placed LED, new transformers, new VFD's across the district. The State of Connecticut provided \$1.1M in incentives leaving the balance to be paid to Eversource in the form of a zero percent loan paid out over 48 months. The projected savings from are generated by a reduction of 1.8 M kWh per year.

Respectively,

Joseph P. Mancini
Director of Finance and Operations

CC: Board of Education
Board of Finance
Superintendent

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY 19 A 8:55
ATTEST: *David I. Lange*
TOWN CLERK

FIFTEEN ROPE FERRY ROAD



WATERFORD, CT 06385-2886

5

May 13, 2025

Town of Waterford
First Selectman, Robert J. Brule
15 Rope Ferry Road
Waterford, CT 06385

RE: Budget, Line 20511-57767
Appropriation of Funding for Exterior Renovations

Dear First Selectman Brule,

On behalf of the Planning Department I would like to request an appropriation in the amount of \$25,000 from designated line 20511-57767 (Nevins Cottage Structural Repairs).

The funds will be used in conjunction with donated time and materials by the Friends of Nevins Cottage non-profit entity to complete the exterior renovations of the Nevins Cottage.

Please do not hesitate to contact me if additional information is needed.

Sincerely,


Jonathan E. Mullen, AICP
Planning Director

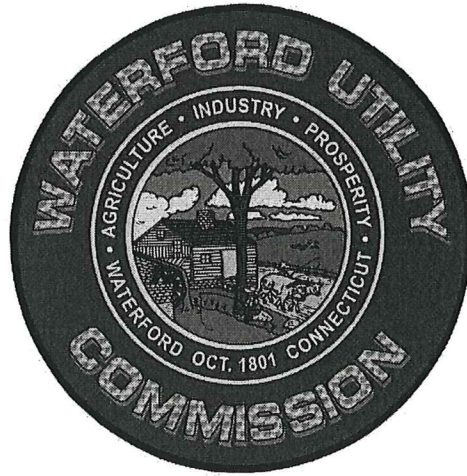
Cc: Kim Allen, Finance Director

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY 19 A 8:55
ATTEST: 
TOWN CLERK

NEVINS COTTAGE STRUCTURAL REPAIRS (20511-57767)

CASH AND IN-KIND SERVICES MATCH (to date, 05/08/2025)

Date	Category	Item	Cost
7/9/2024	blueprints	blueprints	\$ 137.33
7/23/2024	permits	building permit	\$ 24.83
9/9/2024	website	website	\$ 189.43
9/26/2024	website	domain name	\$ 10.46
10/30/2024	tools/supplies	pry bar kit	\$ 19.13
11/18/2024	equipment rental	deliver lift to site	\$ 207.38
11/21/2024	tools/supplies	home depot	\$ 593.36
12/2/2024	equipment rental	boom lift rental	\$ 4,825.22
12/2/2024	equipment rental	boom lift rental	\$ 2,311.91
12/2/2024	signage	signage	\$ 763.60
12/12/2024	paint/exterior finishes	paint	\$ 48.24
12/12/2024	windows/shutters/doors	Country Reproductions	\$ 82.31
12/15/2024	labor	labor	\$ 6,195.08
12/16/2024	equipment rental	remove lift from site	\$ 207.38
12/16/2024	tools/supplies	Home Depot	\$ 349.07
12/18/2024	paint/exterior finishes	wood filler	\$ 18.97
12/18/2024	paint/exterior finishes	paint	\$ 285.04
12/31/2024	paint/exterior finishes	labor	\$ 5,531.17
3/11/2025	paint/exterior finishes	paint	\$ 53.55
3/20/2025	paint/exterior finishes	paint	\$ 430.23
3/25/2025	paint/exterior finishes	paint	\$ 72.24
3/25/2025	paint/exterior finishes	paint	\$ 12.17
3/25/2025	paint/exterior finishes	paint - red	\$ 159.95
4/1/2025	windows/shutters/doors	wood sash window panes	\$ 861.44
4/1/2025	windows/shutters/doors	3 wood door frames	\$ 670.45
4/2/2025	lumber	porch posts	\$ 194.06
4/2/2025	tools/supplies	Home Depot	\$ 536.48
4/9/2025	hardware	lumber & joist hangers	\$ 213.55
4/10/2025	lumber	lumber - 5 - 2x8x16	\$ 116.99
4/23/2025	trim	PVC	\$ 118.46
4/23/2025	windows/shutters/doors	glass	\$ 131.87
4/23/2025	equipment rental	equimpment rental	\$ 13,055.04
4/30/2025	blueprints	blueprints	\$ 500.27
4/30/2025	hardware	nails	\$ 296.72
4/30/2025	labor	labor March & April	\$ 41,160.80
4/30/2025	windows/shutters/doors	basement windows	\$ 143.57
In Kind Materials/Services Total			\$ 80,527.75



6

Town of Waterford Connecticut

Utility Commission

2024 Annual Report



WATERFORD UTILITY COMMISSION

2024 ANNUAL REPORT

Overview

The Waterford Utility Commission is established under Town Charter 4.1 with the powers and duties prescribed by Special Act No. 172 of 1963 and by Chapter 103 of Connecticut General Statutes.

The Commission consist of five electors appointed by the Representative Town Meeting who shall serve for four years. The members of the Commission elect a Chairman and Secretary. The Commission is responsible for development of a long-term plan to protect the ground and surface water from pollution. It implements the plan by designing, constructing, and maintaining sewers or other alternative measures to ensure a safe and adequate water supply for the residents of Waterford. Its involvement in water supply and distribution includes designing, constructing, and maintaining water mains, water booster pump stations, elevated water storage tanks and hydrants.

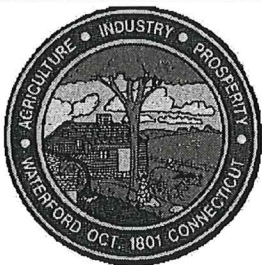
Waterford embarked on its first wastewater infrastructure project in 1970, Contract #1. This \$2.7 million dollar contract entailed the design and construction of over 13,000 linear feet of four foot diameter concrete mainline sewer interceptors, to which 28 of the town's sewer basins connect. Since then the Utility Commission has designed and constructed 79 additional wastewater infrastructure contracts now serving approximately 78 percent of the town's parcels. Our last sewer extension project, the Harrison's Landing area of Quaker Hill, was constructed in 2011. Currently there are no additional planned sewer extensions as the majority of remaining parcels lie within RU-120 zoned areas which are considered sewer avoidance areas. The Commission's focus has transitioned over the past years from designing and constructing infrastructure to efficiently operating and maintaining the town's massive sewer investment.

Waterford's first waterworks project commenced in 1966, since this time we have completed 51 additional major waterworks projects. The Town now possesses in excess of 146 miles of waterworks infrastructure, three water pressure booster stations and three water storage tanks.

TABLE OF CONTENTS



Message from the Director	1-2
Introduction	3-4
Our Team	5-7
Utility Commission Organization Chart	8
Wastewater System Drainage Basins	9
Water Distribution System	10
Capital Projects	11-18
Operational Projects	19-20
Planning	21-23
Wastewater Pump Station Buildings	24-26
Water Booster Stations & Storage Facilities	27
Financial Overview	28



WATERFORD UTILITY COMMISSION 2024 Annual Report

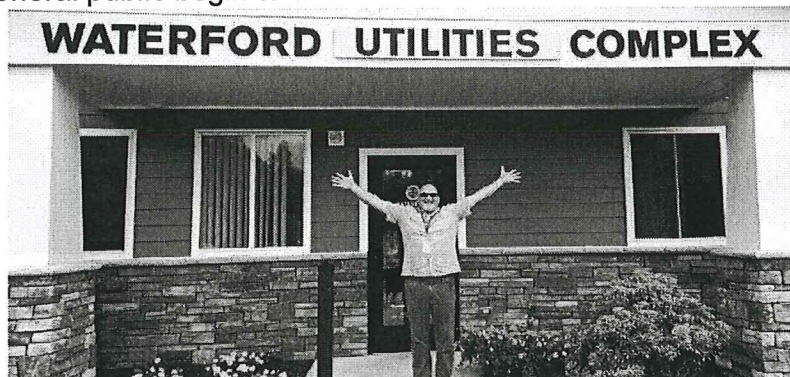
A MESSAGE FROM THE WATERFORD DIRECTOR OF UTILITIES JILL N. STEVENS

It is with a grateful heart that I submit the Fiscal Year 2024 Waterford Utility Commission Annual Report. This has been a transformative year for the Utility Commission; we have completed one major refurbishment project, the Fargo Water Tank refurbishment project and continue work on the Old Norwich Road Wastewater refurbishment project. This past year we have been working on new technology based solutions to increase efficiencies for the field crew, including migrating our Geographic Information System (GIS) to the cloud and initiating a new Asset Management Software System, as well as making changes to the daily operations to better align with the intent of an Enterprise Funded entity.

This coming year we are looking forward to completing the rollout of the Asset Management System, including launching iPad tablets for the field crew to allow them 24/7 access to the plans and information they need and implementing a new Supervisory Control and Data Control Acquisition System for our wastewater operations in addition to .

From a staffing perspective unfortunately we lost a few long time employees to retirement this year; our Survey Party Chief, Fred Lathrop, and our Construction Inspector, Ed Machinski, as a result of their well-deserved retirements we adjusted our organization chart to better fit the needs of the department, as the operation has transitioned from a focus on construction more toward maintenance and repair. This resulted in the combination of the Construction Inspector and Survey Party Chief positions into our newly created Compliance Enforcement Technician position, and allowed us to restructure the Sewer Tech and Maintenance Operators positions.

Our most noted loss this year was of our longest and most valuable employee the previous Director, James A. Bartelli. It has been my great fortune to have been able to work with and learn from Jimmy while I was Assistant Director. Most people do not know what the Utility Commission staff does on a daily basis, which is generally a sign of excellence in our industry. It is usually only when things do not go as planned that the general public begin to understand what we do for them. That statement rings true for our department here in Waterford, and is directly attributed to Jimmy's 39 years of service and undying commitment to excellence which has shaped this department into what it is today. Jimmy worked his way up from to Director from the very bottom of the organization, a rare feat, and his unique set of skills and knowledge



A MESSAGE FROM THE WATERFORD DIRECTOR OF UTILITIES JILL N. STEVENS

are irreplaceable. I cannot understate my gratitude to him for giving me the opportunity to work in such a wonderful department, and although many of us would have loved to have kept him here for at least a few more years, I wish him all the best in his well-deserved retirement.

I want also extend my appreciation to the members of the Waterford Utility Commission, who have volunteered their valuable time for the betterment of the Town and its environment. The operation of the Department benefits each and every month from the collective expertise and experience of our Commission members who have over 150 combined years of engineering and project management experience. They are a very talented and committed group of individuals who should be recognized for their extraordinary efforts and accomplishments. I was to extend a special thanks to outgoing Commissioner Stephen Negri who will be missed.

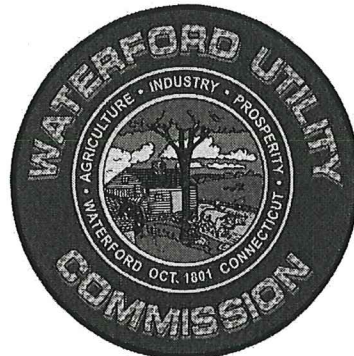
The Commission's continuing goal is to provide exemplary customer service and operate a safe, efficiently run system while maintaining reasonable rates for our customers. Our constant focus on an aggressive preventative maintenance program and long term capital planning will allow us to accomplish this goal. A crucial requirement of any efficiently run operation is to be provided with the financial resources necessary to conduct proper preventative maintenance and necessary capital improvements. We are truly fortunate to have the support of our Commission and the continued financial support of our First Selectman, Board of Selectmen, Board of Finance, and Representative Town Meeting.

A key to our success lies within our highly trained and talented Utility Commission staff. We are extremely fortunate to employ a team of individuals who are committed to our system management goals and who truly care about the critical service they provide. I am grateful to be associated with such a dedicated group of caring, conscientious and devoted colleagues.



Respectfully,

Jill N. Stevens



INTRODUCTION

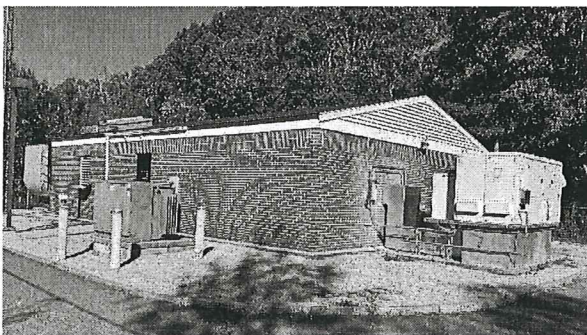
The Utility Commission is the Water Pollution Control Authority of the town. Pursuant to Town Charter, the Commission shall plan and direct the development, financing, construction and operation of such water and sewage supply, disposal and distribution facilities as may be required to properly serve the needs of the town. The Commission also develops policy and implements the immediate and long-term plans to protect the environment from pollution for the enjoyment of future generations. It implements these plans and develops the goals by designing, constructing, establishing policy, and maintaining sewers, residential grinder pumps, and pumping stations.

Wastewater generated in Waterford, as well contributing flows from East Lyme, and portions of New London are conveyed to New London's Piacenti Wastewater Treatment Facility via Waterford's main Pump Station, known as the Evergreen station. The terms and conditions of the Town's wastewater collection, conveyance, and treatment are memorialized within two recently adopted agreements: The Waterford / East Lyme Wastewater Collection and Conveyance Agreement, signed October 21, 2022 and referred to as the Bi-Town Agreement and The New London / Waterford / East Lyme Wastewater Collection, Conveyance and Treatment Agreement, signed October 15, 2021 and referred to as the Tri-Town Agreement. Waterford's annual wastewater operations and maintenance activities are funded by the users of the wastewater system, utilizing an Enterprise Fund, not Town taxes. The Utility Commission has a cost-based business model. Our rates are set based on our actual annual operations and maintenance costs.

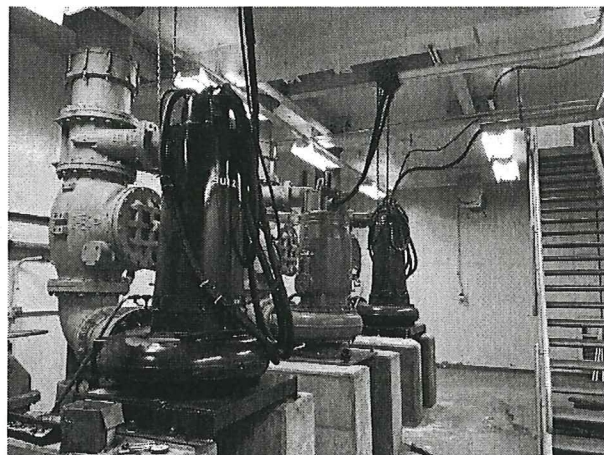
The Utility Commission is tasked with operating what is known as a "wastewater collection system". Wastewater collection systems receive wastewater from homes, businesses, and industry and transmits this waste throughout the town's vast network of subsurface piping and pumping stations to a point of treatment. This process, which is vital to public health, has been protecting Waterford's ground and surface waters from pollution for over 50 years

The Town of Waterford's wastewater collection system was initially developed based on an evaluation of wastewater needs identified in the 1968 Wastewater Facilities Plan. There have been several partial updates to the original plan which identified additional wastewater needs to support Town growth. The Town currently owns and operates an extensive wastewater collection system comprised of 142 miles of gravity sewers and 28 pumping stations which serve 28 drainage basins. These individual basins and pumping stations are identified within this report.

WATERFORD'S MAIN PUMPING STATION



EVERGREEN AVENUE



INTRODUCTION

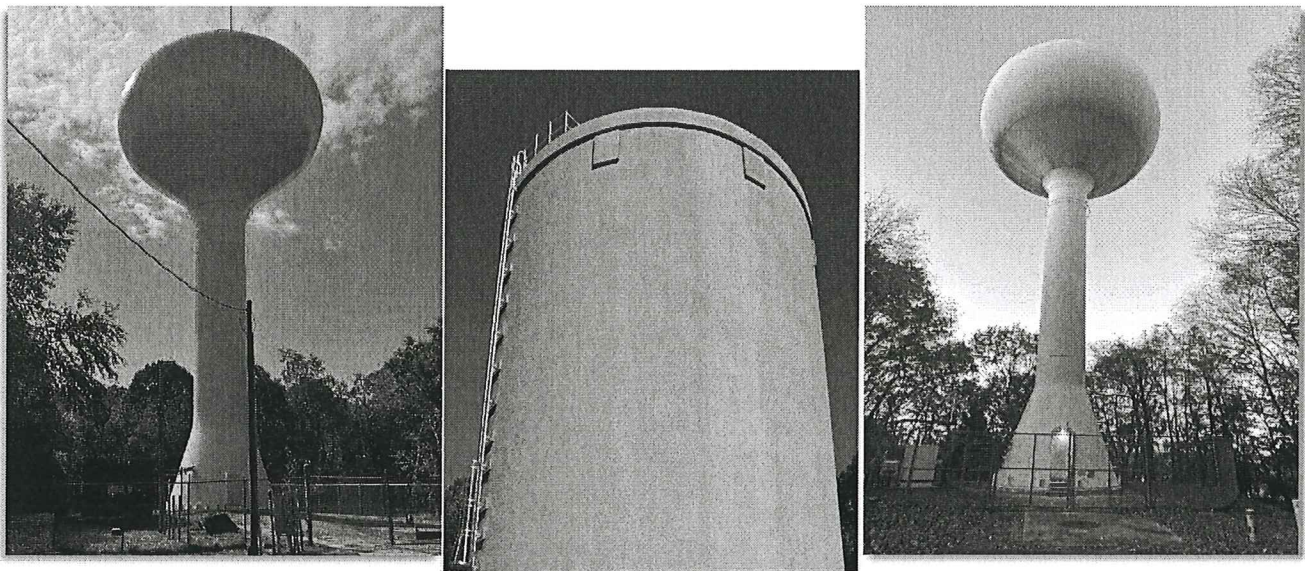
The Commission also has a long-term commitment to provide a safe and reliable water supply and distribution infrastructure. This involvement includes, but is not limited to, the acquisition of water bearing property, developing water sources, the acquisition of alternative sources, designing, constructing, maintaining, and rehabilitating water mains, water booster pump stations, elevated water storage tanks, hydrants, and other infrastructure necessary and indispensable to maintain a safe, protected, and reliable drinking water supply.

The Town's waterworks system was initially developed as result of a water supply survey report conducted in 1958 by Philip Genovese & Assoc. This report identified four separate schemes of potential water supply for the Town: 1. Distillation of sea water, 2. Sub-Surface Supply, 3. Reservoir System, and 4. Purchase water from our neighbors in New London. The Town ultimately decided to adopt scheme 4, a decision which has mutually benefited both communities since the date of inception. The town now possesses approximately 146 miles of water mains and their related appurtenances such as water storage tanks, booster pump stations, fire hydrants and other related components. A Water Systems map is identified within this report.

As aforementioned, Waterford's waterworks infrastructure assets include water booster stations, storage tanks, distribution mains and related components however our residents are direct water customers of the City of New London Department of Public Utilities who maintains our water system. The terms and conditions regarding furnishing water and maintenance of the Town's waterworks system are memorialized within the Waterford/New London Interlocal Water Agreement. This agreement was signed on October 6, 1988 and remains in effect until June 30, 2028. In Fiscal Year 2024 through the Interlocal agreement Waterford property owners billed consumption was 89,488,718 cubic feet of water.

We will continue to implement the comprehensive rehabilitation and retrofitting program for our water and wastewater infrastructure, following the 15-year capital improvement plan (CIP) that was developed over thirteen years ago. Through continuous updates and revisions the CIP is intended to insure that both the water and wastewater infrastructure continues serving the Town in a safe, reliable, and efficient manner.

WATERFORD'S WATER STORAGE TANKS



OUR TEAM

The Utility Commission employs a staff of 15 full time employees within our three divisions, Administrative/Clerical, Inspection/GIS, and Field Maintenance divisions. Our professionals specialize in the various activities and skills required to execute the Commission's mission critical operation. Our team is responsible for the Departments administration, financial procedures, regulatory compliance, data acquisition, construction and rehabilitation inspections, and wastewater infrastructure operations and maintenance.

The Administrative staff and Clerical division's functions include the billing and collection of all water and sewer assessments, sewer connection fees, sewer use charges and liens; compliance with regulatory mandates, statutes, and ordinances; personnel and staffing related issues; and maintaining a database and records of our water/wastewater infrastructure.

The Compliance Enforcement Technician's tasks and activities include the ongoing maintenance of records, maps, and our geographical information system (GIS), as coordination and integration with the sewer system evaluation survey process, marking out our sub-surface utilities for Call Before You Dig applications, plan and specification review, field inspection and cost control of all Town sponsored or privately constructed projects built intended to become public once completed. Our Enforcement Technician is also charged with ensuring the Utility Commission complies with regulatory requirements under Federal and State mandates such as the Lead and Copper Rule Revision / Improvement and the Fats, Oil & Grease program and any other emerging regulations that impact water and wastewater in the Town of Waterford.

The Maintenance Division is a defined mission critical operation, it is responsible for the safe, reliable and efficient operation of our approximately 145 miles of sewer and force mains, twenty-eight wastewater pump stations, over 3500 manhole structures, and over 100 residential sewage ejector pumps. This division is properly trained and provided with the resources required to operate our system on a 24/7 year round basis to address any system emergencies or immediate customer needs.



*Back row L-R: Dean, Pat, Dave, Pete, Dmitri, Logan, Austin, and Jill
Front row L-R: Amy, Jackie, Eric, Shawn, Celeste and Nora & Lexie (our Mascots)*

OUR TEAM

UTILITY COMMISSION MEMBERS

Kenneth Kirkman, Chairman
Thomas J. Dembek
Rodney A. Pinkham
Jerry Porter
Raymond L. Valentini
Robert J. Tuneski, Board of Finance liason

ADMINISTRATIVE AND OFFICE STAFF

Jill N. Stevens	Director	4.5 years served
Vacant	Assistant Director	
Amy Windle	Office Coordinator	11 years served
Jackie Jackson	Accounts Receivable Clerk	4 years served
Celeste Bushway	Secretary/Clerk	7 years served

OFFICE STAFF



L-R: Jackie, Amy, Celeste

OUR TEAM

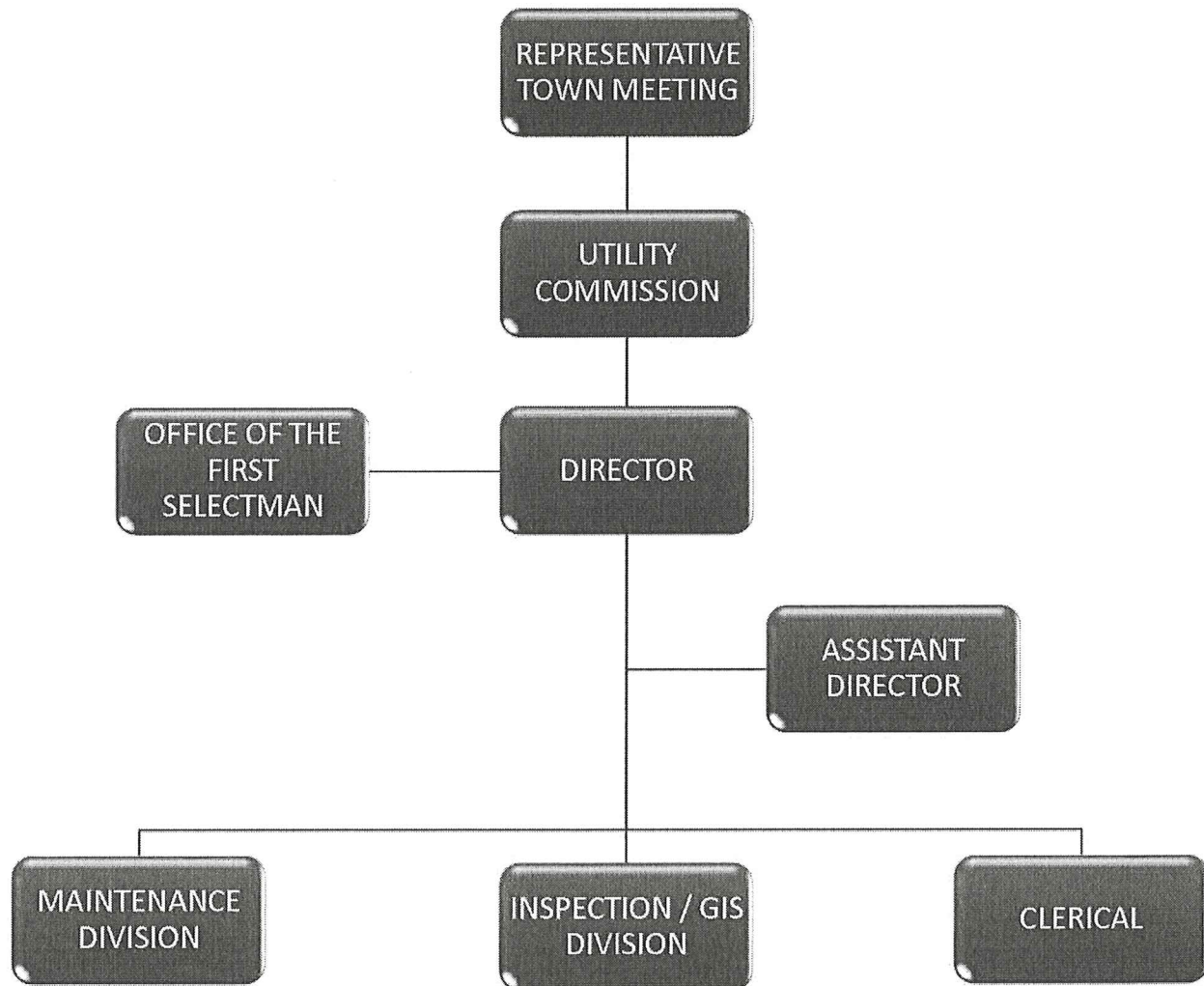
MAINTENANCE AND INSPECTION / GIS STAFF

Shawn Matthews	Compliance Enforcement Tech	4 months served
Peter Clark	Foreman	17 years served
Eric Williams	Lead Operator / Electrician	7 years served
David Burke	Sewer Maintenance Operator	17 years served
Dean Rowe	Sewer Maintenance Operator	16 years served
Patrick Dulin	Sewer Maintenance Operator	10 years served
Dimitri Sferrazza	Sewer Maintenance Operator	3 years served
Logan Gerovitz	Sewer Tech II	4 years served
Austin Rogers	Sewer Tech I	5 months served
Vacant	Sewer Tech I	

MAINTENANCE AND INSPECTION / GIS STAFF

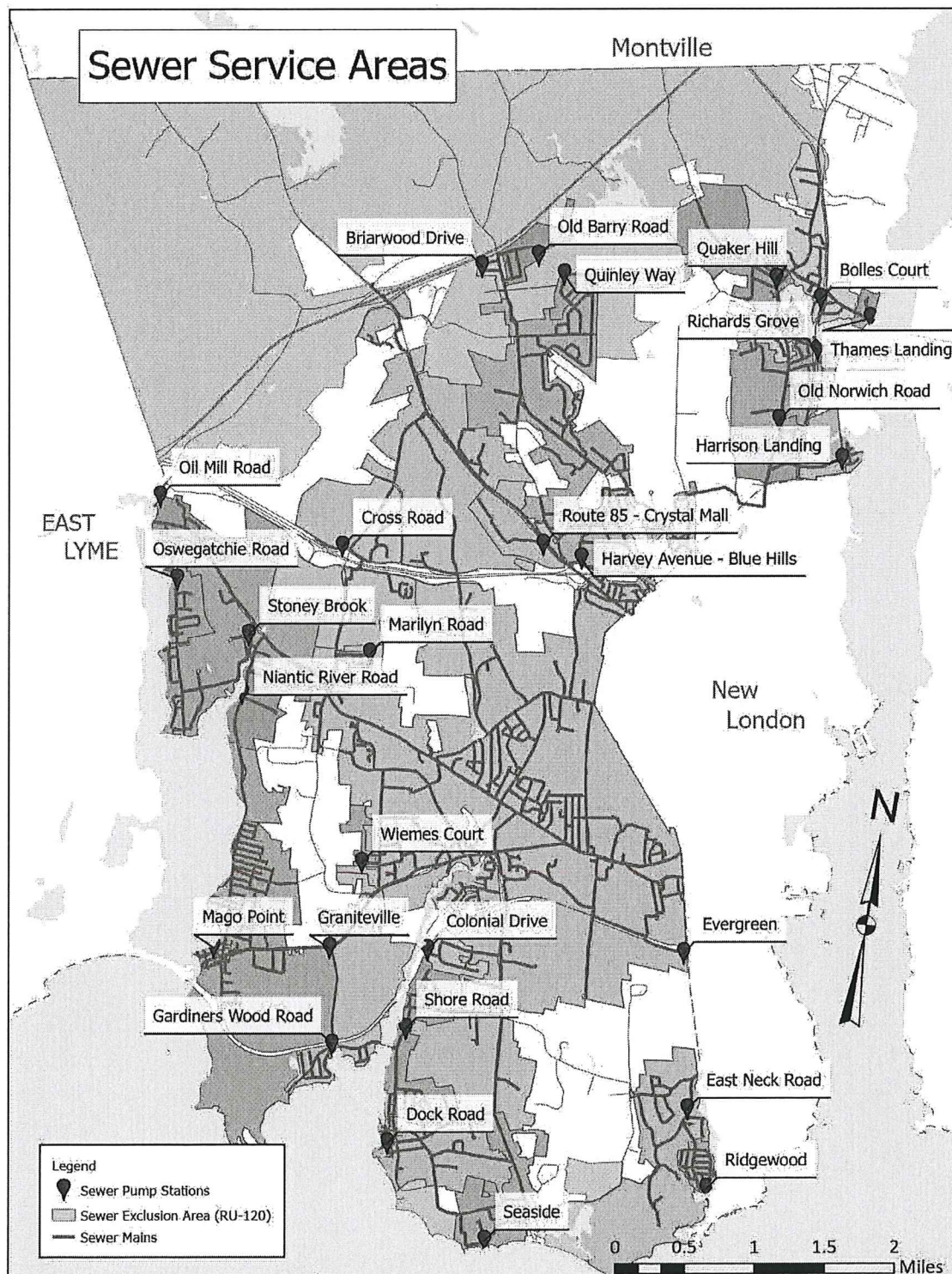


Back Row L-R: Pat, Dave, Pete, Logan, Austin
Front Row L-R: Dean, Dimitri, Eric, Shawn

UTILITY COMMISSION ORGANIZATIONAL CHART

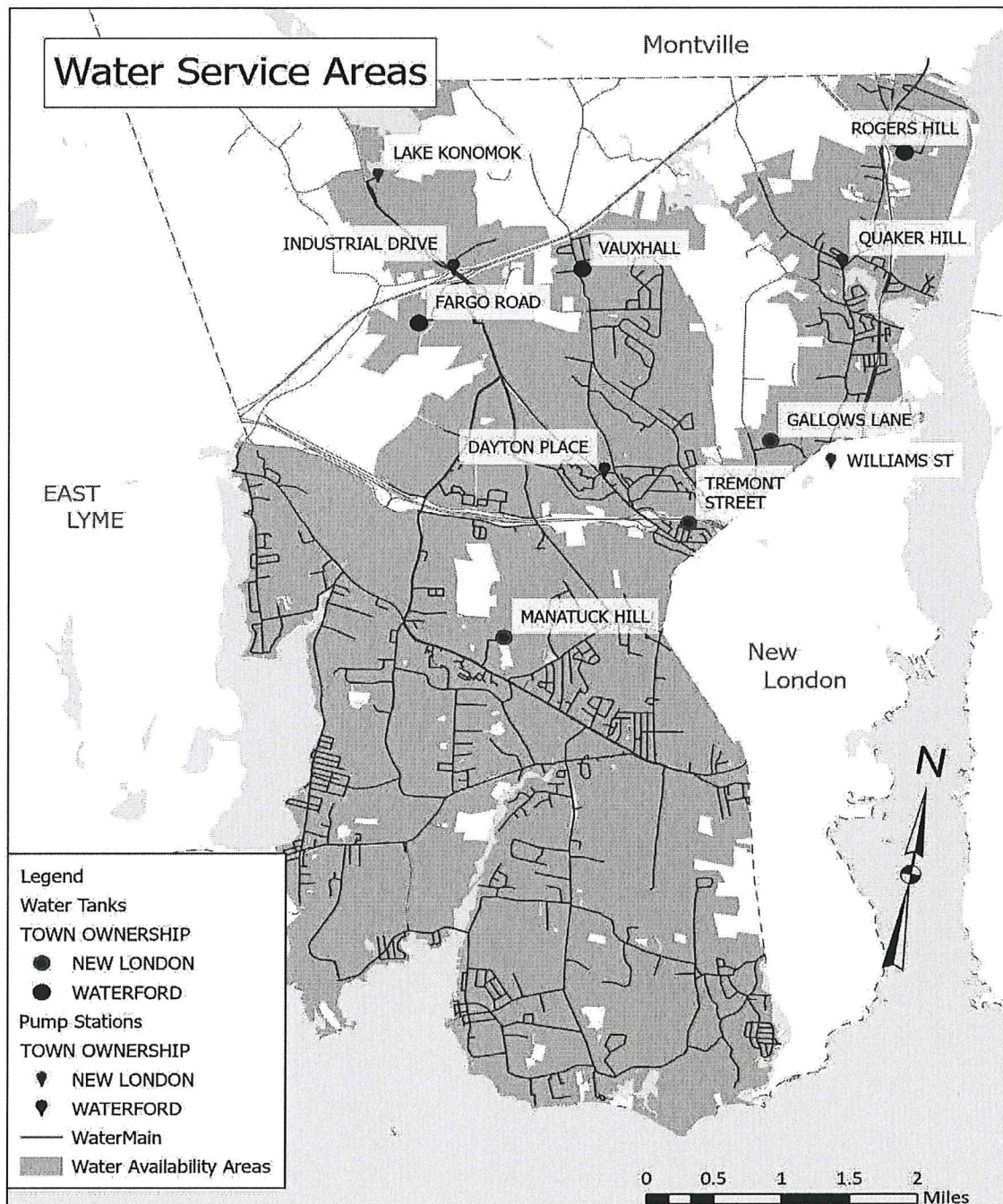
WATERFORD WASTEWATER INFRASTRUCTURE

Wastewater Infrastructure - Within the Town of Waterford, there are 145 miles of sewer pipes, 28 pumping stations, 3500 manholes, and about 100 town owned individual sewer grinder pumps. The 28 individual drainage basins are shown below in different colors.



WATERFORD WATER INFRASTRUCTURE

Water Infrastructure - The Town of Waterford owns three water storage tanks, the 750,000 gallon Fargo Tank, the 300,000 gallon Vauxhall tank and the 1.25 Million gallon Rogers Hill tank. We also own three water booster pump stations, Dayton Place, Old Colchester Road and Industrial Drive. The Waterford Water infrastructure is comprised of 146 miles of water mains. The City of New London supplies water to over 7900 Town of Waterford customers. There are three water storage tanks owned by New London that are located in Waterford. These are: Manatuck Hill (5 million gallons), Tremont Street (3.25 million gallons), and Gallows Lane (3.5) million gallons.

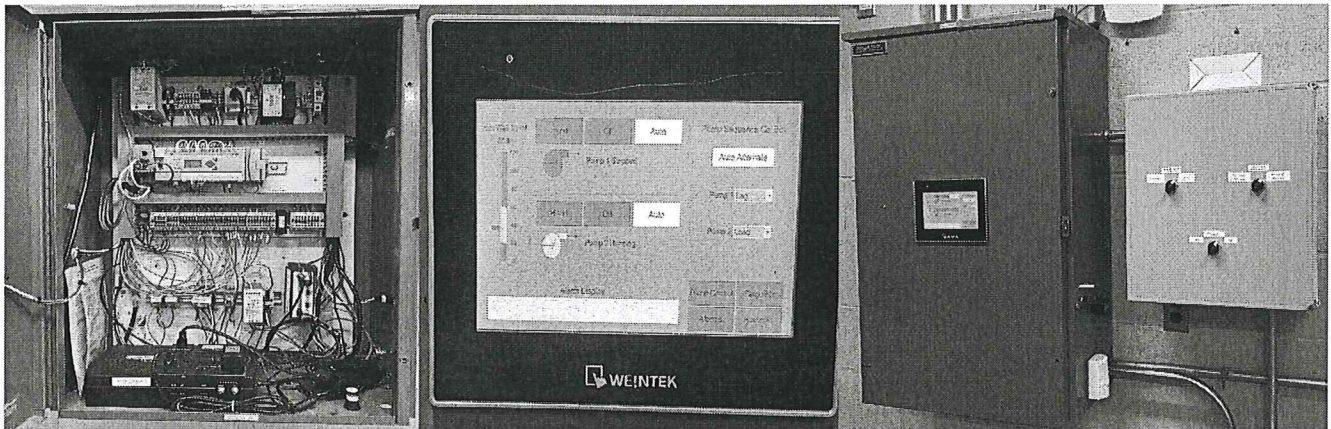


CAPITAL PROJECTS

- Gorman– Rupp Pump Station Controls Upgrade

This is a project carry over from FY22 to date Utility Commission maintenance staff technicians have completed control upgrades at Oil Mill Road, Dock Road, Richards Grove Road, Old Barry Road, Quaker Hill Center, Oswegatchie Road, Niantic River Road and Shore Road pump stations. Currently work is ongoing at the Ridgewood pump station. Gorman-Rupp is a manufacturer of packaged wastewater lift stations; these stations are constructed in a factory then installed as a kit below ground. The Utility Commission operates and maintains 18 Gorman-Rupp lift stations of various sizes. This control upgrade project involves the removal of antiquated unsupported analog type pump drive and level control systems and the installation of state of the art Programmable Logic Controllers, Human-Machine Interface Panels, Level Transducers, Telemetry Interface, conduit piping and wiring. For added redundancy, an independent simplistic ball float level control systems is being installed in the unlikely event of total loss of all electronic control systems. The removal and installation of all project components is being conducted in-house at considerable savings by Utility Commission staff. This program is anticipated to be completed by late-2024. This is an ARPA funded project in the amount of \$163,750.00

Below are examples of control components installed by Utility Commission staff.

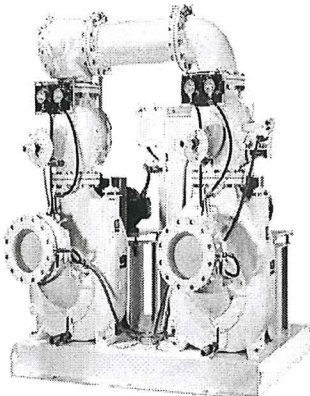


Programmable Logic Controller

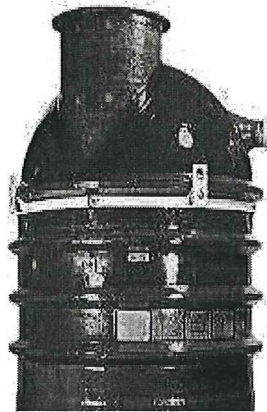
Human Machine Interface

Redundant Level Control System

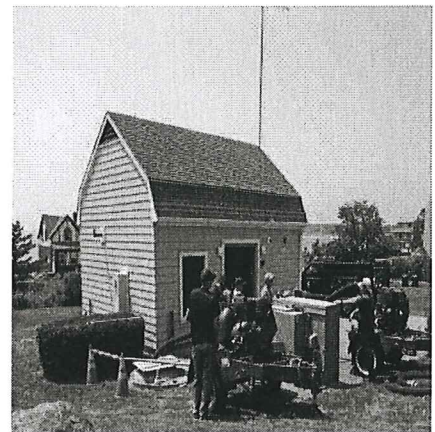
Examples of Gorman-Rupp Pump Station components and building structure below



Gorman-Rupp Pumps



Gorman Rupp 7'-6" Below Ground Fiberglass Station



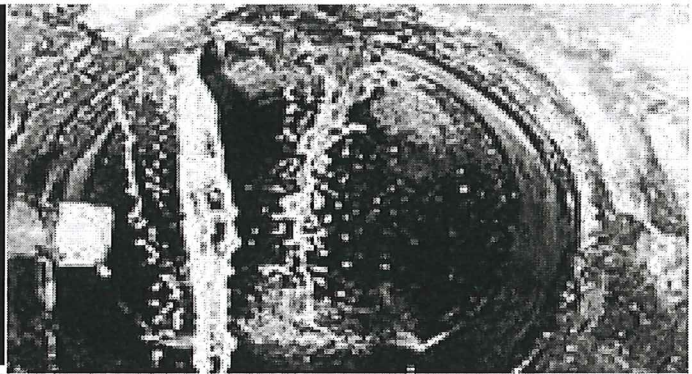
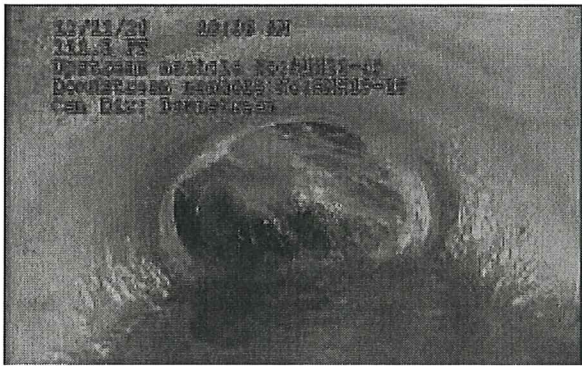
Dock Road Station By-Pass Training

CAPITAL PROJECTS

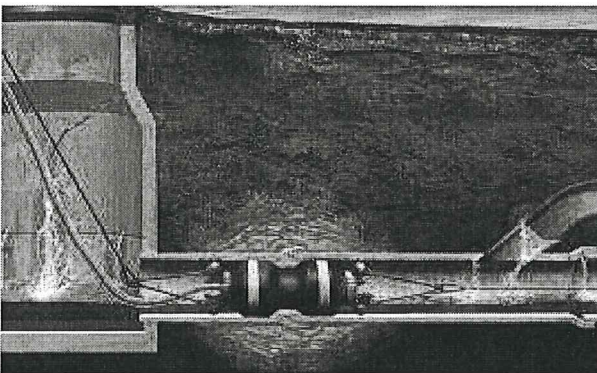
- Inflow and Infiltration Control

Inflow and Infiltration (I&I) is extraneous water that enters our wastewater collection system from ground water and storm water. Sump pump discharge, roof gutter down spouts and foundation drains that are connected to the sewer line are some sources of Inflow. Infiltration occurs when there are structural deficiencies within the infrastructure which allow ground water to seep into the system.

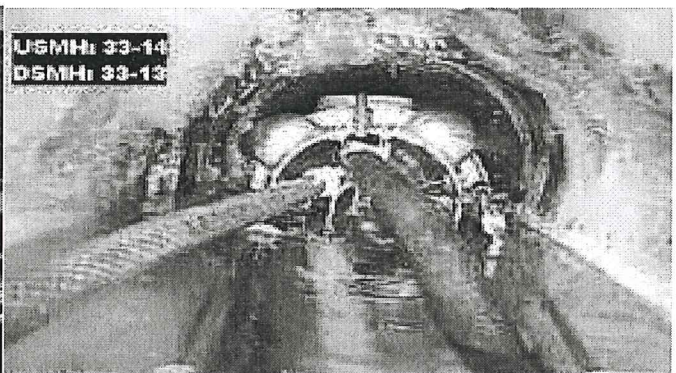
Faulty joints, cracked pipes, tree root intrusion, and other structural deficiencies are sources of infiltration. The elimination of I&I increases collection system capacity and decreases pump station component run times which results in lower operational costs and ultimately lower treatment plant costs. Our staff routinely conducts condition assessments of our collection system by utilizing our own pipeline cleaning equipment and robotic pipeline camera. Deficiencies are located, graded, prioritized and corrected typically by means of innovative “no-dig” trenchless robotic technology.



CCTV footage of Infiltration from faulty pipe joints



Robotic Chemical Injection grouting lateral packer pumps chemical grout into faulty joints



CCTV footage of Chemical Injection grouting apparatus



Pipeline Vacuum and Jetting Truck

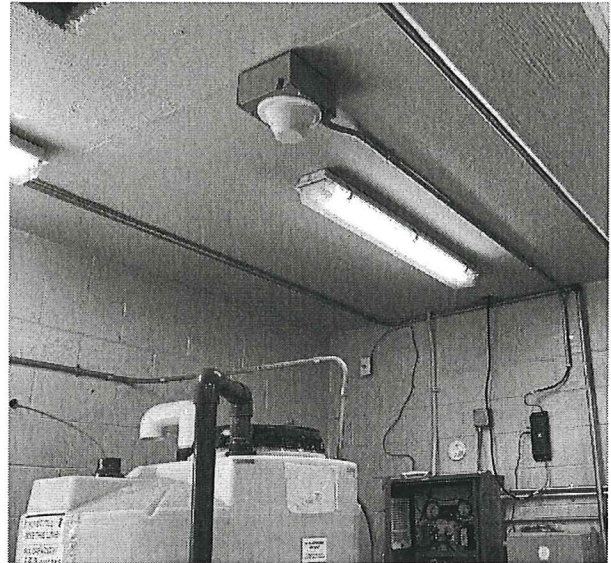


Closed Circuit Television Equipment Truck

CAPITAL PROJECTS

- Cellular Amplifier Installations

This past year the Utility Commission conducted a pilot program at the Main Pumping Station, Evergreen Avenue that entailed the installation of Cellular amplifier equipment. All of the Town's wastewater pumping stations are below grade, in some cases they are four stories below ground. The stations are constructed of thick concrete walls, which pose communication problems with two way radios and cellular phones. Amplifiers and associated equipment were installed on both the dry and wet well sides of the building. Prior to the installation, communications between the dry and wet sides of the buildings did not exist. The installation of this equipment now allows the staff to contact emergency personnel in the



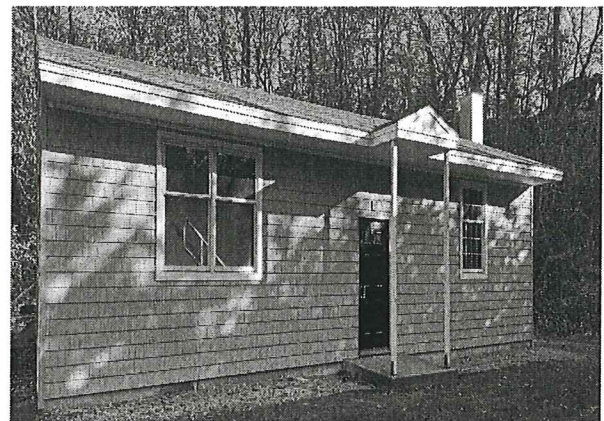
event of need and has created the ability for staff to communicate within the entire station to conduct troubleshooting tasks and routine operational tasks. As result of the very successful pilot program, the Utility Commission will install fifteen more amplifiers at various stations. Our staff continually researches concepts to create operational efficiency and enhance safety within our organization.

- Wastewater Pump Station Exterior Improvements

This ongoing project entails the replacement of pump station Roofing, Exterior siding, Doors, Driveways, Lighting and other exterior improvements. Through FY22 & 23 \$100K Capital Fund appropriation, the Utility Commission has replaced the roofing at Bolles Ct, Waterford Village, Shore Rd, Dock Rd, Sea Side, Niantic River, Mago Point, and Evergreen Avenue pump stations. Our staff also completed the exterior vinyl siding and trim work at the Bolles Ct station and Waterford Village Station. A majority of this work was conducted in-house by our maintenance technicians. A new driveway was installed at East Neck pump station. This is a multiyear Capital funded project in the amount of \$100,000.00



Bolles Court Station Before



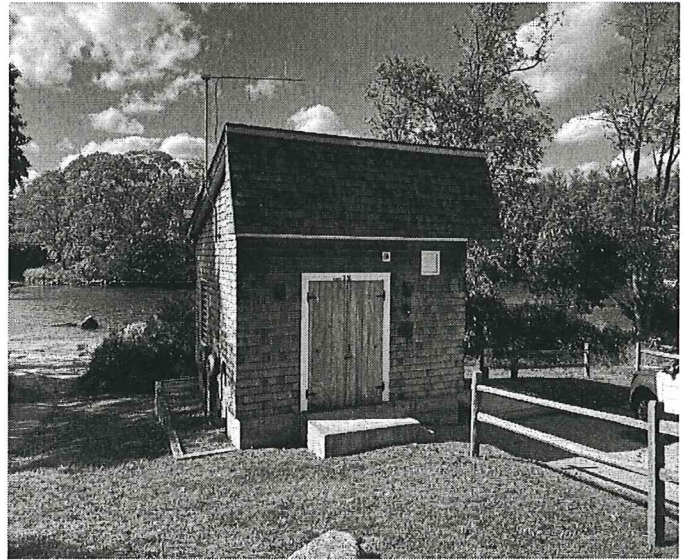
Bolles Court Station After

CAPITAL PROJECTS

ROOF REPLACEMENT AT NIAN TIC RIVER ROAD STATION



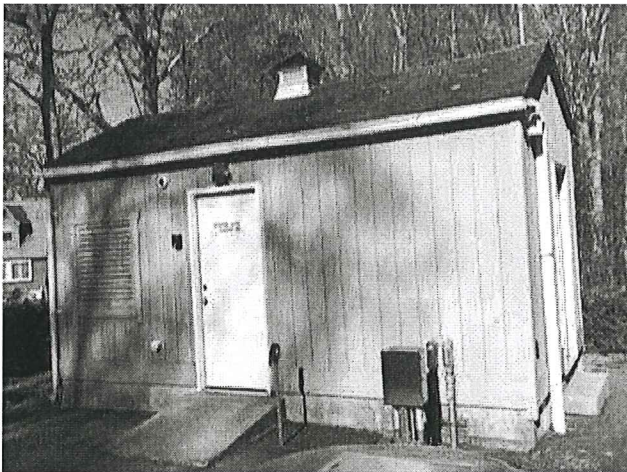
Niantic River Road Station Before New Roof



Niantic River Road Station After New Roof

WATERFORD VILLAGE STATION IMPROVEMENTS

New Roof, Siding, Gutters, Door and Trim completed by Maintenance Division staff



Waterford Village Station Before Improvements



Waterford Village Station After Improvements

CAPITAL PROJECTS

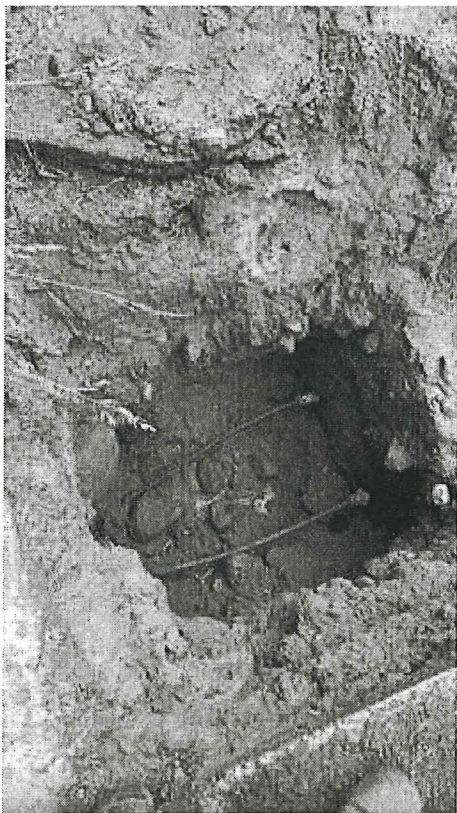
- Plastic Water Service Replacement Program.

This a project carry over from FY23. There are approximately 7900 water services in Town, many of which are plastic and have exceeded their useful life resulting in unaccounted for water loss and degradation to the Town roads. The goal of this program is to replace the aging plastic water services with copper line prior to DPW paving the roads.

To date through a cooperative WUC/DPW effort, we have replaced 162 plastic water service lines, totaling 3,416 linear feet. Service line replacement costs are on average \$4100 each depending upon the service line length and location. It is our intent to continue to replace these water services prior to DPW paving the roads in doing so we are requesting a multi-year funding schedule and program for the replacement of plastic water services. This will be in conjunction with the DPW roads improvement program.

This is a Capital Project currently funded in the amount of \$831,300.

PLASTIC WATER SERVICE LINE REPLACEMENT BEFORE AND AFTER



Plastic Water Service prior to replacement



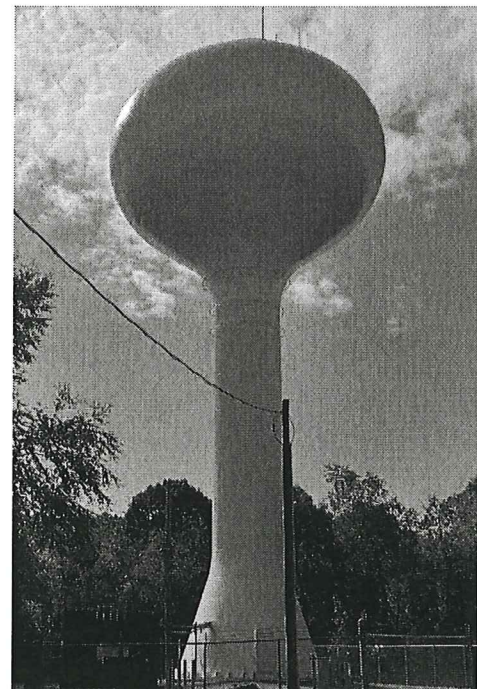
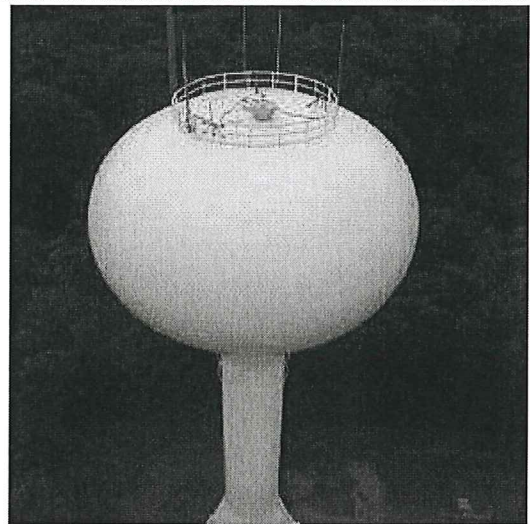
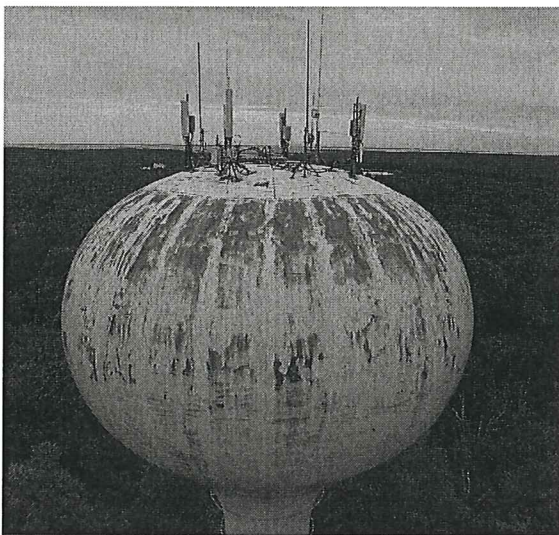
Plastic Water Service replaced with copper line

CAPITAL PROJECTS

- Fargo Road Water Tank

A contract for the refurbishment of the 140' tall 750,000 gallon water spheroid was executed on July 21, 2023 in the amount of \$999,900. The work began in the spring of 2024 and was completed in August of 2024. The rehabilitation project consisted of some cosmetic work, the sandblasting and recoating of the tanks interior and exterior surfaces to extend its useful life and to meet CT Department of Health regulations, and the replacement of the fill pipe when a pinhole leak at the base of the fill pipe, not present during the tank evaluation study, presented itself during the project. The new coating and repair work will protect the tank and prolong its useful life for at least another 30 years. This was an ARPA funded project in the amount of \$1,200,000.

FARGO ROAD ELEVATED SPHEROID BEFORE AND AFTER

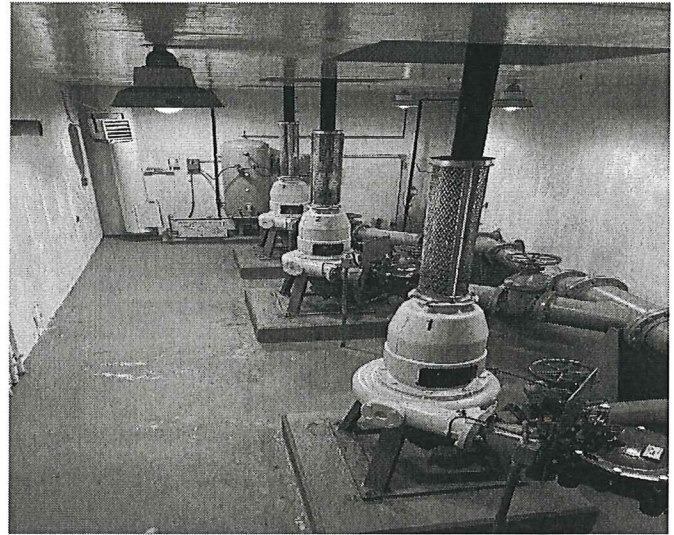
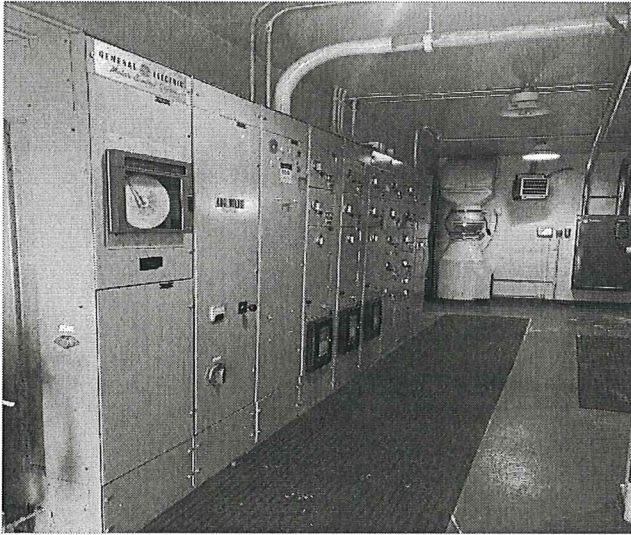


CAPITAL PROJECTS

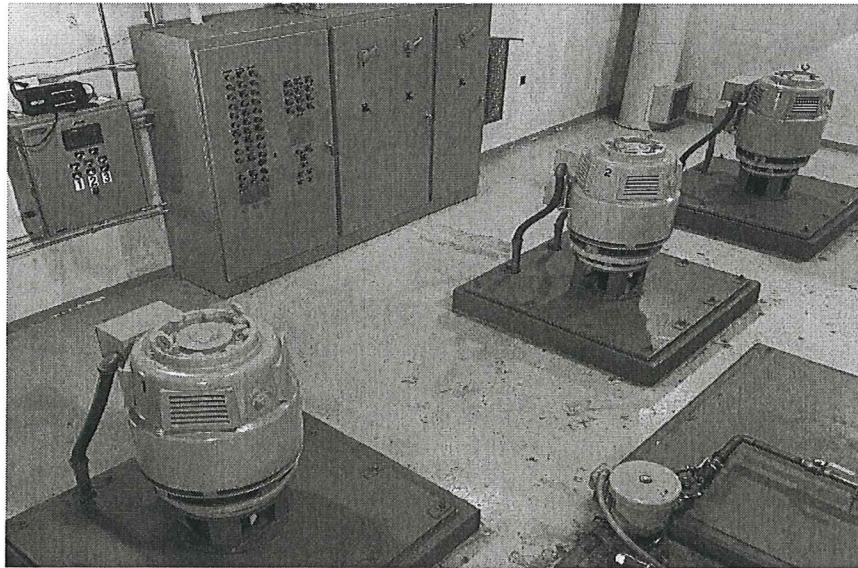
- Old Norwich Road Wastewater Pump Station Upgrade.

The contract for the upgrade of this station was executed on October 30, 2023. In the amount of \$2,319,410. Rehabilitation work began in the spring of this year and is slated to be complete by November of 2025 due to electrical component lead time issues. Upgrades included the replacement of variable frequency drive units, main electrical service panels, level control systems, atmospheric monitoring equipment, influent pumps and associated piping.

This is an ARPA funded project in the amount of \$587,650.00 the remaining funds are being funded through the Capital and Non-Recurring Funds (CNR)



Motor Control Center and 1,000 Gallons per Minute Centrifugal Pumps. Original equipment from date of station's construction in 1976.



75 Horse Power Induction Type Electric Motors

CAPITAL PROJECTS

- Cross-Country Sewer Mains Easement Access Project.

This is a project carry over from FY23, sewer mains collect wastewater from our Town's parcels and convey this wastewater to downstream pumping stations via a vast network of piping and pumping stations to a point terminating at the Main pumping station, which then conveys the wastewater to the regional treatment facility in New London. Of the Town's 150 miles of sewer piping, approximately 15.6 miles lie within cross-country easement areas, outside of roadways. Many of these sewer mains traverse through heavily wooded areas, which are becoming more challenging to access. Accessibility is crucial in order to conduct a full assessment evaluation and to provide timely access to conduct immediate or corrective repairs to the sewer main or structures. The goal of this project is to recreate the original easement access area or create alternate access points.

Contract #1 was the Town's very first sewer construction project, which began in 1970. This project entailed the installation of approximately 13,000 linear feet of sewer main. A Special Appropriation in the amount of \$250,000 for engineering services was appropriated for the Contract #1 Sewer Main Access project in 2023. Survey work to identify the Contract #1 easement area, manholes, intersecting property lines, and other utilities within the easement area commenced in October of 2023 and was completed in the spring of 2024. Preliminary design is complete, and approval for the final design package (drawings and specifications) to be used for contractor bid solicitation and construction for Phase One of the restoration project was granted by the Utility Commission at the November 2024 meeting.

Phase one will encompass the southern section of the interceptor beginning at the intersection of Great Neck Road and Rope Ferry Road to the end of the interceptor at Evergreen Avenue Pump Station. Phase two which encompasses the northern section of the interceptor from Boston Post Road to Great Neck Road requires the acquisition of additional easements to gain access to the interceptor during restoration and for the Utility Commission staff in the future.

Splitting the project into two Phases allows restoration work to begin while easements are procured, so that once Phase one is complete easements will be in place and Phase two can begin shortly thereafter. Our engineering firm estimates construction costs up to \$350,000 for Contract 1 alone. It is the intent of the Utility Commission to establish a multi-year request necessary to fund the survey, engineering and reconstruction of each of the Town's cross-country sewer main easement areas.

OPERATIONAL PROJECTS

Water

- Lead and Copper Revision Rule (LCRR)

This is a project carry over from FY23. The US EPA has developed regulations to protect communities from exposure to Lead in drinking water. This regulation known as the Lead and Copper Rule Revisions requires all public water systems to create an inventory of the water service line material that serves each home or business, from the water main up to the building's interior. This inventory list is mandated by USEPA and the Connecticut Department of Public Health (CTDPH). The LCRR regulation required that Waterford create an inventory of the existing water service line materials (plastic, copper, lead, galvanized, other) on the public and private side in Waterford's water system and identify which service lines may be galvanized or contain lead. The Utility Commission executed an agreement with an Engineering firm to conduct the EPA's mandatory Service Line Inventory in the amount of \$98,363. Approximately 7900 water service lines in Waterford needed to be evaluated, we successfully submitted our service line inventory list by the October 16, 2024 deadline. This is the first phase in a multi-year regulation, the next phase known as the Lead and Copper Rule Improvements was codified in October of 2024 by the US EPA, to date CTPDH has not yet adopted the next phase; the Utility Commission is reviewing these requirements and will comply with all State and Federal requirements as they become available.

Wastewater

- Geographic Information System (GIS) Update

The Utility Commission has been operating a Geographic Information System (GIS) to map and record the location and type of many of our assets for over 20 years; however the system and data management required some updates in order to ensure that all Town departments were able to use the same data and create a base for other software platforms including an Asset Management program to build upon.



Beginning in FY23 through a collaborative effort with several other Town departments the Utility Commission spearheaded the effort to upgrade the GIS platform and data management to ArcGIS Online and ArcGIS Pro. This was a critical step that has enabled Utility Commission staff to pursue more technology based solutions to more efficiently run and maintain the operation. To date we have moved all of our paper maps and individual service connection cards to the GIS and provided iPads to the maintenance crew so that all infrastructure information is readily available at their fingertips in the field. Because of this upgrade we are now able to create public facing maps that will better inform our customers and potential developers of where our infrastructure and individual service connections are located amongst other tools for both the public and internal staff.

OPERATIONAL PROJECTS

- Asset Management Software

Asset management is the practice of managing infrastructure capital assets to minimize the total cost of owning and operating these assets while delivering the desired service levels. Water and wastewater utilities use this practice to ensure planned maintenance can be conducted and capital assets (pumps, motors, pipes, etc.) can be repaired, replaced, or upgraded in a timely manner and budgeted for appropriately. Asset management software for wastewater utilities helps track and manage physical assets, such as treatment plants, pipes, pumps, and valves, to ensure they are properly maintained and operated. Asset management programs with good data—including asset attributes (e.g., age, condition, and criticality), life-cycle costing, proactive operations and maintenance, and capital replacement plans can be the most efficient method of meeting this challenge.



The Utility Commission chose Beehive Industries as our Asset Management program vendor and entered into an agreement in May of 2024 to begin implementing their cloud based software solution for water and wastewater asset management. This software will allow us to better answer questions about our assets like: Where is it located? What is it? What's been done to it? Who did it? How much time did it take? What materials were consumed? What needs to be done to it in the future?

Beehive will allow us to get data out into the field with devices that we are already familiar with and software that is easy to use. Being able to navigate the software and answer the above questions quickly while leveraging incredible datasets like our GIS platform will create efficiencies for the organization that will change the workforce and business outcomes for the better.



PLANNING

Water

- Pleasure Beach Water Main Replacement

This project was initiated around 2005 with the intention of replacing water mains in the Pleasure Beach area known as Water Contract #10 which consisted of 20,316 LF of 8" pipe. This contract area has experienced a significant number of main breaks. DPW has held off paving this area to avoid causing more breaks. To date, we have replaced 1,468 feet of the Contract # 10 main, and 18,848 feet of the old main remain. Funds are being requested for future years to replace approximately 6,300 LF/Yr. at a current average costs of \$150/LF. This project will enhance the reliability of the distribution system and create assurances that the roads within the contract area can be repaved without causing a main break and creating an adverse condition to a newly paved road.

- Water Tank Management Program

The Town of Waterford owns three water storage tanks, the 750,000 gallon Fargo Tank, the 300,000 gallon Vauxhall tank and the 1.25 Million gallon Rogers Hill tank. As highlighted earlier in this report the Fargo Road Tank refurbishment project was completed this year. Prior to the renovation, the Fargo Road water tank had its original coat of paint, which had far exceeded its useful life expectancy by approximately 10 years. This work was necessary to preserve the Town's significant investment in its infrastructure and to extend the life of its asset; if routine maintenance of infrastructure is ignored, it turns into an emergency capital investment and typically costs three times that of routine maintenance. If this tank had not undergone the recent rehabilitation, the structural integrity of the tank would have eventually failed, requiring that the tank be replaced at a significant cost to the Town.

Many municipalities do not realize the financial investment they have in their water storage tanks. These key municipal water distribution system components often receive the least attention and yet, they can potentially experience serious issues without proper tank asset management. Contamination from animals or debris, corrosion and other issues can trigger customer complaints, municipal regulatory compliance violations and costly water distribution service disruptions. A Water Tank Management Program for these valuable assets would preserve the significant investment the Town has made in water storage tanks by guaranteeing routine inspections and maintenance of the water storage tanks does not fall behind, thus improving the reliability of the system. A sustainable water tank management solution also makes budgeting easier as initial repair costs can be spread out over a few years if necessary and all future interior and exterior renovation costs are included.

PLANNING

Wastewater

- RT 85 Wastewater Pump Station Power Conversion Project

This pump station resides within an easement on the Crystal Mall property. Since the Rt 85 wastewater pumping station was constructed, the station's electric power and stand by power has been provided by the Crystal Mall. It is the intent of the Commission to be responsible for the commercial and standby power to this pumping station in order to assure reliable service from the electrical components and proper maintenance of the emergency standby power source. To achieve this we will have to install our own emergency generator and commercial power service components. An evaluation was conducted in 2007, which identified two alternatives ranging in costs from \$432K to \$602K at the time.

- Wastewater Pump Station Upgrades and Replacements

The Utility Commission has conducted comprehensive upgrades to the Evergreen Avenue, Mago Point, Bolles Court, Harvey Avenue Wastewater Pump Stations and is currently upgrading the Old Norwich Road Wastewater Pump Station. Additionally the Utility Commission staff has an aggressive preventative maintenance program in place, however the mechanical, electrical, and building system components of the remaining stations are aging and all components will eventually need to be repaired, upgraded or replaced. Over the next 5-10 years the Cross Roads, Stoney Brook, Marilyn Road and Wiemes Court stations will need comprehensive upgrades or complete replacements. It is the Utility Commission's intention to continue to evaluate all 28 wastewater pump stations and make appropriate capital funding requests to address the needs of the system as it ages.

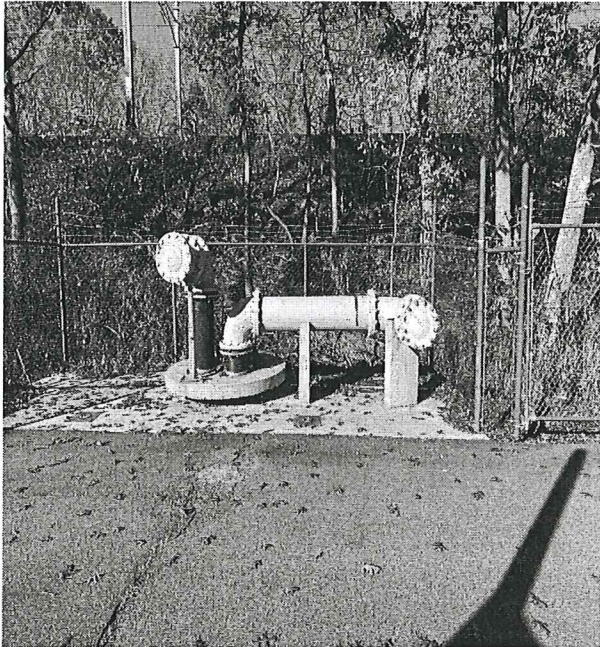
PLANNING

- Large Diameter Emergency By-Pass Mobile Pump.

Evergreen Station is the main wastewater pumping station that services all flows from the Towns of Waterford and East Lyme and portions of New London. This station is equipped with by-pass piping to accept the installation of a portable bypass pump in the event of station failure.

The Utility Commission does not own a portable pump of sufficient capacity to accommodate this station's flow. Funding for a large diameter diesel driven mobile pump is planned within the Utility Commission's Fleet Plan.

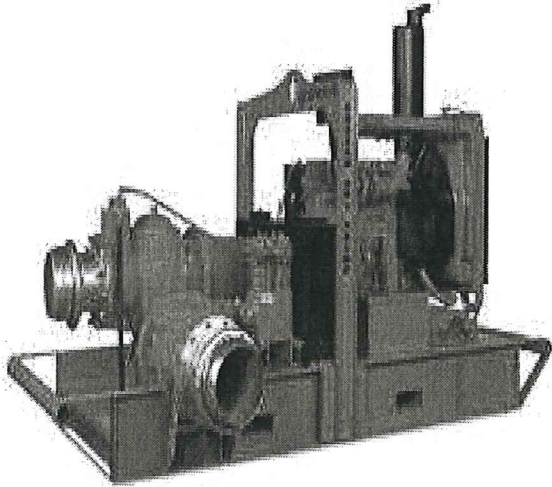
Evergreen Station Emergency By-Pass Pump



Emergency By-Pass Suction Piping



Emergency By-Pass Discharge Piping

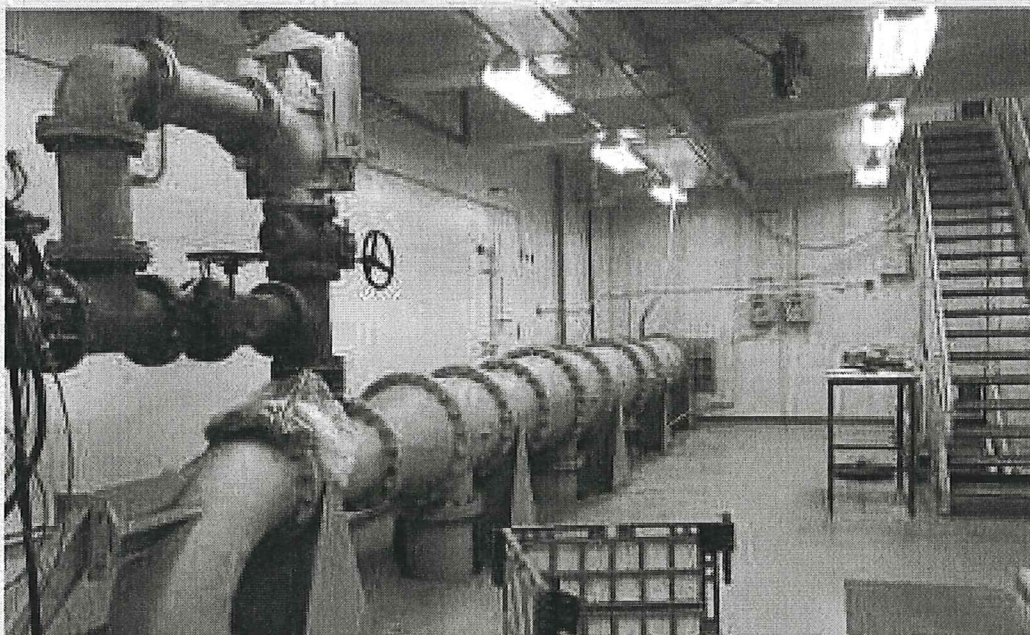
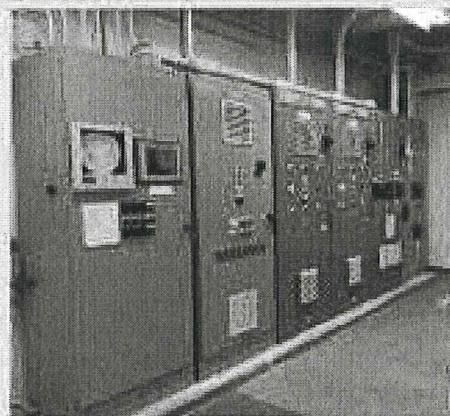
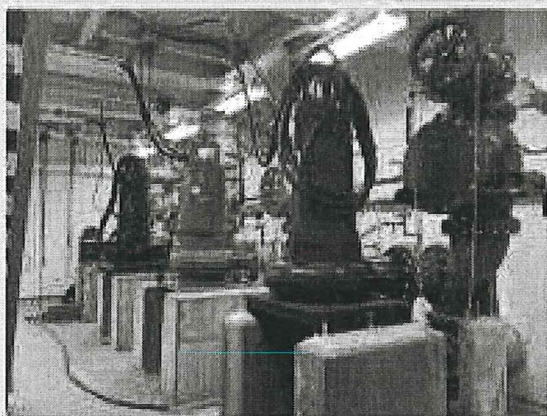
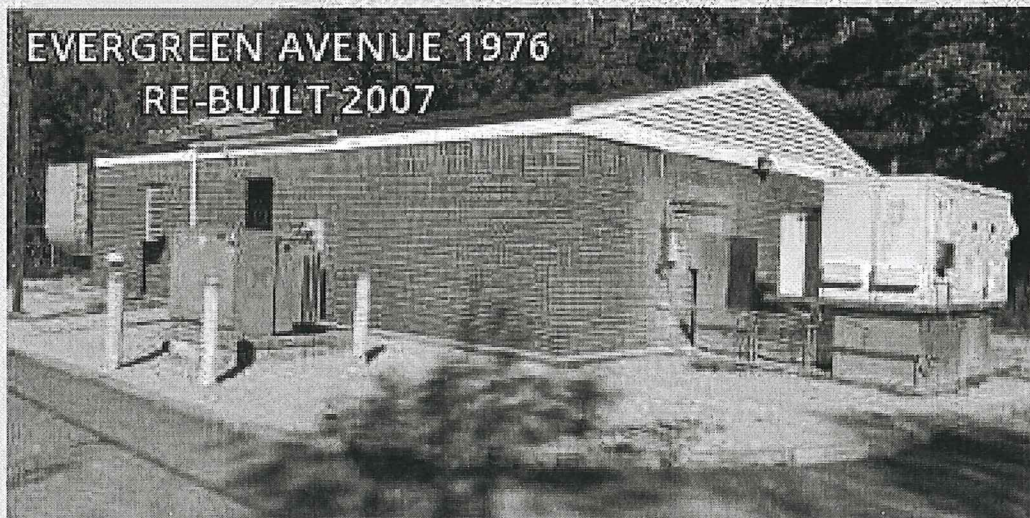


Diesel driven 12" Portable Pump
241 HP 5,590 GPM

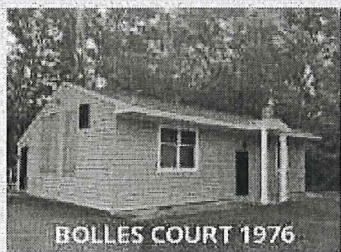


The pump would be temporarily installed between Suction and discharge piping in event of station failure.

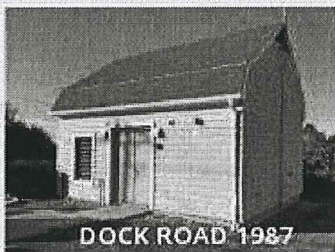
EVERGREEN AVENUE PUMP STATION



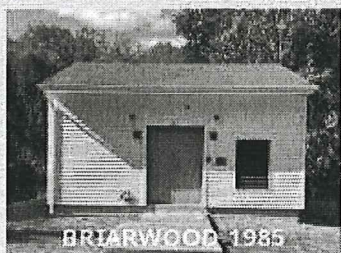
WASTEWATER PUMP STATIONS & YEAR BUILT / RE-BUILT



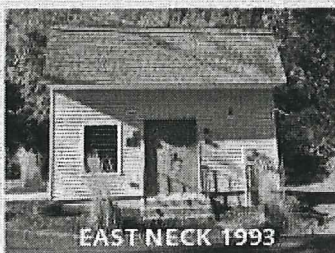
BOLLES COURT 1976



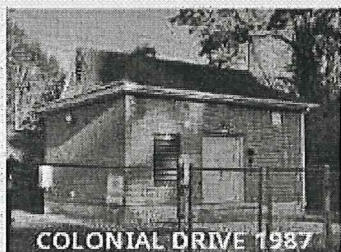
DOCK ROAD 1987



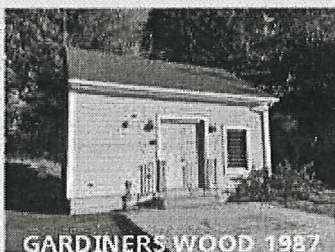
BRIARWOOD 1985



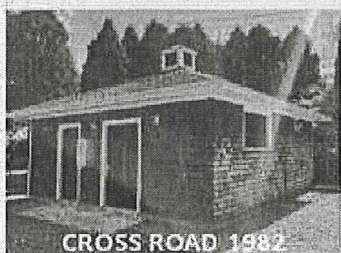
EAST NECK 1993



COLONIAL DRIVE 1987



GARDINERS WOOD 1987



CROSS ROAD 1982



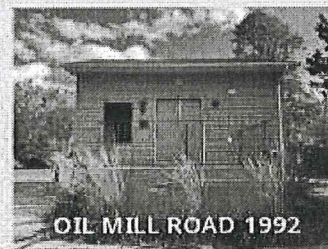
GRANITEVILLE 1995



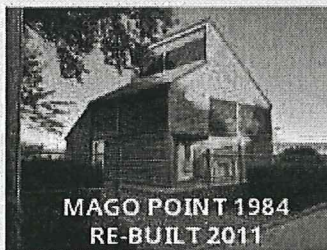
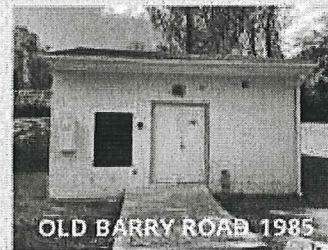
HARRISONS LANDING 2012



NTANTIC RIVER ROAD 1992

HARVEY AVENUE 1976
RE-BUILT 2015

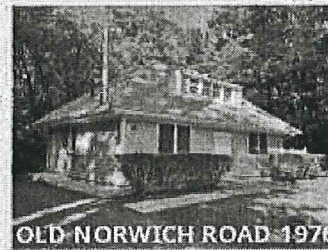
OIL MILL ROAD 1992

MAGO POINT 1984
RE-BUILT 2011

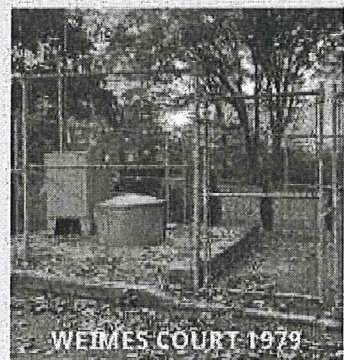
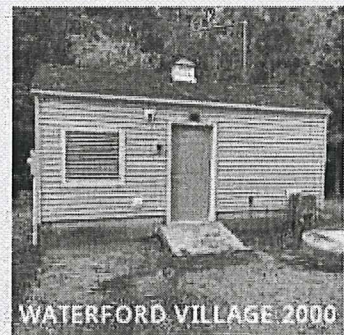
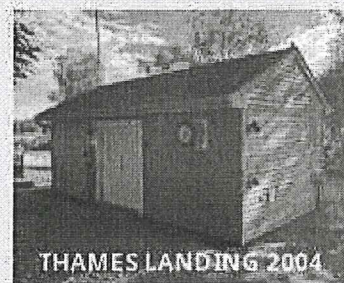
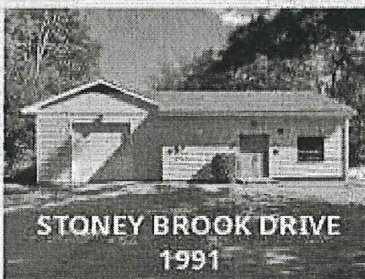
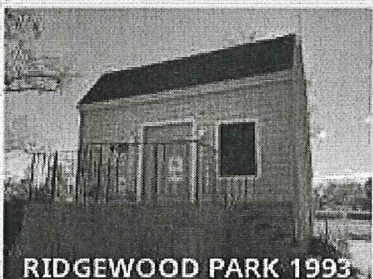
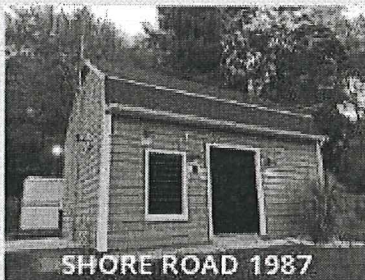
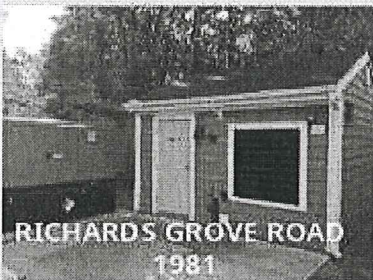
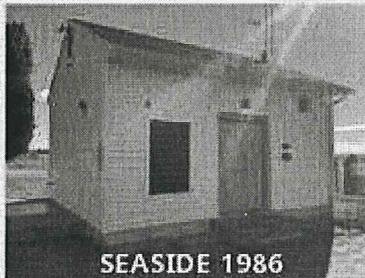
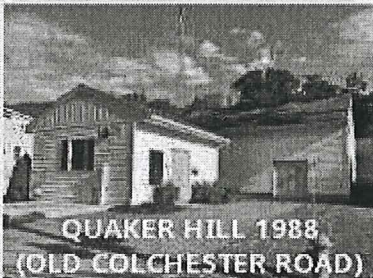
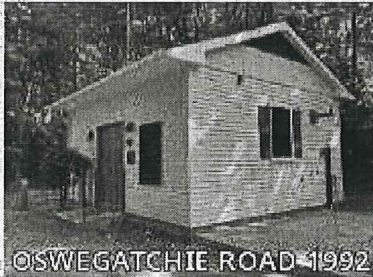
OLD BARRY ROAD 1985



MARYLIN ROAD 1979

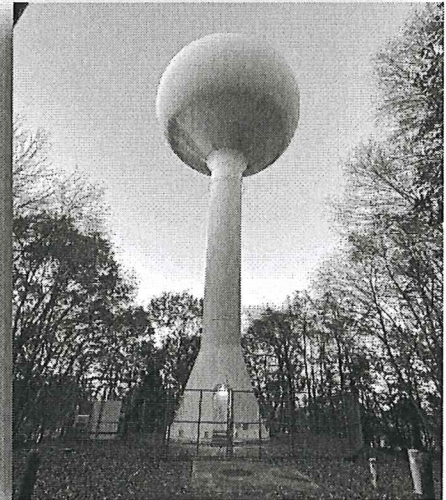


OLD NORWICH ROAD 1976

WASTEWATER PUMP STATIONS & YEAR BUILT / RE-BUILT

WATER PRESSURE BOOSTER STATIONS & WATER TOWERS

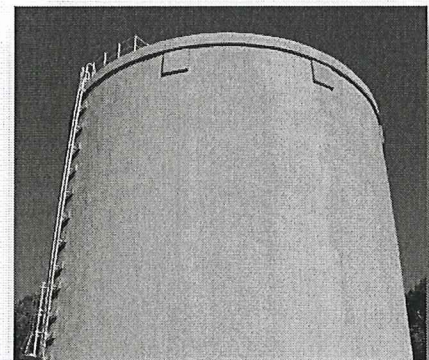
**Dayton Place Water Pressure Booster
Station Built 1973 - Rehab 2014**



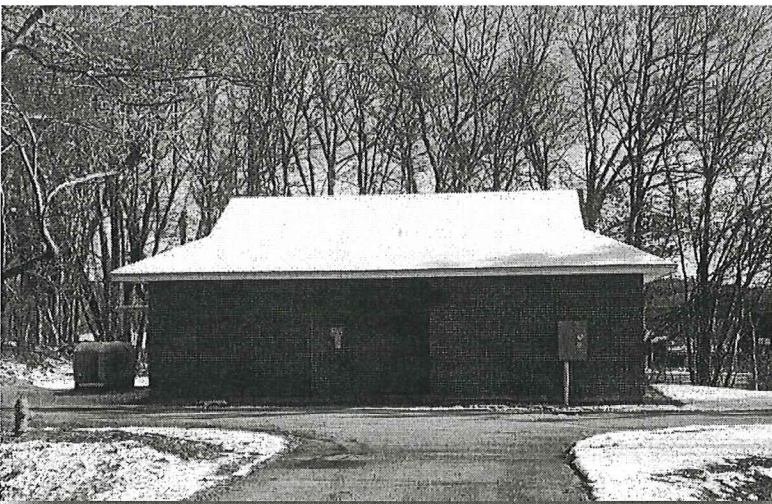
**Vauxhall Street Water Tower
Built 1973 - Rehab 2003
Capacity – 300,000 Gallons**



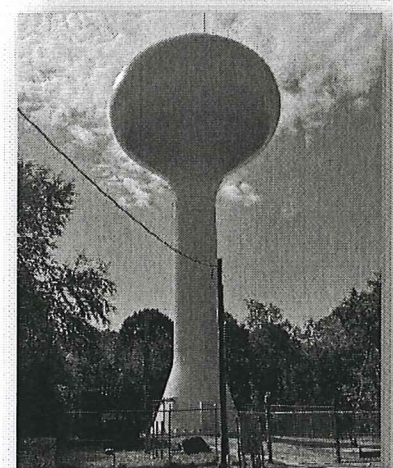
**Old Colchester Road Water Pressure Booster
Station Built 2008**



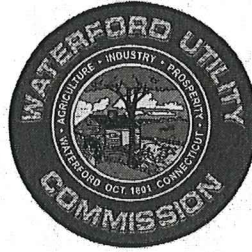
**Rogers Hill Water Tower
Built 2008
Capacity – 1.25 Million Gallons**



**Industrial Drive Water Pressure Booster Station Built 1986 - Complete
Rehab 2014**



**Fargo Lane Water Tower Built
1986 – Rehab 2024**

FINANCIAL OVERVIEW - FY2024

The administration, clerical, and the operation and maintenance of the wastewater collection system are 100% funded through sewer use fees (Enterprise Fund). No revenue is received from the Town's General Fund. The wastewater enterprise operating budget for FY24 was \$3,960,074.

Our residential sewer use rate is based upon a two tier system. Tier 1 is a flat rate charge of \$45.00 per quarter/equivalent dwelling unit and tier 2 is based upon actual water consumption of \$3.50 /100 cubic feet of water. This rate has remained in effect since 2009.

ASSESSMENT, RENTALS, ENTERPRISE, CONNECTION FEES & OTHER REVENUES FY24

Utility Commission benefit assessment collections in FY24:

- \$0 in water assessments, and
- \$0 in sewer assessments

Water and Sewer assessment collections are deposited into the General Fund.

The Utility Commission also generated:

- \$4,565,333 in sewer user charges billed and \$4,154,193 in sewer user charges collected which are deposited into the Enterprise Fund. [The apparent increase in sewer use charges levied in FY24 is attributed to the change in the timing of sewer use bills made at the beginning of the fiscal year in an effort to better align with the timing of the City of New London's water billing cycles.]
- \$58,794 from sewer connection fees which are deposited into the Sewer Development and Maintenance Fund.
- \$40,628 in water tower antenna space rental fees which are deposited into the WUC Water Fund.

EXPENDITURES FY24

- Expenditures from the General Fund for operational expenses were \$0
- Expenditures from the Enterprise Fund were \$4,961,851
- Expenditures from the Sewer Development & Maintenance Fund were \$86,595
- Expenditures from the Water Fund were \$131,081
- Expenditures from the Capital & Non-Recurring Fund were \$306,154
- Expenditures from the Capital Improvements Fund were \$109,298

Fire Services Review Special Committee Presentation

Items for Notice of Representative Town Meeting

8

Number 8.

To act upon the recommendation of the Board of Finance that an appropriation not to exceed \$12,000,000 be approved for demolition of the existing building and the construction of a new Town of Waterford Oswegatchie Fire Station at 441 Boston Post Road, Waterford as substantially described in the plans prepared by Silver Petrucelli & Associates' for the Oswegatchie Fire Station Building Committee (the "Project") dated January 24, 2025 and on file in the office of the Director of Planning and Development. The appropriation may be spent for design, demolition, renovation and construction costs, equipment, furnishings, materials, site improvements, survey costs, architects' fees, engineering fees, other consultants' fees, legal fees, net temporary interest and other financing costs and other expenses related to the project and financing; to authorize the Oswegatchie Fire Station Building Committee to determine the scope and particulars of the project to authorize the issue of up to \$12,000,000 bonds or notes, and temporary notes to finance, in part, said appropriation; to authorize the First Selectman and the Director of Finance to determine to amount, date, interest rates, maturities, redemption provisions, form and other details of the transfer agent, and paying agent for the obligations to designate one or more banks or trust companies to be certifying bank, registrar, transfer agent, and paying agent for the obligations, to provide for the keeping of a record of the obligations; to designate a financial advisor to the town in connection with the sale of the obligations; to see the obligations at public or private sale, to deliver the obligations and to perform all other acts which are necessary or appropriate to issue the obligations; to designate Shipman and Goodwin as bond counsel to approve the legality of the obligations; to declare the Town's official intent under Federal Income Tax Regulation Section 1.150-2 that project costs may be paid from temporary advances of available funds and that the Town reasonably expects to reimburse any such advances from the proceeds of borrowings; to authorize the First Selectman and the Director of Finance to make representations and covenants to maintain the continued exemption from federal income taxation of interest on the obligations and to make representations and enter into written agreements for the benefit of holders of the obligations to provide secondary market disclosure information; and to authorize the First Selectman, the Director of Finance, the Oswegatchie Fire Station Building Committee and other proper officers and officials of the Town to execute and file all necessary applications, agreements and documents in order to obtains grants to finance the project.

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY 22 A 10:39
ATTORNEY
TOWN CLERK

RECEIVED FOR RECORD
WATERFORD, CT

2025 MAY 22 A 10:50

RESOLUTION TO APPROPRIATE \$12,000,000 FOR THE CONSTRUCTION OF A NEW TOWN OF WATERFORD OSWEGATCHIE FIRE STATION AND TO AUTHORIZE THE ISSUANCE OF BONDS OR NOTES OF THE TOWN IN AN AMOUNT NOT TO EXCEED \$12,000,000 TO FINANCE THE APPROPRIATION

RESOLVED,

1. That the Town of Waterford (the "Town") appropriate up to \$12,000,000 for the demolition of the existing building and the construction of a new Town of Waterford Fire Station, as described in the plans prepared by Silver Petrucelli & Associates for the Oswegatchie Fire Station Building Committee (the "Project"). The appropriation may be expended for design, demolition, construction, renovation and installation costs, engineering and professional fees, fixtures, furnishings, materials, equipment, purchase costs, legal fees, financing costs, interest expense on temporary borrowings, and other costs related to the Project. The appropriation shall include any federal, state or other grants-in-aid received for the Project. The Oswegatchie Fire Station Building Committee for the Project is authorized to determine the scope and particulars of the Project. The Oswegatchie Fire Station Building Committee may reduce or modify the scope of the Project and the entire appropriation may be expended on the Project as so reduced or modified.
2. That the Town finance the Project by issuing the Town's bonds, notes or other obligations in an amount not to exceed \$12,000,000, which bonds, notes or other obligations shall be issued pursuant to the Connecticut General Statutes, as amended. The bonds, notes or other obligations may be sold as a single issue or consolidated with any other authorized issues of bonds, notes or other obligations of the Town. The Director of Finance shall keep a record of the bonds, notes or other obligations. The bonds, notes or other obligations shall bear the Town seal or a facsimile thereof. The bonds, notes or other obligations shall each recite that every requirement of law relating to its issue has been fully complied with, that such bond, note or other obligation is within every debt and other limit prescribed by law, and that the full faith and credit of the Town are pledged to the payment of the principal thereof and the interest thereon. The First Selectman and Director of Finance are hereby authorized to determine the amount, date, interest rates, maturities, form and other details of the bonds or notes; to designate a bank or trust company to be certifying bank, registrar, transfer agent and paying agent for the bonds or notes; to designate the persons to sign such bonds or notes by their manual or facsimile signatures in the name or on behalf of the Town; to sell the bonds or notes at public or private sale; to deliver the bonds or notes; and to perform all other acts which are necessary or appropriate to issue the bonds or notes.
3. That the Town is authorized to issue temporary notes in anticipation of the receipt of the proceeds of said bonds, notes or other obligations. The temporary notes shall be issued with maturity dates in accordance with the Connecticut General Statutes, as amended. The temporary notes shall each recite that every requirement of law relating to its issue has been fully complied with, that such note is within every debt and other limit prescribed by law, and that the full faith and credit of the Town are pledged to the payment of the principal thereof and the interest thereon. The First

Selectman and Director of Finance are authorized to determine the amounts, dates, interest rates, maturities, form, and other details of the notes; to sell the notes at public or private sale; to designate the persons to execute and deliver the notes; and to perform all other acts which are necessary or appropriate to issue the notes. The net interest cost on such notes, including renewals thereof, and the expense of preparing, issuing, and marketing such notes, to the extent paid from the proceeds from the issuance of bonds, notes or other obligations, shall be included as a cost of the appropriation.

4. That the Town hereby declares its official intent under Treasury Regulation Section 1.150-2 of the Internal Revenue Code of 1986, as amended, that the project costs may be paid from temporary advances of available funds and that the Town reasonably expects to reimburse any such advances from the proceeds of borrowings in an aggregate principal amount not in excess of the amount of borrowing authorized for the Project; that the First Selectman and Director of Finance are authorized to bind the Town pursuant to such representations and agreements as they deem necessary or advisable in order to ensure and maintain the continued exemption from Federal income taxation of interest on the bonds, notes or temporary notes authorized by this resolution, if issued on a tax-exempt basis, including covenants to pay rebates of investment earnings to the United States in future years; and that the First Selectman and Director of Finance are authorized to make representations and agreements for the benefit of the holders of the bonds, notes or temporary notes to provide secondary market disclosure information and to execute and deliver on behalf of the Town an agreement to provide such information with such terms and conditions as they, with the advice of bond counsel, deem necessary and appropriate.
5. That the First Selectman is authorized to apply for and accept grants for the Project, to execute grant agreements for the Project, and to file such documents as may be required to obtain grants for the costs of financing the Project.
6. That the First Selectman, the Director of Finance, the Oswegatchie Fire Station Building Committee and other proper officers of the Town are authorized to take all other action which is necessary or desirable to complete the Project and to issue bonds, notes or other obligations to finance the aforesaid appropriation.

RESOLUTION OF THE PLANNING AND ZONING COMMISSION

RESOLVED, that the Planning and Zoning Commission of the Town of Waterford approves the following project pursuant to Section 8-24 of the General Statutes of Connecticut:

Improvements to the Oswegatchie Fire House Facility per application #PL-25—3 located at 439 & 441 Boston Post Road, with modifications and conditions 1 thru 3 and to adopt the findings 1 thru 6 of the staff reports.

The resolution was approved by 4 votes in favor and 0 votes opposed.

RECEIVED FOR RECORD
WATERFORD, CT
2025 APR 23 | A 8:29
ATTEST: *[Signature]*
TOWN CLERK

[Signature]

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553

www.waterfordct.org

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAR 24 AM 8:01
March 25, 2025
6:30 p.m.
ATTEST: [Signature]
TOWN CLERK

AGENDA

Planning & Zoning Commission Town Hall

Meeting Documents

https://ct-waterford.civicplus.com/AgendaCenter/Planning-Zoning-Commission-33/?#_03252025-2038

- ITEM #1 CALL TO ORDER/APPOINTMENT OF ALTERNATES**
- ITEM #2 PLEDGE OF ALLEGIANCE**
- ITEM #3 APPROVAL OF THE February 11, 2025 MEETING MINUTES**

ITEM #4 APPLICATION RECEIPT

#PL-25-4 Request of James Gerrish, Applicant and Peter VanArnam, Owner for a Coastal Site Plan review and approval for a new single family home on property located at 163 Oswegatchie Road, R-40 Zone in accordance with Sections 5.1.1 and 25.4 of the Zoning Regulations and as shown on plans entitled "Zoning Location Survey, Prepared for James G. Gerrish for Property Located at 163 Oswegatchie Road Town of Waterford County of New London Connecticut"

APPLICATION WAS RECEIVED: 2/25/25

ACTION REQUIRED BY: 5/8/25

ITEM #5 APPLICATION REVIEW

#PL-25-3 – Request of the Town of Waterford, owner and applicant, for a site plan review and approval for a new Oswegatchie Fire Station on property located at 439 and 441 Boston Post Road, NBPO zone in accordance with sections 7a.2.3, 22 and 25.4 of the Zoning Regulations and as shown on plans titled "Oswegatchie Fire Station, 441 Boston Post Road, Waterford, Connecticut, Site Plan/Design Review/Coastal Site Plan Application" dated revised 2/7/2025.

ACTION REQUIRED BY: 4/16/25

ITEM #6 EXECUTIVE SESSION

Discussion of the following pending lawsuit entitled:

1721, LLC v. Waterford Planning and Zoning Commission; Docket Number HHD-CV24-6195785-S

ITEM #7 ADMINISTRATIVE REVIEW

ITEM #8 CORRESPONDENCE

ITEM #9 COMMISSION BUSINESS

- A. Discussion to schedule POCD meeting date
- B. Review of past months' and ongoing projects
- C. Upcoming projects

ITEM #10 ADJOURNMENT

Katrina Kotfer
Katrina Kotfer,
Recording Secretary

PLANNING AND ZONING COMMISSION MEETING MINUTES

Planning & Zoning Commission
Town Hall

March 25, 2025
6:30 PM

Members Present: Karen Barnett, Tim Bleasdale, Tim Conderino
Members Absent: Chairman Greg Massad and Victor Ebersole
Alternates Present: Doris Crum
Alternates Absent: Joseph DiBuono
Staff Present: Jonathan Mullen, AICP, Planning Director, Mark Wujtewicz, Planner
and Katrina Kotfer, Recording Secretary

1. CALL TO ORDER AND APPOINTMENT OF ALTERNATES

T. Bleasdale called the meeting to order at 6:30 PM. D. Crum was seated for G. Massad.

2. PLEDGE OF ALLEGIANCE

3. APPROVAL OF MINUTES

MOTION: Motion made by K. Barnett, seconded by D. Crum, to approve the February 11, 2025 meeting minutes.

VOTE: 4-0

4. APPLICATION RECEIPT

#PL-25-4 Request of James Gerrish, Applicant and Peter VanArnam, Owner for a Coastal Site Plan review and approval for a new single family home on property located at 163 Oswegatchie Road, R-40 Zone in accordance with Sections 5.1.1 and 25.4 of the Zoning Regulations and as shown on plans entitled "Zoning Location Survey, Prepared for James G. Gerrish for Property Located at 163 Oswegatchie Road Town of Waterford County of New London Connecticut"
APPLICATION WAS RECEIVED: 2/25/25
ACTION REQUIRED BY: 5/8/25

Staff noted that the application was received by the Commission at the cancelled February 25, 2025 meeting and will be reviewed by the Commission at a future meeting.

5. APPLICATION REVIEW

#PL-25-3 Request of the Town of Waterford, owner and applicant, for a site plan review and approval for a new Oswegatchie Fire Station on property located at 439 and 441 Boston Post Road, NBPO zone in accordance with sections 7a.2.3, 22 and 25.4 of the Zoning Regulations and as shown on plans titled "Oswegatchie Fire Station, 441 Boston Post Road, Waterford, Connecticut, Site Plan/Design Review/Coastal Site Plan Application" dated revised 2/7/2025.
ACTION REQUIRED BY: 4/16/25

Brian Phillips, PE., Langdon, Eric Kantor, Architect were present for the application.

B. Phillips gave an overview of the proposed new fire station. He noted that the two lots, 439 and 441 Boston Post Road will be merged into one lot. The subject area is surrounded by the R-

40 residential zone district, that there are wetlands nearby and there is a pocket of wetlands on the site. The project received a favorable review from the Design Review Board on March 11, 2025. The overall site is generally flat with an overall grade towards the rear. The site is currently serviced by public water and sewer. The existing fire station will remain in use during construction and will be demolished after the new fire station is completed and in use. As a result of the project, the amount of impervious surface will be reduced. The project will be constructed to include dark sky compliant light fixtures.

T. Conderino asked where the trucks will be washed. B. Phillips noted that the trucks will be washed inside the building.

D. Crum asked if there will be any issues during demolition that will impact Boston Post Road. B. Phillips noted no issues are anticipated.

Eric Cantor, architect reviewed the building elevations and interior layout with the Commission.

M. Wujtewicz reviewed the staff report with the Commission.

The Commission discussed the following findings:

1. The application is for a use subject to a Site Plan approval, pursuant to Section 7A.2.3 of the Waterford Zoning Regulations.
2. The application meets the criteria for a modified site plan approval, pursuant to Section 22 of the Waterford Zoning Regulations, subject to modifications listed.
3. The Waterford Conservation Commission issued Inland Wetland Permit# C-25-02 for regulated inland wetland activities.
4. The Waterford Conservation Commission issued a report of its action on application #C-25-02 in accordance with CGS §8.3(g).
5. The project as approved with conditions is consistent with all applicable coastal policies and includes all reasonable measures to mitigate adverse impacts.
6. This application has been reviewed by the Town of Waterford Design Review Board in accordance with Section 22b of the Waterford Zoning Regulations and which Board submits a positive report to the Planning and Zoning Commission.

The Commission discussed the following modifications and conditions:

1. As a result of the site improvements extending onto both parcels, the two parcels known as 439 and 441 Boston Post Road shall be merged into one parcel. This shall be completed prior to filing the plans on the land records.
2. Construction phasing and the implementation of measures to separate the continuing operation of services from the construction activities shall be strictly adhered to as identified on the plan.
3. All conditions of approval for Inland Wetland Permit #C-25-02 shall be incorporated into this decision as if fully set forth herein.

- MOTION:** Motion made by K. Barnett, seconded by D. Crum to approve with modifications and conditions, the Site Plan for the new Oswegatchie Fire House Facility application #PL-25-3 located at 439 & 441 Boston Post Road, with modifications and conditions 1 thru 3 and to adopt the findings 1 thru 6 of the staff report.
- VOTE:** 4-0

6. EXECUTIVE SESSION

Discussion of the following pending lawsuit entitled:
1721, LLC v. Waterford Planning and Zoning Commission;
Docket Number HHD-CV24-6195785-S

Jonathan Mullen, Planning Director, Mark Wujtewicz, Planner, Robert Avena, Esq., Town Attorney and Katrina Kotfer, Recording Secretary were invited in by the Commission to enter executive session.

- MOTION:** Motion made by K. Barnett, seconded by T. Conderino, to enter into executive session at 7:05 pm.

VOTE: 4-0

- MOTION:** Motion made by T. Conderino seconded by K. Barnett, to leave executive session at 7:50 pm with no votes taken.

VOTE: 4-0

7. ADMINISTRATIVE REVIEW

No action was taken.

8. CORRESPONDENCE

No correspondence was received.

9. COMMISSION BUSINESS

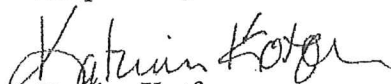
M. Wujtewicz gave a brief update on projects currently under construction.

10. ADJOURNMENT

- MOTION:** Motion made by D. Crum, seconded by T. Conderino to adjourn at 8:00 pm.

VOTE: 4-0

Respectfully Submitted,


Katrina Kotfer
Recording Secretary



DEPARTMENT OF PLANNING AND DEVELOPMENT

MEMORANDUM

TO: Planning and Zoning Commission

FROM: Mark Wujtewicz, Planner

DATE: March 11, 2025

TITLE: Staff Report: Oswegatchie Fire Station
439 & 441 Boston Post Road
Site Plan
Application PL-25-3

EXECUTIVE SUMMARY

The project as proposed is to construct an approximate 10,160 square foot footprint fire station building located at 439 & 441 Boston Post Road. The parcels are located within the Neighborhood Business and Professional Office (NBPO) Zone District with a combined area of approximately 2 acres. The parcels are also located within the Connecticut Coastal Area Management (CAM) boundary. The existing firehouse is approximately 12,000 square feet and located on the 439 Boston Post Road parcel while the associated parking lot is located on the 441 Boston Post Road parcel. In addition to the construction of the new fire station building, other site improvements include new concrete sidewalks and paved parking areas, stormwater quality elements and utilities. The proposed building will be served by the existing municipal water and sewer system.

The existing firehouse facility will remain in operation while the new building is being constructed. The plan identifies temporary procedures and phasing of work that will be implemented during the construction and demolition that will separate the activities in order to maintain the ongoing operation of services conducted on the site. Once the new building is constructed and associated site improvements are completed, the existing facility building will be demolished and any remaining site improvements in the area of the demolished building will be completed.

Prior Planning and Zoning Commission approvals granted for this project site include two Connecticut General Statute (CGS) 8-24 approvals. PL-24-3 was approved by the Commission on January 23, 2024 for the purchase of the two parcels. On January 14, 2025, CGS 8-24 application PL-25-1 was approved by the Commission for the improvements to the property, which is the subject of this site plan application.

The application has been reviewed and approved by the Waterford Conservation Commission through the issuance of Inland Wetland Permit #C-25-02. A copy of the Conservation Commission Action has been submitted into the record.

BACKGROUND

Pertinent Regulations

CGS 8-3(g)

Section 7A – Neighborhood Business and Professional Office (NBPO)

Section 7A.2.3 – Municipal office and facilities

Section 22 – Site Plans

Section 22b – Design Review of Site and Building Requirements

Section 25.4 – Coastal Area Management

This application was received by the Commission on February 11, 2025.
Action on this application must be no later than April 16, 2025.

DISCUSSION

In order for the Commission to approve a site plan it must find that the plan is consistent with the Town of Waterford Zoning Regulations. The Commission must act on the plan initially submitted for review and can find that the site plan is either compliant with the Zoning Regulations or it may approve the plan with modifications that are required to be implemented prior to filing on the land records.

A portion of the project is located within the Connecticut Coastal Area Management (CAM) boundary, therefore an application for a Coastal Area Management Site Plan Permit was submitted into the record. Coastal resources identified were shorelands and inland freshwater wetlands. The plan was found to be consistent with Coastal Resource policies and any potential temporary adverse impacts during construction of the project is mitigated through the implementation of appropriate erosion and sedimentation control measures in accordance with the CT Guidelines for Soil Erosion and Sediment Control. The proposed stormwater management design includes onsite infiltration promoting groundwater recharge and reducing peak flows.

Activity associated with the construction of the proposed facility will impact approximately 20,000 square feet of area within the upland review area of two wetlands identified on the plan as Wetland #1 and Wetland #2. As a result, an application for Inland Wetland Permit #C-25-02 was submitted to the Waterford Conservation Commission. Inland Wetland Permit #C-25-02 was approved with conditions by the Conservation Commission to conduct authorized regulated activities associated with the construction of the new fire station, associated paved area and stormwater treatment. In accordance with CGS §8-3(g) a report of the Conservation Commission action was submitted into the record.

The applicant submitted a Stormwater Management Report into the record. The report noted that the existing conditions on the site include approximately 52,200 square feet of impervious

cover, while the proposed improvements will provide for a net reduction in impervious area by approximately 20,700 square feet. The report indicates that the design of the Stormwater Management System is in conformance with the 2024 CTDEEP Stormwater Quality Manual, the 2000 CTDOT Drainage Manual and that the system as proposed will effectively manage the quality and quantity of stormwater runoff.

RECOMMENDED ACTION

Based on the information provided, staff recommends the Planning and Zoning Commission find that:

Findings:

1. The application is for a use subject to a Site Plan approval, pursuant to Section 7A.2.3 of the Waterford Zoning Regulations.
2. The application meets the criteria for a modified site plan approval, pursuant to Section 22 of the Waterford Zoning Regulations, subject to modifications listed.
3. The Waterford Conservation Commission issued Inland Wetland Permit# C-25-02 for regulated inland wetland activities.
4. The Waterford Conservation Commission issued a report of its action on application #C-25-02 in accordance with CGS §8.3(g).
5. The project as approved with conditions is consistent with all applicable coastal policies and includes all reasonable measures to mitigate adverse impacts.
6. This application has been reviewed by the Town of Waterford Design Review Board in accordance with Section 22b of the Waterford Zoning Regulations and which Board submits a positive report to the Planning and Zoning Commission.

and that the Commission approve the proposal with the following modifications and conditions:

1. As a result of the site improvements extending onto both parcels, the two parcels known as 439 and 441 Boston Post Road shall be merged into one parcel. This shall be completed prior to filing the plans on the land records.
2. Construction phasing and the implementation of measures to separate the continuing operation of services from the construction activities shall be strictly adhered to as identified on the plan.
3. All conditions of approval for Inland Wetland Permit #C-25-02 shall be incorporated into this decision as if fully set forth herein.

Proposed Motion

To approve with modifications and conditions, the Site Plan for the new Oswegatchie Fire House Facility application #PL-25-3 located at 439 & 441 Boston Post Road, with modifications and conditions 1 and 3 and to adopt the findings 1 thru 6 of the staff report.

PLANNING AND ZONING COMMISSION MEETING M I N U T E S

Planning & Zoning Commission
Town Hall

March 25, 2025
6:30 PM

Members Present: Karen Barnett, Tim Bleasdale, Tim Conderino
Members Absent: Chairman Greg Massad and Victor Ebersole
Alternates Present: Doris Crum
Alternates Absent: Joseph DiBuono
Staff Present: Jonathan Mullen, AICP, Planning Director, Mark Wujtewicz, Planner
and Katrina Kotfer, Recording Secretary

1. CALL TO ORDER AND APPOINTMENT OF ALTERNATES

T. Bleasdale called the meeting to order at 6:30 PM. D. Crum was seated for G. Massad.

2. PLEDGE OF ALLEGIANCE

3. APPROVAL OF MINUTES

MOTION: Motion made by K. Barnett, seconded by D. Crum, to approve the February 11, 2025 meeting minutes.

VOTE: 4-0

4. APPLICATION RECEIPT

#PL-25-4 Request of James Gerrish, Applicant and Peter VanArnam, Owner for a Coastal Site Plan review and approval for a new single family home on property located at 163 Oswegatchie Road, R-40 Zone in accordance with Sections 5.1.1 and 25.4 of the Zoning Regulations and as shown on plans entitled "Zoning Location Survey, Prepared for James G. Gerrish for Property Located at 163 Oswegatchie Road Town of Waterford County of New London Connecticut"

APPLICATION WAS RECEIVED:

2/25/25

ACTION REQUIRED BY:

5/8/25

Staff noted that the application was received by the Commission at the cancelled February 25, 2025 meeting and will be reviewed by the Commission at a future meeting.

5. APPLICATION REVIEW

#PL-25-3 – Request of the Town of Waterford, owner and applicant, for a site plan review and approval for a new Oswegatchie Fire Station on property located at 439 and 441 Boston Post Road, NBPO zone in accordance with sections 7a.2.3, 22 and 25.4 of the Zoning Regulations and as shown on plans titled "Oswegatchie Fire Station, 441 Boston Post Road, Waterford, Connecticut, Site Plan/Design Review/Coastal Site Plan Application" dated revised 2/7/2025.

ACTION REQUIRED BY:

4/16/25

Brian Phillips, PE., Langdon, Eric Kantor, Architect were present for the application.

B. Phillips gave an overview of the proposed new fire station. He noted that the two lots, 439 and 441 Boston Post Road will be merged into one lot. The subject area is surrounded by the R-

40 residential zone district, that there are wetlands nearby and there is a pocket of wetlands on the site. The project received a favorable review from the Design Review Board on March 11, 2025. The overall site is generally flat with an overall grade towards the rear. The site is currently serviced by public water and sewer. The existing fire station will remain in use during construction and will be demolished after the new fire station is completed and in use. As a result of the project, the amount of impervious surface will be reduced. The project will be constructed to include dark sky compliant light fixtures.

T. Conderino asked where the trucks will be washed. B. Phillips noted that the trucks will be washed inside the building.

D. Crum asked if there will be any issues during demolition that will impact Boston Post Road. B. Phillips noted no issues are anticipated.

Eric Cantor, architect reviewed the building elevations and interior layout with the Commission.

M. Wujtewicz reviewed the staff report with the Commission.

The Commission discussed the following findings:

1. The application is for a use subject to a Site Plan approval, pursuant to Section 7A.2.3 of the Waterford Zoning Regulations.
2. The application meets the criteria for a modified site plan approval, pursuant to Section 22 of the Waterford Zoning Regulations, subject to modifications listed.
3. The Waterford Conservation Commission issued Inland Wetland Permit# C-25-02 for regulated inland wetland activities.
4. The Waterford Conservation Commission issued a report of its action on application #C-25-02 in accordance with CGS §8.3(g).
5. The project as approved with conditions is consistent with all applicable coastal policies and includes all reasonable measures to mitigate adverse impacts.
6. This application has been reviewed by the Town of Waterford Design Review Board in accordance with Section 22b of the Waterford Zoning Regulations and which Board submits a positive report to the Planning and Zoning Commission.

The Commission discussed the following modifications and conditions:

1. As a result of the site improvements extending onto both parcels, the two parcels known as 439 and 441 Boston Post Road shall be merged into one parcel. This shall be completed prior to filing the plans on the land records.
2. Construction phasing and the implementation of measures to separate the continuing operation of services from the construction activities shall be strictly adhered to as identified on the plan.
3. All conditions of approval for Inland Wetland Permit #C-25-02 shall be incorporated into this decision as if fully set forth herein.

- MOTION:** Motion made by K. Barnett, seconded by D. Crum to approve with modifications and conditions, the Site Plan for the new Oswegatchie Fire House Facility application #PL-25-3 located at 439 & 441 Boston Post Road, with modifications and conditions 1 thru 3 and to adopt the findings 1 thru 6 of the staff report.
- VOTE:** 4-0

6. EXECUTIVE SESSION

Discussion of the following pending lawsuit entitled:
1721, LLC v. Waterford Planning and Zoning Commission;
Docket Number HHD-CV24-6195785-S

Jonathan Mullen, Planning Director, Mark Wujtewicz, Planner, Robert Avena, Esq., Town Attorney and Katrina Kotfer, Recording Secretary were invited in by the Commission to enter executive session.

- MOTION:** Motion made by K. Barnett, seconded by T. Conderino, to enter into executive session at 7:05 pm.
- VOTE:** 4-0

- MOTION:** Motion made by T. Conderino seconded by K. Barnett, to leave executive session at 7:50 pm with no votes taken.
- VOTE:** 4-0

7. ADMINISTRATIVE REVIEW

No action was taken.

8. CORRESPONDENCE

No correspondence was received.

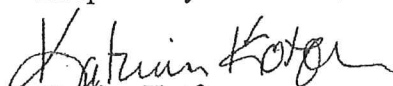
9. COMMISSION BUSINESS

M. Wujtewicz gave a brief update on projects currently under construction.

10. ADJOURNMENT

- MOTION:** Motion made by D. Crum, seconded by T. Conderino to adjourn at 8:00 pm.
- VOTE:** 4-0

Respectfully Submitted,


Katrina Kotfer
Recording Secretary



DEPARTMENT OF PLANNING AND DEVELOPMENT

MEMORANDUM

TO: Planning and Zoning Commission

FROM: Mark Wujtewicz, Planner

DATE: March 11, 2025

TITLE: Staff Report: Oswegatchie Fire Station
439 & 441 Boston Post Road
Site Plan
Application PL-25-3

EXECUTIVE SUMMARY

The project as proposed is to construct an approximate 10,160 square foot footprint fire station building located at 439 & 441 Boston Post Road. The parcels are located within the Neighborhood Business and Professional Office (NBPO) Zone District with a combined area of approximately 2 acres. The parcels are also located within the Connecticut Coastal Area Management (CAM) boundary. The existing firehouse is approximately 12,000 square feet and located on the 439 Boston Post Road parcel while the associated parking lot is located on the 441 Boston Post Road parcel. In addition to the construction of the new fire station building, other site improvements include new concrete sidewalks and paved parking areas, stormwater quality elements and utilities. The proposed building will be served by the existing municipal water and sewer system.

The existing firehouse facility will remain in operation while the new building is being constructed. The plan identifies temporary procedures and phasing of work that will be implemented during the construction and demolition that will separate the activities in order to maintain the ongoing operation of services conducted on the site. Once the new building is constructed and associated site improvements are completed, the existing facility building will be demolished and any remaining site improvements in the area of the demolished building will be completed.

Prior Planning and Zoning Commission approvals granted for this project site include two Connecticut General Statute (CGS) 8-24 approvals. PL-24-3 was approved by the Commission on January 23, 2024 for the purchase of the two parcels. On January 14, 2025, CGS 8-24 application PL-25-1 was approved by the Commission for the improvements to the property, which is the subject of this site plan application.

The application has been reviewed and approved by the Waterford Conservation Commission through the issuance of Inland Wetland Permit #C-25-02. A copy of the Conservation Commission Action has been submitted into the record.

BACKGROUND

Pertinent Regulations

CGS 8-3(g)

Section 7A – Neighborhood Business and Professional Office (NBPO)

Section 7A.2.3 – Municipal office and facilities

Section 22 – Site Plans

Section 22b – Design Review of Site and Building Requirements

Section 25.4 – Coastal Area Management

This application was received by the Commission on February 11, 2025.
Action on this application must be no later than April 16, 2025.

DISCUSSION

In order for the Commission to approve a site plan it must find that the plan is consistent with the Town of Waterford Zoning Regulations. The Commission must act on the plan initially submitted for review and can find that the site plan is either compliant with the Zoning Regulations or it may approve the plan with modifications that are required to be implemented prior to filing on the land records.

A portion of the project is located within the Connecticut Coastal Area Management (CAM) boundary, therefore an application for a Coastal Area Management Site Plan Permit was submitted into the record. Coastal resources identified were shorelands and inland freshwater wetlands. The plan was found to be consistent with Coastal Resource policies and any potential temporary adverse impacts during construction of the project is mitigated through the implementation of appropriate erosion and sedimentation control measures in accordance with the CT Guidelines for Soil Erosion and Sediment Control. The proposed stormwater management design includes onsite infiltration promoting groundwater recharge and reducing peak flows.

Activity associated with the construction of the proposed facility will impact approximately 20,000 square feet of area within the upland review area of two wetlands identified on the plan as Wetland #1 and Wetland #2. As a result, an application for Inland Wetland Permit #C-25-02 was submitted to the Waterford Conservation Commission. Inland Wetland Permit #C-25-02 was approved with conditions by the Conservation Commission to conduct authorized regulated activities associated with the construction of the new fire station, associated paved area and stormwater treatment. In accordance with CGS §8-3(g) a report of the Conservation Commission action was submitted into the record.

The applicant submitted a Stormwater Management Report into the record. The report noted that the existing conditions on the site include approximately 52,200 square feet of impervious

cover, while the proposed improvements will provide for a net reduction in impervious area by approximately 20,700 square feet. The report indicates that the design of the Stormwater Management System is in conformance with the 2024 CTDEEP Stormwater Quality Manual, the 2000 CTDOT Drainage Manual and that the system as proposed will effectively manage the quality and quantity of stormwater runoff.

RECOMMENDED ACTION

Based on the information provided, staff recommends the Planning and Zoning Commission find that:

Findings:

1. The application is for a use subject to a Site Plan approval, pursuant to Section 7A.2.3 of the Waterford Zoning Regulations.
2. The application meets the criteria for a modified site plan approval, pursuant to Section 22 of the Waterford Zoning Regulations, subject to modifications listed.
3. The Waterford Conservation Commission issued Inland Wetland Permit# C-25-02 for regulated inland wetland activities.
4. The Waterford Conservation Commission issued a report of its action on application #C-25-02 in accordance with CGS §8.3(g).
5. The project as approved with conditions is consistent with all applicable coastal policies and includes all reasonable measures to mitigate adverse impacts.
6. This application has been reviewed by the Town of Waterford Design Review Board in accordance with Section 22b of the Waterford Zoning Regulations and which Board submits a positive report to the Planning and Zoning Commission.

and that the Commission approve the proposal with the following modifications and conditions:

1. As a result of the site improvements extending onto both parcels, the two parcels known as 439 and 441 Boston Post Road shall be merged into one parcel. This shall be completed prior to filing the plans on the land records.
2. Construction phasing and the implementation of measures to separate the continuing operation of services from the construction activities shall be strictly adhered to as identified on the plan.
3. All conditions of approval for Inland Wetland Permit #C-25-02 shall be incorporated into this decision as if fully set forth herein.

Proposed Motion

To approve with modifications and conditions, the Site Plan for the new Oswegatchie Fire House Facility application #PL-25-3 located at 439 & 441 Boston Post Road, with modifications and conditions 1 and 3 and to adopt the findings 1 thru 6 of the staff report.

441 BOSTON POST ROAD
WATERFORD, CONNECTICUT

OWNER & APPLICANT
OSWEGATCHIE FIRE COMPANY #4, INC.
441 BOSTON POST ROAD
WATERFORD, CT 06385

**SURVEYOR, CIVIL ENGINEER &
LANDSCAPE ARCHITECT**
**LANGAN ENGINEERING &
ENVIRONMENTAL SERVICES, INC**
555 LONG WHARF DRIVE
NEW HAVEN, CT 06511
(203) 562-5771

ARCHITECT
SILVER AND PETRUCELLI & ASSOCIATES
3190 WHITNEY AVENUE, BUILDING 2
HAMDEN, CT 06518
(203) 230-9007

DRAWING LIST		DATE	REVISED
NUMBER	TITLE	DATE	REVISED
-	COVER SHEET	2/17/2025	-
V8101	BOUNDARY AND TOPOGRAPHIC SURVEY	6/26/2024	-
V8102	BOUNDARY AND TOPOGRAPHIC SURVEY	6/26/2024	-
CS101	SITE PLAN	2/17/2025	-
CS501	SITE DETAILS I	2/17/2025	-
CS602	SITE DETAILS II	2/17/2025	-
CG101	GRADING, DRAINAGE & UTILITY PLAN	2/17/2025	-
CG501	GRADING & DRAINAGE DETAILS I	2/17/2025	-
CU101	UTILITY PLAN	2/17/2025	-
CU501	UTILITY DETAILS I	2/17/2025	-
CU501	UTILITY DETAILS II	2/17/2025	-
CE101	BROOKS CONTROL/CONSTRUCTION PHASING PLAN I	2/17/2025	-
CE102	BROOKS CONTROL/CONSTRUCTION PHASING PLAN II	2/17/2025	-
CS301	SOIL EROSION & SEDIMENT CONTROL DETAILS	2/17/2025	-
LP101	PLANTING PLAN	2/17/2025	-
LP501	PLANTING DETAILS	2/17/2025	-
LI101	LIGHTING PLAN	2/17/2025	-
LI501	LIGHTING DETAILS	2/17/2025	-
A190	FLOOR PLANS	1/24/2025	-
A302	EXTERIOR ELEVATIONS	1/24/2025	-
A303	EXTERIOR ELEVATIONS	1/24/2025	-
A304	3D VIEW	1/24/2025	-
A305	3D VIEW	1/24/2025	-

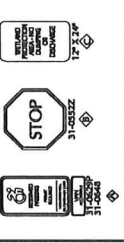
RELEASE DATES	
DATE	ISSUED FOR
1/7/2025	INLAND WETLAND/WATERCOURSE PERMIT APP
1/21/2025	TOWN CONSERVATION COMMENTS
2/7/2025	SITE PLAN/DRB/COASTAL SITE PLAN APP

LANGAN

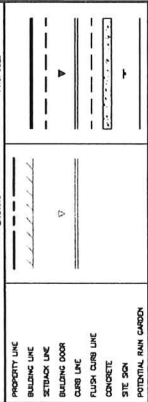
GENERAL NOTES

1. ALL INFORMATION DERIVED FROM THE FOLLOWING TRANSPORT AND TRANSPORTATION DEPARTMENT, AND A-11 DESIGN POST ROAD, WATERBURY, CT, DATED JUNE 28, 2024.
2. THE SITE IS LOCATED WITHIN 200' OF THE NEW HAVEN MAP, WATERBURY, CT, EFFECTIVE AUGUST 1, 2023. THE SITE IS AN AREA OF MINIMAL FLOOD HAZARD WITH NO BASE FLOOD ELEVATIONS.
3. THE SITE IS LOCATED WITHIN 200' OF THE NEW HAVEN MAP, WATERBURY, CT, EFFECTIVE AUGUST 1, 2023. THE SITE IS AN AREA OF MINIMAL FLOOD HAZARD WITH NO BASE FLOOD ELEVATIONS.

SIGN LEGEND



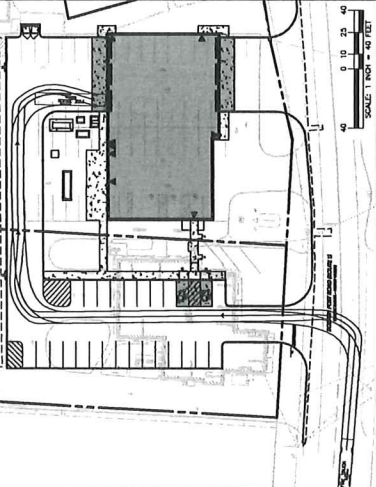
LEGEND



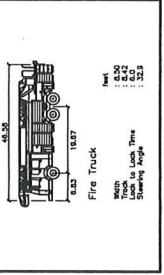
ZONING CHART

REFERENCE: TOWN OF WATERBURY CT ZONING REGULATIONS (ADOPTED EFFECTIVE OCTOBER 1, 2024)			
PROPOSED USE: MUNICIPAL FACILITY			
ITEM	REQUIRED	PROPOSED	SECTION
MINIMUM BUILDING HEIGHT	35 FT	<35 FT	SECTION 7A.7
MINIMUM LOT FRONTAGE	100 FT	311 FT	SECTION 7A.4
MINIMUM SETBACK, FRONT YARD	25 FT	33.5 FT	SECTION 7A.3.1
MINIMUM SETBACK, SIDE YARD	15 FT	16.4 FT	SECTION 7A.3.2
MINIMUM SETBACK, REAR YARD	50 FT	99.3 FT	SECTION 7A.3.3
MINIMUM LOT SIZE	25,000 SF	87,097 SF	SECTION 2.1
OFF-STREET PARKING	1 SPACE PER 250 SF OF GROUND FLOOR OFFICE SPACE, 3,514 SF / 250 = 14 SPACES	28 SPACES	SECTION 7A.2
BUILDING COVERAGE	25%	11%	SECTION 7A.6

FIRE TRUCK TURNING MOVEMENT



FIRE TRUCK PROFILE



Date	Description	No.
	Revisions	



LANGDON

Langdon CT, Inc.
555 Long Street Drive, 3rd Floor
New Haven, CT 06511
T: 203.262.2771 F: 203.268.8142 www.langdon.com

Project
OSWEGATCHIE FIRE STATION

Waterbury, Connecticut
Drawing Title

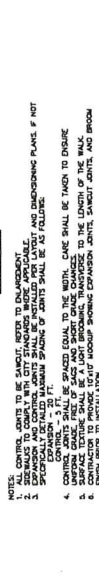
SITE PLAN

Project No.	140266001
Date	2/27/2025
Drawn By	APF
Checked By	

CS101

Sheet 1 of 15

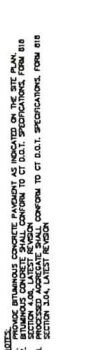
Date: 2/27/2025 Time: 12:14 User: Alex Site Code: Langdon\Alex.Leland\Drawings\CS101.dwg Drawing Code: 140266001-002-001-001



NOTES:

1. ALL JOINTS TO BE SAW CUT. REFER TO ENCLACEMENT FOR DETAILS.
2. EXPANSION AND CONTRACTION JOINTS SHALL BE SPECIFICALLY DETAILED FOR LAYOUT AND DIMENSIONING PLANS. IF NOT SPECIFICALLY DETAILED MAXIMUM SPACING OF JOINTS SHALL BE AS FOLLOWS:
CONCRETE - 5 FT.
CURBS - 3 FT.
3. CONTRACTION JOINTS SHALL BE SPACED EQUAL TO THE WIDTH. CARE SHALL BE TAKEN TO ENSURE SURFACE TEXTURE SHALL BE A LIGHT BROOKING TRANSVERSE TO THE LENGTH OF THE WALK.
4. CONTRACTOR TO PROVIDE 10' MINIMUM SHOWING EXPANSION JOINTS, SAW CUT JOINTS AND BROOM FINISH.

N.13



1. PROVIDE BITUMINOUS CONCRETE PAVEMENT AS INDICATED ON THE SITE PLAN.
2. BITUMINOUS CONCRETE SHALL CONFORM TO CT D.O.T. SPECIFICATIONS, FORM 818
3. ALL PAVEMENTS SHALL BE 12 INCHES THICK.
4. PROCESSED AGGREGATE SHALL CONFORM TO CT D.O.T. SPECIFICATIONS, FORM 818
SECTION 3.04, LATEST EDITION

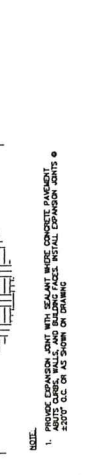
MENT SECTION - HEAVY D

N.T.S



Diagram illustrating the installation of a compacted subgrade and existing pavement base. The diagram shows a cross-section of the pavement structure. The top layer is labeled "EXISTING PAVEMENT BASE TO BE CUT AT A 1:1 SLOPE". Below this is a layer labeled "EXISTING PAVEMENT BASE". The bottom layer is labeled "COMPACTED SUBGRADE". A note indicates: "NOTE: INSTALLER TO INSTALL TACK COAT ON ALL BUILT EDGES OF EXISTING PAVEMENT".

—



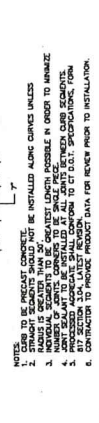
NOTE:

1. PROVIDE EXPANSION JOINT WITH SEALANT WHERE CONCRETE PAVERMENT, CURBS, WALLS, AND BUILDING FACE MEET INITIAL EXPANSION JOINTS 250' O.C. OR AS SHOWN ON DRAWING.

11/2

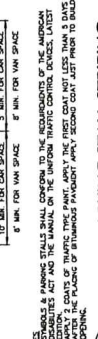


6 CONCRETE PAD N.1/5



- NOTES TO BE PRECAST CONCRETE.
- STRAIGHT SEGMENTS SHOULD NOT BE INSTALLED ALONG CURVES UNLESS RADIUS IS GREATER THAN 30'.
- SEGMENTS SHOULD BE THE GREATEST LENGTH POSSIBLE IN ORDER TO MINIMIZE NUMBER OF JOINTS. CONCRETE TO BE SINGLE PCE.
- SEGMENTS TO BE 10' LONG, 18" HIGH, 12" WIDE.
- NUMBER OF SEGMENTS SHALL BE DETERMINED BY CONTRACTOR, BASED ON SEGMENT LENGTH TO MATCH EXISTING CURVE.
- SEGMENTS SHALL CONFORM TO CT D.O.T. SPECIFICATIONS, FORM 817 SECTION 3.04, LATEST REVISION.
- CONTRACTOR TO PROVIDE PLOT DATA FOR REVIEW PRIOR TO INSTALLATION.

○



10 MIN. FOR COAT SPACE	8 MIN. FOR VAN SPACE	8 MIN. FOR VAN SPACE
------------------------	----------------------	----------------------

STALLS AND PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS AND THE MANUAL ON THE UNIFORM TRAFFIC CONTROL DEVICES. LATEST EDITIONS SHALL BE USED.

APPLY 2 COATS OF TRAFFIC TYPE PAINT. APPLY THE FIRST COAT NOT LESS THAN 3 DAYS BEFORE THE PLACING OF BITUMINOUS PAVEMENT. APPLY SECOND COAT JUST PRIOR TO BUILDING UP THE SURFACE.



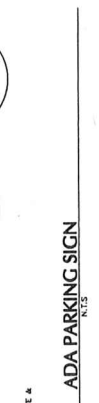
WHITE UNITS

80. SECRET PARKING STALL

ALL PARKING MARKINGS TO BE DRYDYE. NO
CONFINED ALL PARKING SPACE INDICATED ON PLANS.

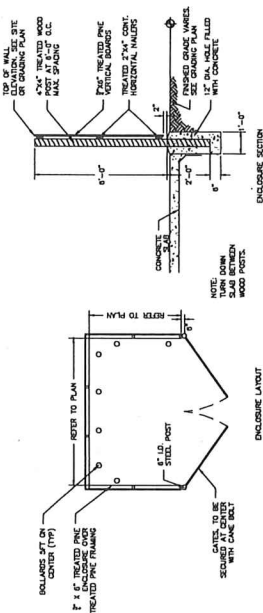
N.T.S

N.T.S



ADA PARKING SIGN
NT-5

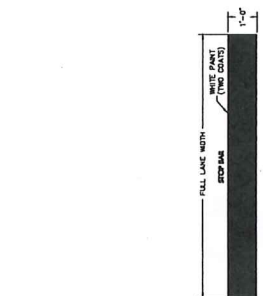
225



NOTE: CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO INSTALLATION

DUMPSTER ENCLOSURE

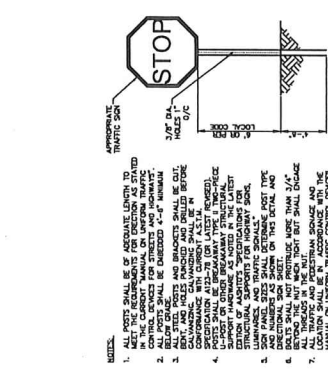
2



NOTE: 1. PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS SHOWN.
2. CROSSWALK TO BE INSTALLED MINIMUM 4 FEET FROM STOP BAR

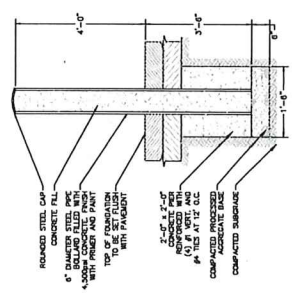
ON-SITE PAVEMENT MARKINGS

1



ON-SITE SIGN DETAIL

3



NOTE: 1. BOLLARD SHALL BE COMPATIBLE WITH EXISTING PAVEMENT AND SHALL BE INSTALLED IN THE MIDDLE OF THE STREET.
2. BOLLARD SHALL BE INSTALLED IN THE MIDDLE OF THE STREET.

BOLLARD

4

LANGSTON

Langston CT, Inc.
565 Langston Road, 3rd Floor
New Britain, CT 06051
T: 203.789.3771 F: 203.789.3142 www.langston.com

Project

OSWEGATCHIE FIRE STATION

Date

Description

Revisions

Project No. 140266001

Date 2/7/2025

Drawn By JAE

Checked By JAE

Drawing No. CS502

Sheet 3 of 15

DRAINAGE NOTES

1. ALL PROPOSED STORM DRAINAGE PIPING TO UTILIZE WATER-TIGHT JOINTS.
2. LOCATIONS AND ELEVATIONS OF ROOF LANDINGS SHOULD BE COORDINATED WITH ARCHITECTURAL DRAINAGE PRIOR TO CONSTRUCTION.
3. ROOF DRAIN INTERSECTIONS, BEHIND FLUSH TO GRADE, AT ALL LOCATIONS OF CLIMATE SHALL BE INDICATED, SIZED AND UPSTREAM DOWNS.
4. ALL REQUIRED STORM LATERALS SERVING THE BUILDING SHALL BE COORDINATED AND CONTRACTED TO WITHIN THE FOOT OF EACH BUILDING TO BE CONSTRUCTED. ALL REQUIRED STORM LATERALS SHALL BE INSTALLED EXTERIORLY, INDICATING, OR CORRECTIONS WITHIN FIVE FEET OF THE BUILDING NECESSARY TO COMPLETE CONNECTION OF LATERALS TO THE BUILDING.

GRADING NOTES

- ACCESSIBLE PARKING AREAS NOT TO EXCEED 2% IN ANY DIRECTION.
ACCESSIBLE ROUTES NOT TO EXCEED 6% RUNNING SLOPE OR 2% CROSS SLOPE.
BUILDING ENTRANCES AND RAMP LANDINGS NOT TO EXCEED 2% IN ANY DIRECTION.
ACCESSIBLE RAMPS TO BE CONSTRUCTED PER ADA REQUIREMENTS.
- ABBREVIATIONS: TO-TOP OF CURB
LO-BOTTOM OF CURB
TO-TOP OF WALL
TO-TOP OF RAMP
BS-BOTTOM OF WALL

- ACCESSIBLE PARKING AREAS NOT TO EXCEED 2% IN ANY DIRECTION.
ACCESSIBLE ROUTES NOT TO EXCEED 2% RUNNING SLOPE OR 2% CROSS-SLOPE.
BUILDING ENTRANCES AND RAMP LANDINGS NOT TO EXCEED 2% IN ANY DIRECTION.
ACCESSIBLE RAMPS TO BE CONSTRUCTED PER ADA REQUIREMENTS.
- ABBREVIATIONS: TO-TOP OF CURB
BS-BOTTOM OF CURB
UP-UPPER PORT
DN-DOWNSIDE OF WALL



Langon CT, Inc.
555 Long Wharf Drive, 9th Floor
New Haven, CT 06511
T: 203.562.5771 F: 203.789.6142 www.langon.com

Ben Jant

OSWEGATCHIE FIRE
STATION

WATERFORD	CONNECTICUT
Proving Title	

GRADING & DRAINAGE PLAN

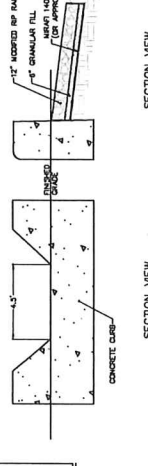
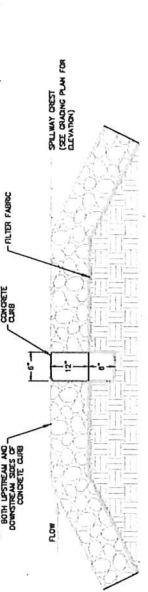
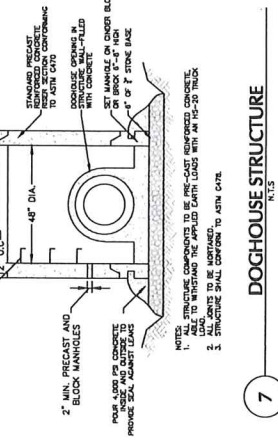
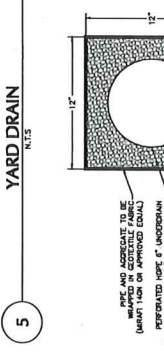
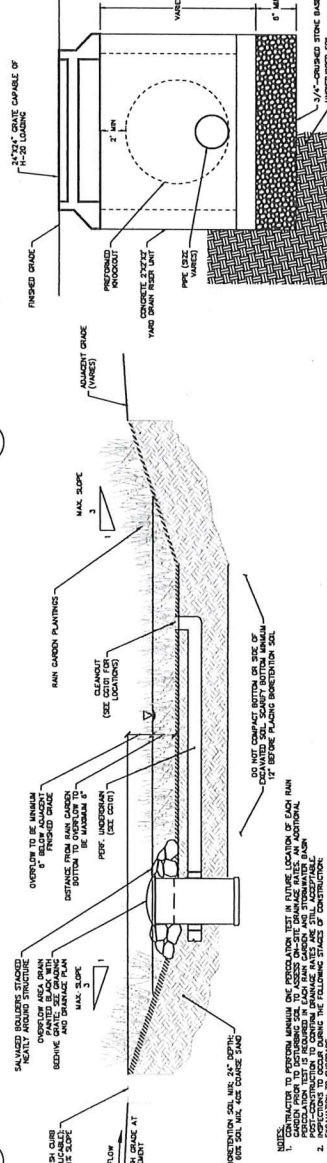
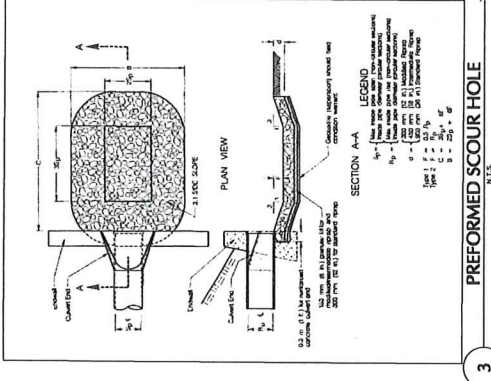
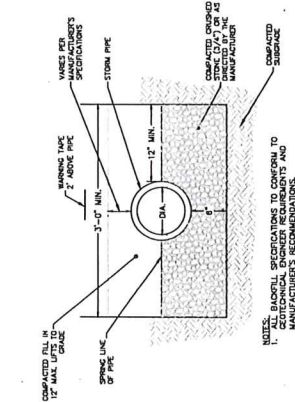
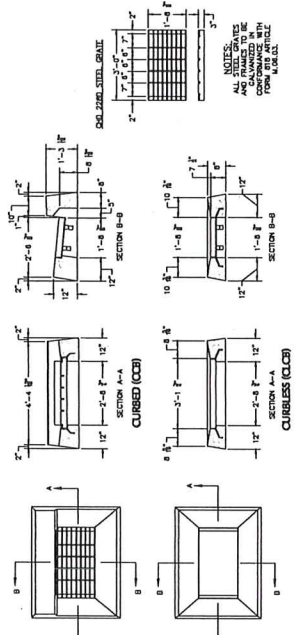
Project No.	Drawing No.
-------------	-------------

CG101

Sheet 4 of 15



Date: 2/6/2025 Time: 15:14 User: dfo Side Table: Lennan 18 Layout: Layout1 Document Code: 1432364 2025-201314210
 Sheet 4 of 13



Date	Description	Revisions

LANGSTON
Langston Engineering, Inc.
555 Long Street Drive, 3rd Floor
New Haven, CT 06511
Tel: 203.562.5771 Fax: 203.788.8142 www.langston.com

OSWEGATCHIE FIRE STATION

GRADING AND DRAINAGE DETAILS

Project: **CG501**

Drawing No: **CG501**

Scale: **AS SHOWN**

Drawn By: **AK**

Checked By: **AK**

Sheet 3 of 18

TOWN OF WATERFORD UTILITY NOTES

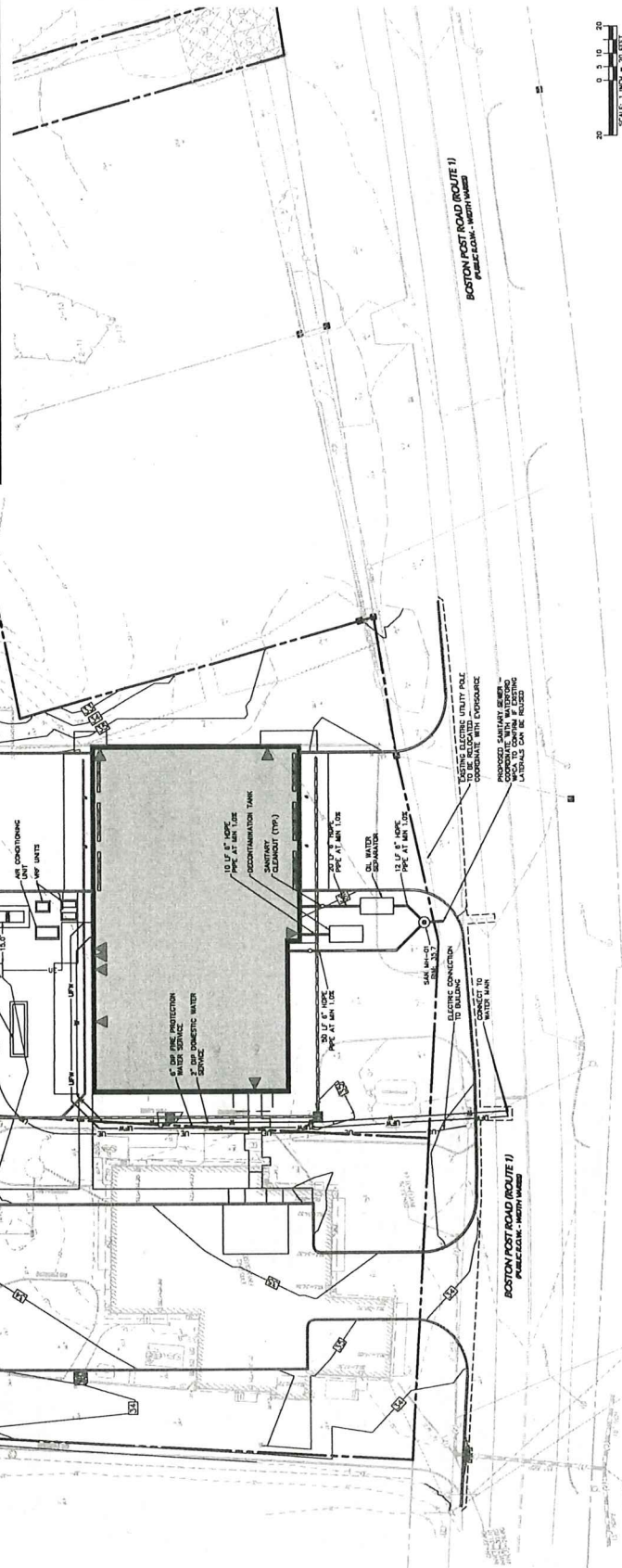
1. A REPRESENTATIVE FROM THE UTILITY COMMISSION SHALL BE PRESENT FOR THE CONNECTION TO THE SEWER SYSTEM. PLEASE GIVE AT LEAST 48 HOURS NOTICE BEFORE CONNECTION.
 2. A REPRESENTATIVE FROM THE UTILITY COMMISSION SHALL BE PRESENT FOR THE DISCONNECTION OF THE EXISTING STATION. PLEASE GIVE AT LEAST 48 HOURS NOTICE BEFORE DISCONNECTION.
 3. ALL DESIGN AND CONSTRUCTION OF WATER AND SEWER UTILITIES MUST CONFORM TO THE TOWN OF WATERFORD'S STANDARDS AND SPECIFICATIONS.
- CONTACT THE CITY OF NEW LONDON FOR INFORMATION REGARDING WATER CONNECTION.

EXISTING		PROPOSED
PROPERTY LINE	_____	_____
BUILDING LINE	_____	_____
SEWAGE LINE	_____	_____
SANITARY LINE	_____	_____
SANITARY CLEANOUT	_____	_____
ELECTRIC UTILITY LINE	_____	_____
DOMESTIC WATER SERVICE LINE	_____	_____
FIRE PROTECTION WATER LINE	_____	_____

UTILITY NOTES

- [illegible]

- [illegible]



Revisions		
Date	Description	No.



LANGAN
Lengan CT, Inc.
555 Long Wharf Drive, 9th Floor
New Haven, CT 06511
T: 203.962.5771 F: 203.789.6142 www.langan.com

OSWEGATCHIE FIRE
STATION

WATERFORD	CONNECTICUT
1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

UTILITY PLAN

Project No.	Drawing No.
142204501	
Date	
2/7/2025	
Drawn By	
APF	
Checked By	

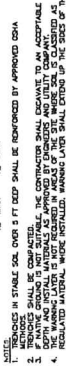
Sheet 6 of 15

THE NEW LAB HAS BEEN DESIGNED AS A HUBWAY TO BRIDGE THE GAPS BETWEEN RESEARCH AND FIELD CONSTRUCTION. THE LAB IS SITED ON THE "SAND CANYON" RAMPAGE FOR THE BRIDGES AND TRAILWAY IN THE "SAND CANYON" AREA OF THE NATIONAL PARK SYSTEM. THE LAB IS SITED ON THE "SAND CANYON" RAMPAGE FOR THE BRIDGES AND TRAILWAY IN THE "SAND CANYON" AREA OF THE NATIONAL PARK SYSTEM. THE LAB IS SITED ON THE "SAND CANYON" RAMPAGE FOR THE BRIDGES AND TRAILWAY IN THE "SAND CANYON" AREA OF THE NATIONAL PARK SYSTEM.

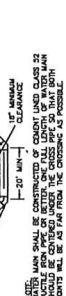
1. MAINT. COMMISSIONERS. PUBLIC WORKS. (Continued) 1. MAINT. P.W. 10
2. MAINT. P.W. 11
3. MAINT. P.W. 12
4. MAINT. P.W. 13
5. MAINT. P.W. 14
6. MAINT. P.W. 15
7. MAINT. P.W. 16
8. MAINT. P.W. 17
9. MAINT. P.W. 18
10. MAINT. P.W. 19
11. MAINT. P.W. 20
12. MAINT. P.W. 21
13. MAINT. P.W. 22
14. MAINT. P.W. 23
15. MAINT. P.W. 24
16. MAINT. P.W. 25
17. MAINT. P.W. 26
18. MAINT. P.W. 27
19. MAINT. P.W. 28
20. MAINT. P.W. 29
21. MAINT. P.W. 30
22. MAINT. P.W. 31
23. MAINT. P.W. 32
24. MAINT. P.W. 33
25. MAINT. P.W. 34
26. MAINT. P.W. 35
27. MAINT. P.W. 36
28. MAINT. P.W. 37
29. MAINT. P.W. 38
30. MAINT. P.W. 39
31. MAINT. P.W. 40
32. MAINT. P.W. 41
33. MAINT. P.W. 42
34. MAINT. P.W. 43
35. MAINT. P.W. 44
36. MAINT. P.W. 45
37. MAINT. P.W. 46
38. MAINT. P.W. 47
39. MAINT. P.W. 48
40. MAINT. P.W. 49
41. MAINT. P.W. 50
42. MAINT. P.W. 51
43. MAINT. P.W. 52
44. MAINT. P.W. 53
45. MAINT. P.W. 54
46. MAINT. P.W. 55
47. MAINT. P.W. 56
48. MAINT. P.W. 57
49. MAINT. P.W. 58
50. MAINT. P.W. 59
51. MAINT. P.W. 60
52. MAINT. P.W. 61
53. MAINT. P.W. 62
54. MAINT. P.W. 63
55. MAINT. P.W. 64
56. MAINT. P.W. 65
57. MAINT. P.W. 66
58. MAINT. P.W. 67
59. MAINT. P.W. 68
60. MAINT. P.W. 69
61. MAINT. P.W. 70
62. MAINT. P.W. 71
63. MAINT. P.W. 72
64. MAINT. P.W. 73
65. MAINT. P.W. 74
66. MAINT. P.W. 75
67. MAINT. P.W. 76
68. MAINT. P.W. 77
69. MAINT. P.W. 78
70. MAINT. P.W. 79
71. MAINT. P.W. 80
72. MAINT. P.W. 81
73. MAINT. P.W. 82
74. MAINT. P.W. 83
75. MAINT. P.W. 84
76. MAINT. P.W. 85
77. MAINT. P.W. 86
78. MAINT. P.W. 87
79. MAINT. P.W. 88
80. MAINT. P.W. 89
81. MAINT. P.W. 90
82. MAINT. P.W. 91
83. MAINT. P.W. 92
84. MAINT. P.W. 93
85. MAINT. P.W. 94
86. MAINT. P.W. 95
87. MAINT. P.W. 96
88. MAINT. P.W. 97
89. MAINT. P.W. 98
90. MAINT. P.W. 99
91. MAINT. P.W. 100
92. MAINT. P.W. 101
93. MAINT. P.W. 102
94. MAINT. P.W. 103
95. MAINT. P.W. 104
96. MAINT. P.W. 105
97. MAINT. P.W. 106
98. MAINT. P.W. 107
99. MAINT. P.W. 108
100. MAINT. P.W. 109
101. MAINT. P.W. 110
102. MAINT. P.W. 111
103. MAINT. P.W. 112
104. MAINT. P.W. 113
105. MAINT. P.W. 114
106. MAINT. P.W. 115
107. MAINT. P.W. 116
108. MAINT. P.W. 117
109. MAINT. P.W. 118
110. MAINT. P.W. 119
111. MAINT. P.W. 120
112. MAINT. P.W. 121
113. MAINT. P.W. 122
114. MAINT. P.W. 123
115. MAINT. P.W. 124
116. MAINT. P.W. 125
117. MAINT. P.W. 126
118. MAINT. P.W. 127
119. MAINT. P.W. 128
120. MAINT. P.W. 129
121. MAINT. P.W. 130
122. MAINT. P.W. 131
123. MAINT. P.W. 132
124. MAINT. P.W. 133
125. MAINT. P.W. 134
126. MAINT. P.W. 135
127. MAINT. P.W. 136
128. MAINT. P.W. 137
129. MAINT. P.W. 138
130. MAINT. P.W. 139
131. MAINT. P.W. 140
132. MAINT. P.W. 141
133. MAINT. P.W. 142
134. MAINT. P.W. 143
135. MAINT. P.W. 144
136. MAINT. P.W. 145
137. MAINT. P.W. 146
138. MAINT. P.W. 147
139. MAINT. P.W. 148
140. MAINT. P.W. 149
141. MAINT. P.W. 150
142. MAINT. P.W. 151
143. MAINT. P.W. 152
144. MAINT. P.W. 153
145. MAINT. P.W. 154
146. MAINT. P.W. 155
147. MAINT. P.W. 156
148. MAINT. P.W. 157
149. MAINT. P.W. 158
150. MAINT. P.W. 159
151. MAINT. P.W. 160
152. MAINT. P.W. 161
153. MAINT. P.W. 162
154. MAINT. P.W. 163
155. MAINT. P.W. 164
156. MAINT. P.W. 165
157. MAINT. P.W. 166
158. MAINT. P.W. 167
159. MAINT. P.W. 168
160. MAINT. P.W. 169
161. MAINT. P.W. 170
162. MAINT. P.W. 171
163. MAINT. P.W. 172
164. MAINT. P.W. 173
165. MAINT. P.W. 174
166. MAINT. P.W. 175
167. MAINT. P.W. 176
168. MAINT. P.W. 177
169. MAINT. P.W. 178
170. MAINT. P.W. 179
171. MAINT. P.W. 180
172. MAINT. P.W. 181
173. MAINT. P.W. 182
174. MAINT. P.W. 183
175. MAINT. P.W. 184
176. MAINT. P.W. 185
177. MAINT. P.W. 186
178. MAINT. P.W. 187
179. MAINT. P.W. 188
180. MAINT. P.W. 189
181. MAINT. P.W. 190
182. MAINT. P.W. 191
183. MAINT. P.W. 192
184. MAINT. P.W. 193
185. MAINT. P.W. 194
186. MAINT. P.W. 195
187. MAINT. P.W. 196
188. MAINT. P.W. 197
189. MAINT. P.W. 198
190. MAINT. P.W. 199
191. MAINT. P.W. 200
192. MAINT. P.W. 201
193. MAINT. P.W. 202
194. MAINT. P.W. 203
1

[illegible]

WATERFORD UTILITY STANDARDS

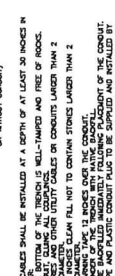


672

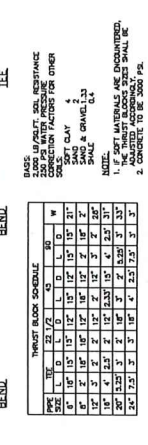


N.T.S.

N.T.S



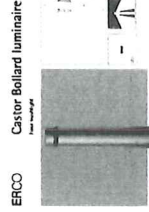
N.T.S



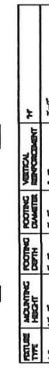
N.T.S.



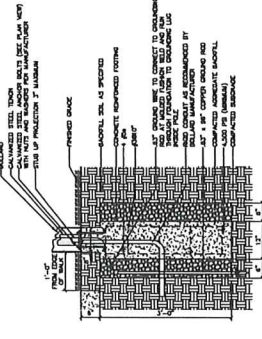
N.T.3
DETAIL PROVIDED BY
TOWN OF WATTSBORO

[illegible]EBC
Castor Bollard Illuminance

Copyright © 2006 John Wiley & Sons, Inc.



	10-12"	2-4"	1-8"	1-2"
1. SHIRT CAP, ANKLE FLANGE, ANCHOR BOLTS, LUGGING RINGS, CONNECTION HARDWARE, BOLT COVERS, HANGERS, COVERS, AND BOLT CLOTH TAPERS SHALL BE FURNISHED BY PELL MANUFACTURER.				
2. ALL STEEL SHALL BE A36 OR A572-50, UNLESS OTHERWISE SPECIFIED. ALL STEEL SHALL BE HOT ROLLED OR HOT TREATED TO REMOVE HYDROGEN.				
3. BOLTS AND NUTS SHALL BE A307 OR A307-15, UNLESS OTHERWISE SPECIFIED.				
4. BOLT SHALL BE OF THE CONTRACTOR PULL. ENTIRE PORTION OF BOLT SHALL BE HARD-HEAT TREATED.				
5. CONTRACTOR TO COMPACT BACKFILL AROUND PILE FOR LATERAL RESISTANCE. / ACTION REPORT.				
6. CONTRACTOR TO PROVIDE PROTECTIVE COATING TO ALL EXPOSED STEEL SURFACES. / ACTION REPORT.				
7. EXISTENCE AND PRELIMINARY CULVERT LOCATIONS SHALL BE DETERMINED BY FIELD INVESTIGATION AND RECORD DRAWINGS. / ACTION REPORT.				
8. ALL MATERIALS AND CONSTRUCTION SHALL BE OF THE BEST QUALITY, AND ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS AND STANDARDS OF THE CONTRACT DOCUMENTS.				



1. *What is the purpose of the study?*
 2. *What are the research questions or hypotheses?*
 3. *What is the study design?*
 4. *What are the variables?*
 5. *What are the results?*
 6. *What are the conclusions?*
 7. *What are the limitations?*
 8. *What are the implications?*
 9. *What are the strengths?*
 10. *What are the weaknesses?*
 11. *What are the contributions?*
 12. *What are the future directions?*
 13. *What are the ethical considerations?*
 14. *What are the funding sources?*
 15. *What are the conflicts of interest?*
 16. *What are the acknowledgments?*
 17. *What are the references?*
 18. *What are the appendices?*
 19. *What are the footnotes?*
 20. *What are the tables?*
 21. *What are the figures?*
 22. *What are the legends?*
 23. *What are the captions?*
 24. *What are the subtitles?*
 25. *What are the keywords?*
 26. *What are the abstracts?*
 27. *What are the introductions?*
 28. *What are the discussions?*
 29. *What are the conclusions?*
 30. *What are the acknowledgments?*
 31. *What are the references?*
 32. *What are the appendices?*
 33. *What are the footnotes?*
 34. *What are the tables?*
 35. *What are the figures?*
 36. *What are the legends?*
 37. *What are the captions?*
 38. *What are the subtitles?*
 39. *What are the keywords?*
 40. *What are the abstracts?*
 41. *What are the introductions?*
 42. *What are the discussions?*
 43. *What are the conclusions?*
 44. *What are the acknowledgments?*
 45. *What are the references?*
 46. *What are the appendices?*
 47. *What are the footnotes?*
 48. *What are the tables?*
 49. *What are the figures?*
 50. *What are the legends?*
 51. *What are the captions?*
 52. *What are the subtitles?*
 53. *What are the keywords?*
 54. *What are the abstracts?*
 55. *What are the introductions?*
 56. *What are the discussions?*
 57. *What are the conclusions?*
 58. *What are the acknowledgments?*
 59. *What are the references?*
 60. *What are the appendices?*
 61. *What are the footnotes?*
 62. *What are the tables?*
 63. *What are the figures?*
 64. *What are the legends?*
 65. *What are the captions?*
 66. *What are the subtitles?*
 67. *What are the keywords?*
 68. *What are the abstracts?*
 69. *What are the introductions?*
 70. *What are the discussions?*
 71. *What are the conclusions?*
 72. *What are the acknowledgments?*
 73. *What are the references?*
 74. *What are the appendices?*
 75. *What are the footnotes?*
 76. *What are the tables?*
 77. *What are the figures?*
 78. *What are the legends?*
 79. *What are the captions?*
 80. *What are the subtitles?*
 81. *What are the keywords?*
 82. *What are the abstracts?*
 83. *What are the introductions?*
 84. *What are the discussions?*
 85. *What are the conclusions?*
 86. *What are the acknowledgments?*
 87. *What are the references?*
 88. *What are the appendices?*
 89. *What are the footnotes?*
 90. *What are the tables?*
 91. *What are the figures?*
 92. *What are the legends?*
 93. *What are the captions?*
 94. *What are the subtitles?*
 95. *What are the keywords?*
 96. *What are the abstracts?*
 97. *What are the introductions?*
 98. *What are the discussions?*
 99. *What are the conclusions?*
 100. *What are the acknowledgments?*
 101. *What are the references?*
 102. *What are the appendices?*
 103. *What are the footnotes?*
 104. *What are the tables?*
 105. *What are the figures?*
 106. *What are the legends?*
 107. *What are the captions?*
 108. *What are the subtitles?*
 109. *What are the keywords?*
 110. *What are the abstracts?*
 111. *What are the introductions?*
 112. *What are the discussions?*
 113. *What are the conclusions?*
 114. *What are the acknowledgments?*
 115. *What are the references?*
 116. *What are the appendices?*
 117. *What are the footnotes?*
 118. *What are the tables?*
 119. *What are the figures?*
 120. *What are the legends?*
 121. *What are the captions?*
 122. *What are the subtitles?*
 123. *What are the keywords?*
 124. *What are the abstracts?*
 125. *What are the introductions?*
 126. *What are the discussions?*
 127. *What are the conclusions?*
 128. *What are the acknowledgments?*
 129. *What are the references?*
 130. *What are the appendices?*
 131. *What are the footnotes?*
 132. *What are the tables?*
 133. *What are the figures?*
 134. *What are the legends?*
 135. *What are the captions?*
 136. *What are the subtitles?*
 137. *What are the keywords?*
 138. *What are the abstracts?*
 139. *What are the introductions?*
 140. *What are the discussions?*
 141. *What are the conclusions?*
 142. *What are the acknowledgments?*
 143. *What are the references?*
 144. *What are the appendices?*
 145. *What are the footnotes?*
 146. *What are the tables?*
 147. *What are the figures?*
 148. *What are the legends?*
 149. *What are the captions?*
 150. *What are the subtitles?*
 151. *What are the keywords?*
 152. *What are the abstracts?*
 153. *What are the introductions?*
 154. *What are the discussions?*
 155. *What are the conclusions?*
 156. *What are the acknowledgments?*
 157. *What are the references?*
 158. *What are the appendices?*
 159. *What are the footnotes?*
 160. *What are the tables?*
 161. *What are the figures?*
 162. *What are the legends?*
 163. *What are the captions?*
 164. *What are the subtitles?*
 165. *What are the keywords?*
 166. *What are the abstracts?*
 167. *What are the introductions?*
 168. *What are the discussions?*
 169. *What are the conclusions?*
 170. *What are the acknowledgments?*
 171. *What are the references?*
 172. *What are the appendices?*
 173. *What are the footnotes?*
 174. *What are the tables?*
 175. *What are the figures?*
 176. *What are the legends?*
 177. *What are the captions?*
 178. *What are the subtitles?*
 179. *What are the keywords?*
 180. *What are the abstracts?*
 181. *What are the introductions?*
 182. *What are the discussions?*
 183. *What are the conclusions?*
 184. *What are the acknowledgments?*
 185. *What are the references?*
 186. *What are the appendices?*
 187. *What are the footnotes?*
 188. *What are the tables?*
 189. *What are the figures?*
 190. *What are the legends?*
 191. *What are the captions?*
 192. *What are the subtitles?*
 193. *What are the keywords?*
 194. *What are the abstracts?*
 195. *What are the introductions?*
 196. *What are the discussions?*
 197. *What are the conclusions?*
 198. *What are the acknowledgments?*
 199. *What are the references?*
 200. *What are the appendices?*
 201. *What are the footnotes?*
 202. *What are the tables?*
 203. *What are the figures?*
 204. *What are the legends?*
 205. *What are the captions?*
 206. *What are the subtitles?*
 207. *What are the keywords?*
 208. *What are the abstracts?*
 209. *What are the introductions?*
 210. *What are the discussions?*
 211. *What are the conclusions?*
 212. *What are the acknowledgments?*
 213. *What are the references?*
 214. *What are the appendices?*
 215. *What are the footnotes?*
 216. *What are the tables?*
 217. *What are the*

LED Area Luminaire

Model	Power (W)	Beam Angle (°)	Light Output (lm)	Color Temp (K)	Life (h)
AL-01	100	60	10000	3000	50000
AL-02	200	60	20000	3000	50000
AL-03	300	60	30000	3000	50000

LED Downlight

Model	Power (W)	Beam Angle (°)	Light Output (lm)	Color Temp (K)	Life (h)
DL-01	10	30	1000	3000	50000
DL-02	20	30	2000	3000	50000
DL-03	30	30	3000	3000	50000

LED Floodlight

Model	Power (W)	Beam Angle (°)	Light Output (lm)	Color Temp (K)	Life (h)
FL-01	100	120	10000	3000	50000
FL-02	200	120	20000	3000	50000
FL-03	300	120	30000	3000	50000

LED Track Light

Model	Power (W)	Beam Angle (°)	Light Output (lm)	Color Temp (K)	Life (h)
TL-01	10	30	1000	3000	50000
TL-02	20	30	2000	3000	50000
TL-03	30	30	3000	3000	50000

LED Strip Light

Model	Power (W)	Length (m)	Light Output (lm)	Color Temp (K)	Life (h)
SL-01	10	5	1000	3000	50000
SL-02	20	5	2000	3000	50000
SL-03	30	5	3000	3000	50000

LED Wall Light

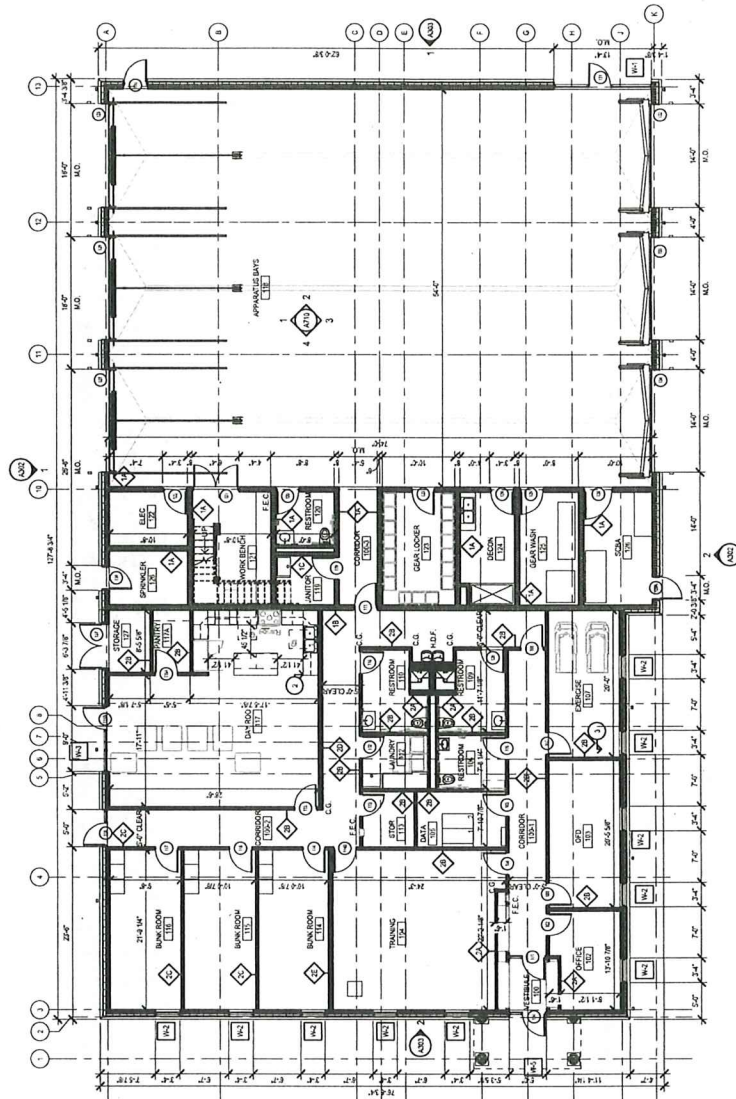
Model	Power (W)	Beam Angle (°)	Light Output (lm)	Color Temp (K)	Life (h)
WL-01	10	60	1000	3000	50000
WL-02	20	60	2000	3000	50000
WL-03	30	60	3000	3000	50000

Example: LED 7x7 100W LED Floodlight

Model	Power (W)	Beam Angle (°)	Light Output (lm)	Color Temp (K)	Life (h)
FL-04	100	120	10000	3000	50000
FL-05	200	120	20000	3000	50000
FL-06	300	120	30000	3000	50000

1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27
 28
 29
 30
 31
 32
 33
 34
 35
 36
 37
 38
 39
 40
 41
 42
 43
 44
 45
 46
 47
 48
 49
 50
 51
 52
 53
 54
 55
 56
 57
 58
 59
 60
 61
 62
 63
 64
 65
 66
 67
 68
 69
 70
 71
 72
 73
 74
 75
 76
 77
 78
 79
 80
 81
 82
 83
 84
 85
 86
 87
 88
 89
 90
 91
 92
 93
 94
 95
 96
 97
 98
 99
 100
 101
 102
 103
 104
 105
 106
 107
 108
 109
 110
 111
 112
 113
 114
 115
 116
 117
 118
 119
 120
 121
 122
 123
 124
 125
 126
 127
 128
 129
 130
 131
 132
 133
 134
 135
 136
 137
 138
 139
 140
 141
 142
 143
 144
 145
 146
 147
 148
 149
 150
 151
 152
 153
 154
 155
 156
 157
 158
 159
 160
 161
 162
 163
 164
 165
 166
 167
 168
 169
 170
 171
 172
 173
 174
 175
 176
 177
 178
 179
 180
 181
 182
 183
 184
 185
 186
 187
 188
 189
 190
 191
 192
 193
 194
 195
 196
 197
 198
 199
 200
 201
 202
 203
 204
 205
 206
 207
 208
 209
 210
 211
 212
 213
 214
 215
 216
 217
 218
 219
 220
 221
 222
 223
 224
 225
 226
 227
 228
 229
 230
 231
 232
 233
 234
 235
 236
 237
 238
 239
 240
 241
 242
 243
 244
 245
 246
 247
 248
 249
 250
 251
 252
 253
 254
 255
 256
 257
 258
 259
 260
 261
 262
 263
 264
 265
 266
 267
 268
 269
 270
 271
 272
 273
 274
 275
 276
 277
 278
 279
 280
 281
 282
 283
 284
 285
 286
 287
 288
 289
 290
 291
 292
 293
 294
 295
 296
 297
 298
 299
 300
 301
 302
 303
 304
 305
 306
 307
 308
 309
 310
 311
 312
 313
 314
 315
 316
 317
 318
 319
 320
 321
 322
 323
 324
 325
 326
 327
 328
 329
 330
 331
 332
 333
 334
 335
 336
 337
 338
 339
 340
 341
 342
 343
 344
 345
 346
 347
 348
 349
 350
 351
 352
 353
 354
 355
 356
 357
 358
 359
 360
 361
 362
 363
 364
 365
 366
 367
 368
 369
 370
 371
 372
 373
 374
 375
 376
 377
 378
 379
 380
 381
 382
 383
 384
 385
 386
 387
 388
 389
 390
 391
 392
 393
 394
 395
 396
 397
 398
 399
 400
 401
 402
 403
 404
 405
 406
 407
 408
 409
 410
 411
 412
 413
 414
 415
 416
 417
 418
 419
 420
 421
 422
 423
 424
 425
 426
 427
 428
 429
 430
 431
 432
 433
 434
 435
 436
 437
 438
 439
 440
 441
 442
 443
 444
 445
 446
 447
 448
 449
 450
 451
 452
 453
 454
 455
 456
 457
 458
 459
 460
 461
 462
 463
 464
 465
 466
 467
 468
 469
 470
 471
 472
 473
 474
 475
 476
 477
 478
 479
 480
 481
 482
 483
 484
 485
 486
 487
 488
 489
 490
 491
 492
 493
 494
 495
 496
 497
 498
 499
 500
 501
 502
 503
 504
 505
 506
 507
 508
 509
 510
 511
 512
 513
 514
 515
 516
 517
 518

[illegible]



1 **FIRST FLOOR PLAN**
1/8" = 1'-0"

1 **FIRST FLOOR PLAN**
1/8" = 1'-0"

SYMBOL LEGEND		GENERAL NOTES	
	• NEW METAL ELEG PARTITIONS		• DOWNER GUARD
	• NEW MASONRY WALL		• FIVE EXTINGUISHING CABINET
	• NEW CMU WALL		• FIVE DOWN - SLOPE TO DRAIN
	• DOWN NUMBER		• UNDEVELOPED DRAINING FLAT AREA
	• WINDOW TYPE		
	• ROOM NAME		
	• ROOM NAME		
	• PARTITION TYPE		
	• CONSTRUCTION NOTE		
	• EXTENDED ELEVATION NUMBER		
	• SHEET NUMBER		
	• INTERIOR ELEVATION NUMBER		
	• SHEET NUMBER		
	• BUILDING SECTION NUMBER		
	• WALL SECTION NUMBER		
	• SHEET NUMBER		
	• DOWNER GUARD		
	• FIVE EXTINGUISHING CABINET		
	• FIVE DOWN - SLOPE TO DRAIN		
	• UNDEVELOPED DRAINING FLAT AREA		

GENERAL NOTES

1. READ ALL GENERAL NOTES ON DRAWING A501.
2. CONTRACTORS SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS.
3. ALL DIMENSIONS ARE TO OUTSIDE FACE OF BLOCK, CONCRETE MASONRY UNITS AND METAL FRAMING UNLESS OTHERWISE NOTED.
4. ALL NEW WALL AND PARTITION ASSEMBLIES SHALL EXTEND TO UNDERSIDE OF DECK UNLESS OTHERWISE NOTED.
5. PROVIDE CAM WITH PRE-MANUFACTURED BALUNOISE AT ALL EXPOSED CORNERS.
6. WHERE THE WORD "ALUMINUM" IS INDICATED IT SHALL MEAN TO ALUMINUM BOTH SIDES OF WALL.

Drawing Number	
Date	3/12/2022
Scale	
As indicated	
Drawn By	
EAC	
Project Number	29,352

FLOOR PLANS

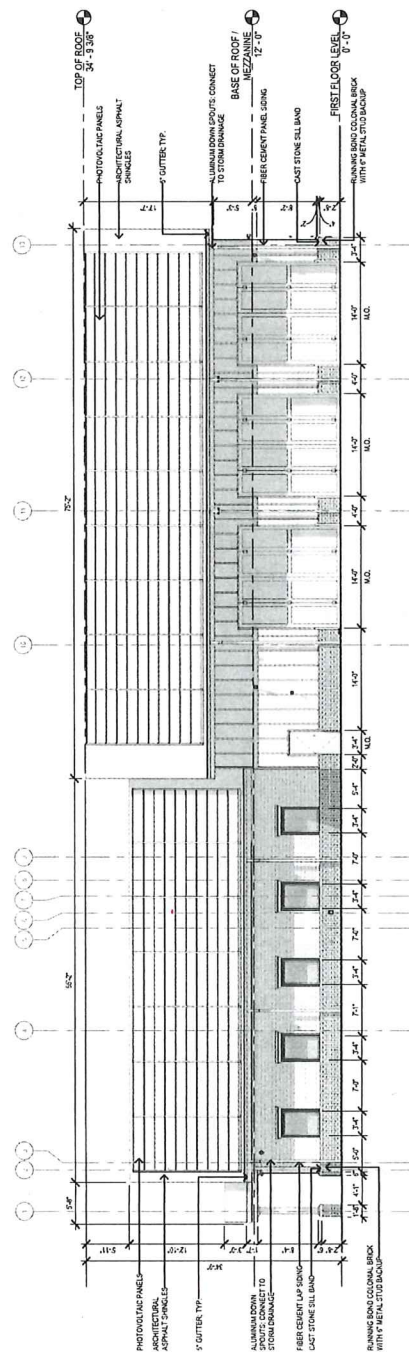
100% DESIGN DEVELOPMENT

[illegible]

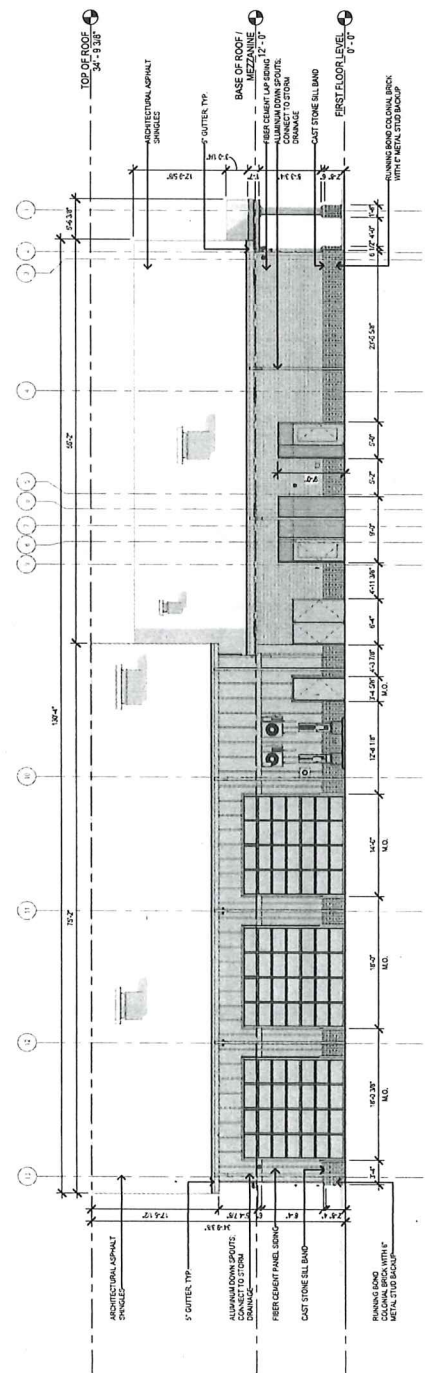
SILVER PETRUCELLI + ASSOCIATES
313190 WHITNEY AVENUE HAMDEN CT 06518
31311 STATE STREET NEW LONDON CT 06320
203 230 9007
silverpetrucci.com



NEW CONSTRUCTION
OSWEGATCHIE FIRE STATION
441 BOSTON POST RD
WATERFORD, CT 06385



2 SOUTH ELEVATION
108' x 112'



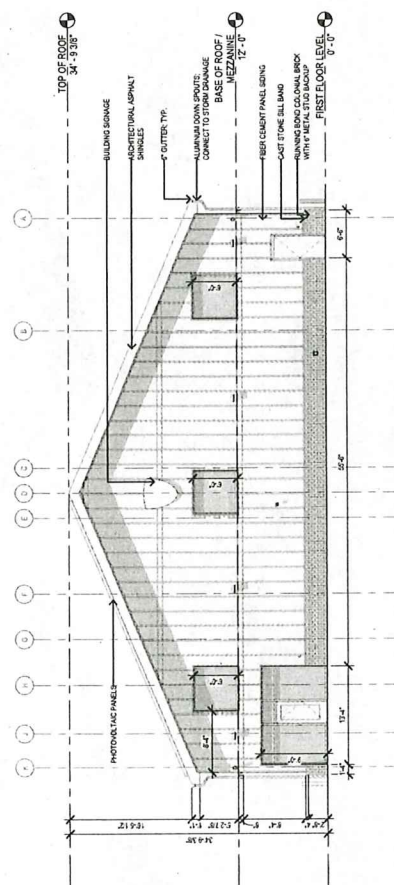
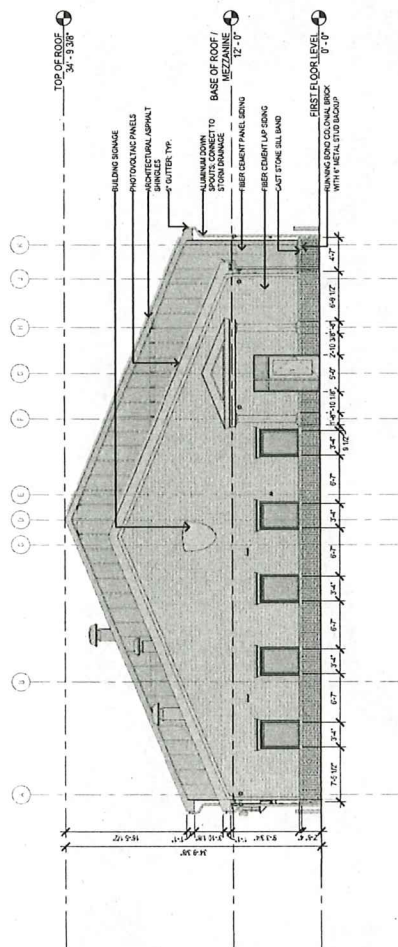
1 NORTH ELEVATION
108' x 112'

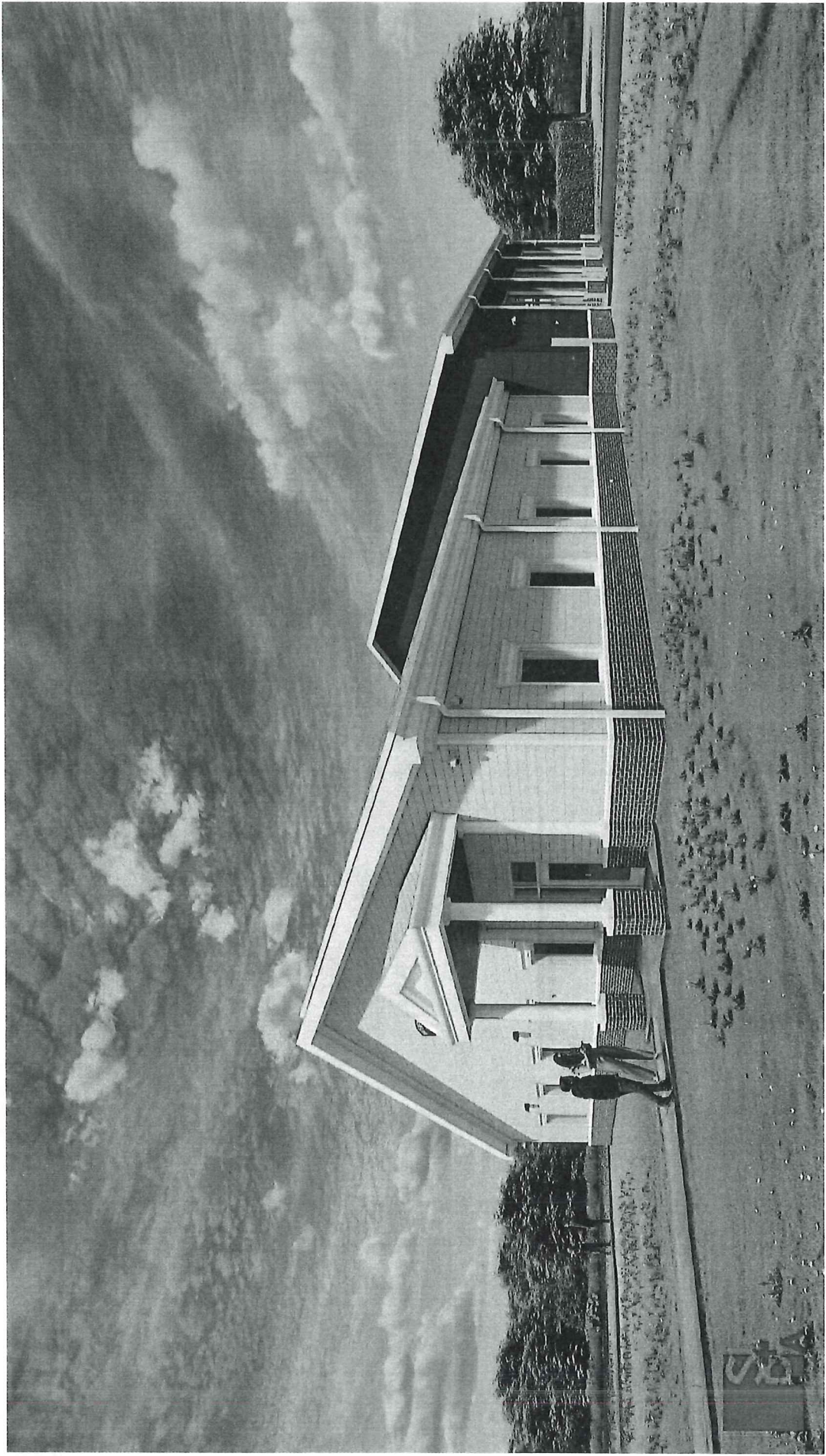
NEW CONSTRUCTION
 OSWEGATCHIE FIRE STATION
 441 BOSTON POST RD.
 WATERFORD, CT 06385

S&PA
 SILVER PETRUCELLI + ASSOCIATES
 3190 WHITNEY AVENUE HAMDEN CT 06518
 311 STATE STREET NEW LONDON CT 06320
 203 230 9007
 silverpetruelli.com

Project No. _____
 Drawing No. _____
 Date _____
 Scale _____
 Designer _____
 Checker _____
 Engineer _____
 Architect _____
 City Engineer _____
 State Engineer _____
 County Engineer _____
 Planning Board _____
 Zoning Board _____
 Building Department _____
 Fire Department _____
 Health Department _____
 Police Department _____
 School Board _____
 Other _____

Drawing Title: **EXTERIOR ELEVATIONS**
 Project Name: **100% DESIGN DEVELOPMENT**
 Drawing Number: **A302**
 Date: 2/15/2022
 Scale: 1/8" = 1'-0"
 Designer: [Signature]
 Checker: [Signature]
 Engineer: [Signature]
 Architect: [Signature]
 City Engineer: [Signature]
 State Engineer: [Signature]
 County Engineer: [Signature]
 Planning Board: [Signature]
 Zoning Board: [Signature]
 Building Department: [Signature]
 Fire Department: [Signature]
 Health Department: [Signature]
 Police Department: [Signature]
 School Board: [Signature]
 Other: [Signature]





Presented By
NEW CONSTRUCTION
OSWEGATCHIE FIRE STATION
441 BOSTON POST RD
WATERFORD, CT 06385



SILVER PETRUCELLI + ASSOCIATES
3190 WHITNEY AVENUE HAMDEN CT 06518
311 STATE STREET NEW LONDON CT 06320
203 230 9007
silverpetrucci.com



Reviewed By _____ Date _____
Checked By _____ Date _____
Designed By _____ Date _____
Drawn By _____ Date _____
Project Number _____
Sheet Number _____



Scale: 3/8" = 1'-0"
3D VIEW
Project Name: **100% DESIGN DEVELOPMENT**
Sheet Number: _____

Client Name: _____
Date: 2/15/22
Drawn By: _____
Checked By: _____
Project Number: _____
Sheet Number: **A304**



Project Name NEW CONSTRUCTION OSWEGATCHIE FIRE STATION 441 BOSTON POST RD WATERFORD, CT 06385	Client SILVER PETRUCELLI + ASSOCIATES 3190 WHITNEY AVENUE HAMDEN CT 06518 311 STATE STREET NEW LONDON CT 06320 203 230 9007 silverpetrucelli.com	Date _____ Drawn By _____ Check By _____ Project Number _____ Sheet Number _____	3D VIEW 100% DESIGN DEVELOPMENT	Date 10/24/25 Drawn By _____ Check By _____ Project Number _____ Sheet Number _____
---	--	---	------------------------------------	--



7 January 2025

Jonathan Mullen
Planning Director
Town of Waterford
15 Rope Ferry Road
Waterford, CT 06385

**RE: Stormwater Management Report
Oswegatchie Fire Station
441 Boston Post Road
Waterford, Connecticut
Langan Project No.: 140286501**

Dear Mr. Mullen,

This report provides an analysis of the proposed peak runoff discharges and the engineering design for the proposed stormwater conveyance system at 441 Boston Post Road.

PROJECT DESCRIPTION

Existing Conditions

The project site is located at 441 Boston Post Road in Waterford CT; see Figure 1. The overall approximately 2.0-acre parcel is currently occupied by the existing Oswegatchie Fire Station, including impervious and grass areas. The parcel is located within the Niantic River sub regional drainage basin. The parcel area does not contain any known locations of State and Federal Listed Species and Critical Habitats per the CT Natural Diversity Data Base Areas map of Waterford, CT dated June 2024. The project site is located on the western part of the parcel within the limits of the existing fire station site. To the west the project site is bordered by a garden shop. To the south, the project site is bordered by Boston Post Road. To the east the project site is bordered by residential properties on Boston Post Road. To the north the site is bordered by lightly wooded wetland areas. The existing project site is mostly impervious areas with the majority of stormwater running overland towards the wetlands in the north.

Based upon a topographic survey prepared by Langan, dated June 28, 2024, the site grades slope downward from the southern corner of the property towards the northern property line, with elevations ranging from approximately 35 feet to about 30 feet.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Study of the town of Waterford, Connecticut map number 09011C0481J with an effective date of August 5, 2013, the proposed development is located within Zone X (Unshaded). Zone X (Unshaded) is considered a Low-Risk Area and described by FEMA as areas outside the 0.2-percent-annual-chance flood. No base flood elevations or base flood depths are shown within these zones.

According to the USDA Natural Resources Conservation Service Web Soil Survey, the site's soil type varies throughout. The site is mostly classified as Hinckley Loamy Sand with an A hydrologic rating and slopes between 3 and 15 percent. Additionally, the eastern corner of the site is classified as Walpole Sandy Loam with a D hydrologic rating and slopes between 0 and 3 percent.

There are wetland areas to the east and north of the site. While some of the site work is proposed within the 100-foot upland review area, no direct wetland impacts are proposed.

Proposed Project

The proposed project consists of the demolition of the existing fire station and the construction of a new fire station building with new landscaped areas, driveways, and parking areas. Additional improvements include new stormwater and utility infrastructure. A summary of the change in impervious is shown below.

Project Site Impervious Cover [SF]		
Existing Conditions	Proposed Conditions	Net Decrease
±52,200	±31,500	±20,700

The proposed stormwater system has been designed to maintain existing site hydrology to the maximum extent practicable. The majority of runoff from the new development will be conveyed to various stormwater management systems before discharging to either the existing stormwater network in Boston Post Road or overland towards the existing offsite wetlands. Water quality improvements include yard drains with sumps, a pretreatment swale and a rain garden. These water quality improvements have been designed to retain 100% of the proposed project's water quality volume onsite. This achieves the average annual pollutant load reduction requirements as per the recommendations of the 2024 CT Stormwater Quality Manual.

Details of the size and location of the stormwater network can be found on the Grading &

Drainage Plans, detail sheets and supporting calculations in the appendices of this report.

PEAK RUNOFF ANALYSIS (See Appendices A & B)

The stormwater management system is designed to control the rate of runoff from the site's watersheds to be equal or less than existing conditions up to, and including, a 100-year design storm event.

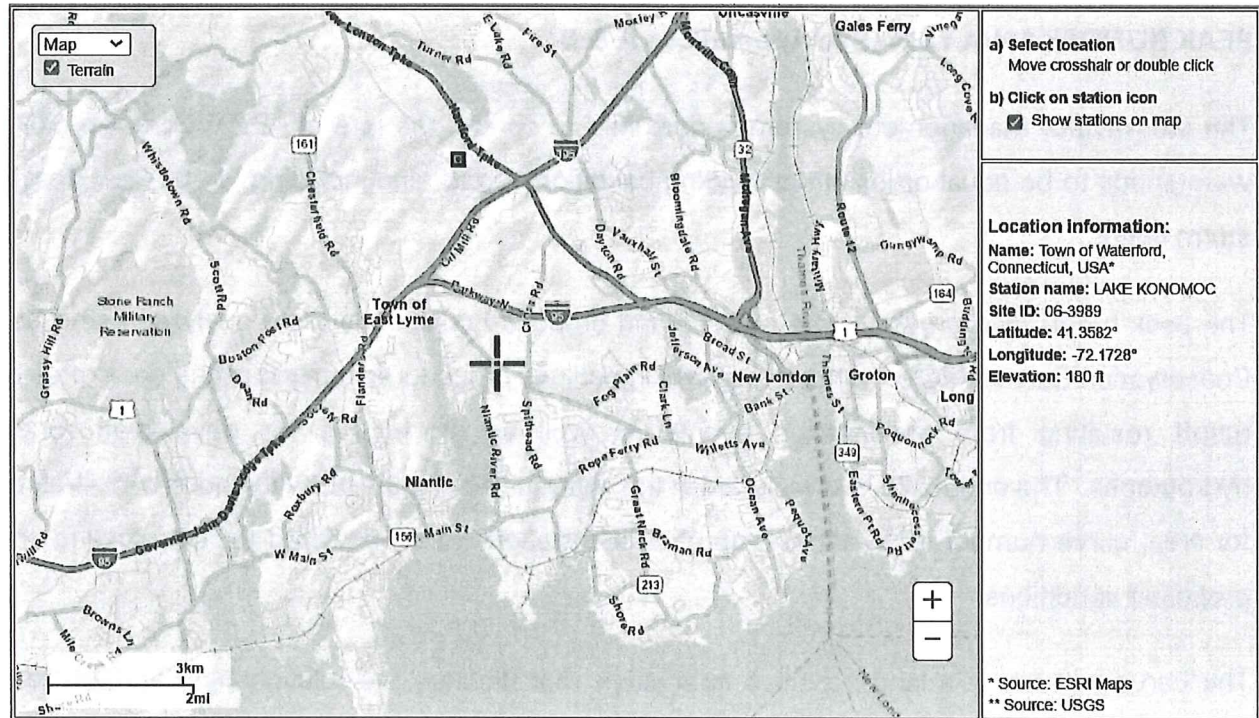
The peak runoff discharges for the existing and proposed conditions were analyzed using Soil Conservation Service (SCS) methodology which outlines procedures for calculating peak rates of runoff resulting from precipitation events as well as procedures for developing runoff hydrographs. The entire site was included in the analysis; see Figures EXWS and PRWS. Values for area, curve number (CN), and a time of concentration were calculated for the existing and proposed conditions.

The curve number is a land sensitive coefficient that dictates the relationship between total rainfall depth and direct storm runoff. The soils within the watershed are divided into hydrologic soil groups (A, B, C, and D). The SCS classification system evaluates the runoff potential of a soil according to its infiltration and transmission rates. "A" soils have the lowest runoff potential, while "D" soils have the greatest runoff potential.

The time of concentration (T_c) is defined as the time for runoff to travel from the hydraulically most distant point in the watershed to a point of interest. Values of time of concentration were determined for existing and proposed conditions based on land cover and slope of the flow path using methods outlined in TR-55.

For this study, a 24-hour SCS Type III standard rainfall distribution was used to determine the peak flow rate and volume to all points of discharge from the site. Precipitation data used for the various storm events is based on the "NOAA Atlas 14 Point Precipitation Frequency Estimates: CT" for Lake Konomoc Station. Lake Konomoc Station was chosen for rainfall data because it is the station located within the closest proximity of the project location as shown in Graphic 1. A summary of all rainfall data utilized in the analysis for this site is provided below and a complete compilation of data provided by NOAA for this location is included in Appendix C.

Graphic 1. NOAA Rainfall Data Location Map



NOAA Precipitation Depth per Average Recurrence Interval [in]

Duration	2-Year	10-Year	25-Year	100-Year
24-hour	3.45	5.13	6.17	7.79

Existing Condition (See Appendix A)

The project area's existing drainage conditions were analyzed as Watersheds A, B, and C (See Drawing EXWS).

Existing Watershed A is approximately 0.26 acres and comprises grassy areas, driveway aprons onto the site and the southwestern portion of the existing building. Stormwater runoff from this watershed either flows into the existing storm drainage network or overland and offsite towards Boston Post Road.

Existing Watershed B is approximately 0.08 acres and consists of grass and brush areas at the east of the site. Stormwater runoff from this watershed flows overland to the wetlands #2 to the east of the site.

Existing Watershed C is about 1.27 acres and consists of the existing building and parking areas along with grassy and brush areas. Stormwater runoff from this watershed flows overland to the wetlands #1 offsite to the north.

Proposed Condition (See Appendix B)

In the proposed condition, site hydrology attempts to mimic existing conditions and all watershed outlets remain the same.

Proposed Watershed A is about 0.37 acres and consists of grassy areas and the proposed driveway aprons. Stormwater will continue to flow overland to Boston Post Road. The proposed site within this watershed has been designed to significantly reduce impervious area as compared with the existing condition.

Proposed Watershed B is about 0.09 acres and includes grass and brush areas to the east of the site. This watershed will remain generally unchanged, and stormwater collected within this watershed will flow overland to the wetlands #2 offsite to the east.

Proposed Watershed C is divided into two sub-watersheds: Sub-watershed C1 and Sub-watershed C2. Sub-watershed C1 is about 1.04 acres and consists of the proposed building and parking areas along with grassy areas; stormwater within this watershed will flow either through a pretreatment swale conveyance feature or directly into a rain garden before flowing to the wetlands #2 offsite to the north. Sub-watershed C2 is about 0.12 acres and consists of grassy and brush areas; stormwater within this watershed will continue to flow overland to the wetlands #2 offsite to the north.

Details of the sizes and locations of the stormwater collection systems can be found on drawings CG101. A conservative design infiltration rate for the rain garden is 1 inch per hour. The design infiltration rate will be confirmed with on-site testing prior to construction. Please refer to Appendix F for boring log data within the vicinity of the proposed rain garden. This testing was performed by Barton & Loguidice as a part of a Limited Phase II Environmental Site Assessment report, dated 08/27/2024. According to the boring log data, groundwater was encountered between 6' and 13' below existing grade, and existing site soils within the rain gardens consist of a mainly sandy material.

Site Discharge Peak Flow Comparison for WS-A (CF)

Storm	Current	Proposed	Delta	% Reduction
2-Year	0.37	0.09	-0.28	75.68%
10-Year	0.77	0.44	-0.33	42.86%
25-Year	1.04	0.71	-0.33	31.73%
100-Year	1.46	1.20	-0.26	17.81%

Site Discharge Peak Flow Comparison for WS-B (CF)

Storm	Current	Proposed	Delta	% Reduction
2-Year	0.02	0.01	-0.01	50.00%
10-Year	0.09	0.09	0.00	0.00%
25-Year	0.15	0.19	0.00	0.00%
100-Year	0.26	0.26	0.00	0.00%

Site Discharge Peak Flow Comparison for WS-C (CF)

Storm	Current	Proposed	Delta	% Reduction
2-Year	3.77	0.32	-3.45	91.51%
10-Year	5.91	2.04	-3.87	65.48%
25-Year	7.22	3.73	-3.49	48.34%
100-Year	9.24	5.62	-3.62	39.18%

Site Discharge Peak Flow Comparison for Total Site (CF)

Storm	Current	Proposed	Delta	% Reduction
2-Year	4.15	0.38	-3.77	90.84%
10-Year	6.76	2.39	-4.37	64.65%
25-Year	8.39	4.44	-3.95	47.08%
100-Year	10.95	6.93	-4.02	36.71%

As can be seen from the tables above, runoff from each watershed and the total site will be attenuated for the storms up to and including the 100-year storm. Additionally, per the 2024 CT Stormwater Quality Manual requirements, runoff from each watershed that includes proposed site development will be attenuated by 50% for the 2-year storm event.

STORMWATER CONVEYANCE SYSTEM (See Appendix D)

The stormwater conveyance system was sized using the Rational Method for the 10-year storm event as per the CTDEEP Stormwater Quality Manual. Values for area, runoff coefficient, C, and

a time of concentration were calculated for each drainage area. The average runoff coefficient was calculated based upon the following cover types:

<u>Cover</u>	<u>C</u>
Grass/Pervious	0.3
Roof/Pavement/Impervious	0.9

Rainfall intensities were taken from the "NOAA Atlas 14 Point Precipitation Frequency Estimates: CT" for Lake Konomoc. Stormwater pipes were then sized based upon the Manning's Equation for full flow pipe capacity and solving for the hydraulic grade line. The computer program Hydraflow Storm Sewers 2011 by Intellisolve was used in the analysis.

Each proposed storm sewer system has been analyzed using a starting HGL elevation equal to the outlet pipe's crown elevation. This mimics a tailwater elevation equal to the outlet pipe's diameter or a scenario where a proposed pipe is entering an existing pipe flow at full capacity.

STORMWATER QUALITY (See Appendix E)

The proposed stormwater management system has been designed to incorporate stormwater quality measures including a significant decrease in site imperviousness, yard drains with sumps, a pretreatment swale conveyance feature, and a rain garden. These measures will be implemented to increase water quality and minimize the passage of pollutants to the existing stormwater systems as compared to current conditions.

Under current conditions, the entirety of the site impervious cover ($\pm 52,200$ SF) is considered directly connected impervious area (DCIA). This project proposes to decrease DCIA by over 90%, which will decrease surface runoff and increase infiltration of rainfall into the soil.

Per Table 4.1 of the CT Stormwater Quality Manual, the site is considered a redevelopment with existing DCIA of 40% or more. As such, the Required Retention Volume (RRV) is 50% of the site's Water Quality Volume (WQV). Through coordination with the town of Waterford Environmental Planner, this project occurs within the Stony Brook watershed area. Stormwater discharge from the site contributes to an intermittent watercourse and wetland system located north of the parcel. The receiving portion of Stony Brook south of Route 1 has been designated as an impaired waterbody by CTDEEP. Because of this information, the stormwater system has

been designed to retain 100% of the site WQV and exceed the RRV requirements for our redevelopment site.

Table 4.3 of the CT Stormwater Quality Manual shows the minimum average annual pollutant load reductions for Total Suspended Solids (TSS), Total Phosphorus (TP) and Total Nitrogen (TN). Per the manual, "a proposed stormwater management system meets or exceeds these average pollutant load reductions when the RRV is retained on-site using suitable stormwater retention practices. Achieving these minimum required load reductions for sediment and nutrients is assumed to provide adequate reductions of other stormwater pollutants including floatable materials." Through the use of the proposed rain garden, the stormwater system designed exceeds our RRV and will retain 100% of the WQV, thereby also exceeding the required average annual pollutant load reductions.

CONCLUSION

The proposed stormwater management system has been designed in general accordance with the 2024 CTDEEP Stormwater Quality Manual and the 2000 CTDOT Drainage Manual. It has been designed to maintain existing site hydrology to the maximum extent practicable with attenuated peak flows and multiple water quality improvements.

This Langan report shows that the proposed stormwater management system, as designed, will effectively manage quality and quantity of stormwater runoff for the proposed development. Please refer to the Drawings for additional drainage information.

Sincerely,
Langan CT, Inc.



Brian Phillips, P.E.
Senior Project Manager

7 January 2025

Jonathan Mullen
Planning Director
Town of Waterford
15 Rope Ferry Road
Waterford, CT 06385

**RE: Stormwater Management Report
Oswegatchie Fire Station
441 Boston Post Road
Waterford, Connecticut
Langan Project No.: 140286501**

Dear Mr. Mullen,

This report provides an analysis of the proposed peak runoff discharges and the engineering design for the proposed stormwater conveyance system at 441 Boston Post Road.

PROJECT DESCRIPTION

Existing Conditions

The project site is located at 441 Boston Post Road in Waterford CT; see Figure 1. The overall approximately 2.0-acre parcel is currently occupied by the existing Oswegatchie Fire Station, including impervious and grass areas. The parcel is located within the Niantic River sub regional drainage basin. The parcel area does not contain any known locations of State and Federal Listed Species and Critical Habitats per the CT Natural Diversity Data Base Areas map of Waterford, CT dated June 2024. The project site is located on the western part of the parcel within the limits of the existing fire station site. To the west the project site is bordered by a garden shop. To the south, the project site is bordered by Boston Post Road. To the east the project site is bordered by residential properties on Boston Post Road. To the north the site is bordered by lightly wooded wetland areas. The existing project site is mostly impervious areas with the majority of stormwater running overland towards the wetlands in the north.

Based upon a topographic survey prepared by Langan, dated June 28, 2024, the site grades slope downward from the southern corner of the property towards the northern property line, with elevations ranging from approximately 35 feet to about 30 feet.

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Study of the town of Waterford, Connecticut map number 09011C0481J with an effective date of August 5, 2013, the proposed development is located within Zone X (Unshaded). Zone X (Unshaded) is considered a Low-Risk Area and described by FEMA as areas outside the 0.2-percent-annual-chance flood. No base flood elevations or base flood depths are shown within these zones.

According to the USDA Natural Resources Conservation Service Web Soil Survey, the site's soil type varies throughout. The site is mostly classified as Hinckley Loamy Sand with an A hydrologic rating and slopes between 3 and 15 percent. Additionally, the eastern corner of the site is classified as Walpole Sandy Loam with a D hydrologic rating and slopes between 0 and 3 percent.

There are wetland areas to the east and north of the site. While some of the site work is proposed within the 100-foot upland review area, no direct wetland impacts are proposed.

Proposed Project

The proposed project consists of the demolition of the existing fire station and the construction of a new fire station building with new landscaped areas, driveways, and parking areas. Additional improvements include new stormwater and utility infrastructure. A summary of the change in impervious is shown below.

Project Site Impervious Cover [SF]

Existing Conditions	Proposed Conditions	Net Decrease
±52,200	±31,500	±20,700

The proposed stormwater system has been designed to maintain existing site hydrology to the maximum extent practicable. The majority of runoff from the new development will be conveyed to various stormwater management systems before discharging to either the existing stormwater network in Boston Post Road or overland towards the existing offsite wetlands. Water quality improvements include yard drains with sumps, a pretreatment swale and a rain garden. These water quality improvements have been designed to retain 100% of the proposed project's water quality volume onsite. This achieves the average annual pollutant load reduction requirements as per the recommendations of the 2024 CT Stormwater Quality Manual.

Details of the size and location of the stormwater network can be found on the Grading &

Drainage Plans, detail sheets and supporting calculations in the appendices of this report.

PEAK RUNOFF ANALYSIS (See Appendices A & B)

The stormwater management system is designed to control the rate of runoff from the site's watersheds to be equal or less than existing conditions up to, and including, a 100-year design storm event.

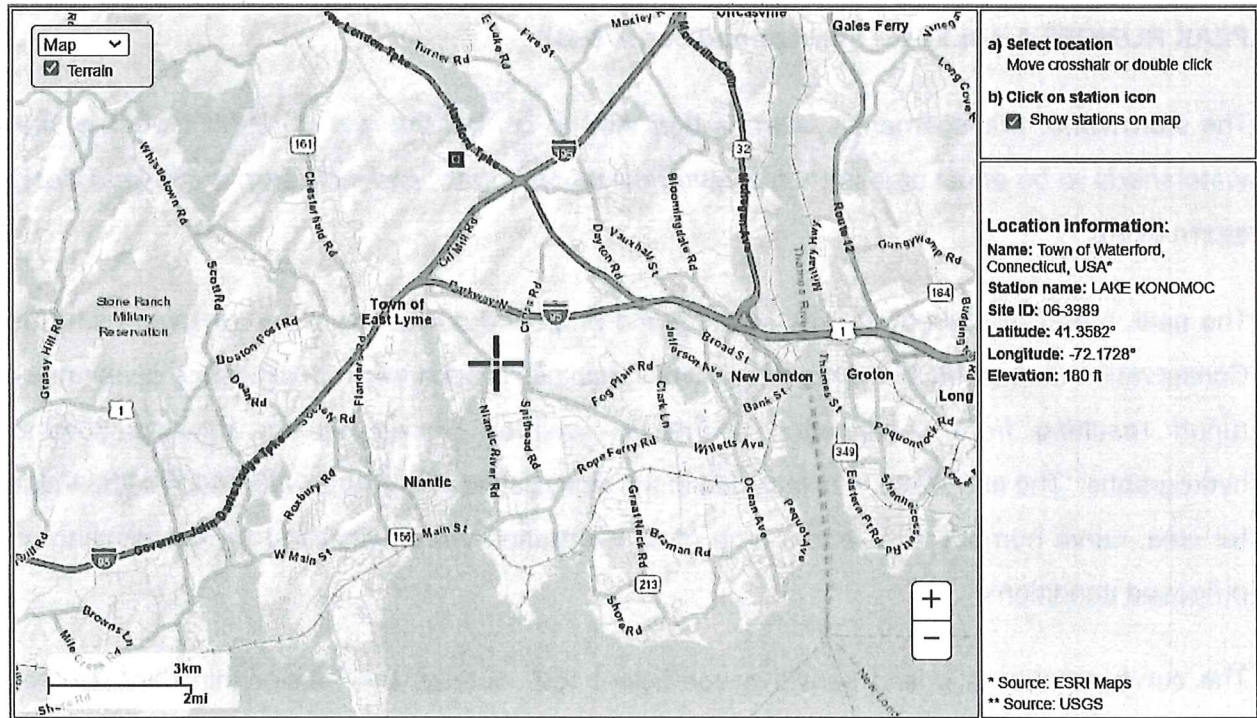
The peak runoff discharges for the existing and proposed conditions were analyzed using Soil Conservation Service (SCS) methodology which outlines procedures for calculating peak rates of runoff resulting from precipitation events as well as procedures for developing runoff hydrographs. The entire site was included in the analysis; see Figures EXWS and PRWS. Values for area, curve number (CN), and a time of concentration were calculated for the existing and proposed conditions.

The curve number is a land sensitive coefficient that dictates the relationship between total rainfall depth and direct storm runoff. The soils within the watershed are divided into hydrologic soil groups (A, B, C, and D). The SCS classification system evaluates the runoff potential of a soil according to its infiltration and transmission rates. "A" soils have the lowest runoff potential, while "D" soils have the greatest runoff potential.

The time of concentration (T_c) is defined as the time for runoff to travel from the hydraulically most distant point in the watershed to a point of interest. Values of time of concentration were determined for existing and proposed conditions based on land cover and slope of the flow path using methods outlined in TR-55.

For this study, a 24-hour SCS Type III standard rainfall distribution was used to determine the peak flow rate and volume to all points of discharge from the site. Precipitation data used for the various storm events is based on the "NOAA Atlas 14 Point Precipitation Frequency Estimates: CT" for Lake Konomoc Station. Lake Konomoc Station was chosen for rainfall data because it is the station located within the closest proximity of the project location as shown in Graphic 1. A summary of all rainfall data utilized in the analysis for this site is provided below and a complete compilation of data provided by NOAA for this location is included in Appendix C.

Graphic 1. NOAA Rainfall Data Location Map



NOAA Precipitation Depth per Average Recurrence Interval [in]

Duration	2-Year	10-Year	25-Year	100-Year
24-hour	3.45	5.13	6.17	7.79

Existing Condition (See Appendix A)

The project area's existing drainage conditions were analyzed as Watersheds A, B, and C (See Drawing EXWS).

Existing Watershed A is approximately 0.26 acres and comprises grassy areas, driveway aprons onto the site and the southwestern portion of the existing building. Stormwater runoff from this watershed either flows into the existing storm drainage network or overland and offsite towards Boston Post Road.

Existing Watershed B is approximately 0.08 acres and consists of grass and brush areas at the east of the site. Stormwater runoff from this watershed flows overland to the wetlands #2 to the east of the site.

Existing Watershed C is about 1.27 acres and consists of the existing building and parking areas along with grassy and brush areas. Stormwater runoff from this watershed flows overland to the wetlands #1 offsite to the north.

Proposed Condition (See Appendix B)

In the proposed condition, site hydrology attempts to mimic existing conditions and all watershed outlets remain the same.

Proposed Watershed A is about 0.37 acres and consists of grassy areas and the proposed driveway aprons. Stormwater will continue to flow overland to Boston Post Road. The proposed site within this watershed has been designed to significantly reduce impervious area as compared with the existing condition.

Proposed Watershed B is about 0.09 acres and includes grass and brush areas to the east of the site. This watershed will remain generally unchanged, and stormwater collected within this watershed will flow overland to the wetlands #2 offside to the east.

Proposed Watershed C is divided into two sub-watersheds: Sub-watershed C1 and Sub-watershed C2. Sub-watershed C1 is about 1.04 acres and consists of the proposed building and parking areas along with grassy areas; stormwater within this watershed will flow either through a pretreatment swale conveyance feature or directly into a rain garden before flowing to the wetlands #2 offsite to the north. Sub-watershed C2 is about 0.12 acres and consists of grassy and brush areas; stormwater within this watershed will continue to flow overland to the wetlands #2 offsite to the north.

Details of the sizes and locations of the stormwater collection systems can be found on drawings CG101. A conservative design infiltration rate for the rain garden is 1 inch per hour. The design infiltration rate will be confirmed with on-site testing prior to construction. Please refer to Appendix F for boring log data within the vicinity of the proposed rain garden. This testing was performed by Barton & Loguidice as a part of a Limited Phase II Environmental Site Assessment report, dated 08/27/2024. According to the boring log data, groundwater was encountered between 6' and 13' below existing grade, and existing site soils within the rain gardens consist of a mainly sandy material.

Site Discharge Peak Flow Comparison for WS-A (CF)

Storm	Current	Proposed	Delta	% Reduction
2-Year	0.37	0.09	-0.28	75.68%
10-Year	0.77	0.44	-0.33	42.86%
25-Year	1.04	0.71	-0.33	31.73%
100-Year	1.46	1.20	-0.26	17.81%

Site Discharge Peak Flow Comparison for WS-B (CF)

Storm	Current	Proposed	Delta	% Reduction
2-Year	0.02	0.01	-0.01	50.00%
10-Year	0.09	0.09	0.00	0.00%
25-Year	0.15	0.19	0.00	0.00%
100-Year	0.26	0.26	0.00	0.00%

Site Discharge Peak Flow Comparison for WS-C (CF)

Storm	Current	Proposed	Delta	% Reduction
2-Year	3.77	0.32	-3.45	91.51%
10-Year	5.91	2.04	-3.87	65.48%
25-Year	7.22	3.73	-3.49	48.34%
100-Year	9.24	5.62	-3.62	39.18%

Site Discharge Peak Flow Comparison for Total Site (CF)

Storm	Current	Proposed	Delta	% Reduction
2-Year	4.15	0.38	-3.77	90.84%
10-Year	6.76	2.39	-4.37	64.65%
25-Year	8.39	4.44	-3.95	47.08%
100-Year	10.95	6.93	-4.02	36.71%

As can be seen from the tables above, runoff from each watershed and the total site will be attenuated for the storms up to and including the 100-year storm. Additionally, per the 2024 CT Stormwater Quality Manual requirements, runoff from each watershed that includes proposed site development will be attenuated by 50% for the 2-year storm event.

STORMWATER CONVEYANCE SYSTEM (See Appendix D)

The stormwater conveyance system was sized using the Rational Method for the 10-year storm event as per the CTDEEP Stormwater Quality Manual. Values for area, runoff coefficient, C, and

a time of concentration were calculated for each drainage area. The average runoff coefficient was calculated based upon the following cover types:

<u>Cover</u>	<u>C</u>
Grass/Pervious	0.3
Roof/Pavement/Impervious	0.9

Rainfall intensities were taken from the "NOAA Atlas 14 Point Precipitation Frequency Estimates: CT" for Lake Konomoc. Stormwater pipes were then sized based upon the Manning's Equation for full flow pipe capacity and solving for the hydraulic grade line. The computer program Hydraflow Storm Sewers 2011 by Intellisolve was used in the analysis.

Each proposed storm sewer system has been analyzed using a starting HGL elevation equal to the outlet pipe's crown elevation. This mimics a tailwater elevation equal to the outlet pipe's diameter or a scenario where a proposed pipe is entering an existing pipe flow at full capacity.

STORMWATER QUALITY (See Appendix E)

The proposed stormwater management system has been designed to incorporate stormwater quality measures including a significant decrease in site imperviousness, yard drains with sumps, a pretreatment swale conveyance feature, and a rain garden. These measures will be implemented to increase water quality and minimize the passage of pollutants to the existing stormwater systems as compared to current conditions.

Under current conditions, the entirety of the site impervious cover ($\pm 52,200$ SF) is considered directly connected impervious area (DCIA). This project proposes to decrease DCIA by over 90%, which will decrease surface runoff and increase infiltration of rainfall into the soil.

Per Table 4.1 of the CT Stormwater Quality Manual, the site is considered a redevelopment with existing DCIA of 40% or more. As such, the Required Retention Volume (RRV) is 50% of the site's Water Quality Volume (WQV). Through coordination with the town of Waterford Environmental Planner, this project occurs within the Stony Brook watershed area. Stormwater discharge from the site contributes to an intermittent watercourse and wetland system located north of the parcel. The receiving portion of Stony Brook south of Route 1 has been designated as an impaired waterbody by CTDEEP. Because of this information, the stormwater system has

been designed to retain 100% of the site WQV and exceed the RRV requirements for our redevelopment site.

Table 4.3 of the CT Stormwater Quality Manual shows the minimum average annual pollutant load reductions for Total Suspended Solids (TSS), Total Phosphorus (TP) and Total Nitrogen (TN). Per the manual, "a proposed stormwater management system meets or exceeds these average pollutant load reductions when the RRV is retained on-site using suitable stormwater retention practices. Achieving these minimum required load reductions for sediment and nutrients is assumed to provide adequate reductions of other stormwater pollutants including floatable materials." Through the use of the proposed rain garden, the stormwater system designed exceeds our RRV and will retain 100% of the WQV, thereby also exceeding the required average annual pollutant load reductions.

CONCLUSION

The proposed stormwater management system has been designed in general accordance with the 2024 CTDEEP Stormwater Quality Manual and the 2000 CTDOT Drainage Manual. It has been designed to maintain existing site hydrology to the maximum extent practicable with attenuated peak flows and multiple water quality improvements.

This Langan report shows that the proposed stormwater management system, as designed, will effectively manage quality and quantity of stormwater runoff for the proposed development. Please refer to the Drawings for additional drainage information.

Sincerely,
Langan CT, Inc.



Brian Phillips, P.E.
Senior Project Manager

LIST OF FIGURES

Fig. 1	Location Map
Fig. 2	FEMA Flood Map
Fig. 3	NRCS Soil Map

LIST OF DRAWINGS

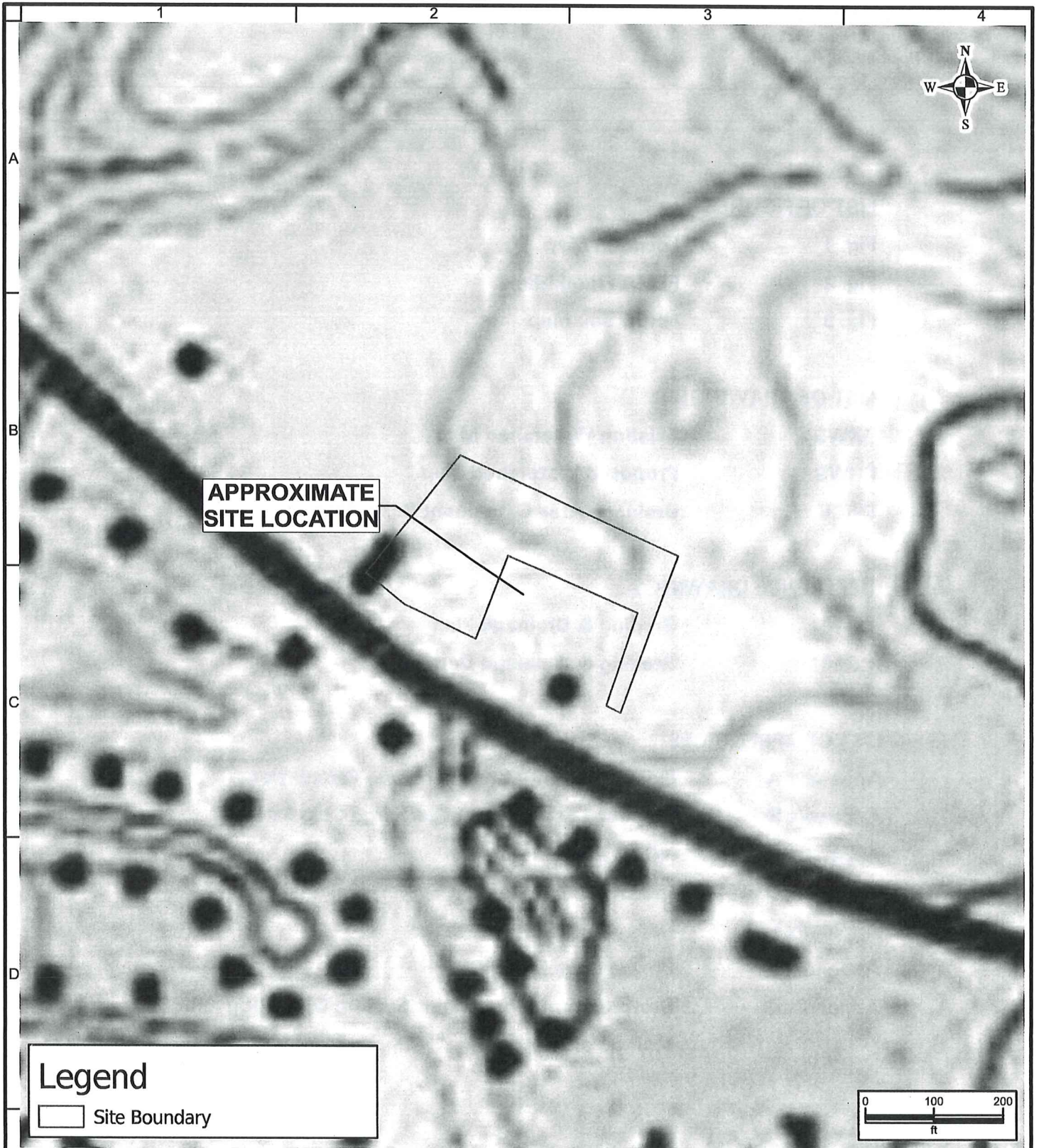
EXWS	Existing Watershed Map
PRWS	Proposed Watershed Map
DACB	Drainage Area Catchment Basin Map

REFERENCE DRAWINGS

CG101	Grading & Drainage Plan
CG501	Grading & Drainage Details

LIST OF APPENDICES

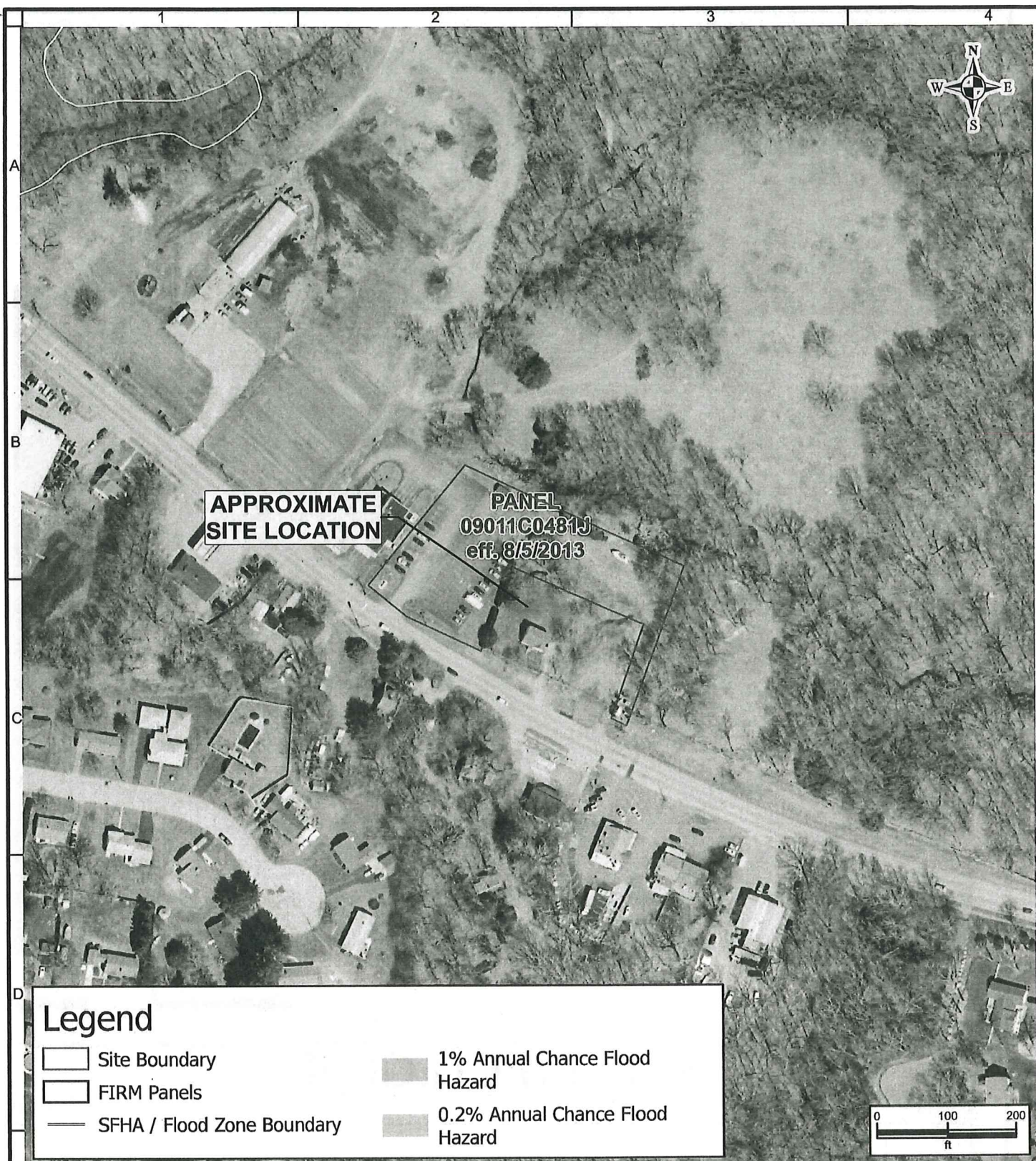
Appendix A	Existing Stormwater Discharge Calculations
Appendix B	Proposed Stormwater Discharge Calculations
Appendix C	NOAA Rainfall Data
Appendix D	Stormwater Collection System Calculations
Appendix E	Supporting Calculations
Appendix F	Boring Logs (by others)
Appendix G	Stormwater Management System Operation and Maintenance Plan



Copyright © 2013 National Geographic Society, i-cubed; © 2013 National Geographic Society, i-cubed

LANGAN 300 Kimball Drive 4th Floor Parsippany NJ 07054-2172 T: 973-560-4900 F: 973-560-4901 www.langan.com Langan Engineering & Environmental Services, Inc. Langan Engineering, Environmental, Surveying, Landscape Architecture and Geology, D.P.C. Langan International Collectively known as Langan	Project Oswegatchie Fire Station WATERFORD CONNECTICUT SOUTHEASTERN CT	Drawing Title SITE LOCATION	Project No. 140286501	Figure 1
			Date 1/3/2025	
			Scale 1:200	
			Drawn By Site Analyzer	
			Submission Date 1/3/2025	Sheet 1 of 2

Disclaimer: This information is produced by an automated system and may not be complete. The absence of a feature is not a confirmation that the feature is not present at the subject location. Information produced is in the public domain and unless noted has not been field verified or provided for any specific use. Users are also cautioned to confirm the information shown is suitable for their intended use.
Spatial Reference: NAD 1983 StatePlane Connecticut FIPS 0600 Feet



State of Connecticut, Maxar, FEMA, FEMA RiskMap CDS

LANGAN

300 Kimball Drive 4th Floor
Parsippany NJ 07054-2172
T: 973-560-4900 F: 973-560-4901 www.langan.com

Langan Engineering & Environmental Services, Inc.
Langan Engineering, Environmental, Surveying, Landscape
Architecture and Geology, D.P.C.
Langan International
Collectively known as Langan

Project

**Oswegatchie Fire
Station**

WATERFORD
CONNECTICUT
SOUTHEASTERN

CT

Drawing Title

**EFFECTIVE FEMA
FIRM**

Project No.

140286501

Date

1/3/2025

Scale

1:200

Drawn By

Site Analyzer

Submission Date

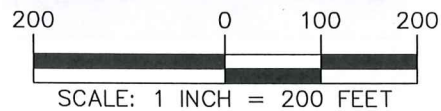
1/3/2025

Figure

2

Sheet 2 of 2

Disclaimer: This information is produced by an automated system and may not be complete. The absence of a feature is not a confirmation that the feature is not present at the subject location. Information produced is in the public domain and unless noted has not been field verified or provided for any specific use. Users are also cautioned to confirm the information shown is suitable for their intended use.
Spatial Reference: NAD 1983 StatePlane Connecticut FIPS 0600 Feet



SOIL TYPE LEGEND

SYMBOL	NAME	GROUP
13	WALPOLE SANDY LOAM, 0 TO 3 PERCENT SLOPES	B/D
38C	HINCKLEY LOAMY SAND, 3 TO 15 PERCENT SLOPES	A

REFERENCE: WEB SOIL SURVEY BY THE UNITED STATES DEPARTMENT OF AGRICULTURAL AND NATURAL RESOURCES CONSERVATION SERVICE.

LANGAN

Langan CT, Inc.
555 Long Wharf Drive, 9th Floor
New Haven, CT 06511

T: 203.562.5771 F: 203.789.6142 www.langan.com

Project

OSWEGATCHIE FIRE
STATION

WATERFORD

CONNECTICUT

Drawing Title

NRCS SOILS
MAP

Project No.

140286501

Date

1/7/2025

Drawn By

APF

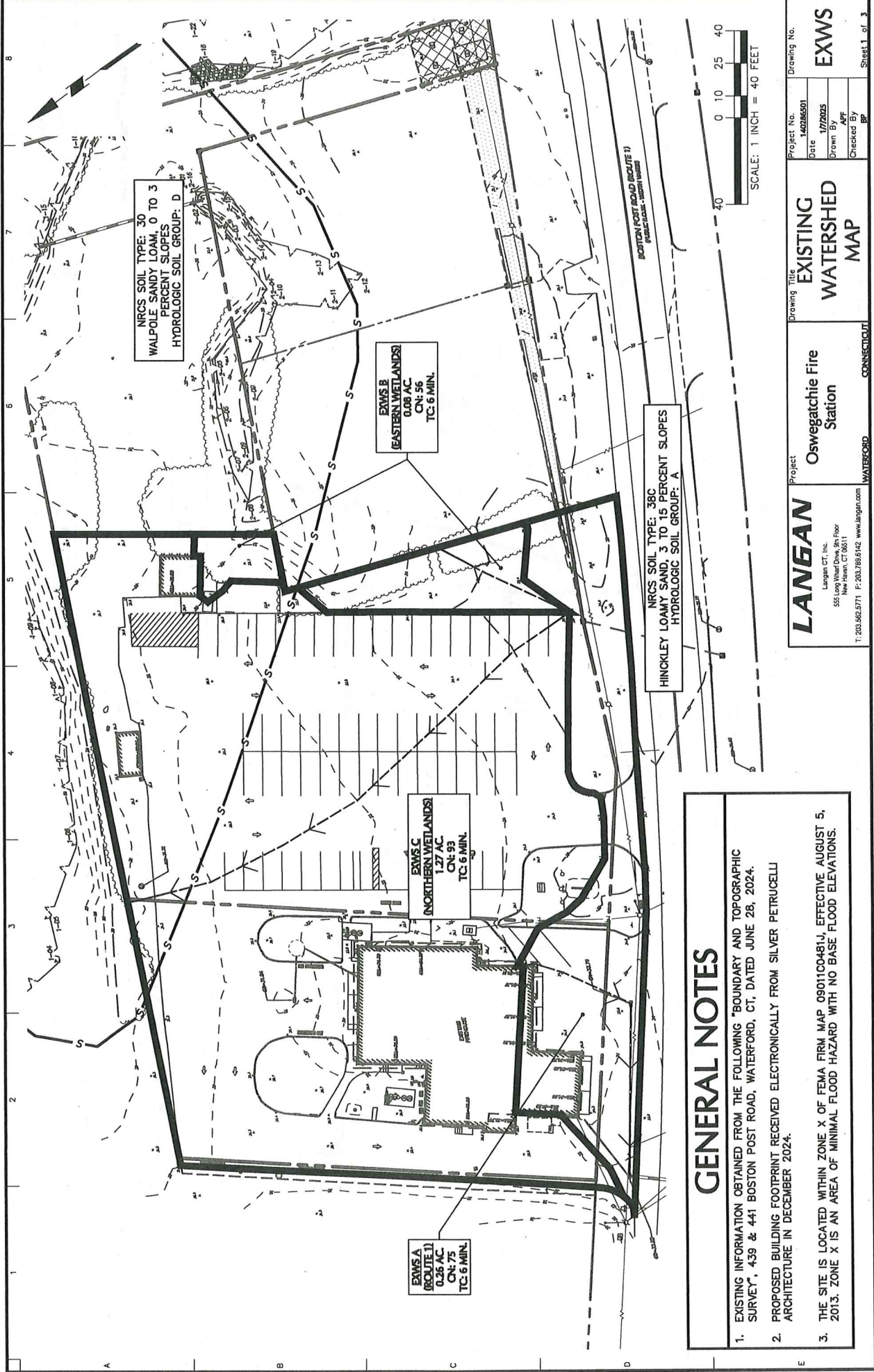
Checked By

BP

Drawing No.

3

Sheet 3 of 1



GENERAL NOTES

- EXISTING INFORMATION OBTAINED FROM THE FOLLOWING "BOUNDARY AND TOPOGRAPHIC SURVEY", 439 & 441 BOSTON POST ROAD, WATERFORD, CT, DATED JUNE 28, 2024.
- PROPOSED BUILDING FOOTPRINT RECEIVED ELECTRONICALLY FROM SILVER PETRUCELLI ARCHITECTURE IN DECEMBER 2024.
- THE SITE IS LOCATED WITHIN ZONE X OF FEMA FIRM MAP 09011C0481J, EFFECTIVE AUGUST 5, 2013. ZONE X IS AN AREA OF MINIMAL FLOOD HAZARD WITH NO BASE FLOOD ELEVATIONS.

LANGAN

Langan CT, Inc.
555 Long Wharf Drive, 5th Floor
New Haven, CT 06511
T: 203-562-5771 F: 203-789-6142 www.langan.com

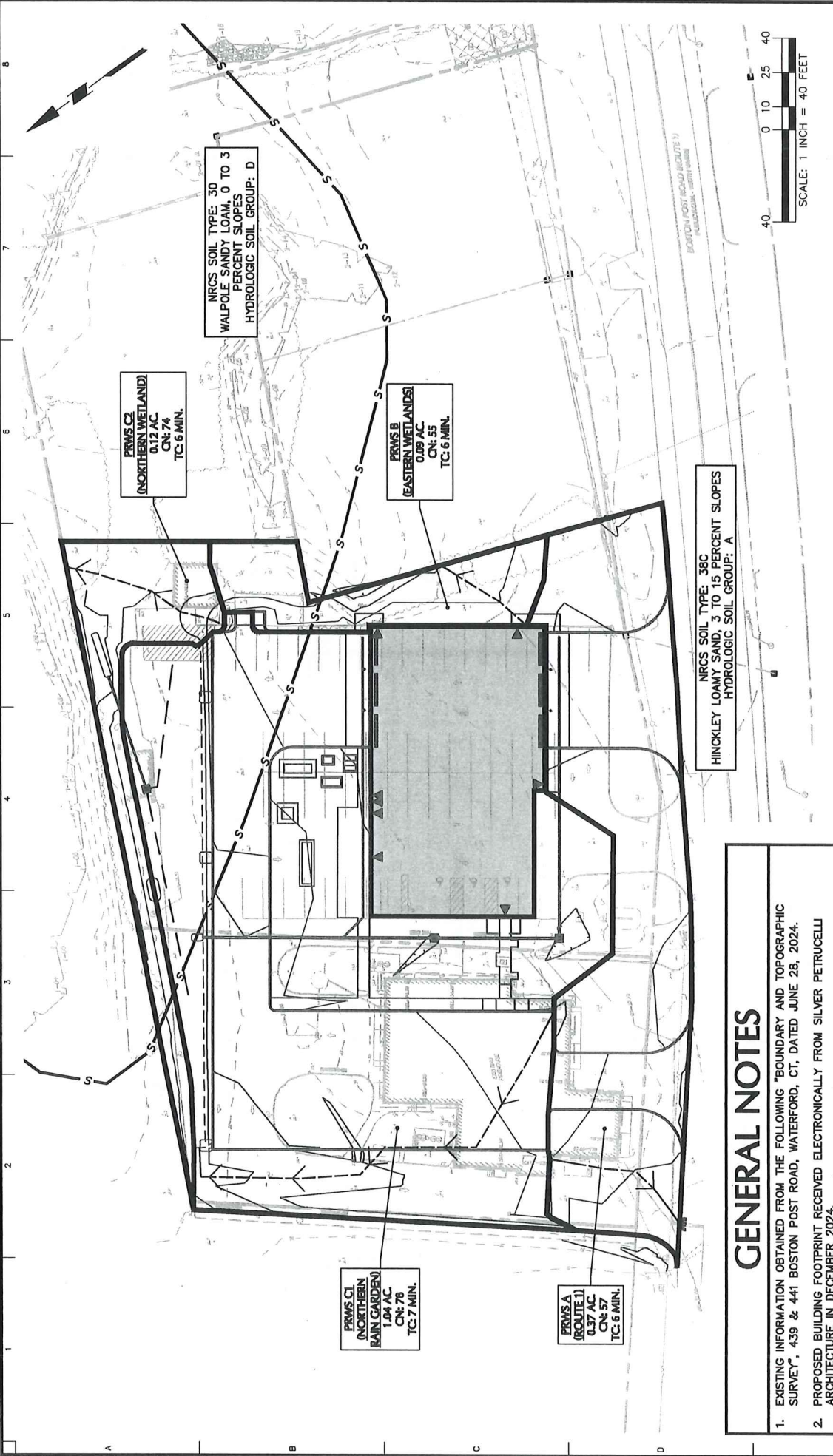
Project
Oswegatchie Fire
Station

Drawing Title
EXISTING
WATERSHED
MAP

Project No.
140286501
Date
1/7/2025
Drawn By
APF
Checked By
BPF

Drawing No.
EXWS
Sheet 1 of 3

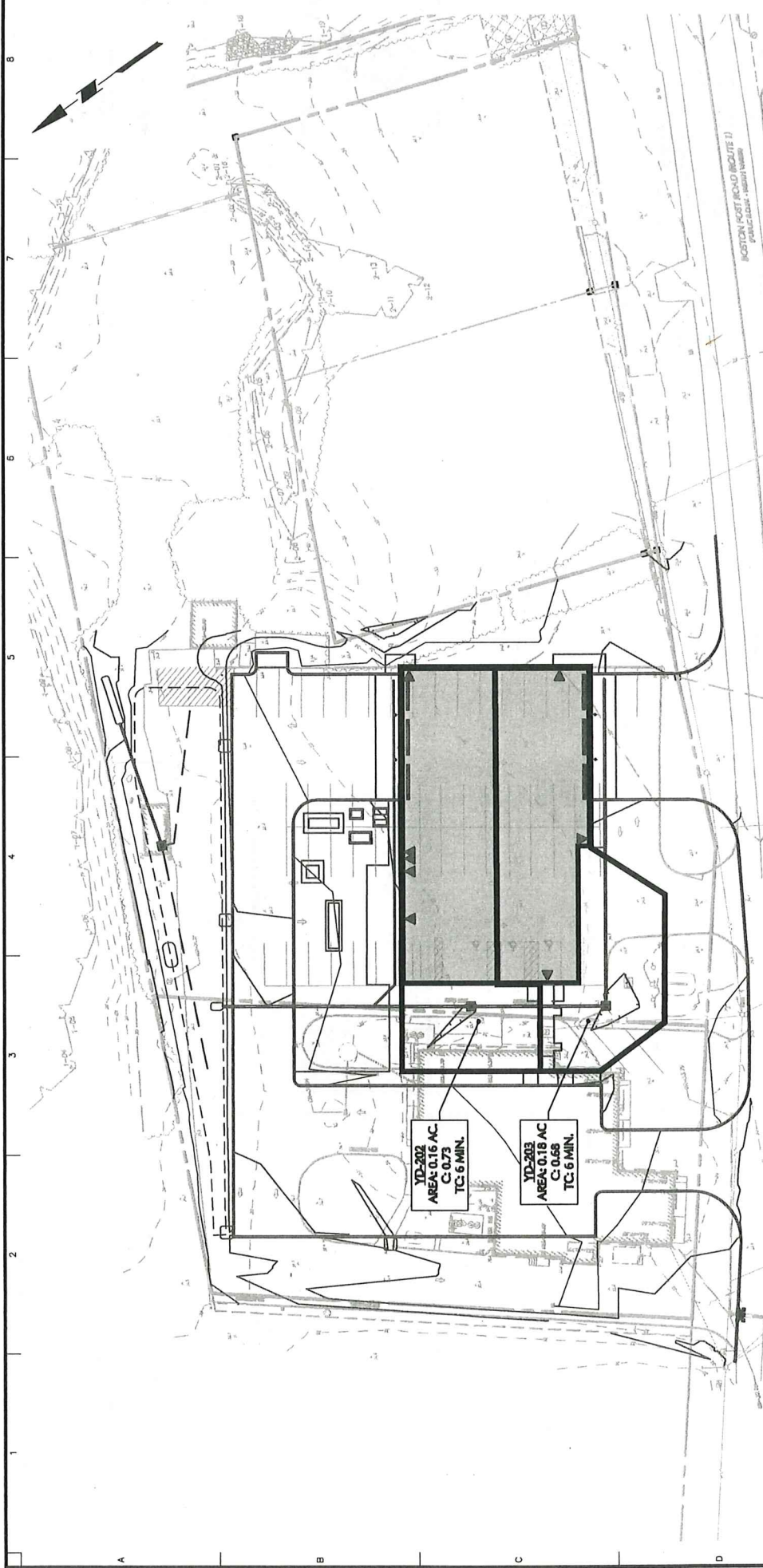
Project
WATERFORD
CONNECTICUT
Date: 1/3/2025 Time: 10:06 User: stay Style Table: Langan.stb Layout: Layout Document Code: 140286501-0201-CG103-0101



GENERAL NOTES

1. EXISTING INFORMATION OBTAINED FROM THE FOLLOWING "BOUNDARY AND TOPOGRAPHIC SURVEY", 439 & 441 BOSTON POST ROAD, WATERFORD, CT, DATED JUNE 28, 2024.
2. PROPOSED BUILDING FOOTPRINT RECEIVED ELECTRONICALLY FROM SILVER PETRUCELLI ARCHITECTURE IN DECEMBER 2024.
3. THE SITE IS LOCATED WITHIN ZONE X OF FEMA FIRM MAP 09011C0481J, EFFECTIVE AUGUST 5, 2013. ZONE X IS AN AREA OF MINIMAL FLOOD HAZARD WITH NO BASE FLOOD ELEVATIONS.

LANGAN Langan CT, Inc. 555 Long Wharf Drive, 5th Floor New Haven, CT 06511 T: 203.562.5771 F: 203.788.6142 www.langan.com	Project Oswegatchie Fire Station	Drawing Title PROPOSED WATERSHED MAP	Project No. 140286501	Drawing No. PRWS
	Date 1/7/2025			Checked By APF
Date 1/7/2025			Drawn By APF	Sheet 2 of 0



GENERAL NOTES

1. EXISTING INFORMATION OBTAINED FROM THE FOLLOWING "BOUNDARY AND TOPOGRAPHIC SURVEY", 439 & 441 BOSTON POST ROAD, WATERFORD, CT, DATED JUNE 28, 2024.
2. PROPOSED BUILDING FOOTPRINT RECEIVED ELECTRONICALLY FROM SILVER PETRUCELLI ARCHITECTURE IN DECEMBER 2024.
3. THE SITE IS LOCATED WITHIN ZONE X OF FEMA FIRM MAP 09011C0481J, EFFECTIVE AUGUST 5, 2013. ZONE X IS AN AREA OF MINIMAL FLOOD HAZARD WITH NO BASE FLOOD ELEVATIONS.

LANGAN Langan CT, Inc. 555 Long Wharf Drive, 8th Floor New Haven, CT 06511 T: 203-582-5771 F: 203-769-9142 www.langan.com	Project Oswegatchie Fire Station	Drawing Title DRAINAGE AREA CATCHMENT BASIN MAP	Project No. 140286501	Drawing No. DACB
			Date 1/17/2024	Drawn By APF
			Checked By BP	Sheet 3 of 3

DRAINAGE NOTES

1. ALL PROPOSED STORM DRAINAGE PIPING TO UTILIZE WATER-TIGHT JOINTS.
2. LOCATIONS AND ELEVATIONS OF ROOF LEADERS SHOULD BE COORDINATED WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
3. CLEARENCES SHALL BE PROVIDED FLUSH TO GRADE AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BOWLS AND UP-STREAM DOGS.
4. ALL REQUIRED STORM LATERALS SERVING THE BUILDING SHALL BE LATERAL ENTRANCES LOCATED AT THE WINDY SIDES OF EACH BUILDING. LATERAL ENTRANCE LOCATION AT THE WINDY SIDES MUST BE NEARBY AN EXISTING OR PROPOSED SIDEWALK OR DRIVEWAY. ANY NECESSARY REVISIONS TO THE LATERAL ENTRANCE LOCATION SHALL BE MADE BY THE BUILDING CONTRACTOR. ANY CHANGES TO THE LATERAL ENTRANCE LOCATION SHALL BE MADE BY THE BUILDING CONTRACTOR.

ALL WORK SHALL BE MADE BY THE BUILDING CONTRACTOR.

[illegible]

GRADING NOTES

- PARKING AREAS NOT TO EXCEED 2% IN ANY DIRECTION
 ROUTES NOT TO EXCEED 6% RUNNING SLOPE OR 2%
 TRANSVERSE SLOPE
 RAMP LANCES NOT TO EXCEED 2%
 RAMP TO BE CONSTRUCTED PER ADA REQUIREMENTS
 TO-TOP OF CURB
 BOTTOM OF CURB
 LANDSCAPE POINT
 TOP OF WALL
 BOTTOM OF WALL

Date	Description	No.
Revisions		



LANGAN

Langan CT, Inc.
555 Long Wharf Drive, 9th Floor
New Haven, CT 06511
T: 203.562.5771 F: 203.789.0142 www.langan.com

OSWEGATCHIE FIRE STATION

WATERFORD CONNECTICUT
Drawing Title

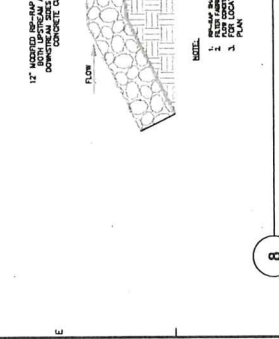
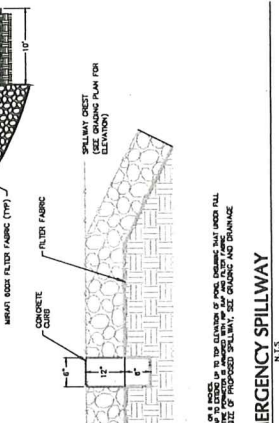
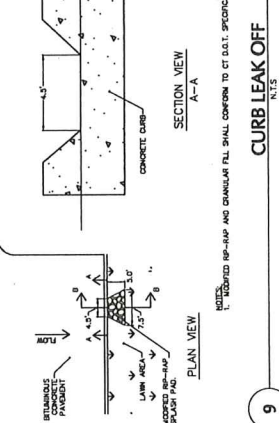
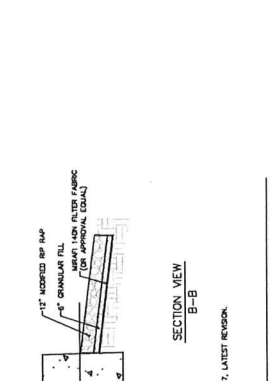
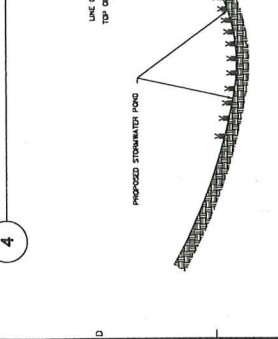
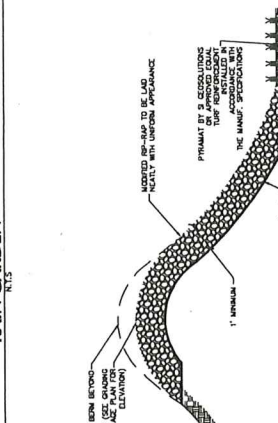
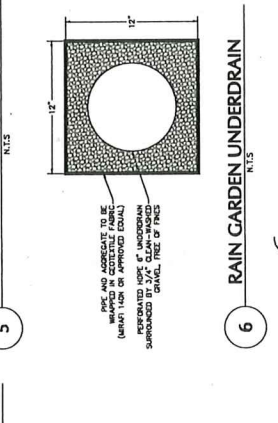
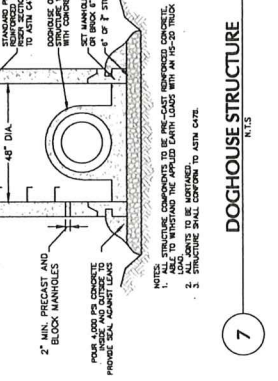
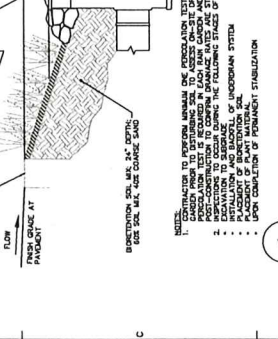
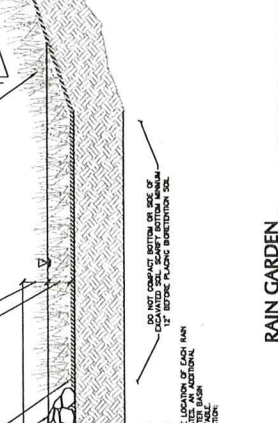
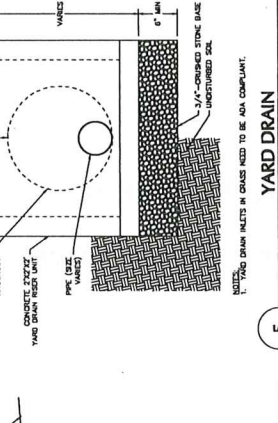
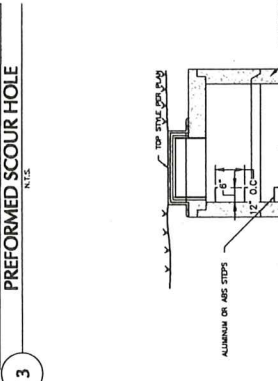
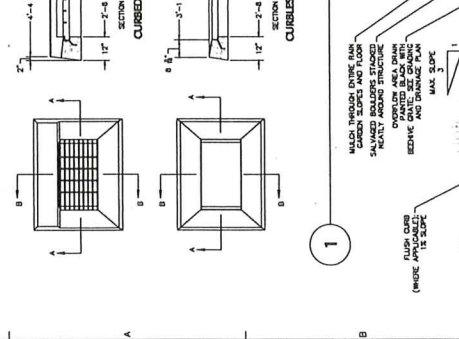
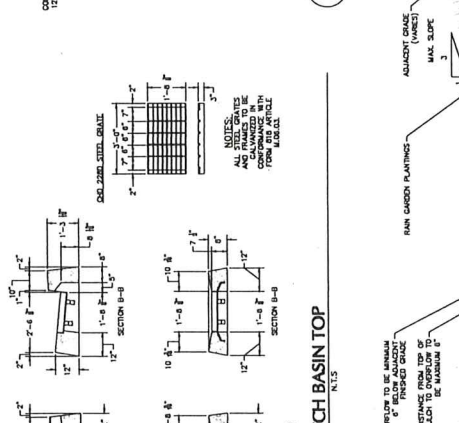
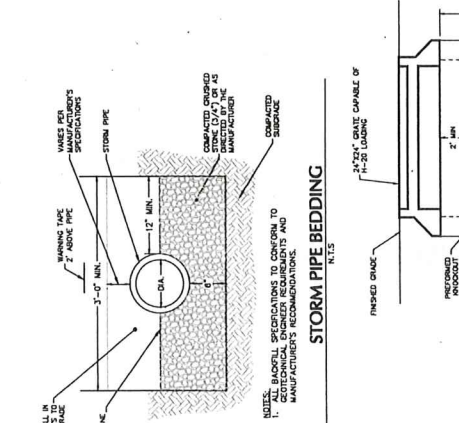
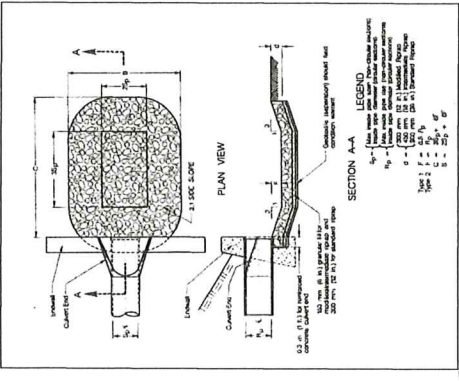
GRADING & DRAINAGE PLAN

Project No.	140296501	CG101	Drawing No.
Date	1/7/2025		
Drawn By	APF		
Checked By			

Sheet 4 of 15

Date: 16/05/2025 Time: 10:15 User: sly User: sly File: T:\Data\Lenovo\18 Lenovo\Lenovo\ Document Code: 142796501-6262-CG131-010 Sheet 4 of 15





Date	Description	No.
	Revisions	

LANGAN
 Langan CT, Inc.
 555 Lonsdale Drive, 9th Floor
 New Haven, CT 06511
 T: 203.562.1771 F: 203.789.6142
 www.langan.com

OSWEGATCHIE FIRE STATION

Project: **CONNECTICUT**

Drawing Title: **GRADING AND DRAINAGE DETAILS**

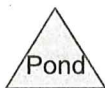
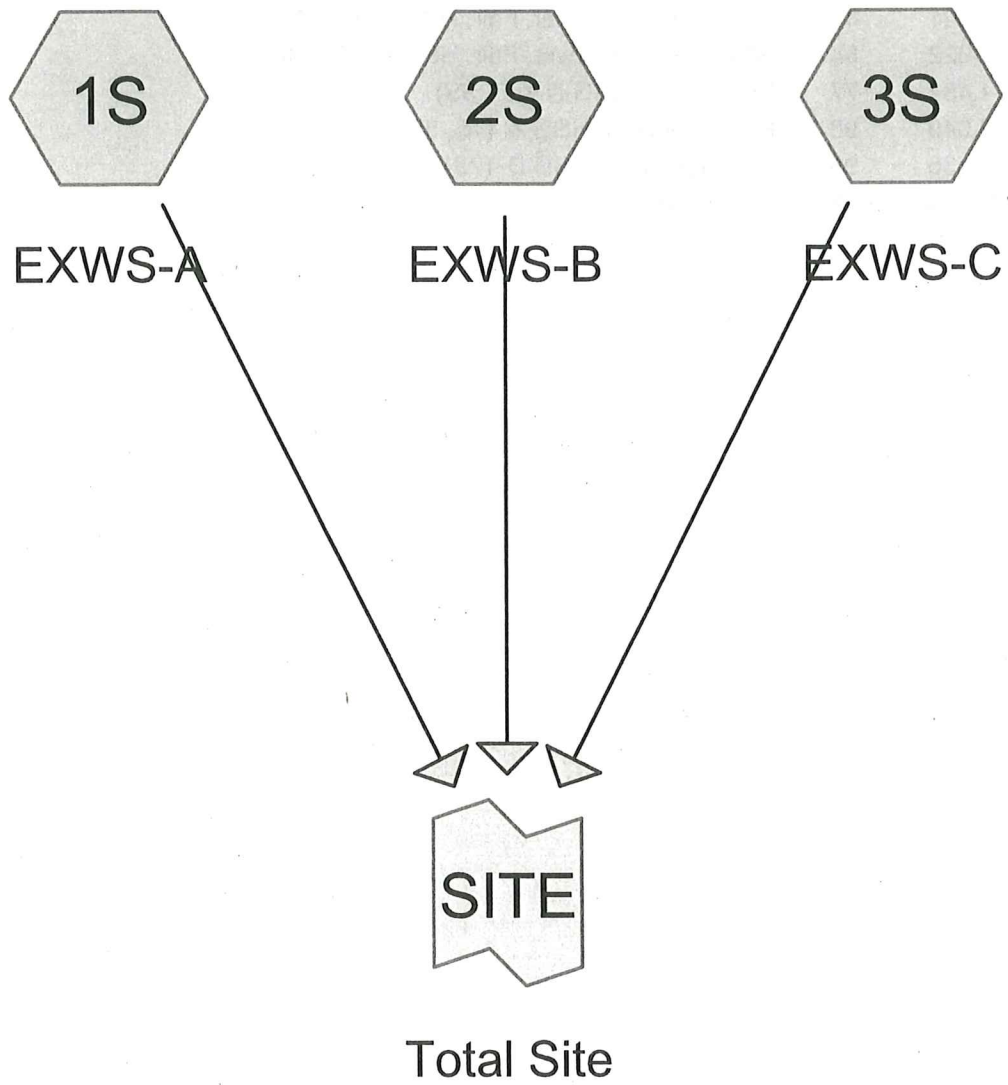
Project No.: **CG501**

Drawn By: **APF**

Checked By: **APF**

APPENDIX A

Existing Stormwater Discharge Calculations



Routing Diagram for EX Hydro

Prepared by Langan Engineering, Printed 11/12/2024
HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Printed 11/12/2024

Page 2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
13,021	49	50-75% Grass cover, Fair, HSG A (1S, 2S, 3S)
4,022	84	50-75% Grass cover, Fair, HSG D (2S, 3S)
1,432	77	Brush, Fair, HSG D (2S, 3S)
52,049	98	Paved parking, HSG A (1S, 3S)
36	98	Paved parking, HSG D (2S)
70,560	88	TOTAL AREA

EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 2-yr Rainfall=3.45"

Printed 11/12/2024

Page 3

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 Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EXWS-ARunoff Area=11,475 sf 52.74% Impervious Runoff Depth=1.27"
Flow Length=137' Tc=6.0 min CN=75 Runoff=0.37 cfs 1,211 cf**Subcatchment 2S: EXWS-B**Runoff Area=3,749 sf 0.96% Impervious Runoff Depth=0.36"
Flow Length=68' Slope=0.0250 '/' Tc=6.4 min CN=56 Runoff=0.02 cfs 113 cf**Subcatchment 3S: EXWS-C**Runoff Area=55,336 sf 83.12% Impervious Runoff Depth=2.69"
Flow Length=248' Slope=0.0200 '/' Tc=6.0 min CN=93 Runoff=3.77 cfs 12,389 cf**Link SITE: Total Site**Inflow=4.15 cfs 13,713 cf
Primary=4.15 cfs 13,713 cf**Total Runoff Area = 70,560 sf Runoff Volume = 13,713 cf Average Runoff Depth = 2.33"**
26.18% Pervious = 18,475 sf 73.82% Impervious = 52,085 sf

EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 2-yr Rainfall=3.45"

Printed 11/12/2024

Page 4

Summary for Subcatchment 1S: EXWS-A

Runoff = 0.37 cfs @ 12.10 hrs, Volume= 1,211 cf, Depth= 1.27"
 Routed to Link SITE : Total Site

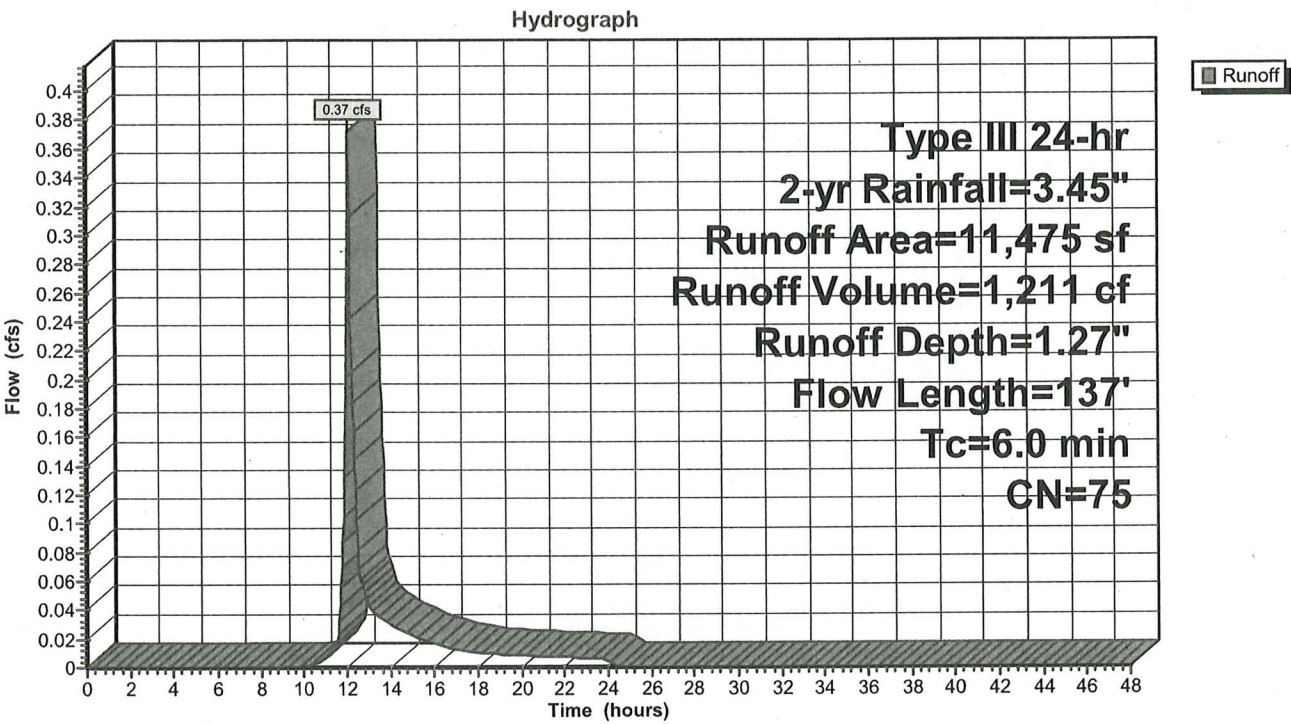
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
5,423	49	50-75% Grass cover, Fair, HSG A
6,052	98	Paved parking, HSG A
11,475	75	Weighted Average
5,423		47.26% Pervious Area
6,052		52.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	54	0.0075	0.85		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
0.3	83	0.0100	4.50	1.57	Pipe Channel, Segment 2 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.010
1.4	137	Total, Increased to minimum Tc = 6.0 min			



Subcatchment 1S: EXWS-A



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 2-yr Rainfall=3.45"

Printed 11/12/2024

Page 6

Summary for Subcatchment 2S: EXWS-B

Runoff = 0.02 cfs @ 12.15 hrs, Volume= 113 cf, Depth= 0.36"
 Routed to Link SITE : Total Site

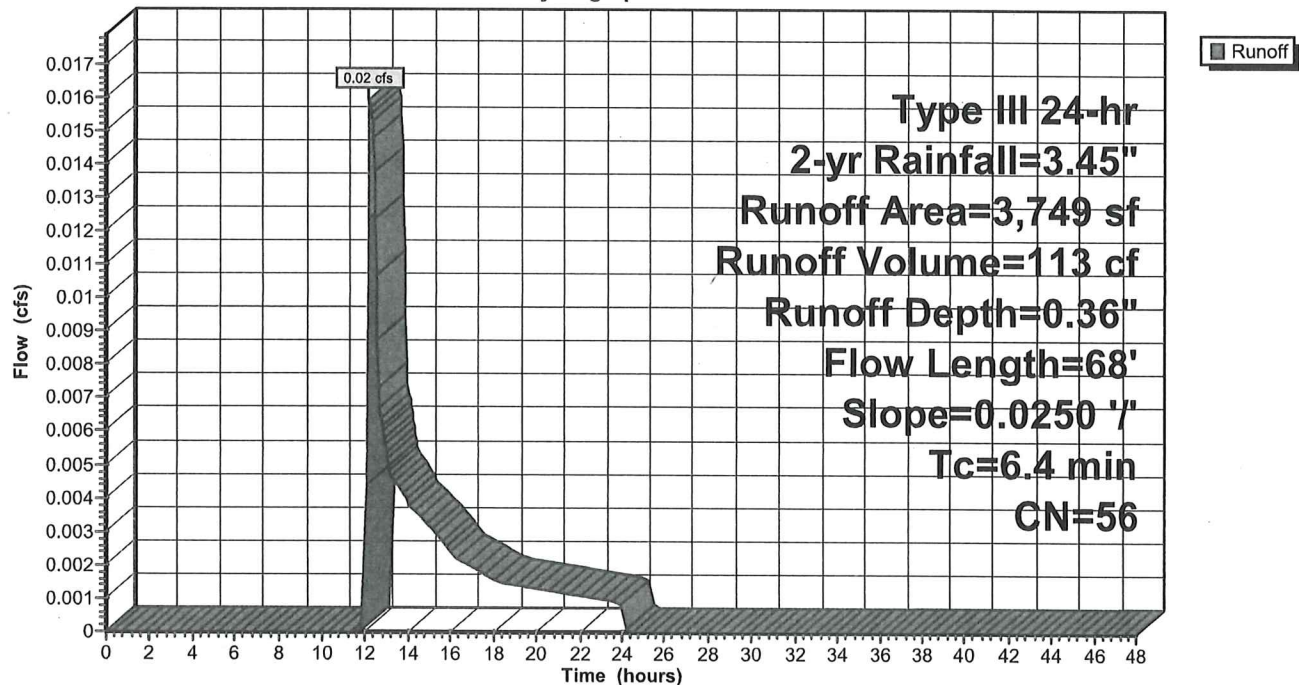
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
2,844	49	50-75% Grass cover, Fair, HSG A
770	77	Brush, Fair, HSG D
99	84	50-75% Grass cover, Fair, HSG D
36	98	Paved parking, HSG D
3,749	56	Weighted Average
3,713		99.04% Pervious Area
36		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	68	0.0250	0.18		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"

**Subcatchment 2S: EXWS-B**

Hydrograph



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 2-yr Rainfall=3.45"

Printed 11/12/2024

Page 7

Summary for Subcatchment 3S: EXWS-C

Runoff = 3.77 cfs @ 12.09 hrs, Volume= 12,389 cf, Depth= 2.69"
 Routed to Link SITE : Total Site

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-yr Rainfall=3.45"

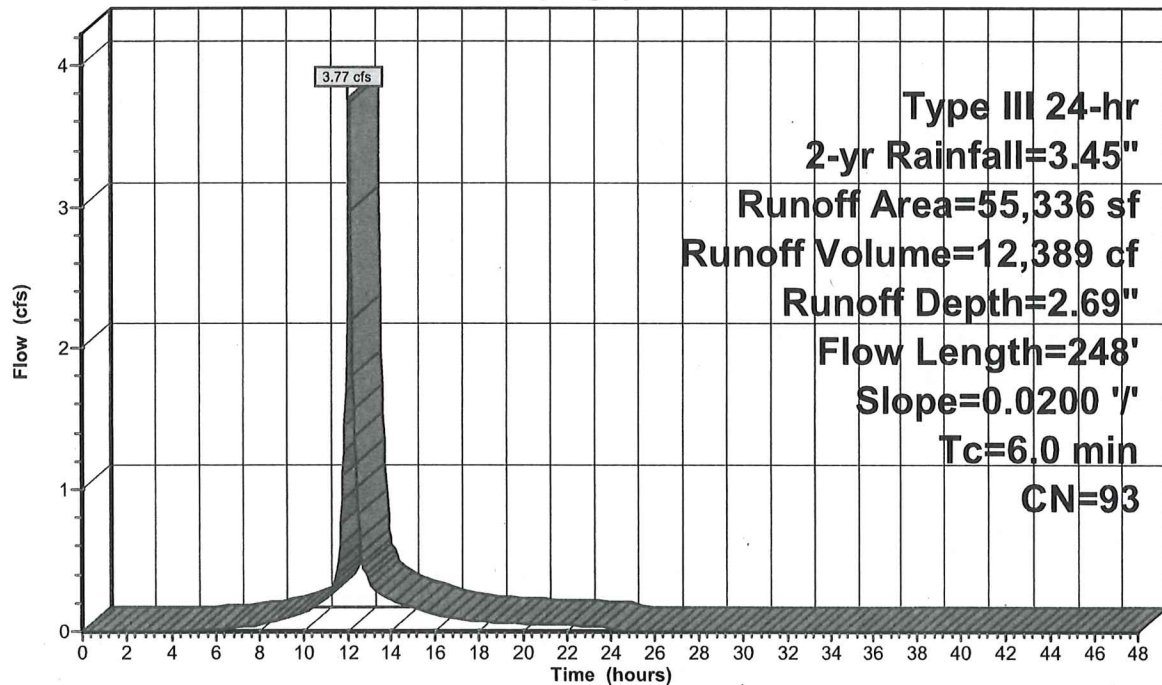
Area (sf)	CN	Description
4,754	49	50-75% Grass cover, Fair, HSG A
3,923	84	50-75% Grass cover, Fair, HSG D
662	77	Brush, Fair, HSG D
45,997	98	Paved parking, HSG A
55,336	93	Weighted Average
9,339		16.88% Pervious Area
45,997		83.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	150	0.0200	1.54		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
0.5	86	0.0200	2.87		Shallow Concentrated Flow, Segment 2 Paved Kv= 20.3 fps
0.1	12	0.0200	2.12		Shallow Concentrated Flow, Segment 3 Grassed Waterway Kv= 15.0 fps
2.2	248	Total, Increased to minimum Tc = 6.0 min			



Subcatchment 3S: EXWS-C

Hydrograph



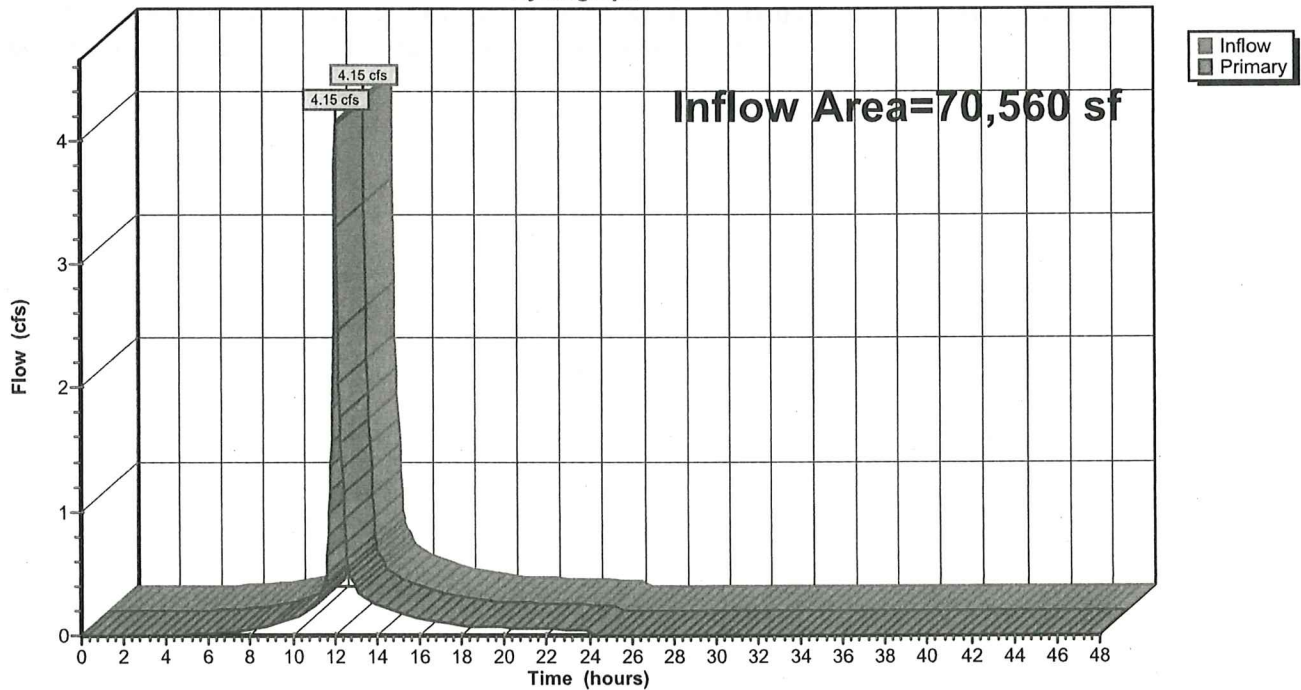
Summary for Link SITE: Total Site

Inflow Area = 70,560 sf, 73.82% Impervious, Inflow Depth = 2.33" for 2-yr event
Inflow = 4.15 cfs @ 12.09 hrs, Volume= 13,713 cf
Primary = 4.15 cfs @ 12.09 hrs, Volume= 13,713 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SITE: Total Site

Hydrograph



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 10-yr Rainfall=5.13"

Printed 11/12/2024

Page 10

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 Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EXWS-A

Runoff Area=11,475 sf 52.74% Impervious Runoff Depth=2.56"

Flow Length=137' Tc=6.0 min CN=75 Runoff=0.77 cfs 2,443 cf

Subcatchment 2S: EXWS-B

Runoff Area=3,749 sf 0.96% Impervious Runoff Depth=1.11"

Flow Length=68' Slope=0.0250 '/' Tc=6.4 min CN=56 Runoff=0.09 cfs 347 cf

Subcatchment 3S: EXWS-C

Runoff Area=55,336 sf 83.12% Impervious Runoff Depth=4.33"

Flow Length=248' Slope=0.0200 '/' Tc=6.0 min CN=93 Runoff=5.91 cfs 19,947 cf

Link SITE: Total Site

Inflow=6.76 cfs 22,737 cf

Primary=6.76 cfs 22,737 cf

Total Runoff Area = 70,560 sf Runoff Volume = 22,737 cf Average Runoff Depth = 3.87"**26.18% Pervious = 18,475 sf 73.82% Impervious = 52,085 sf**

EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 10-yr Rainfall=5.13"

Printed 11/12/2024

Page 11

Summary for Subcatchment 1S: EXWS-A

Runoff = 0.77 cfs @ 12.09 hrs, Volume= 2,443 cf, Depth= 2.56"
Routed to Link SITE : Total Site

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-yr Rainfall=5.13"

Area (sf)	CN	Description
5,423	49	50-75% Grass cover, Fair, HSG A
6,052	98	Paved parking, HSG A
11,475	75	Weighted Average
5,423		47.26% Pervious Area
6,052		52.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	54	0.0075	0.85		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
0.3	83	0.0100	4.50	1.57	Pipe Channel, Segment 2 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.010
1.4	137	Total, Increased to minimum Tc = 6.0 min			



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

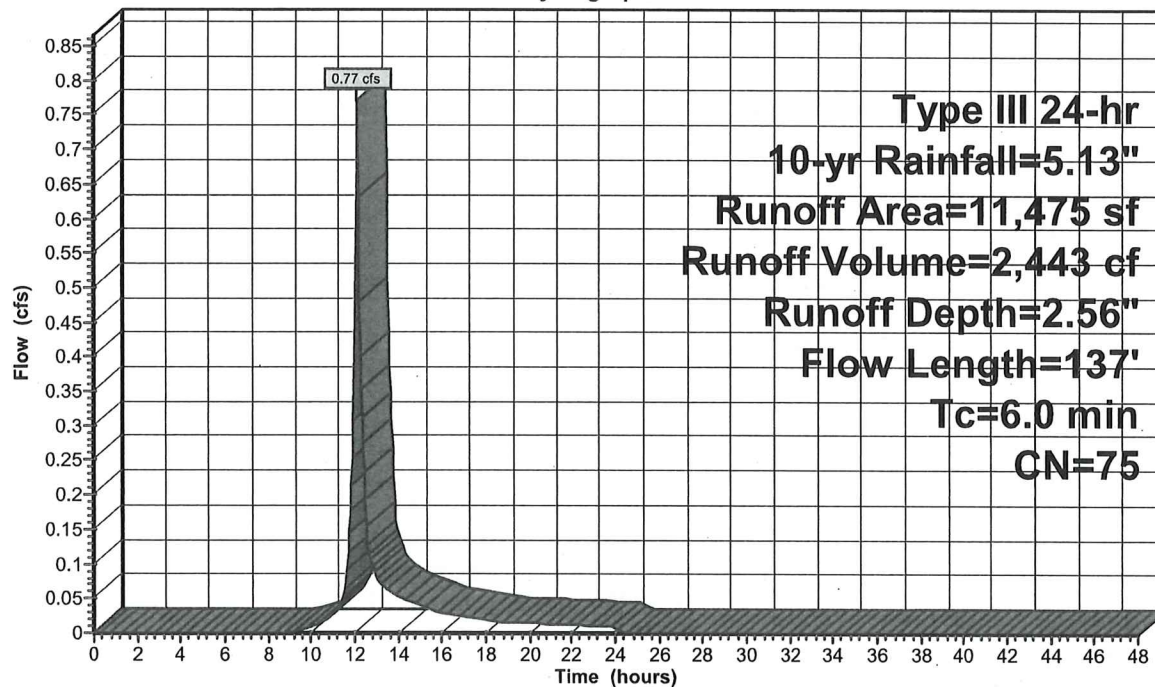
Type III 24-hr 10-yr Rainfall=5.13"

Printed 11/12/2024

Page 12

Subcatchment 1S: EXWS-A

Hydrograph



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 10-yr Rainfall=5.13"

Printed 11/12/2024

Page 13

Summary for Subcatchment 2S: EXWS-B

Runoff = 0.09 cfs @ 12.11 hrs, Volume= 347 cf, Depth= 1.11"
Routed to Link SITE : Total Site

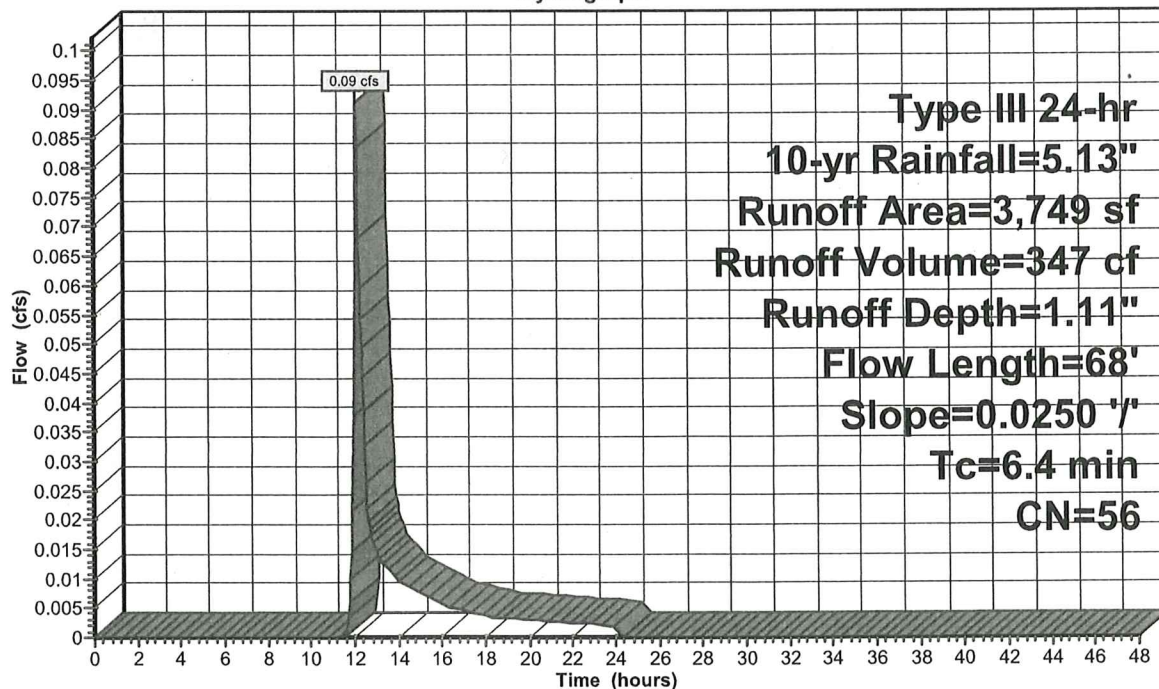
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-yr Rainfall=5.13"

Area (sf)	CN	Description
2,844	49	50-75% Grass cover, Fair, HSG A
770	77	Brush, Fair, HSG D
99	84	50-75% Grass cover, Fair, HSG D
36	98	Paved parking, HSG D
3,749	56	Weighted Average
3,713		99.04% Pervious Area
36		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	68	0.0250	0.18		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"

**Subcatchment 2S: EXWS-B**

Hydrograph



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 10-yr Rainfall=5.13"

Printed 11/12/2024

Page 14

Summary for Subcatchment 3S: EXWS-C

Runoff = 5.91 cfs @ 12.09 hrs, Volume= 19,947 cf, Depth= 4.33"
Routed to Link SITE : Total Site

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-yr Rainfall=5.13"

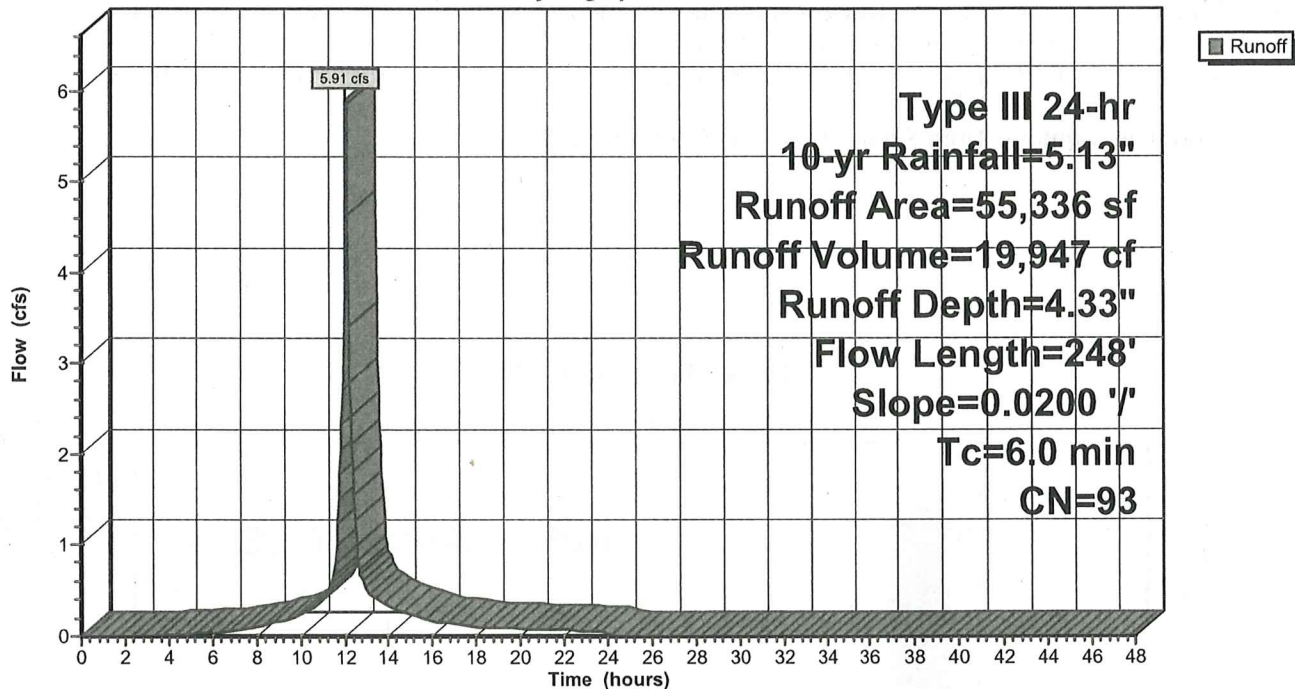
Area (sf)	CN	Description
4,754	49	50-75% Grass cover, Fair, HSG A
3,923	84	50-75% Grass cover, Fair, HSG D
662	77	Brush, Fair, HSG D
45,997	98	Paved parking, HSG A
55,336	93	Weighted Average
9,339		16.88% Pervious Area
45,997		83.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	150	0.0200	1.54		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
0.5	86	0.0200	2.87		Shallow Concentrated Flow, Segment 2 Paved Kv= 20.3 fps
0.1	12	0.0200	2.12		Shallow Concentrated Flow, Segment 3 Grassed Waterway Kv= 15.0 fps
2.2	248	Total, Increased to minimum Tc = 6.0 min			



Subcatchment 3S: EXWS-C

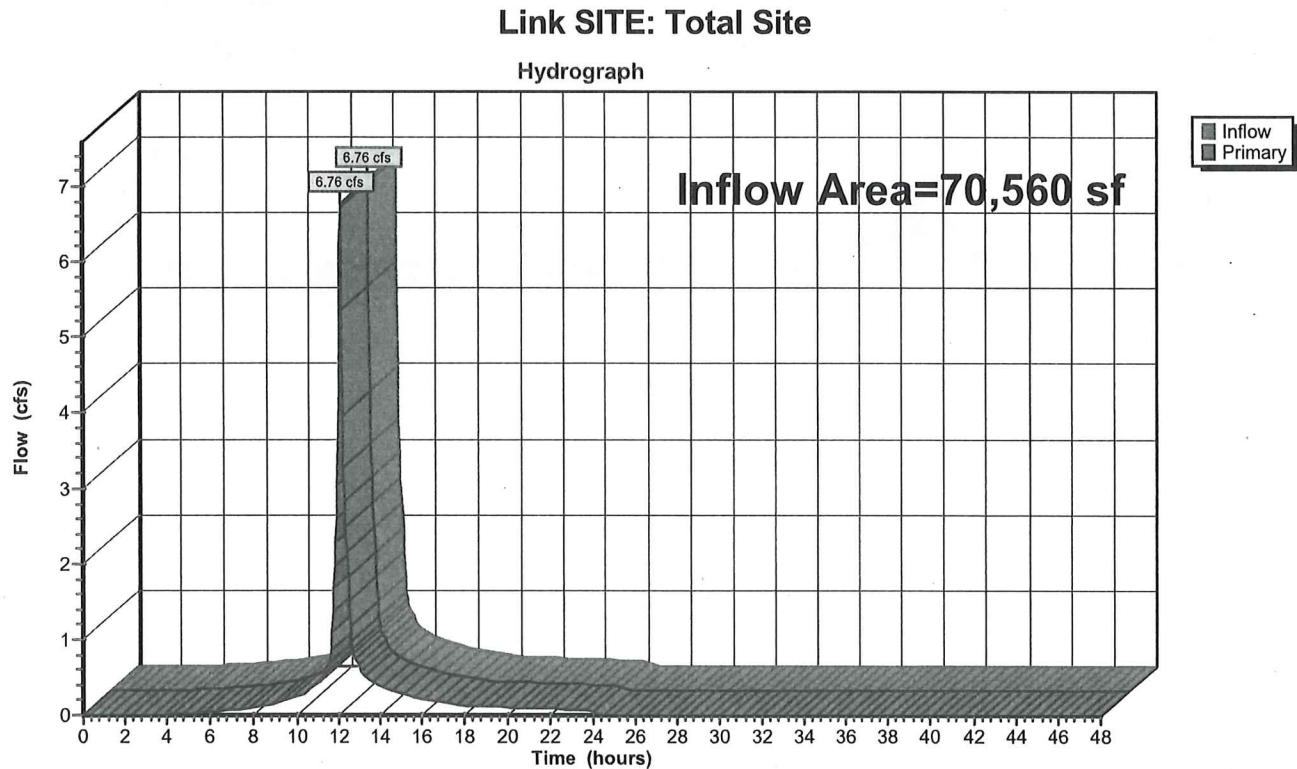
Hydrograph



Summary for Link SITE: Total Site

Inflow Area = 70,560 sf, 73.82% Impervious, Inflow Depth = 3.87" for 10-yr event
Inflow = 6.76 cfs @ 12.09 hrs, Volume= 22,737 cf
Primary = 6.76 cfs @ 12.09 hrs, Volume= 22,737 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 25-yr Rainfall=6.17"

Printed 11/12/2024

Page 17

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 Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EXWS-ARunoff Area=11,475 sf 52.74% Impervious Runoff Depth=3.43"
Flow Length=137' Tc=6.0 min CN=75 Runoff=1.04 cfs 3,277 cf**Subcatchment 2S: EXWS-B**Runoff Area=3,749 sf 0.96% Impervious Runoff Depth=1.70"
Flow Length=68' Slope=0.0250 '/' Tc=6.4 min CN=56 Runoff=0.15 cfs 530 cf**Subcatchment 3S: EXWS-C**Runoff Area=55,336 sf 83.12% Impervious Runoff Depth=5.35"
Flow Length=248' Slope=0.0200 '/' Tc=6.0 min CN=93 Runoff=7.22 cfs 24,673 cf**Link SITE: Total Site**Inflow=8.40 cfs 28,480 cf
Primary=8.40 cfs 28,480 cf**Total Runoff Area = 70,560 sf Runoff Volume = 28,480 cf Average Runoff Depth = 4.84"**
26.18% Pervious = 18,475 sf 73.82% Impervious = 52,085 sf

EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 25-yr Rainfall=6.17"

Printed 11/12/2024

Page 18

Summary for Subcatchment 1S: EXWS-A

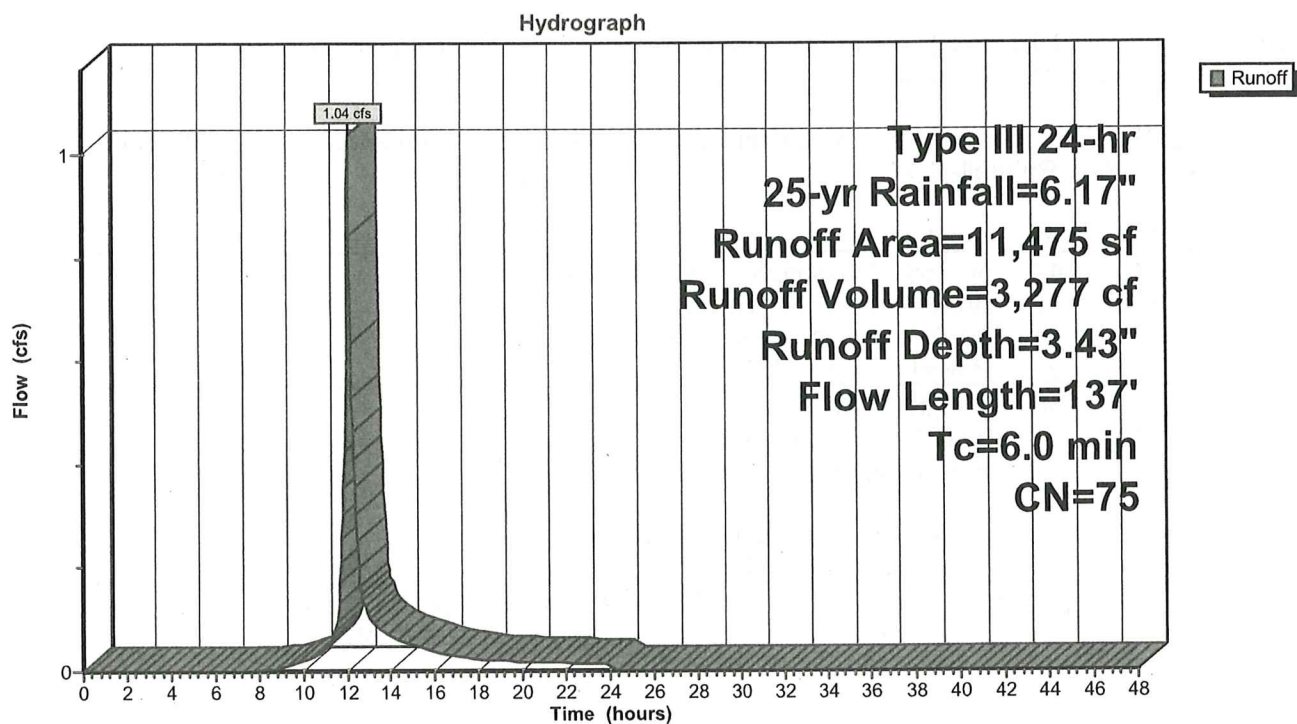
Runoff = 1.04 cfs @ 12.09 hrs, Volume= 3,277 cf, Depth= 3.43"
 Routed to Link SITE : Total Site

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-yr Rainfall=6.17"

Area (sf)	CN	Description
5,423	49	50-75% Grass cover, Fair, HSG A
6,052	98	Paved parking, HSG A
11,475	75	Weighted Average
5,423		47.26% Pervious Area
6,052		52.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	54	0.0075	0.85		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
0.3	83	0.0100	4.50	1.57	Pipe Channel, Segment 2 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.010
1.4	137	Total, Increased to minimum Tc = 6.0 min			



Subcatchment 1S: EXWS-A

EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 25-yr Rainfall=6.17"

Printed 11/12/2024

Page 20

Summary for Subcatchment 2S: EXWS-B

Runoff = 0.15 cfs @ 12.11 hrs, Volume= 530 cf, Depth= 1.70"
Routed to Link SITE : Total Site

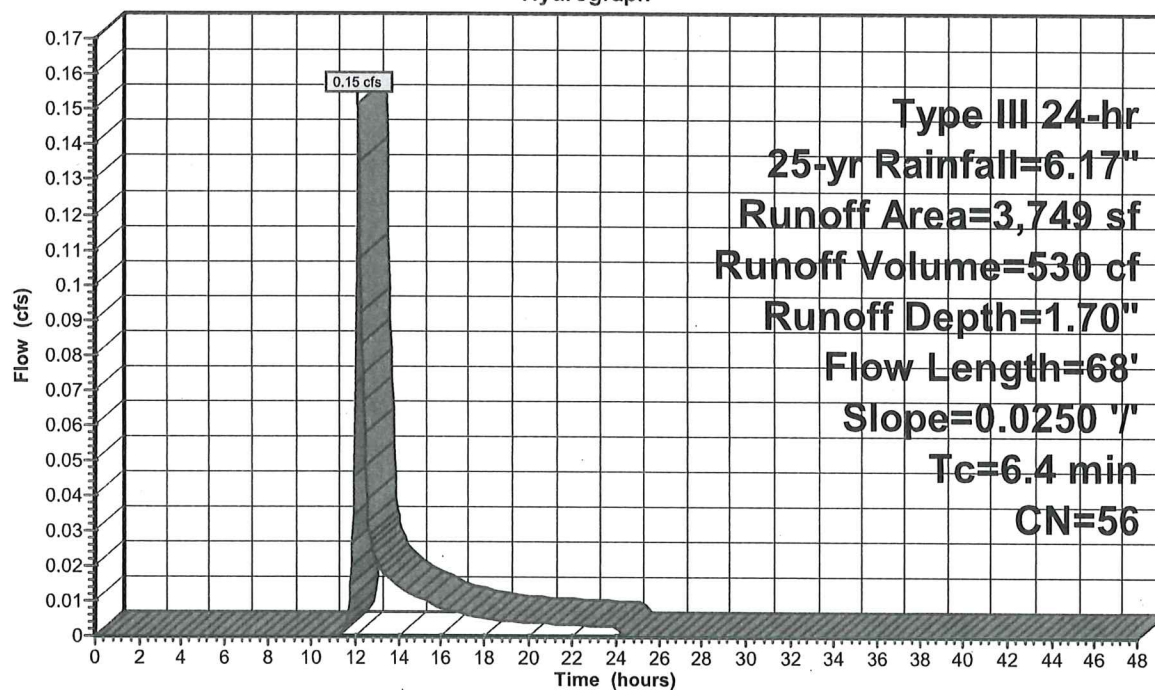
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
2,844	49	50-75% Grass cover, Fair, HSG A
770	77	Brush, Fair, HSG D
99	84	50-75% Grass cover, Fair, HSG D
36	98	Paved parking, HSG D
3,749	56	Weighted Average
3,713		99.04% Pervious Area
36		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	68	0.0250	0.18		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"

**Subcatchment 2S: EXWS-B**

Hydrograph



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 25-yr Rainfall=6.17"

Printed 11/12/2024

Page 21

Summary for Subcatchment 3S: EXWS-C

Runoff = 7.22 cfs @ 12.09 hrs, Volume= 24,673 cf, Depth= 5.35"
Routed to Link SITE : Total Site

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-yr Rainfall=6.17"

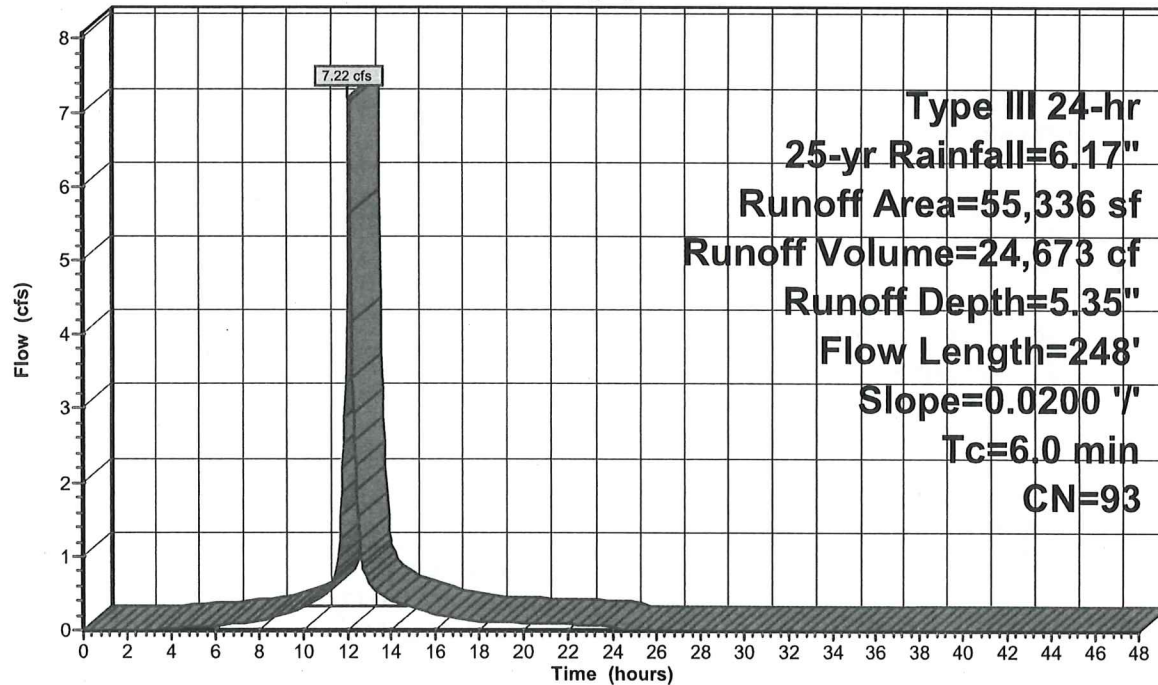
Area (sf)	CN	Description
4,754	49	50-75% Grass cover, Fair, HSG A
3,923	84	50-75% Grass cover, Fair, HSG D
662	77	Brush, Fair, HSG D
45,997	98	Paved parking, HSG A
55,336	93	Weighted Average
9,339		16.88% Pervious Area
45,997		83.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	150	0.0200	1.54		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
0.5	86	0.0200	2.87		Shallow Concentrated Flow, Segment 2 Paved Kv= 20.3 fps
0.1	12	0.0200	2.12		Shallow Concentrated Flow, Segment 3 Grassed Waterway Kv= 15.0 fps
2.2	248	Total, Increased to minimum Tc = 6.0 min			



Subcatchment 3S: EXWS-C

Hydrograph



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 25-yr Rainfall=6.17"

Printed 11/12/2024

Page 23

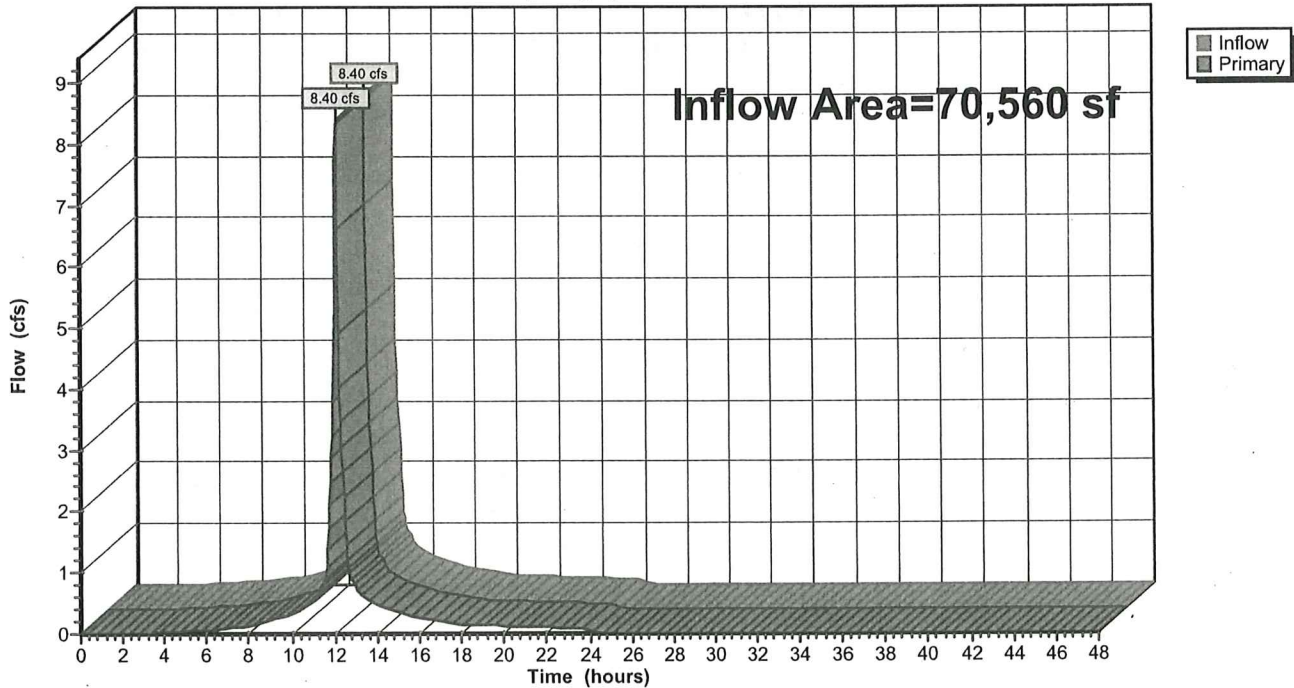
Summary for Link SITE: Total Site

Inflow Area = 70,560 sf, 73.82% Impervious, Inflow Depth = 4.84" for 25-yr event
Inflow = 8.40 cfs @ 12.09 hrs, Volume= 28,480 cf
Primary = 8.40 cfs @ 12.09 hrs, Volume= 28,480 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Link SITE: Total Site

Hydrograph



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 100-yr Rainfall=7.79"

Printed 11/12/2024

Page 24

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 Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: EXWS-ARunoff Area=11,475 sf 52.74% Impervious Runoff Depth=4.85"
Flow Length=137' Tc=6.0 min CN=75 Runoff=1.46 cfs 4,640 cf**Subcatchment 2S: EXWS-B**Runoff Area=3,749 sf 0.96% Impervious Runoff Depth=2.75"
Flow Length=68' Slope=0.0250 '/' Tc=6.4 min CN=56 Runoff=0.26 cfs 858 cf**Subcatchment 3S: EXWS-C**Runoff Area=55,336 sf 83.12% Impervious Runoff Depth=6.95"
Flow Length=248' Slope=0.0200 '/' Tc=6.0 min CN=93 Runoff=9.24 cfs 32,069 cf**Link SITE: Total Site**Inflow=10.96 cfs 37,567 cf
Primary=10.96 cfs 37,567 cf**Total Runoff Area = 70,560 sf Runoff Volume = 37,567 cf Average Runoff Depth = 6.39"**
26.18% Pervious = 18,475 sf 73.82% Impervious = 52,085 sf

EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 100-yr Rainfall=7.79"

Printed 11/12/2024

Page 25

Summary for Subcatchment 1S: EXWS-A

Runoff = 1.46 cfs @ 12.09 hrs, Volume= 4,640 cf, Depth= 4.85"
Routed to Link SITE : Total Site

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-yr Rainfall=7.79"

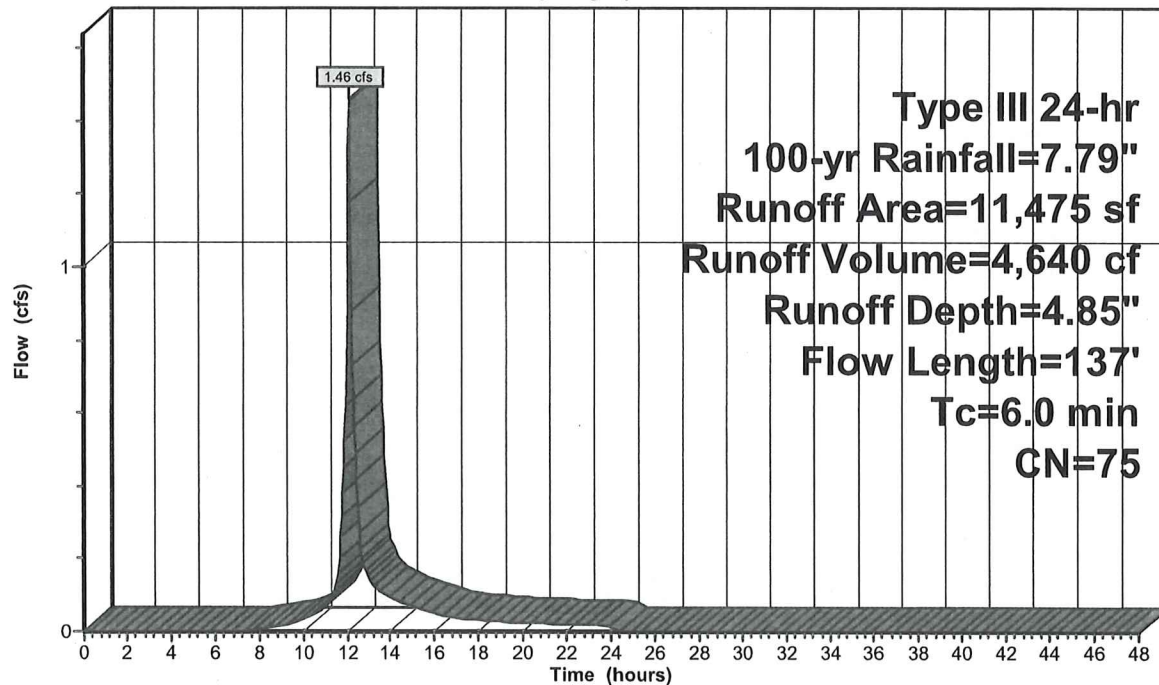
Area (sf)	CN	Description
5,423	49	50-75% Grass cover, Fair, HSG A
6,052	98	Paved parking, HSG A
11,475	75	Weighted Average
5,423		47.26% Pervious Area
6,052		52.74% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	54	0.0075	0.85		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
0.3	83	0.0100	4.50	1.57	Pipe Channel, Segment 2 8.0" Round Area= 0.3 sf Perim= 2.1' r= 0.17' n= 0.010
1.4	137	Total, Increased to minimum Tc = 6.0 min			



Subcatchment 1S: EXWS-A

Hydrograph



Summary for Subcatchment 2S: EXWS-B

Runoff = 0.26 cfs @ 12.10 hrs, Volume= 858 cf, Depth= 2.75"
 Routed to Link SITE : Total Site

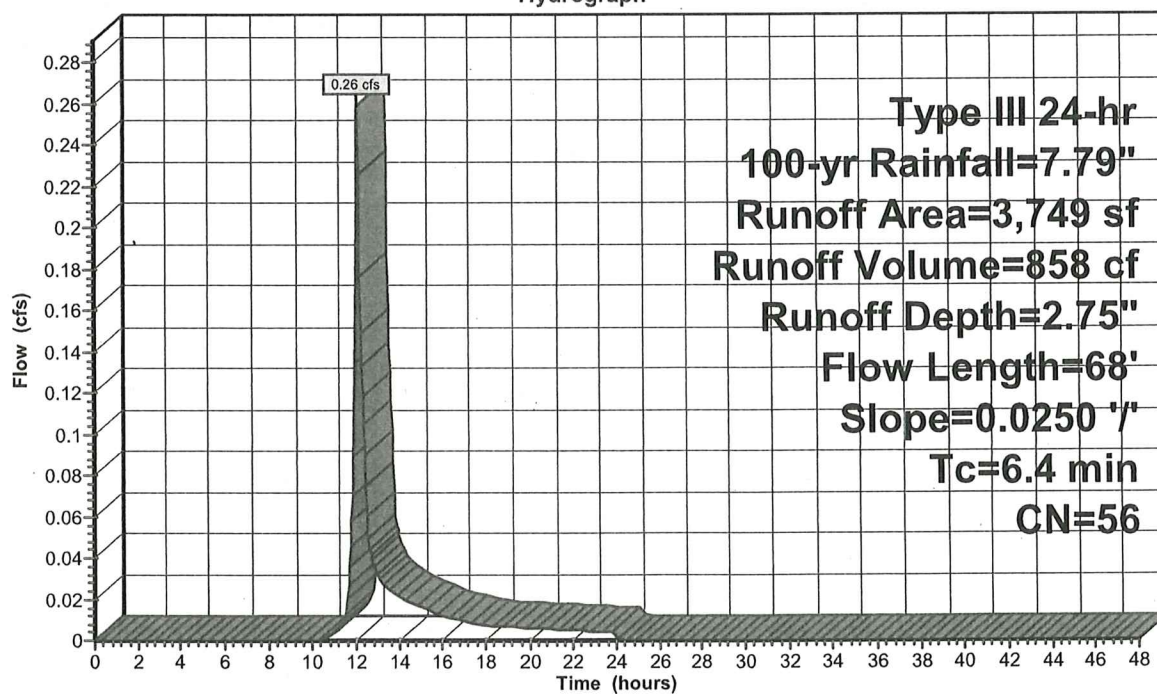
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-yr Rainfall=7.79"

Area (sf)	CN	Description
2,844	49	50-75% Grass cover, Fair, HSG A
770	77	Brush, Fair, HSG D
99	84	50-75% Grass cover, Fair, HSG D
36	98	Paved parking, HSG D
3,749	56	Weighted Average
3,713		99.04% Pervious Area
36		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.4	68	0.0250	0.18		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"

**Subcatchment 2S: EXWS-B**

Hydrograph



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 100-yr Rainfall=7.79"

Printed 11/12/2024

Page 28

Summary for Subcatchment 3S: EXWS-C

Runoff = 9.24 cfs @ 12.09 hrs, Volume= 32,069 cf, Depth= 6.95"
Routed to Link SITE : Total Site

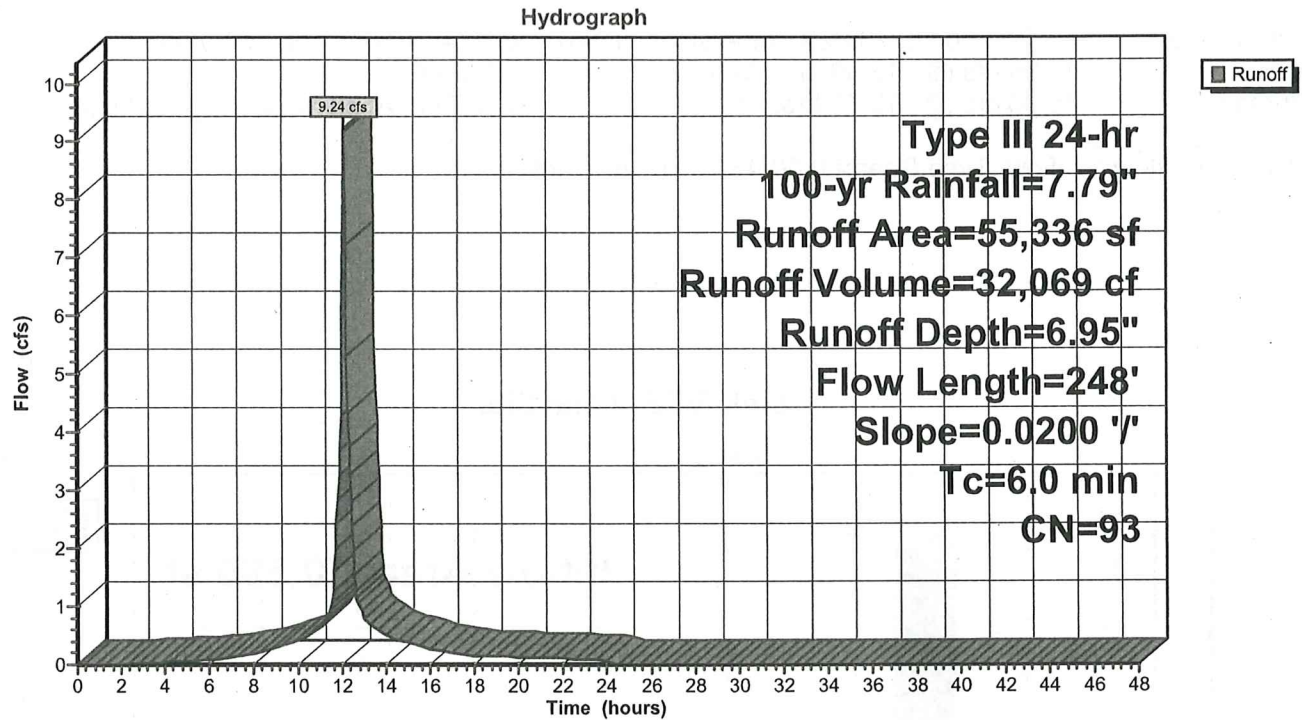
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-yr Rainfall=7.79"

Area (sf)	CN	Description
4,754	49	50-75% Grass cover, Fair, HSG A
3,923	84	50-75% Grass cover, Fair, HSG D
662	77	Brush, Fair, HSG D
45,997	98	Paved parking, HSG A
55,336	93	Weighted Average
9,339		16.88% Pervious Area
45,997		83.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	150	0.0200	1.54		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
0.5	86	0.0200	2.87		Shallow Concentrated Flow, Segment 2 Paved Kv= 20.3 fps
0.1	12	0.0200	2.12		Shallow Concentrated Flow, Segment 3 Grassed Waterway Kv= 15.0 fps
2.2	248	Total, Increased to minimum Tc = 6.0 min			



Subcatchment 3S: EXWS-C



EX Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-3f s/n 08223 © 2023 HydroCAD Software Solutions LLC

Type III 24-hr 100-yr Rainfall=7.79"

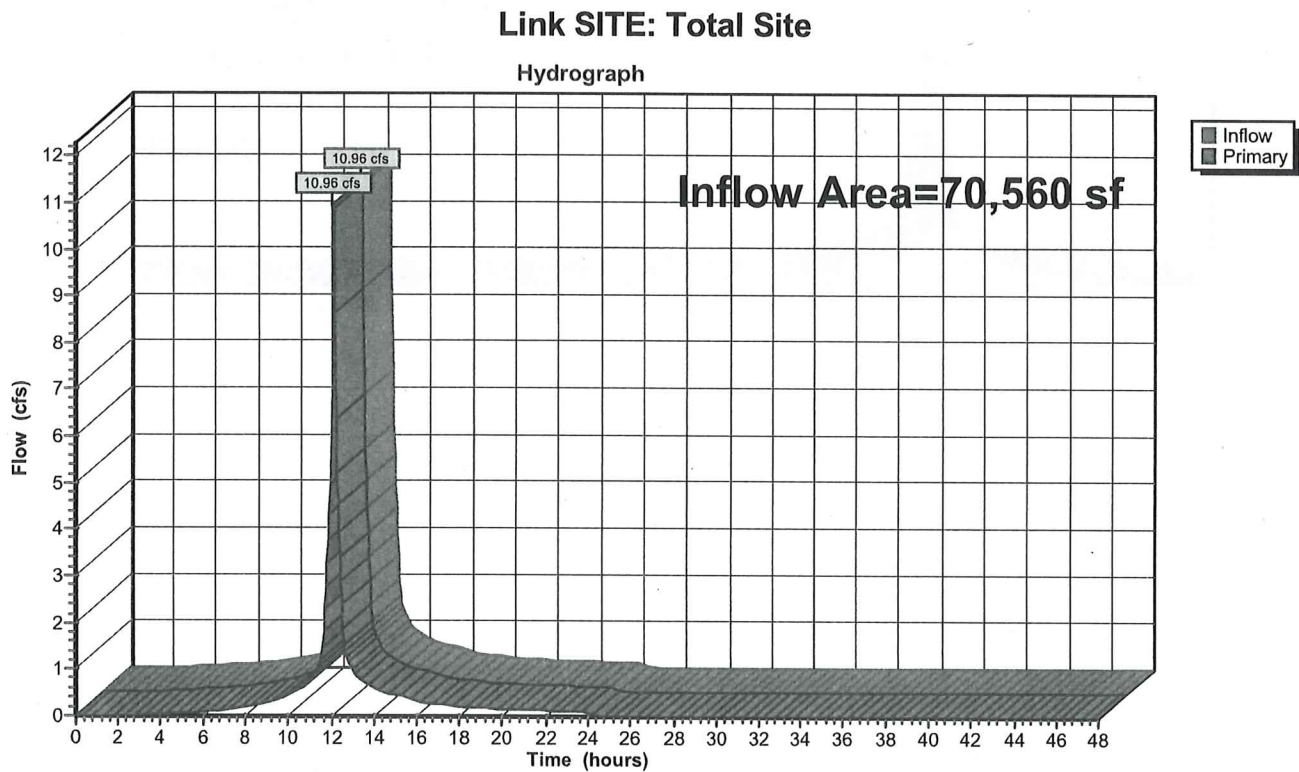
Printed 11/12/2024

Page 30

Summary for Link SITE: Total Site

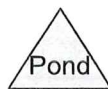
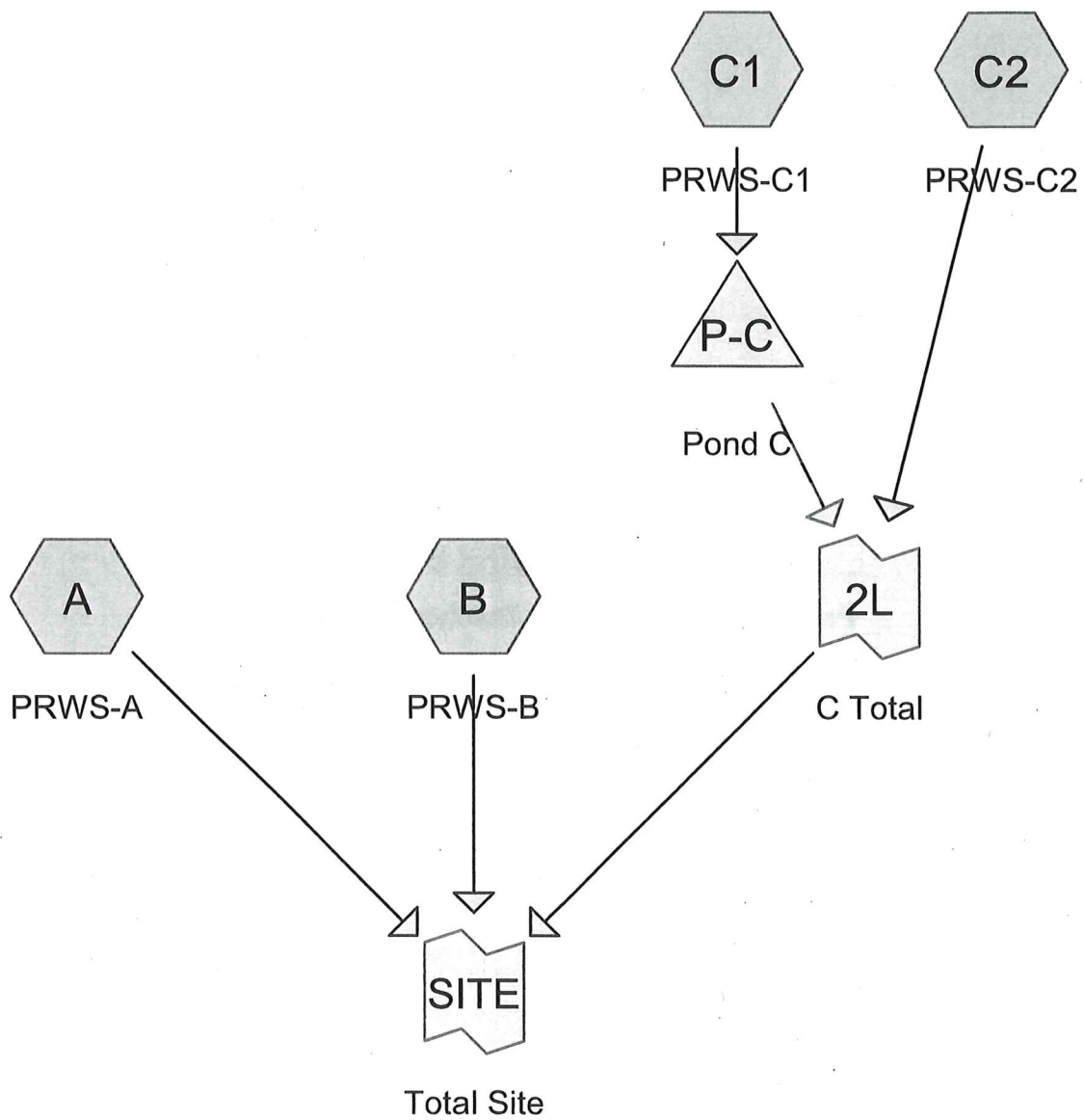
Inflow Area = 70,560 sf, 73.82% Impervious, Inflow Depth = 6.39" for 100-yr event
Inflow = 10.96 cfs @ 12.09 hrs, Volume= 37,567 cf
Primary = 10.96 cfs @ 12.09 hrs, Volume= 37,567 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs



APPENDIX B

Proposed Stormwater Discharge Calculations



Routing Diagram for PR Hydro

Prepared by Langan Engineering, Printed 1/3/2025
 HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Printed 1/3/2025

Page 2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.652	39	>75% Grass cover, Good, HSG A (A, B, C1, C2)
0.206	80	>75% Grass cover, Good, HSG D (B, C1, C2)
0.018	77	Brush, Fair, HSG D (B)
0.013	73	Brush, Good, HSG D (C2)
0.114	98	Paved parking, HSG A (A, B)
0.617	98	Paved parking, HSG D (C1)
1.620	72	TOTAL AREA

PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 2-yr Rainfall=3.45"

Printed 1/3/2025

Page 3

Time span=0.00-48.00 hrs, dt=0.03 hrs, 1601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment A: PRWS-A

Runoff Area=16,220 sf 29.90% Impervious Runoff Depth=0.40"
Flow Length=68' Slope=0.0440 '/' Tc=6.0 min CN=57 Runoff=0.09 cfs 0.012 af

Subcatchment B: PRWS-B

Runoff Area=3,874 sf 3.02% Impervious Runoff Depth=0.33"
Flow Length=45' Slope=0.0389 '/' Tc=6.0 min CN=55 Runoff=0.01 cfs 0.002 af

Subcatchment C1: PRWS-C1

Runoff Area=45,321 sf 59.33% Impervious Runoff Depth=1.46"
Flow Length=205' Tc=6.8 min CN=78 Runoff=1.70 cfs 0.127 af

Subcatchment C2: PRWS-C2

Runoff Area=5,156 sf 0.00% Impervious Runoff Depth=1.21"
Flow Length=74' Slope=0.0610 '/' Tc=6.0 min CN=74 Runoff=0.16 cfs 0.012 af

Pond P-C: Pond C

Peak Elev=32.09' Storage=2,079 cf Inflow=1.70 cfs 0.127 af
Discarded=0.09 cfs 0.102 af Primary=0.29 cfs 0.025 af Secondary=0.00 cfs 0.000 af Outflow=0.38 cfs 0.127 af

Link 2L: C Total

Inflow=0.32 cfs 0.037 af
Primary=0.32 cfs 0.037 af

Link SITE: Total Site

Inflow=0.38 cfs 0.052 af
Primary=0.38 cfs 0.052 af

Total Runoff Area = 1.620 ac Runoff Volume = 0.153 af Average Runoff Depth = 1.13"
54.86% Pervious = 0.889 ac 45.14% Impervious = 0.731 ac

Summary for Subcatchment A: PRWS-A

Runoff = 0.09 cfs @ 12.14 hrs, Volume= 0.012 af, Depth= 0.40"
 Routed to Link SITE : Total Site

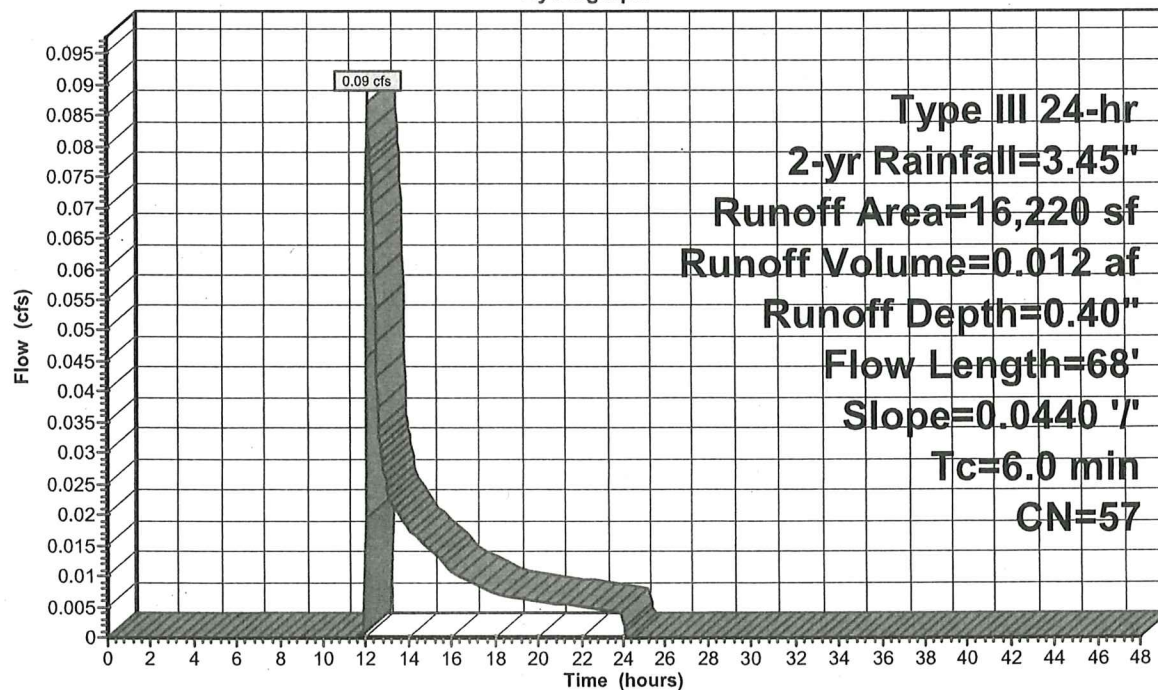
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
11,370	39	>75% Grass cover, Good, HSG A
4,850	98	Paved parking, HSG A
16,220	57	Weighted Average
11,370		70.10% Pervious Area
4,850		29.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	68	0.0440	0.22		Sheet Flow, Segment 1
					Grass: Short n= 0.150 P2= 3.43"
5.1	68	Total, Increased to minimum Tc = 6.0 min			

**Subcatchment A: PRWS-A**

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 2-yr Rainfall=3.45"

Printed 1/3/2025

Page 5

Summary for Subcatchment B: PRWS-B

Runoff = 0.01 cfs @ 12.28 hrs, Volume= 0.002 af, Depth= 0.33"
Routed to Link SITE : Total Site

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type III 24-hr 2-yr Rainfall=3.45"

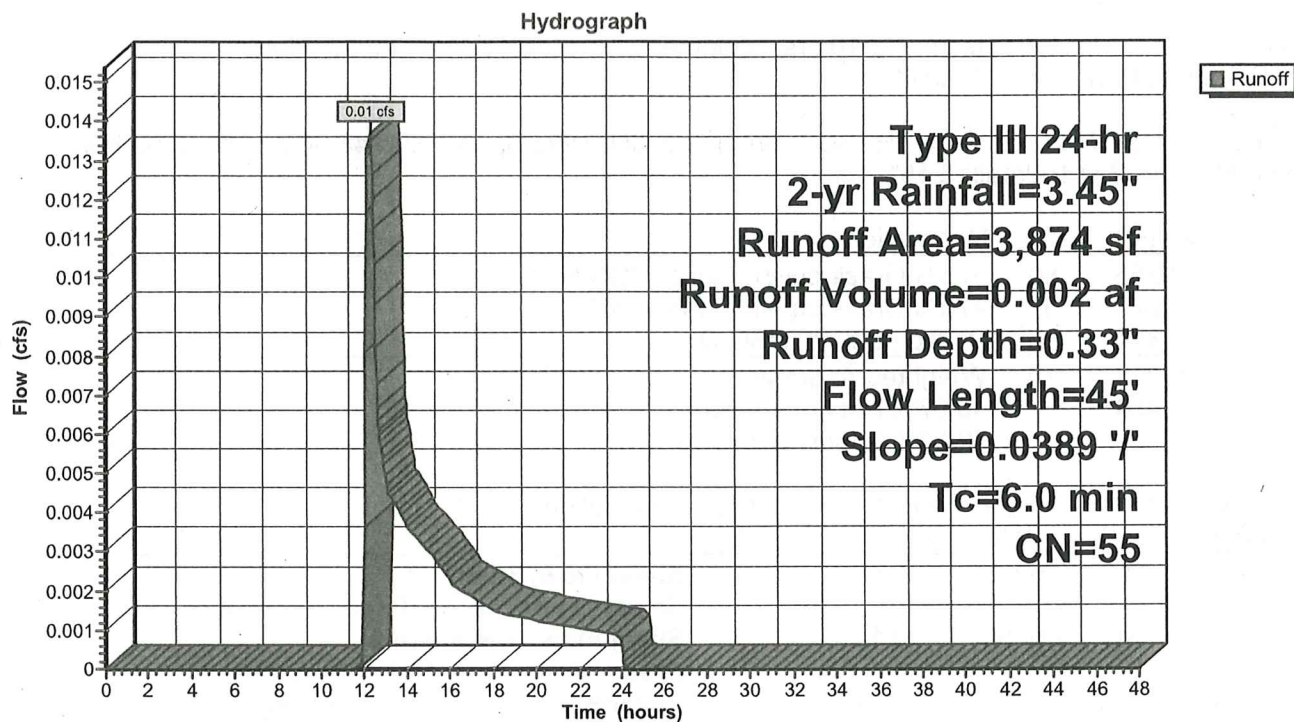
Area (sf)	CN	Description
2,337	39	>75% Grass cover, Good, HSG A
648	80	>75% Grass cover, Good, HSG D
772	77	Brush, Fair, HSG D
117	98	Paved parking, HSG A
3,874	55	Weighted Average
3,757		96.98% Pervious Area
117		3.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	45	0.0389	0.20		Sheet Flow, Segment 1
					Grass: Short n= 0.150 P2= 3.43"
3.8	45	Total, Increased to minimum Tc = 6.0 min			

Segment 1

Subcatchment B: PRWS-B

Subcatchment B: PRWS-B



Summary for Subcatchment C1: PRWS-C1

Runoff = 1.70 cfs @ 12.10 hrs, Volume= 0.127 af, Depth= 1.46"
 Routed to Pond P-C : Pond C

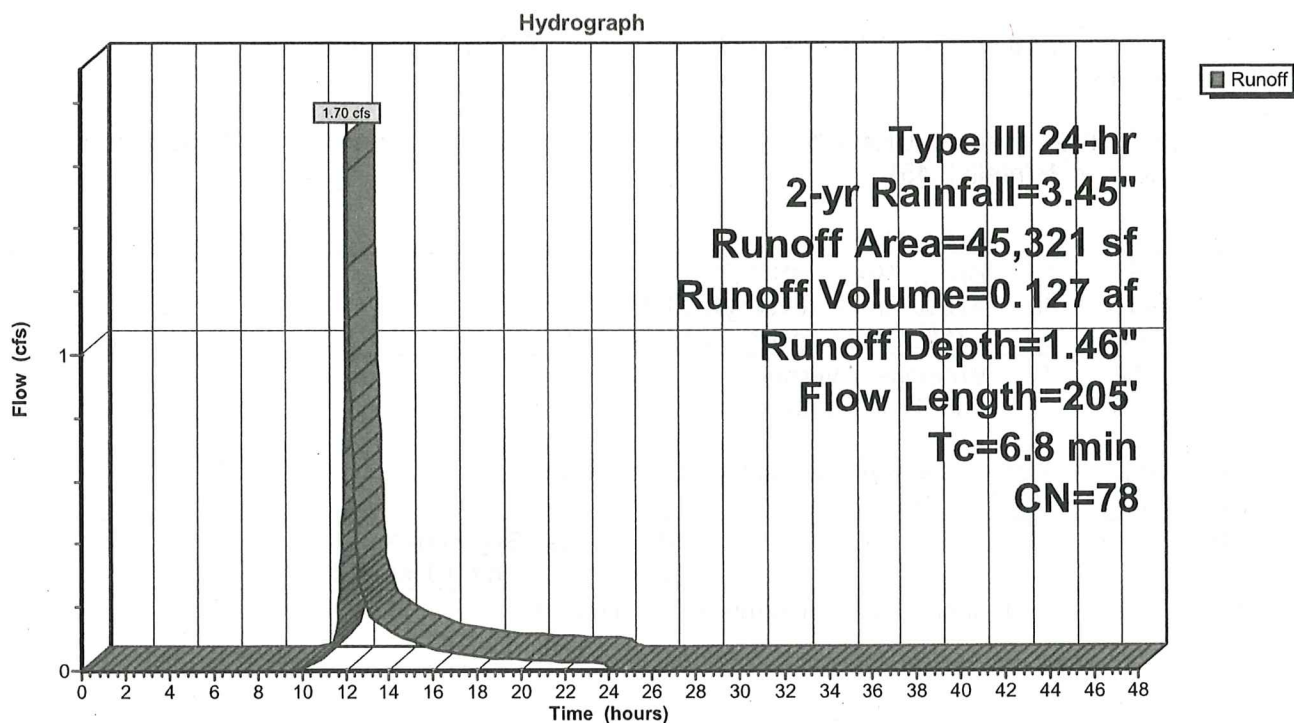
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
4,355	80	>75% Grass cover, Good, HSG D
14,079	39	>75% Grass cover, Good, HSG A
26,887	98	Paved parking, HSG D
45,321	78	Weighted Average
18,434		40.67% Pervious Area
26,887		59.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	109	0.0250	1.58		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
5.2	41	0.0150	0.13		Sheet Flow, Segment 2 Grass: Short n= 0.150 P2= 3.43"
0.5	55	0.0150	1.84		Shallow Concentrated Flow, Segment 3 Grassed Waterway Kv= 15.0 fps
6.8	205	Total			



Subcatchment C1: PRWS-C1



Summary for Subcatchment C2: PRWS-C2

Runoff = 0.16 cfs @ 12.10 hrs, Volume= 0.012 af, Depth= 1.21"
 Routed to Link 2L : C Total

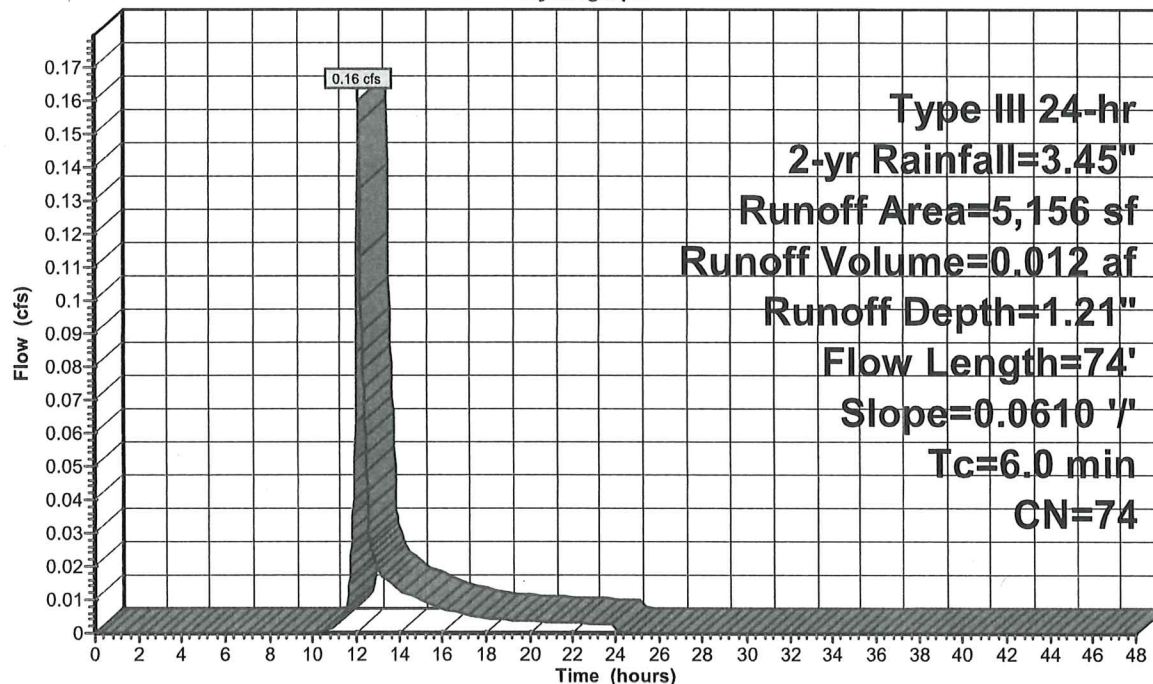
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Type III 24-hr 2-yr Rainfall=3.45"

Area (sf)	CN	Description
557	73	Brush, Good, HSG D
3,991	80	>75% Grass cover, Good, HSG D
608	39	>75% Grass cover, Good, HSG A
5,156	74	Weighted Average
5,156		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	74	0.0610	0.26		Sheet Flow, Segment 1
					Grass: Short n= 0.150 P2= 3.43"
4.8	74	Total, Increased to minimum Tc = 6.0 min			

**Subcatchment C2: PRWS-C2**

Hydrograph



Summary for Pond P-C: Pond C

Inflow Area =	1.040 ac,	59.33% Impervious,	Inflow Depth = 1.46"	for 2-yr event
Inflow =	1.70 cfs @	12.10 hrs,	Volume=	0.127 af
Outflow =	0.38 cfs @	12.56 hrs,	Volume=	0.127 af, Atten= 78%, Lag= 27.2 min
Discarded =	0.09 cfs @	12.56 hrs,	Volume=	0.102 af
Primary =	0.29 cfs @	12.56 hrs,	Volume=	0.025 af
Routed to Link 2L : C Total				
Secondary =	0.00 cfs @	0.00 hrs,	Volume=	0.000 af
Routed to Link 2L : C Total				

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Peak Elev= 32.09' @ 12.56 hrs Surf.Area= 3,914 sf Storage= 2,079 cfs

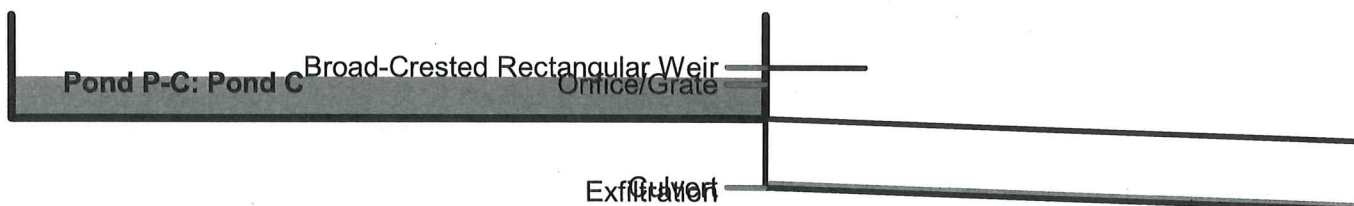
Plug-Flow detention time= 185.8 min calculated for 0.126 af (100% of inflow)
Center-of-Mass det. time= 185.7 min (1,031.6 - 845.9)

Volume	Invert	Avail.Storage	Storage Description	
#1	31.50'	6,050 cf	Custom Stage Data (Conic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
31.50	3,128	0	0	3,128
32.50	4,507	3,797	3,797	4,524
33.00	4,507	2,254	6,050	4,643
Device	Routing	Invert	Outlet Devices	
#1	Discarded	31.50'	1.000 in/hr Exfiltration over Wetted area	
#2	Primary	30.50'	12.0" Round Culvert L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 30.50' / 30.20' S= 0.0100 ' / Cc= 0.900 n= 0.010, Flow Area= 0.79 sf	
#3	Device 2	32.00'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads	
#4	Secondary	32.25'	10.0' long x 5.0' breadth Broad-Crested Rectangular Weir 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) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88	

Discarded OutFlow Max=0.09 cfs @ 12.56 hrs HW=32.09' (Free Discharge)
 ↑ 1=Exfiltration (Exfiltration Controls 0.09 cfs)

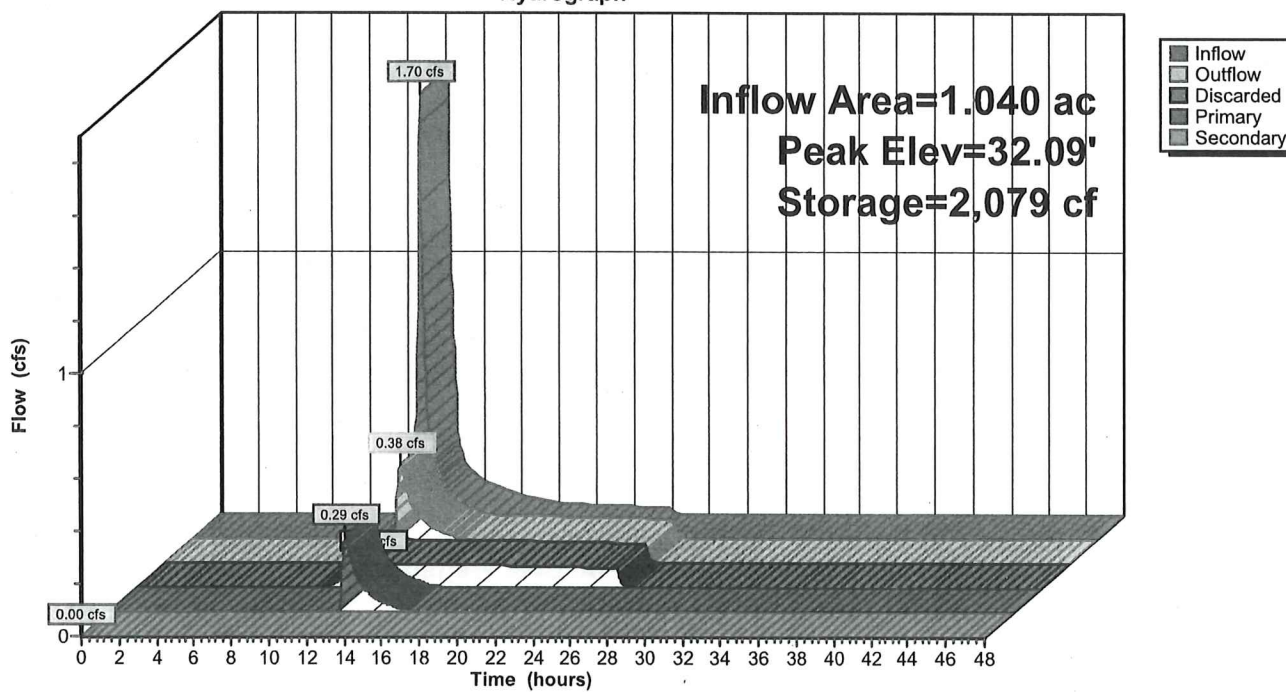
Primary OutFlow Max=0.28 cfs @ 12.56 hrs HW=32.09' (Free Discharge)
 ↳ **2=Culvert** (Passes 0.28 cfs of 3.12 cfs potential flow)
 ↳ **3=Orifice/Grate** (Weir Controls 0.28 cfs @ 0.99 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=31.50' (Free Discharge)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)



Pond P-C: Pond C

Hydrograph



Stage-Discharge for Pond P-C: Pond C

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
31.50	0.00	0.00	0.00	0.00
31.55	0.07	0.07	0.00	0.00
31.60	0.08	0.08	0.00	0.00
31.65	0.08	0.08	0.00	0.00
31.70	0.08	0.08	0.00	0.00
31.75	0.08	0.08	0.00	0.00
31.80	0.08	0.08	0.00	0.00
31.85	0.08	0.08	0.00	0.00
31.90	0.08	0.08	0.00	0.00
31.95	0.09	0.09	0.00	0.00
32.00	0.09	0.09	0.00	0.00
32.05	0.20	0.09	0.11	0.00
32.10	0.42	0.09	0.32	0.00
32.15	0.69	0.09	0.60	0.00
32.20	1.01	0.09	0.92	0.00
32.25	1.38	0.10	1.28	0.00
32.30	2.05	0.10	1.69	0.26
32.35	2.97	0.10	2.13	0.74
32.40	3.85	0.10	2.39	1.36
32.45	4.73	0.10	2.54	2.09
32.50	5.75	0.10	2.67	2.97
32.55	6.89	0.11	2.80	3.98
32.60	8.13	0.11	2.93	5.09
32.65	9.48	0.11	3.05	6.32
32.70	10.97	0.11	3.16	7.70
32.75	12.57	0.11	3.28	9.19
32.80	14.30	0.11	3.38	10.81
32.85	16.14	0.11	3.49	12.55
32.90	17.82	0.11	3.59	14.12
32.95	19.55	0.11	3.69	15.75
33.00	21.33	0.11	3.78	17.44

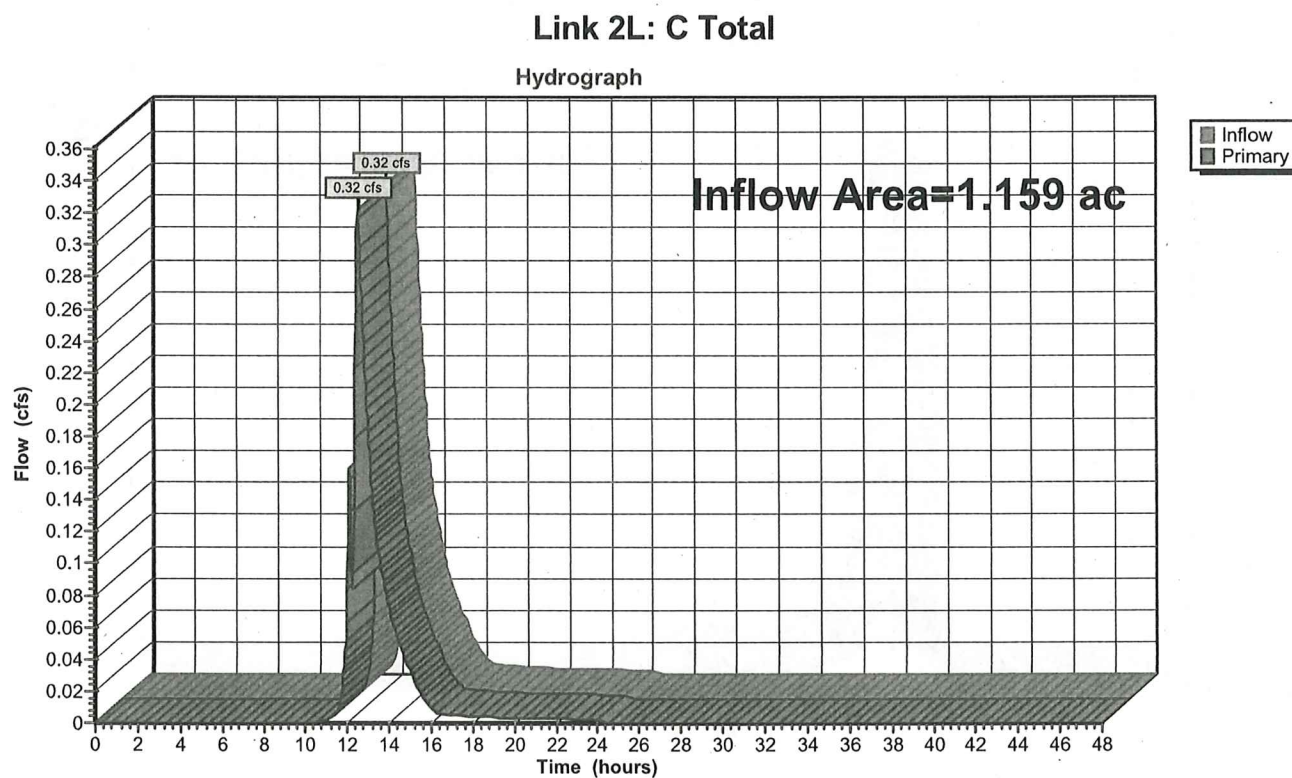
Stage-Area-Storage for Pond P-C: Pond C

Elevation (feet)	Surface (sq-ft)	Wetted (sq-ft)	Storage (cubic-feet)
31.50	3,128	3,128	0
31.55	3,191	3,192	158
31.60	3,255	3,256	319
31.65	3,319	3,321	483
31.70	3,384	3,387	651
31.75	3,449	3,453	822
31.80	3,515	3,520	996
31.85	3,582	3,588	1,173
31.90	3,649	3,656	1,354
31.95	3,717	3,725	1,538
32.00	3,786	3,794	1,726
32.05	3,855	3,864	1,917
32.10	3,925	3,935	2,111
32.15	3,996	4,007	2,309
32.20	4,067	4,079	2,511
32.25	4,139	4,151	2,716
32.30	4,211	4,225	2,925
32.35	4,284	4,299	3,137
32.40	4,358	4,373	3,353
32.45	4,432	4,448	3,573
32.50	4,507	4,524	3,797
32.55	4,507	4,536	4,022
32.60	4,507	4,548	4,247
32.65	4,507	4,560	4,473
32.70	4,507	4,572	4,698
32.75	4,507	4,584	4,923
32.80	4,507	4,596	5,149
32.85	4,507	4,607	5,374
32.90	4,507	4,619	5,599
32.95	4,507	4,631	5,825
33.00	4,507	4,643	6,050

Summary for Link 2L: C Total

Inflow Area = 1.159 ac, 53.27% Impervious, Inflow Depth = 0.38" for 2-yr event
Inflow = 0.32 cfs @ 12.53 hrs, Volume= 0.037 af
Primary = 0.32 cfs @ 12.53 hrs, Volume= 0.037 af, Atten= 0%, Lag= 0.0 min
Routed to Link SITE : Total Site

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs



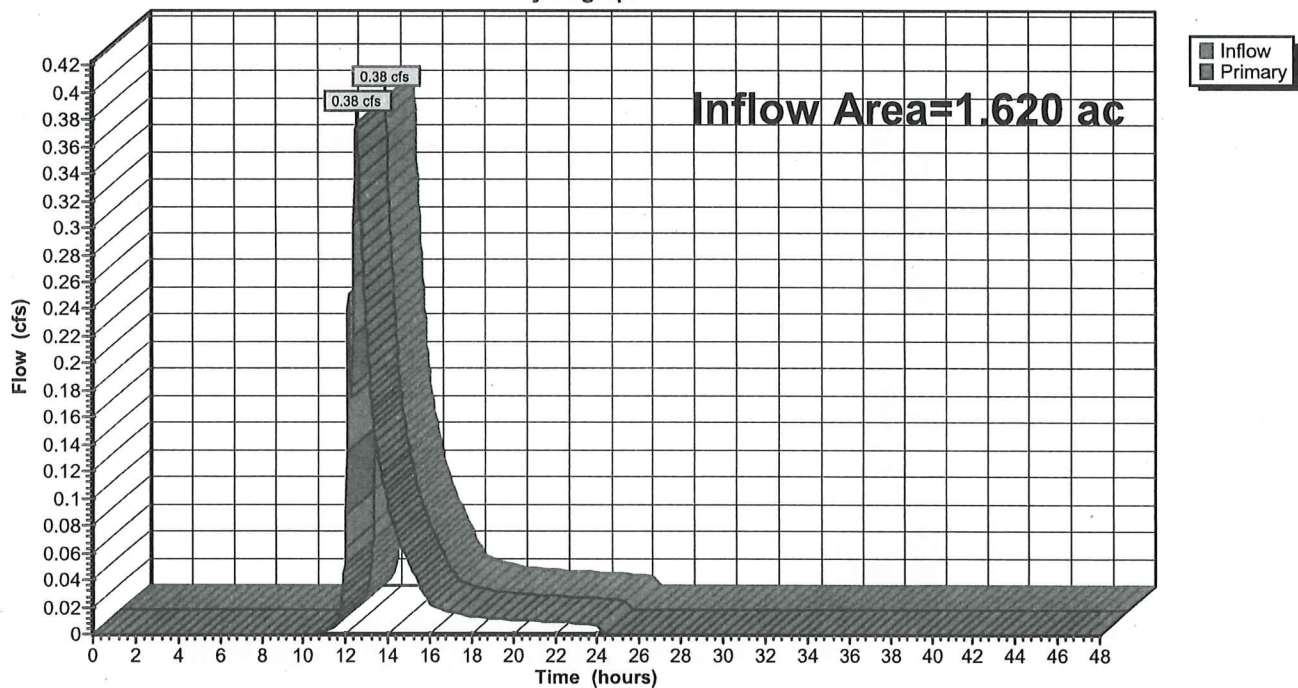
Summary for Link SITE: Total Site

Inflow Area = 1.620 ac, 45.14% Impervious, Inflow Depth = 0.38" for 2-yr event
Inflow = 0.38 cfs @ 12.51 hrs, Volume= 0.052 af
Primary = 0.38 cfs @ 12.51 hrs, Volume= 0.052 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs

Link SITE: Total Site

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 10-yr Rainfall=5.13"

Printed 1/3/2025

Page 16

Time span=0.00-48.00 hrs, dt=0.03 hrs, 1601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment A: PRWS-ARunoff Area=16,220 sf 29.90% Impervious Runoff Depth=1.17"
Flow Length=68' Slope=0.0440 '/' Tc=6.0 min CN=57 Runoff=0.44 cfs 0.036 af**Subcatchment B: PRWS-B**Runoff Area=3,874 sf 3.02% Impervious Runoff Depth=1.05"
Flow Length=45' Slope=0.0389 '/' Tc=6.0 min CN=55 Runoff=0.09 cfs 0.008 af**Subcatchment C1: PRWS-C1**Runoff Area=45,321 sf 59.33% Impervious Runoff Depth=2.82"
Flow Length=205' Tc=6.8 min CN=78 Runoff=3.33 cfs 0.245 af**Subcatchment C2: PRWS-C2**Runoff Area=5,156 sf 0.00% Impervious Runoff Depth=2.47"
Flow Length=74' Slope=0.0610 '/' Tc=6.0 min CN=74 Runoff=0.34 cfs 0.024 af**Pond P-C: Pond C**Peak Elev=32.29' Storage=2,897 cf Inflow=3.33 cfs 0.245 af
Discarded=0.10 cfs 0.127 af Primary=1.63 cfs 0.115 af Secondary=0.21 cfs 0.003 af Outflow=1.94 cfs 0.245 af**Link 2L: C Total**Inflow=2.04 cfs 0.142 af
Primary=2.04 cfs 0.142 af**Link SITE: Total Site**Inflow=2.39 cfs 0.186 af
Primary=2.39 cfs 0.186 af**Total Runoff Area = 1.620 ac Runoff Volume = 0.313 af Average Runoff Depth = 2.32"**
54.86% Pervious = 0.889 ac 45.14% Impervious = 0.731 ac

Summary for Subcatchment A: PRWS-A

Runoff = 0.44 cfs @ 12.10 hrs, Volume= 0.036 af, Depth= 1.17"
 Routed to Link SITE : Total Site

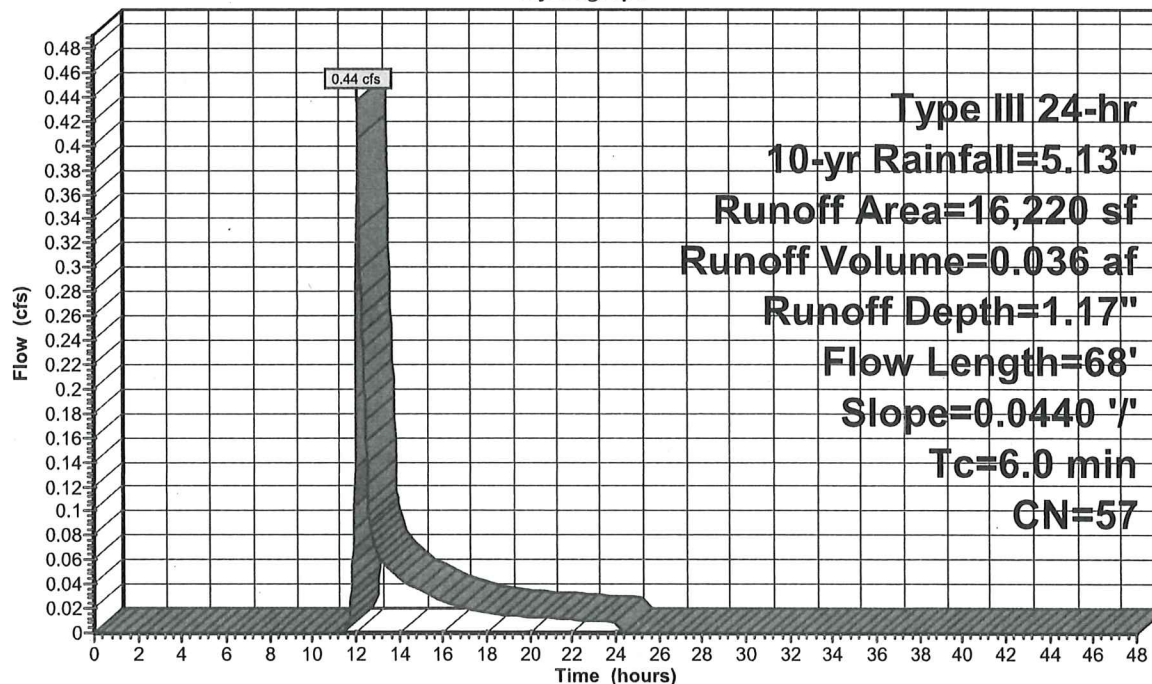
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Type III 24-hr 10-yr Rainfall=5.13"

Area (sf)	CN	Description
11,370	39	>75% Grass cover, Good, HSG A
4,850	98	Paved parking, HSG A
16,220	57	Weighted Average
11,370		70.10% Pervious Area
4,850		29.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	68	0.0440	0.22		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"
5.1	68	Total, Increased to minimum Tc = 6.0 min			

**Subcatchment A: PRWS-A**

Hydrograph



Summary for Subcatchment B: PRWS-B

Runoff = 0.09 cfs @ 12.11 hrs, Volume= 0.008 af, Depth= 1.05"
 Routed to Link SITE : Total Site

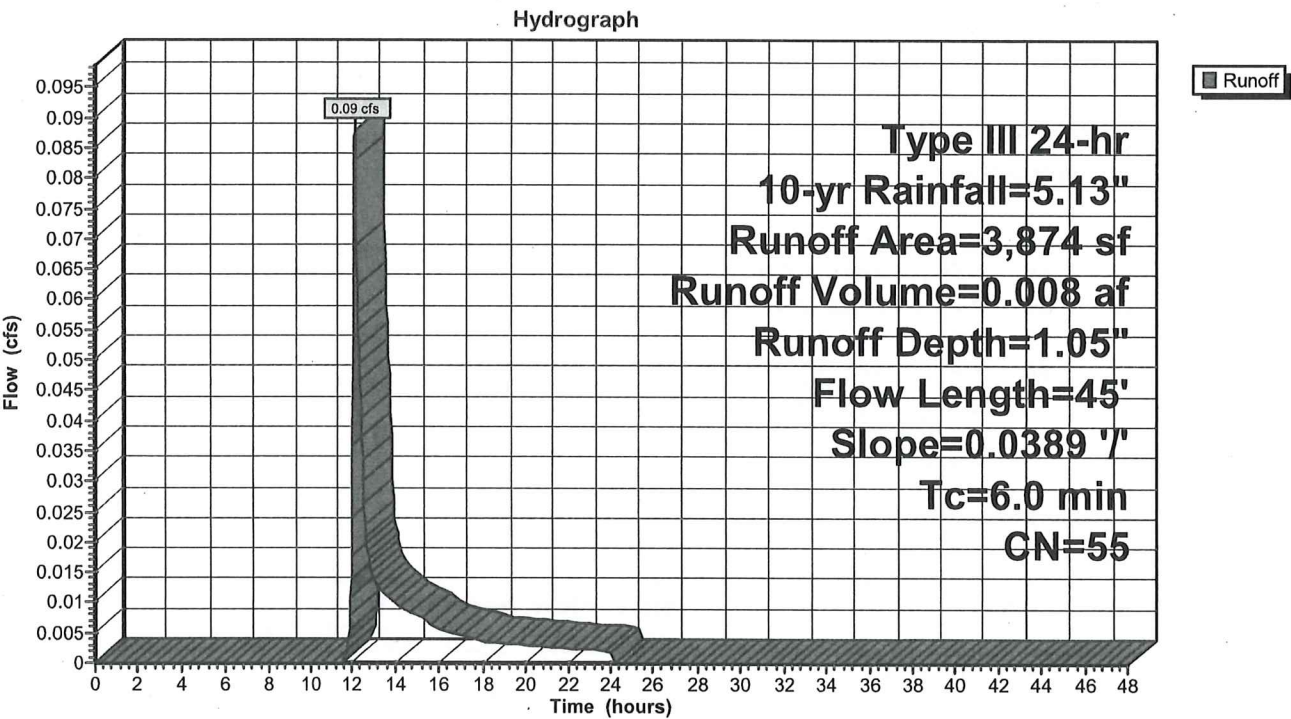
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Type III 24-hr 10-yr Rainfall=5.13"

Area (sf)	CN	Description
2,337	39	>75% Grass cover, Good, HSG A
648	80	>75% Grass cover, Good, HSG D
772	77	Brush, Fair, HSG D
117	98	Paved parking, HSG A
3,874	55	Weighted Average
3,757		96.98% Pervious Area
117		3.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	45	0.0389	0.20		Sheet Flow, Segment 1
					Grass: Short n= 0.150 P2= 3.43"
3.8	45	Total, Increased to minimum Tc = 6.0 min			



Subcatchment B: PRWS-B



Summary for Subcatchment C1: PRWS-C1

Runoff = 3.33 cfs @ 12.10 hrs, Volume= 0.245 af, Depth= 2.82"
 Routed to Pond P-C : Pond C

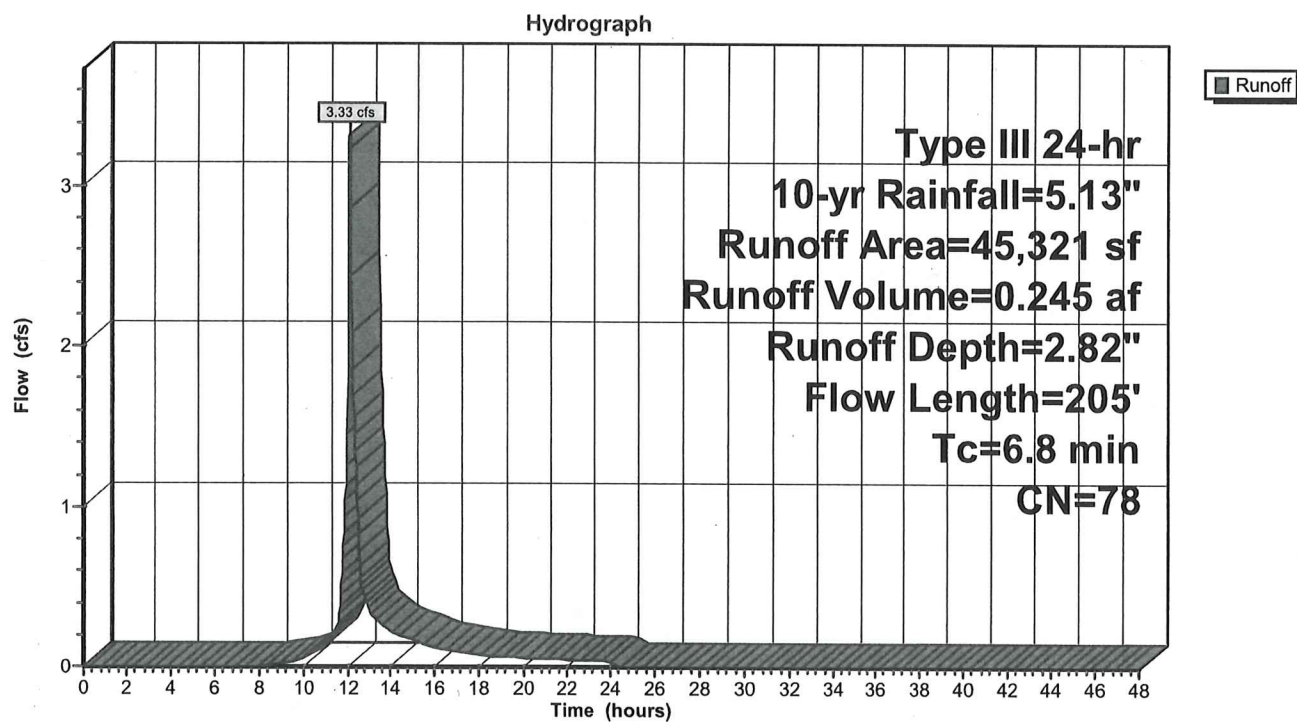
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Type III 24-hr 10-yr Rainfall=5.13"

Area (sf)	CN	Description
4,355	80	>75% Grass cover, Good, HSG D
14,079	39	>75% Grass cover, Good, HSG A
26,887	98	Paved parking, HSG D
45,321	78	Weighted Average
18,434		40.67% Pervious Area
26,887		59.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	109	0.0250	1.58		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
5.2	41	0.0150	0.13		Sheet Flow, Segment 2 Grass: Short n= 0.150 P2= 3.43"
0.5	55	0.0150	1.84		Shallow Concentrated Flow, Segment 3 Grassed Waterway Kv= 15.0 fps
6.8	205	Total			



Subcatchment C1: PRWS-C1



Summary for Subcatchment C2: PRWS-C2

Runoff = 0.34 cfs @ 12.09 hrs, Volume= 0.024 af, Depth= 2.47"
 Routed to Link 2L : C Total

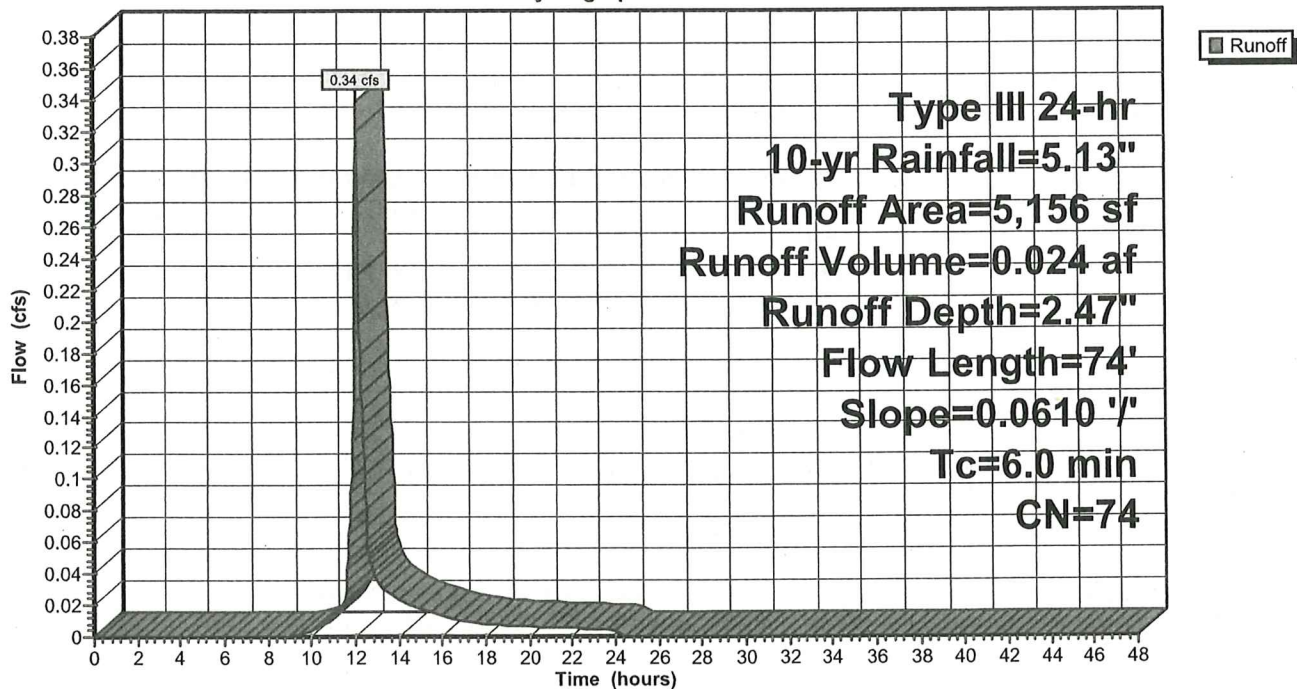
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Type III 24-hr 10-yr Rainfall=5.13"

Area (sf)	CN	Description
557	73	Brush, Good, HSG D
3,991	80	>75% Grass cover, Good, HSG D
608	39	>75% Grass cover, Good, HSG A
5,156	74	Weighted Average
5,156		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	74	0.0610	0.26		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"
4.8	74	Total, Increased to minimum Tc = 6.0 min			

**Subcatchment C2: PRWS-C2**

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 10-yr Rainfall=5.13"

Printed 1/3/2025

Page 23

Summary for Pond P-C: Pond C

Inflow Area = 1.040 ac, 59.33% Impervious, Inflow Depth = 2.82" for 10-yr event
 Inflow = 3.33 cfs @ 12.10 hrs, Volume= 0.245 af
 Outflow = 1.94 cfs @ 12.23 hrs, Volume= 0.245 af, Atten= 42%, Lag= 8.0 min
 Discarded = 0.10 cfs @ 12.23 hrs, Volume= 0.127 af
 Primary = 1.63 cfs @ 12.23 hrs, Volume= 0.115 af
 Routed to Link 2L : C Total
 Secondary = 0.21 cfs @ 12.23 hrs, Volume= 0.003 af
 Routed to Link 2L : C Total

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Peak Elev= 32.29' @ 12.23 hrs Surf.Area= 4,201 sf Storage= 2,897 cf

Plug-Flow detention time= 131.0 min calculated for 0.245 af (100% of inflow)
 Center-of-Mass det. time= 130.9 min (957.6 - 826.7)

Volume	Invert	Avail.Storage	Storage Description
#1	31.50'	6,050 cf	Custom Stage Data (Conic) Listed below (Recalc)

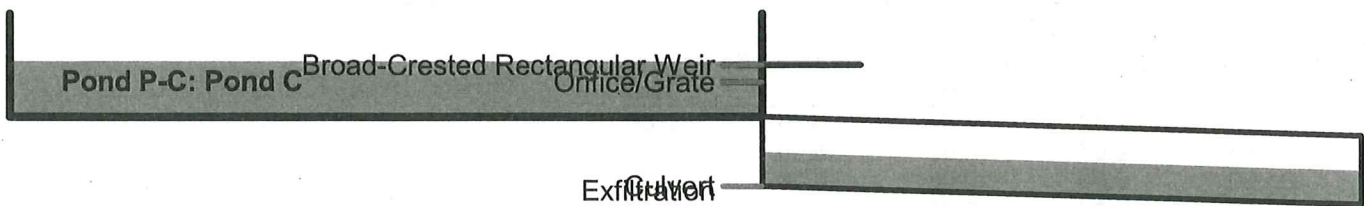
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
31.50	3,128	0	0	3,128
32.50	4,507	3,797	3,797	4,524
33.00	4,507	2,254	6,050	4,643

Device	Routing	Invert	Outlet Devices
#1	Discarded	31.50'	1.000 in/hr Exfiltration over Wetted area
#2	Primary	30.50'	12.0" Round Culvert L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 30.50' / 30.20' S= 0.0100 ' / ' Cc= 0.900 n= 0.010, Flow Area= 0.79 sf
#3	Device 2	32.00'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	32.25'	10.0' long x 5.0' breadth Broad-Crested Rectangular Weir 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) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.10 cfs @ 12.23 hrs HW=32.29' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.10 cfs)

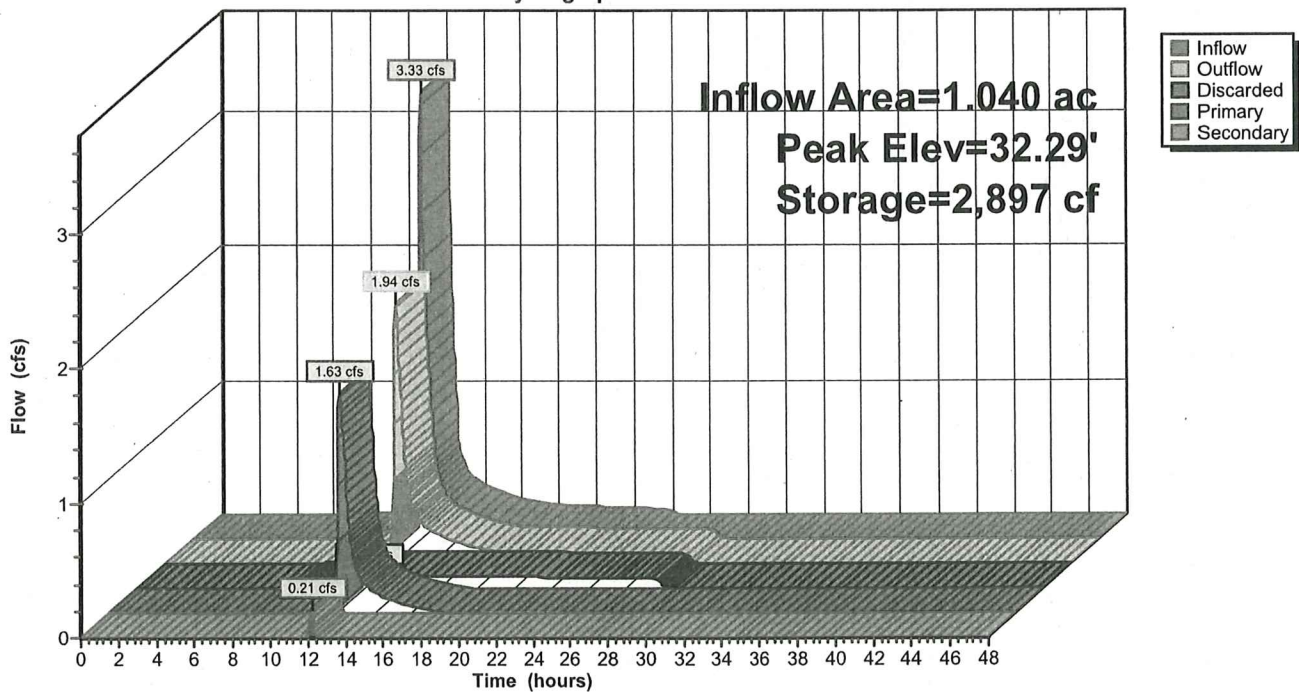
Primary OutFlow Max=1.63 cfs @ 12.23 hrs HW=32.29' (Free Discharge)
 ↑ **2=Culvert** (Passes 1.63 cfs of 3.39 cfs potential flow)
 ↑ **3=Orifice/Grate** (Weir Controls 1.63 cfs @ 1.77 fps)

Secondary OutFlow Max=0.21 cfs @ 12.23 hrs HW=32.29' (Free Discharge)
 ↑ **4=Broad-Crested Rectangular Weir** (Weir Controls 0.21 cfs @ 0.48 fps)



Pond P-C: Pond C

Hydrograph



Stage-Discharge for Pond P-C: Pond C

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
31.50	0.00	0.00	0.00	0.00
31.55	0.07	0.07	0.00	0.00
31.60	0.08	0.08	0.00	0.00
31.65	0.08	0.08	0.00	0.00
31.70	0.08	0.08	0.00	0.00
31.75	0.08	0.08	0.00	0.00
31.80	0.08	0.08	0.00	0.00
31.85	0.08	0.08	0.00	0.00
31.90	0.08	0.08	0.00	0.00
31.95	0.09	0.09	0.00	0.00
32.00	0.09	0.09	0.00	0.00
32.05	0.20	0.09	0.11	0.00
32.10	0.42	0.09	0.32	0.00
32.15	0.69	0.09	0.60	0.00
32.20	1.01	0.09	0.92	0.00
32.25	1.38	0.10	1.28	0.00
32.30	2.05	0.10	1.69	0.26
32.35	2.97	0.10	2.13	0.74
32.40	3.85	0.10	2.39	1.36
32.45	4.73	0.10	2.54	2.09
32.50	5.75	0.10	2.67	2.97
32.55	6.89	0.11	2.80	3.98
32.60	8.13	0.11	2.93	5.09
32.65	9.48	0.11	3.05	6.32
32.70	10.97	0.11	3.16	7.70
32.75	12.57	0.11	3.28	9.19
32.80	14.30	0.11	3.38	10.81
32.85	16.14	0.11	3.49	12.55
32.90	17.82	0.11	3.59	14.12
32.95	19.55	0.11	3.69	15.75
33.00	21.33	0.11	3.78	17.44

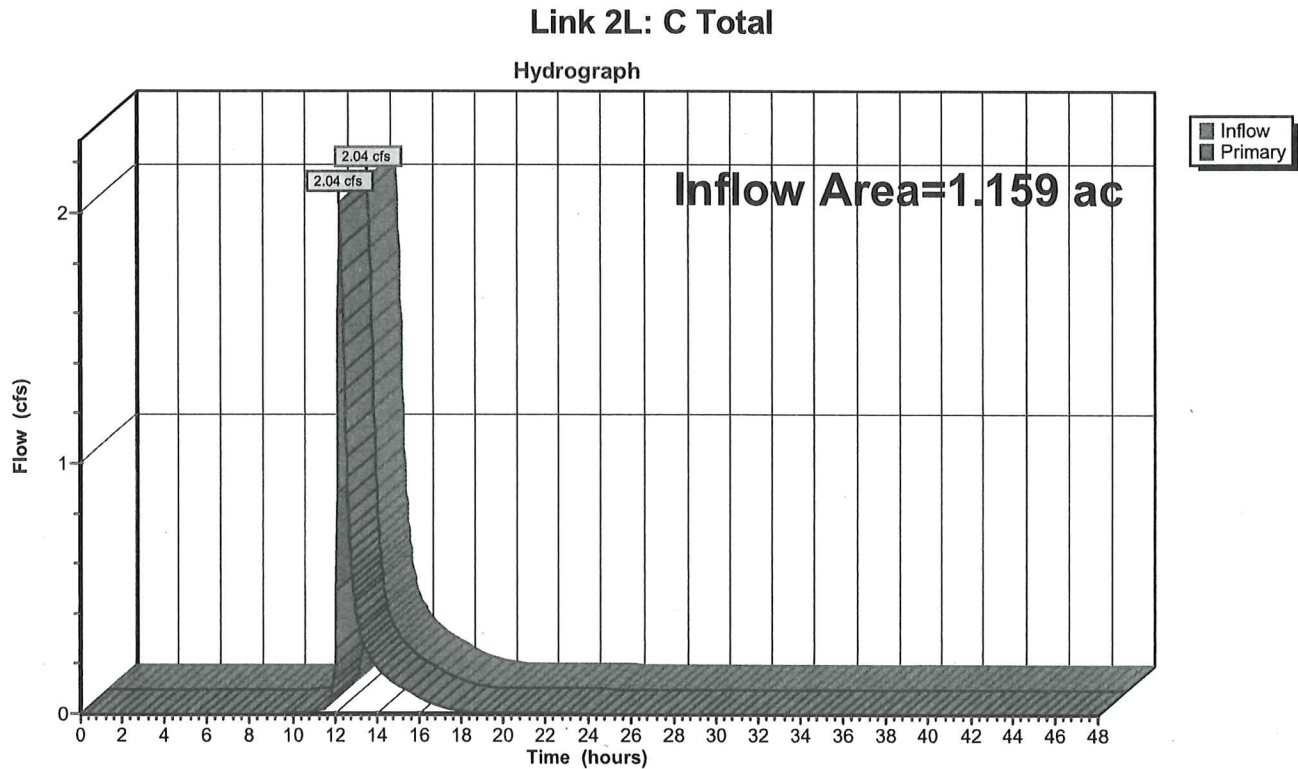
Stage-Area-Storage for Pond P-C: Pond C

Elevation (feet)	Surface (sq-ft)	Wetted (sq-ft)	Storage (cubic-feet)
31.50	3,128	3,128	0
31.55	3,191	3,192	158
31.60	3,255	3,256	319
31.65	3,319	3,321	483
31.70	3,384	3,387	651
31.75	3,449	3,453	822
31.80	3,515	3,520	996
31.85	3,582	3,588	1,173
31.90	3,649	3,656	1,354
31.95	3,717	3,725	1,538
32.00	3,786	3,794	1,726
32.05	3,855	3,864	1,917
32.10	3,925	3,935	2,111
32.15	3,996	4,007	2,309
32.20	4,067	4,079	2,511
32.25	4,139	4,151	2,716
32.30	4,211	4,225	2,925
32.35	4,284	4,299	3,137
32.40	4,358	4,373	3,353
32.45	4,432	4,448	3,573
32.50	4,507	4,524	3,797
32.55	4,507	4,536	4,022
32.60	4,507	4,548	4,247
32.65	4,507	4,560	4,473
32.70	4,507	4,572	4,698
32.75	4,507	4,584	4,923
32.80	4,507	4,596	5,149
32.85	4,507	4,607	5,374
32.90	4,507	4,619	5,599
32.95	4,507	4,631	5,825
33.00	4,507	4,643	6,050

Summary for Link 2L: C Total

Inflow Area = 1.159 ac, 53.27% Impervious, Inflow Depth = 1.47" for 10-yr event
Inflow = 2.04 cfs @ 12.22 hrs, Volume= 0.142 af
Primary = 2.04 cfs @ 12.22 hrs, Volume= 0.142 af, Atten= 0%, Lag= 0.0 min
Routed to Link SITE : Total Site

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs



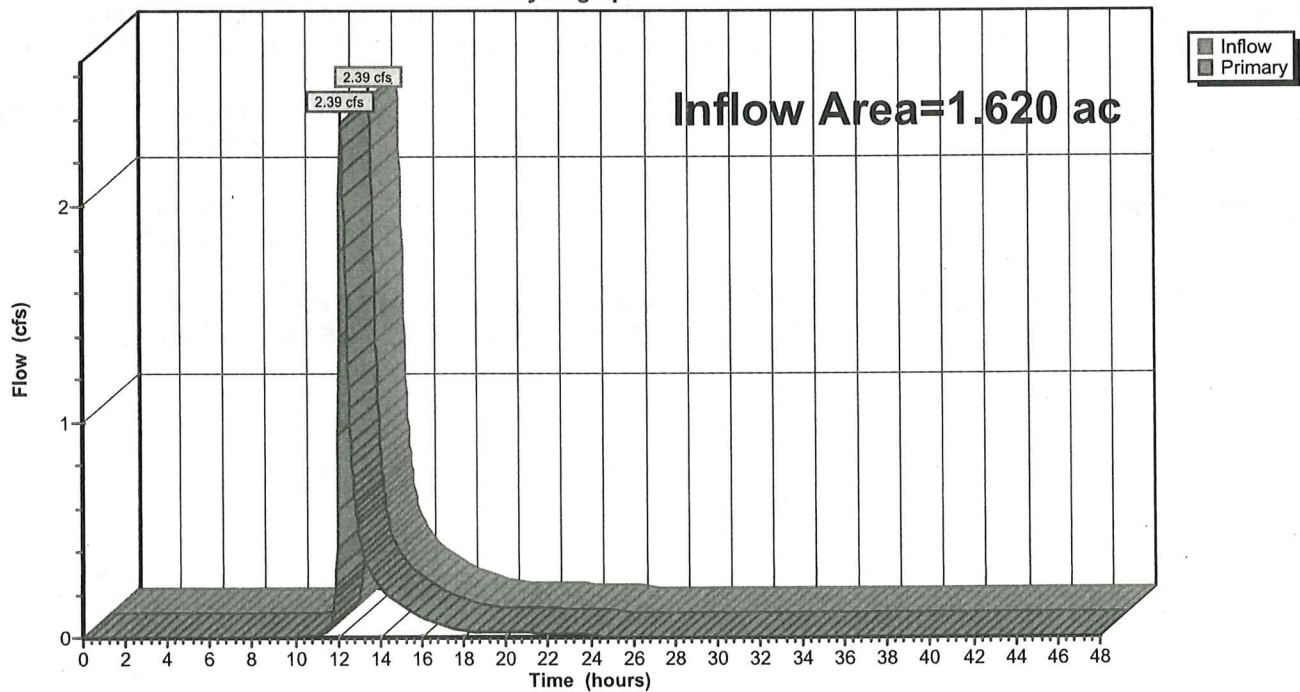
Summary for Link SITE: Total Site

Inflow Area = 1.620 ac, 45.14% Impervious, Inflow Depth = 1.38" for 10-yr event
Inflow = 2.39 cfs @ 12.22 hrs, Volume= 0.186 af
Primary = 2.39 cfs @ 12.22 hrs, Volume= 0.186 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs

Link SITE: Total Site

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 25-yr Rainfall=6.17"

Printed 1/3/2025

Page 29

Time span=0.00-48.00 hrs, dt=0.03 hrs, 1601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment A: PRWS-A

Runoff Area=16,220 sf 29.90% Impervious Runoff Depth=1.78"
Flow Length=68' Slope=0.0440 '/' Tc=6.0 min CN=57 Runoff=0.71 cfs 0.055 af

Subcatchment B: PRWS-B

Runoff Area=3,874 sf 3.02% Impervious Runoff Depth=1.62"
Flow Length=45' Slope=0.0389 '/' Tc=6.0 min CN=55 Runoff=0.15 cfs 0.012 af

Subcatchment C1: PRWS-C1

Runoff Area=45,321 sf 59.33% Impervious Runoff Depth=3.73"
Flow Length=205' Tc=6.8 min CN=78 Runoff=4.40 cfs 0.323 af

Subcatchment C2: PRWS-C2

Runoff Area=5,156 sf 0.00% Impervious Runoff Depth=3.33"
Flow Length=74' Slope=0.0610 '/' Tc=6.0 min CN=74 Runoff=0.46 cfs 0.033 af

Pond P-C: Pond C

Peak Elev=32.38' Storage=3,249 cf Inflow=4.40 cfs 0.323 af
Discarded=0.10 cfs 0.139 af Primary=2.32 cfs 0.166 af Secondary=1.05 cfs 0.018 af Outflow=3.47 cfs 0.323 af

Link 2L: C Total

Inflow=3.73 cfs 0.217 af
Primary=3.73 cfs 0.217 af

Link SITE: Total Site

Inflow=4.44 cfs 0.284 af
Primary=4.44 cfs 0.284 af

Total Runoff Area = 1.620 ac Runoff Volume = 0.423 af Average Runoff Depth = 3.14"
54.86% Pervious = 0.889 ac 45.14% Impervious = 0.731 ac

PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 25-yr Rainfall=6.17"

Printed 1/3/2025

Page 30

Summary for Subcatchment A: PRWS-A

Runoff = 0.71 cfs @ 12.10 hrs, Volume= 0.055 af, Depth= 1.78"
Routed to Link SITE : Total Site

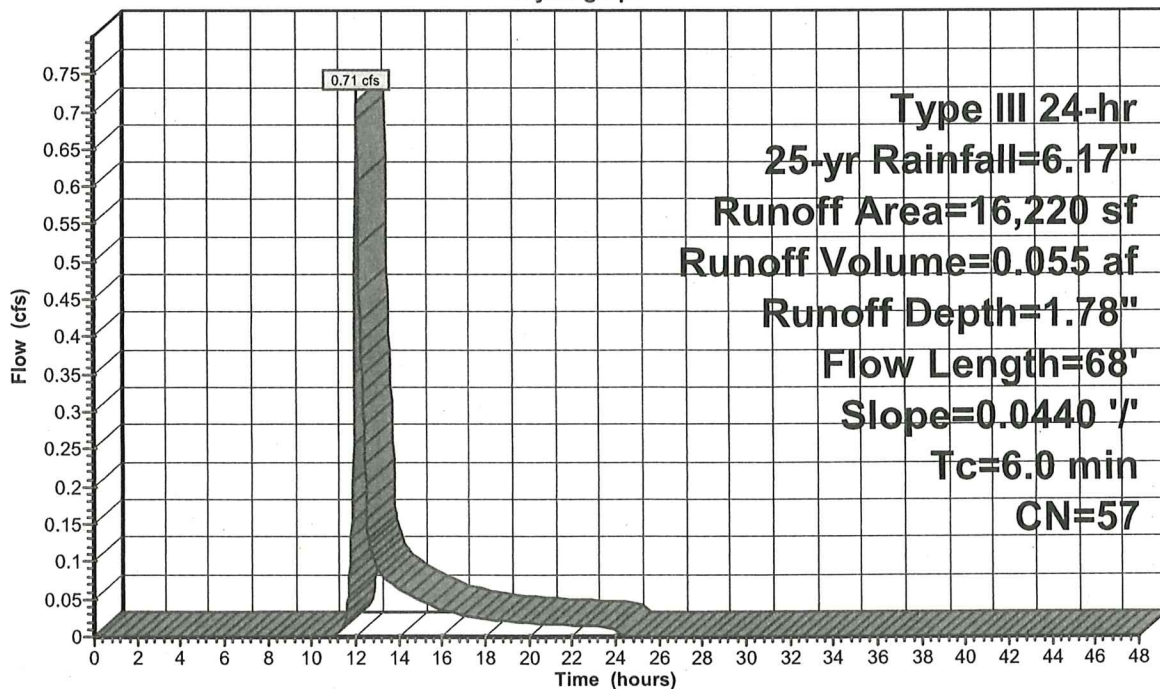
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
11,370	39	>75% Grass cover, Good, HSG A
4,850	98	Paved parking, HSG A
16,220	57	Weighted Average
11,370		70.10% Pervious Area
4,850		29.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	68	0.0440	0.22		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"
5.1	68	Total, Increased to minimum Tc = 6.0 min			

**Subcatchment A: PRWS-A**

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 25-yr Rainfall=6.17"

Printed 1/3/2025

Page 31

Summary for Subcatchment B: PRWS-B

Runoff = 0.15 cfs @ 12.10 hrs, Volume= 0.012 af, Depth= 1.62"
Routed to Link SITE : Total Site

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-yr Rainfall=6.17"

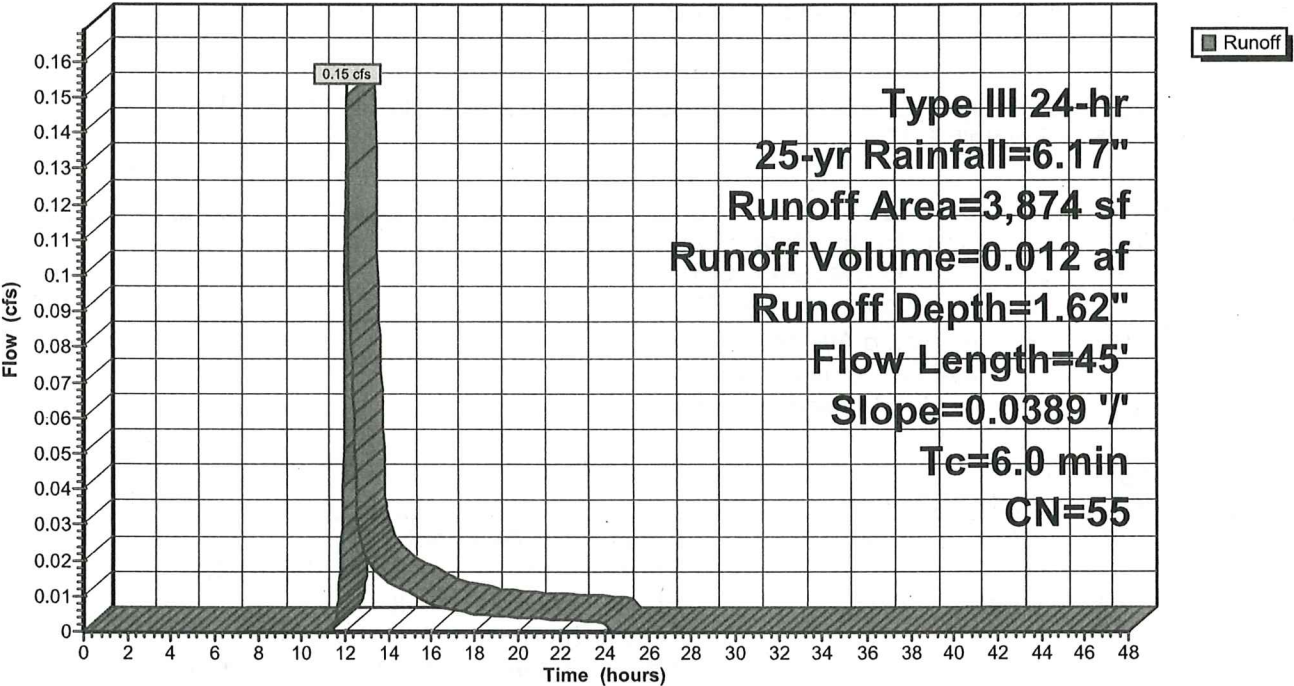
Area (sf)	CN	Description
2,337	39	>75% Grass cover, Good, HSG A
648	80	>75% Grass cover, Good, HSG D
772	77	Brush, Fair, HSG D
117	98	Paved parking, HSG A
3,874	55	Weighted Average
3,757		96.98% Pervious Area
117		3.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	45	0.0389	0.20		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"
3.8	45	Total, Increased to minimum Tc = 6.0 min			



Subcatchment B: PRWS-B

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 25-yr Rainfall=6.17"

Printed 1/3/2025

Page 33

Summary for Subcatchment C1: PRWS-C1

Runoff = 4.40 cfs @ 12.10 hrs, Volume= 0.323 af, Depth= 3.73"

Routed to Pond P-C : Pond C

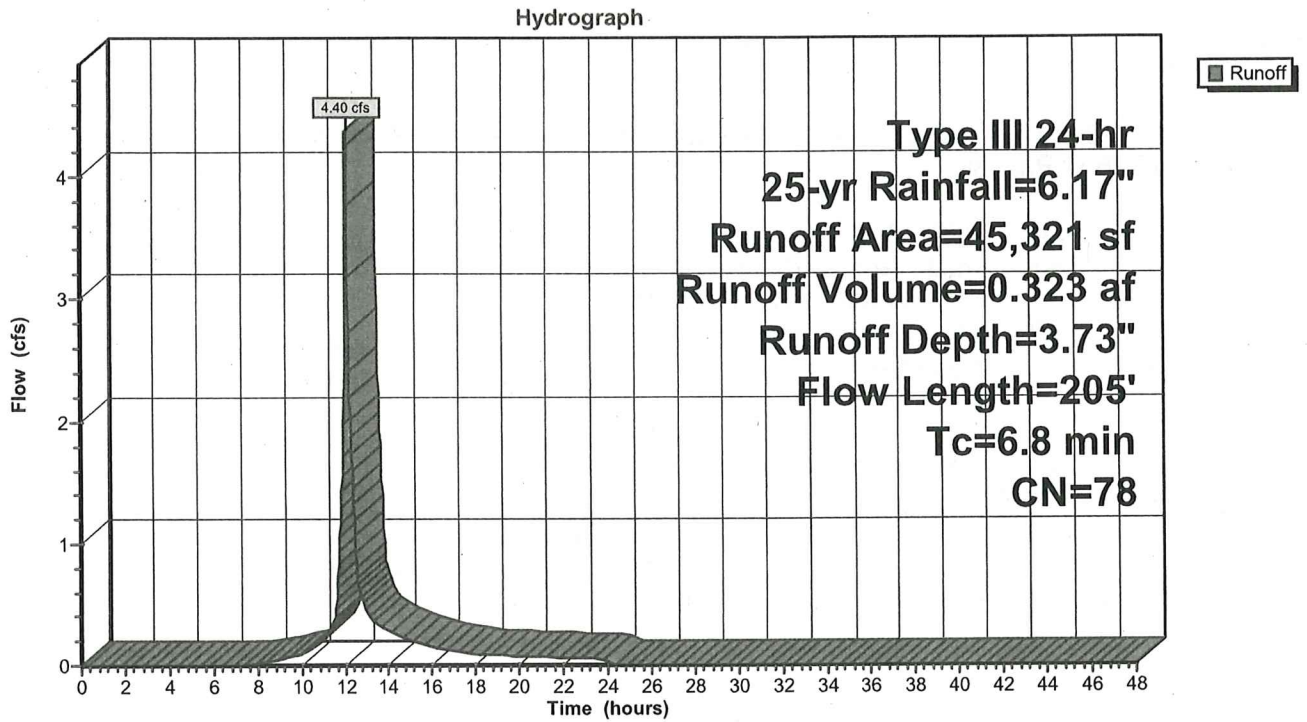
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
4,355	80	>75% Grass cover, Good, HSG D
14,079	39	>75% Grass cover, Good, HSG A
26,887	98	Paved parking, HSG D
45,321	78	Weighted Average
18,434		40.67% Pervious Area
26,887		59.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	109	0.0250	1.58		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
5.2	41	0.0150	0.13		Sheet Flow, Segment 2 Grass: Short n= 0.150 P2= 3.43"
0.5	55	0.0150	1.84		Shallow Concentrated Flow, Segment 3 Grassed Waterway Kv= 15.0 fps
6.8	205	Total			



Subcatchment C1: PRWS-C1



Summary for Subcatchment C2: PRWS-C2

Runoff = 0.46 cfs @ 12.09 hrs, Volume= 0.033 af, Depth= 3.33"
 Routed to Link 2L : C Total

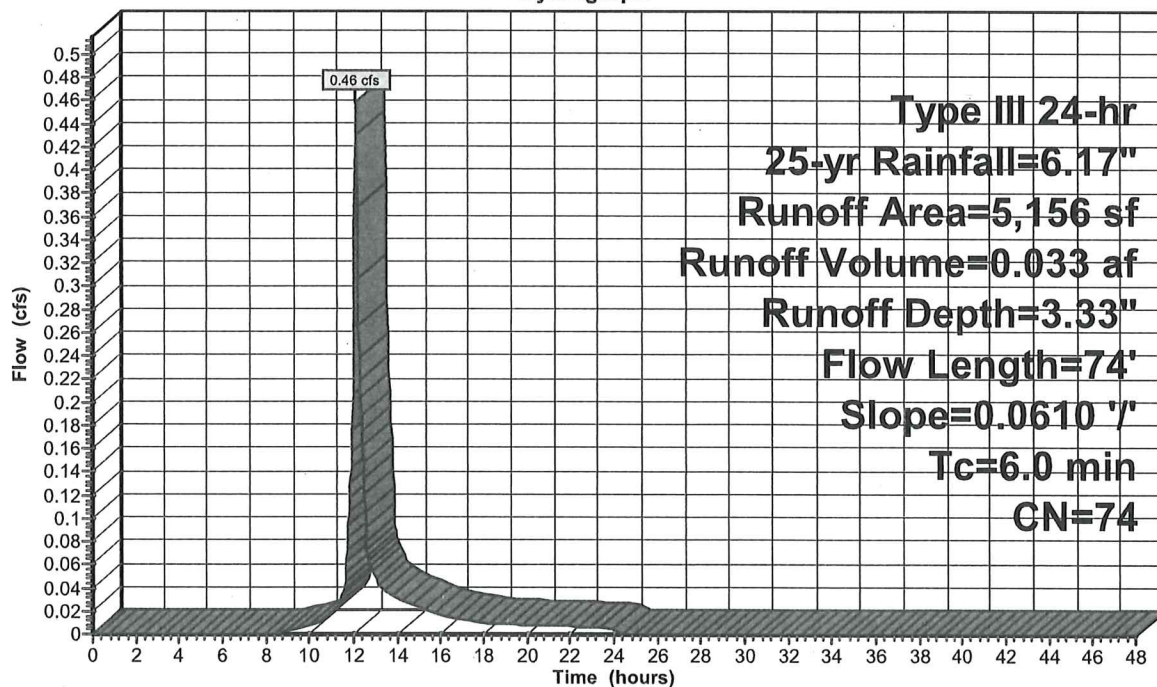
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Type III 24-hr 25-yr Rainfall=6.17"

Area (sf)	CN	Description
557	73	Brush, Good, HSG D
3,991	80	>75% Grass cover, Good, HSG D
608	39	>75% Grass cover, Good, HSG A
5,156	74	Weighted Average
5,156		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	74	0.0610	0.26		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"
4.8	74	Total, Increased to minimum Tc = 6.0 min			

**Subcatchment C2: PRWS-C2**

Hydrograph



Summary for Pond P-C: Pond C

Inflow Area = 1.040 ac, 59.33% Impervious, Inflow Depth = 3.73" for 25-yr event
 Inflow = 4.40 cfs @ 12.10 hrs, Volume= 0.323 af
 Outflow = 3.47 cfs @ 12.17 hrs, Volume= 0.323 af, Atten= 21%, Lag= 4.1 min
 Discarded = 0.10 cfs @ 12.17 hrs, Volume= 0.139 af
 Primary = 2.32 cfs @ 12.17 hrs, Volume= 0.166 af
 Routed to Link 2L : C Total
 Secondary = 1.05 cfs @ 12.17 hrs, Volume= 0.018 af
 Routed to Link 2L : C Total

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Peak Elev= 32.38' @ 12.17 hrs Surf.Area= 4,322 sf Storage= 3,249 cf

Plug-Flow detention time= 112.2 min calculated for 0.323 af (100% of inflow)
 Center-of-Mass det. time= 112.3 min (931.1 - 818.7)

Volume	Invert	Avail.Storage	Storage Description
#1	31.50'	6,050 cf	Custom Stage Data (Conic) Listed below (Recalc)

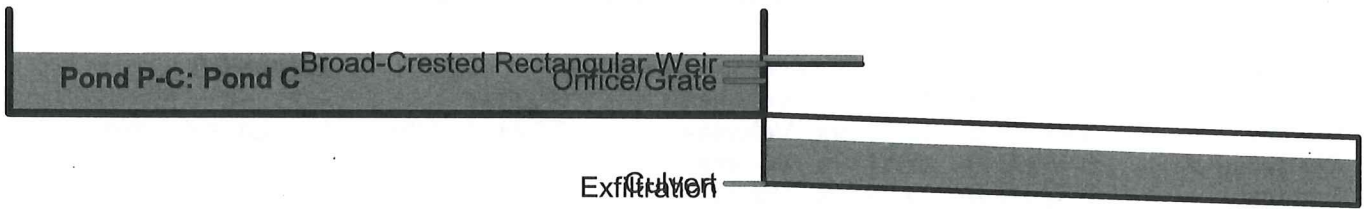
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
31.50	3,128	0	0	3,128
32.50	4,507	3,797	3,797	4,524
33.00	4,507	2,254	6,050	4,643

Device	Routing	Invert	Outlet Devices
#1	Discarded	31.50'	1.000 in/hr Exfiltration over Wetted area
#2	Primary	30.50'	12.0" Round Culvert L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 30.50' / 30.20' S= 0.0100 ' S= 0.0100 ' Cc= 0.900 n= 0.010, Flow Area= 0.79 sf
#3	Device 2	32.00'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	32.25'	10.0' long x 5.0' breadth Broad-Crested Rectangular Weir 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) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.10 cfs @ 12.17 hrs HW=32.37' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.10 cfs)

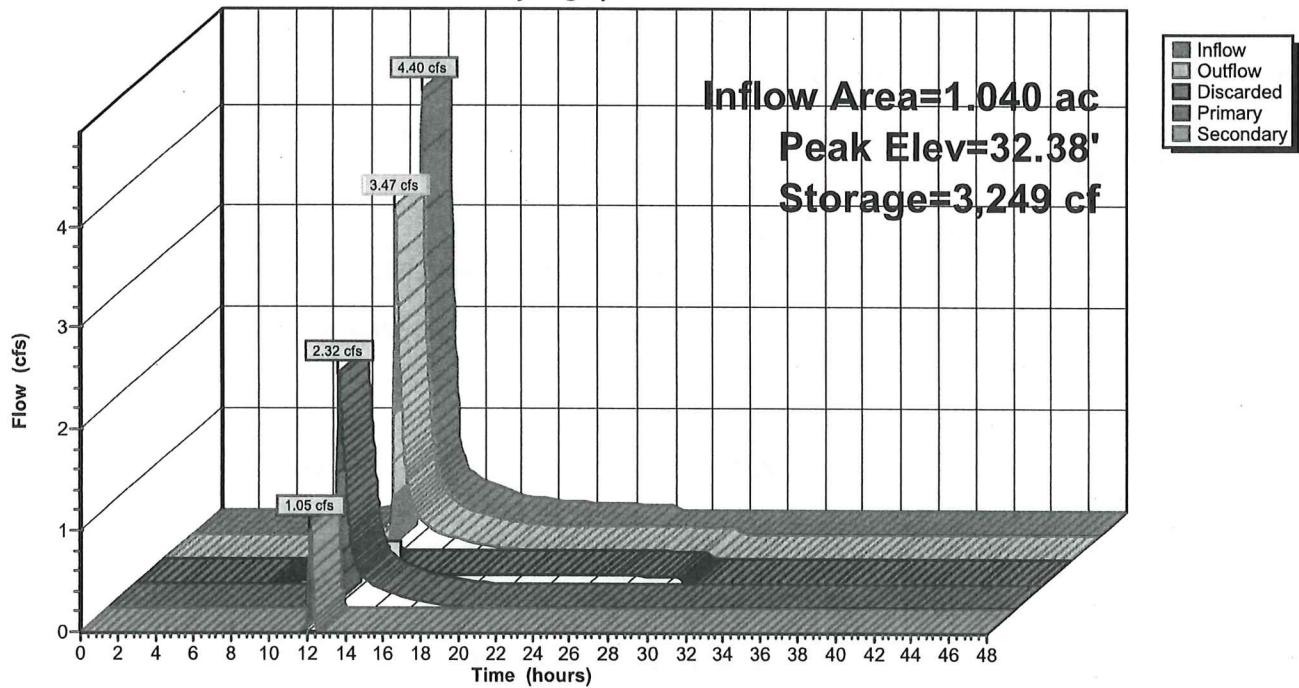
Primary OutFlow Max=2.31 cfs @ 12.17 hrs HW=32.37' (Free Discharge)
 ↑ **2=Culvert** (Passes 2.31 cfs of 3.50 cfs potential flow)
 ↑ **3=Orifice/Grate** (Orifice Controls 2.31 cfs @ 2.95 fps)

Secondary OutFlow Max=1.03 cfs @ 12.17 hrs HW=32.37' (Free Discharge)
 ↑ **4=Broad-Crested Rectangular Weir** (Weir Controls 1.03 cfs @ 0.83 fps)



Pond P-C: Pond C

Hydrograph



Stage-Discharge for Pond P-C: Pond C

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
31.50	0.00	0.00	0.00	0.00
31.55	0.07	0.07	0.00	0.00
31.60	0.08	0.08	0.00	0.00
31.65	0.08	0.08	0.00	0.00
31.70	0.08	0.08	0.00	0.00
31.75	0.08	0.08	0.00	0.00
31.80	0.08	0.08	0.00	0.00
31.85	0.08	0.08	0.00	0.00
31.90	0.08	0.08	0.00	0.00
31.95	0.09	0.09	0.00	0.00
32.00	0.09	0.09	0.00	0.00
32.05	0.20	0.09	0.11	0.00
32.10	0.42	0.09	0.32	0.00
32.15	0.69	0.09	0.60	0.00
32.20	1.01	0.09	0.92	0.00
32.25	1.38	0.10	1.28	0.00
32.30	2.05	0.10	1.69	0.26
32.35	2.97	0.10	2.13	0.74
32.40	3.85	0.10	2.39	1.36
32.45	4.73	0.10	2.54	2.09
32.50	5.75	0.10	2.67	2.97
32.55	6.89	0.11	2.80	3.98
32.60	8.13	0.11	2.93	5.09
32.65	9.48	0.11	3.05	6.32
32.70	10.97	0.11	3.16	7.70
32.75	12.57	0.11	3.28	9.19
32.80	14.30	0.11	3.38	10.81
32.85	16.14	0.11	3.49	12.55
32.90	17.82	0.11	3.59	14.12
32.95	19.55	0.11	3.69	15.75
33.00	21.33	0.11	3.78	17.44

Stage-Area-Storage for Pond P-C: Pond C

Elevation (feet)	Surface (sq-ft)	Wetted (sq-ft)	Storage (cubic-feet)
31.50	3,128	3,128	0
31.55	3,191	3,192	158
31.60	3,255	3,256	319
31.65	3,319	3,321	483
31.70	3,384	3,387	651
31.75	3,449	3,453	822
31.80	3,515	3,520	996
31.85	3,582	3,588	1,173
31.90	3,649	3,656	1,354
31.95	3,717	3,725	1,538
32.00	3,786	3,794	1,726
32.05	3,855	3,864	1,917
32.10	3,925	3,935	2,111
32.15	3,996	4,007	2,309
32.20	4,067	4,079	2,511
32.25	4,139	4,151	2,716
32.30	4,211	4,225	2,925
32.35	4,284	4,299	3,137
32.40	4,358	4,373	3,353
32.45	4,432	4,448	3,573
32.50	4,507	4,524	3,797
32.55	4,507	4,536	4,022
32.60	4,507	4,548	4,247
32.65	4,507	4,560	4,473
32.70	4,507	4,572	4,698
32.75	4,507	4,584	4,923
32.80	4,507	4,596	5,149
32.85	4,507	4,607	5,374
32.90	4,507	4,619	5,599
32.95	4,507	4,631	5,825
33.00	4,507	4,643	6,050

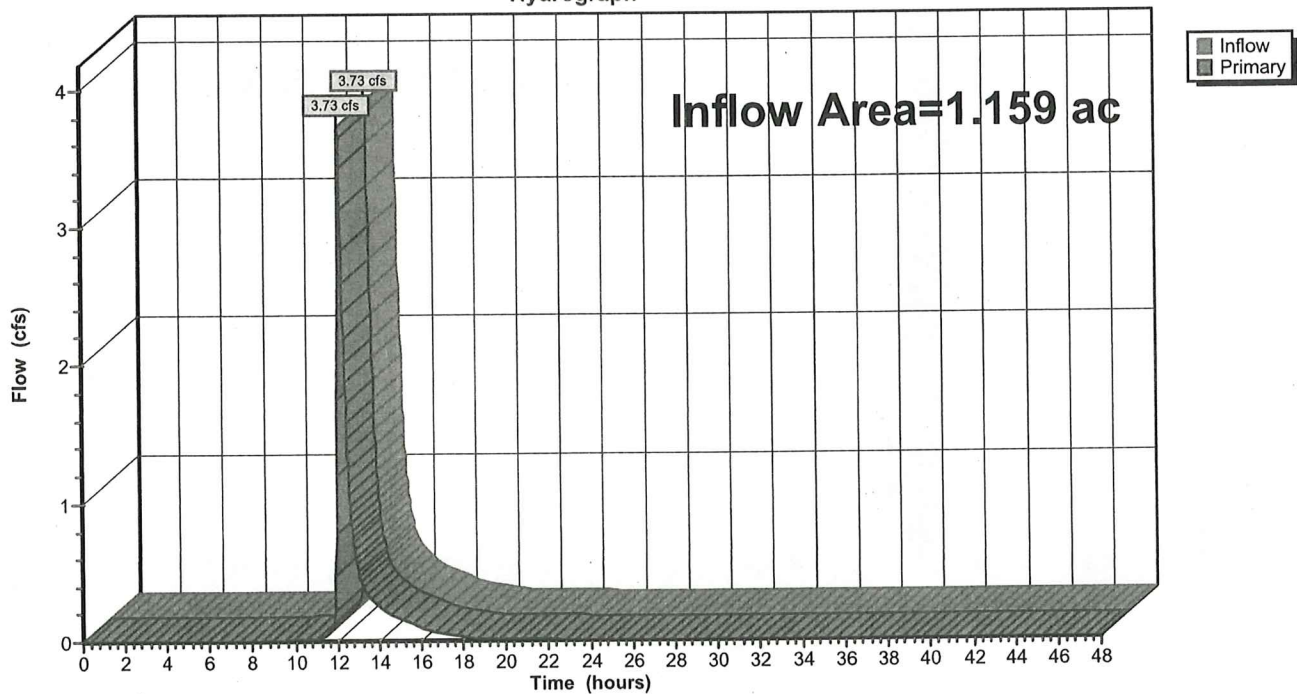
Summary for Link 2L: C Total

Inflow Area = 1.159 ac, 53.27% Impervious, Inflow Depth = 2.25" for 25-yr event
Inflow = 3.73 cfs @ 12.16 hrs, Volume= 0.217 af
Primary = 3.73 cfs @ 12.16 hrs, Volume= 0.217 af, Atten= 0%, Lag= 0.0 min
Routed to Link SITE : Total Site

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs

Link 2L: C Total

Hydrograph



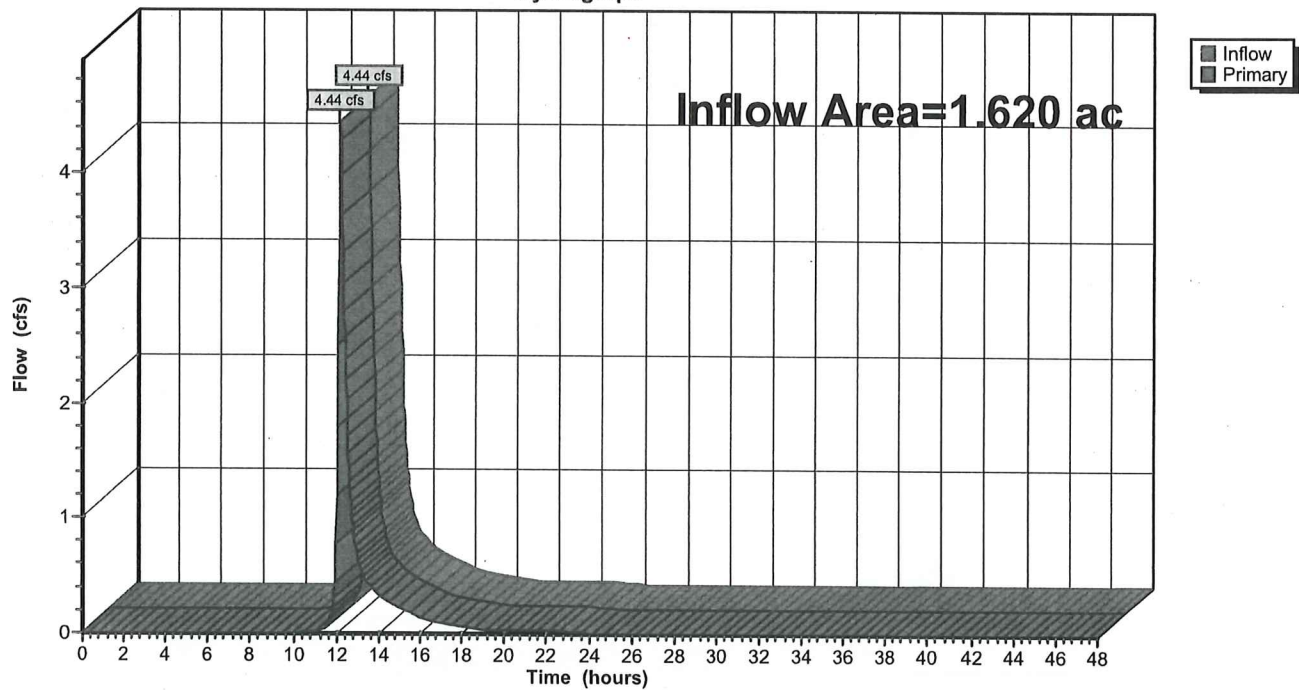
Summary for Link SITE: Total Site

Inflow Area = 1.620 ac, 45.14% Impervious, Inflow Depth = 2.10" for 25-yr event
Inflow = 4.44 cfs @ 12.15 hrs, Volume= 0.284 af
Primary = 4.44 cfs @ 12.15 hrs, Volume= 0.284 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs

Link SITE: Total Site

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 100-yr Rainfall=7.79"

Printed 1/3/2025

Page 42

Time span=0.00-48.00 hrs, dt=0.03 hrs, 1601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment A: PRWS-A Runoff Area=16,220 sf 29.90% Impervious Runoff Depth=2.85"
Flow Length=68' Slope=0.0440 '/' Tc=6.0 min CN=57 Runoff=1.20 cfs 0.089 af

Subcatchment B: PRWS-B Runoff Area=3,874 sf 3.02% Impervious Runoff Depth=2.64"
Flow Length=45' Slope=0.0389 '/' Tc=6.0 min CN=55 Runoff=0.26 cfs 0.020 af

Subcatchment C1: PRWS-C1 Runoff Area=45,321 sf 59.33% Impervious Runoff Depth=5.20"
Flow Length=205' Tc=6.8 min CN=78 Runoff=6.08 cfs 0.451 af

Subcatchment C2: PRWS-C2 Runoff Area=5,156 sf 0.00% Impervious Runoff Depth=4.74"
Flow Length=74' Slope=0.0610 '/' Tc=6.0 min CN=74 Runoff=0.65 cfs 0.047 af

Pond P-C: Pond C Peak Elev=32.47' Storage=3,678 cf Inflow=6.08 cfs 0.451 af
Discarded=0.10 cfs 0.153 af Primary=2.60 cfs 0.246 af Secondary=2.49 cfs 0.052 af Outflow=5.20 cfs 0.451 af

Link 2L: C Total Inflow=5.62 cfs 0.345 af
Primary=5.62 cfs 0.345 af

Link SITE: Total Site Inflow=6.93 cfs 0.453 af
Primary=6.93 cfs 0.453 af

Total Runoff Area = 1.620 ac Runoff Volume = 0.605 af Average Runoff Depth = 4.48"
54.86% Pervious = 0.889 ac 45.14% Impervious = 0.731 ac

PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 100-yr Rainfall=7.79"

Printed 1/3/2025

Page 43

Summary for Subcatchment A: PRWS-A

Runoff = 1.20 cfs @ 12.09 hrs, Volume= 0.089 af, Depth= 2.85"
Routed to Link SITE : Total Site

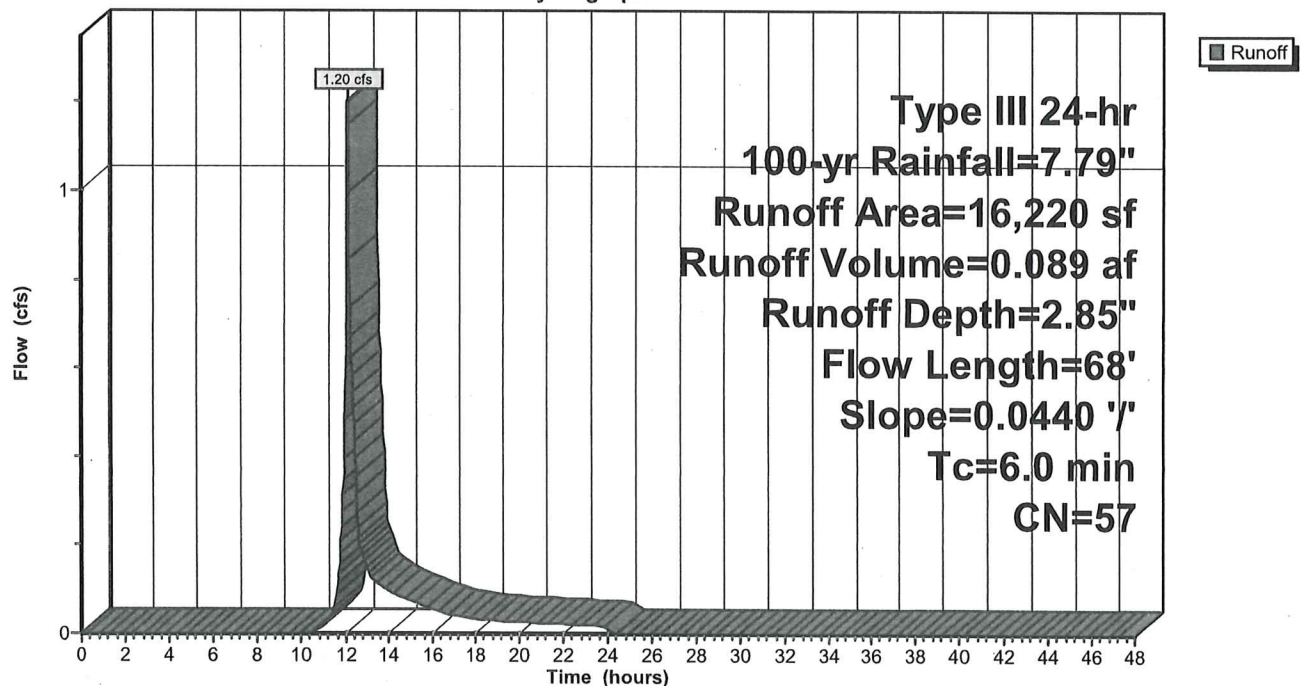
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-yr Rainfall=7.79"

Area (sf)	CN	Description
11,370	39	>75% Grass cover, Good, HSG A
4,850	98	Paved parking, HSG A
16,220	57	Weighted Average
11,370		70.10% Pervious Area
4,850		29.90% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.1	68	0.0440	0.22		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"
5.1	68	Total, Increased to minimum Tc = 6.0 min			

**Subcatchment A: PRWS-A**

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 100-yr Rainfall=7.79"

Printed 1/3/2025

Page 44

Summary for Subcatchment B: PRWS-B

Runoff = 0.26 cfs @ 12.10 hrs, Volume= 0.020 af, Depth= 2.64"
Routed to Link SITE : Total Site

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-yr Rainfall=7.79"

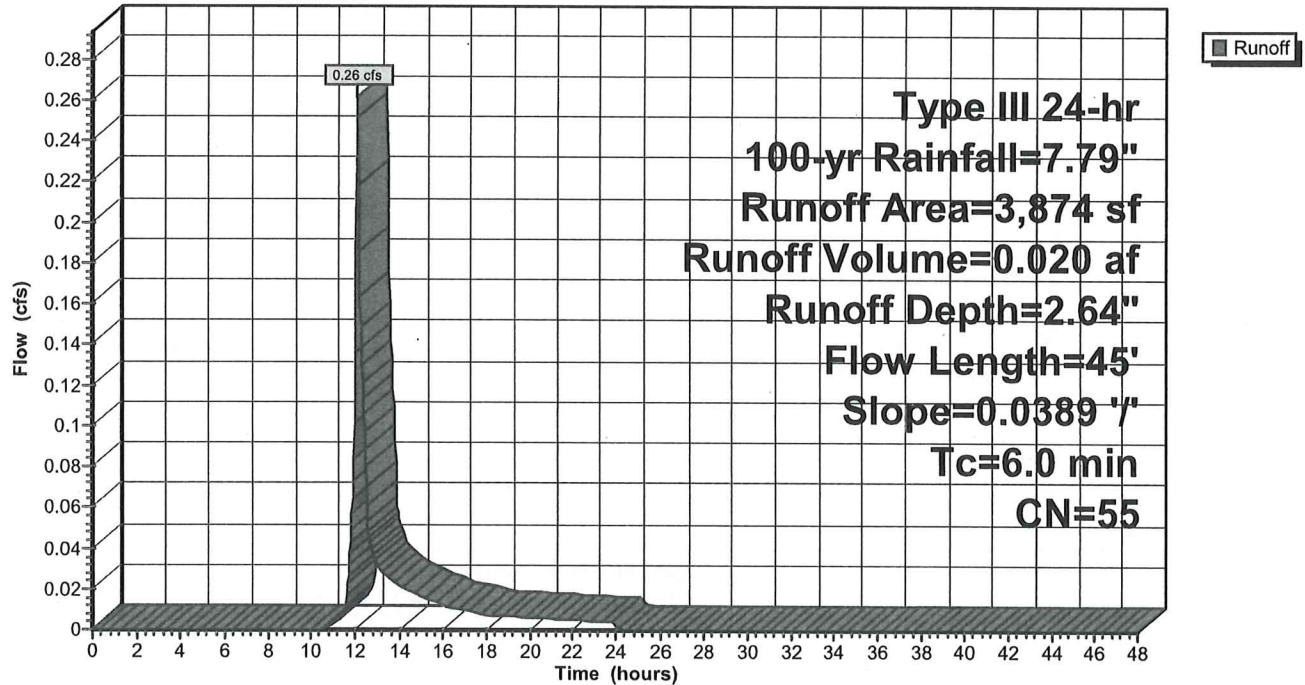
Area (sf)	CN	Description
2,337	39	>75% Grass cover, Good, HSG A
648	80	>75% Grass cover, Good, HSG D
772	77	Brush, Fair, HSG D
117	98	Paved parking, HSG A
3,874	55	Weighted Average
3,757		96.98% Pervious Area
117		3.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.8	45	0.0389	0.20		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"
3.8	45	Total, Increased to minimum Tc = 6.0 min			



Subcatchment B: PRWS-B

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 100-yr Rainfall=7.79"

Printed 1/3/2025

Page 46

Summary for Subcatchment C1: PRWS-C1

Runoff = 6.08 cfs @ 12.10 hrs, Volume= 0.451 af, Depth= 5.20"

Routed to Pond P-C : Pond C

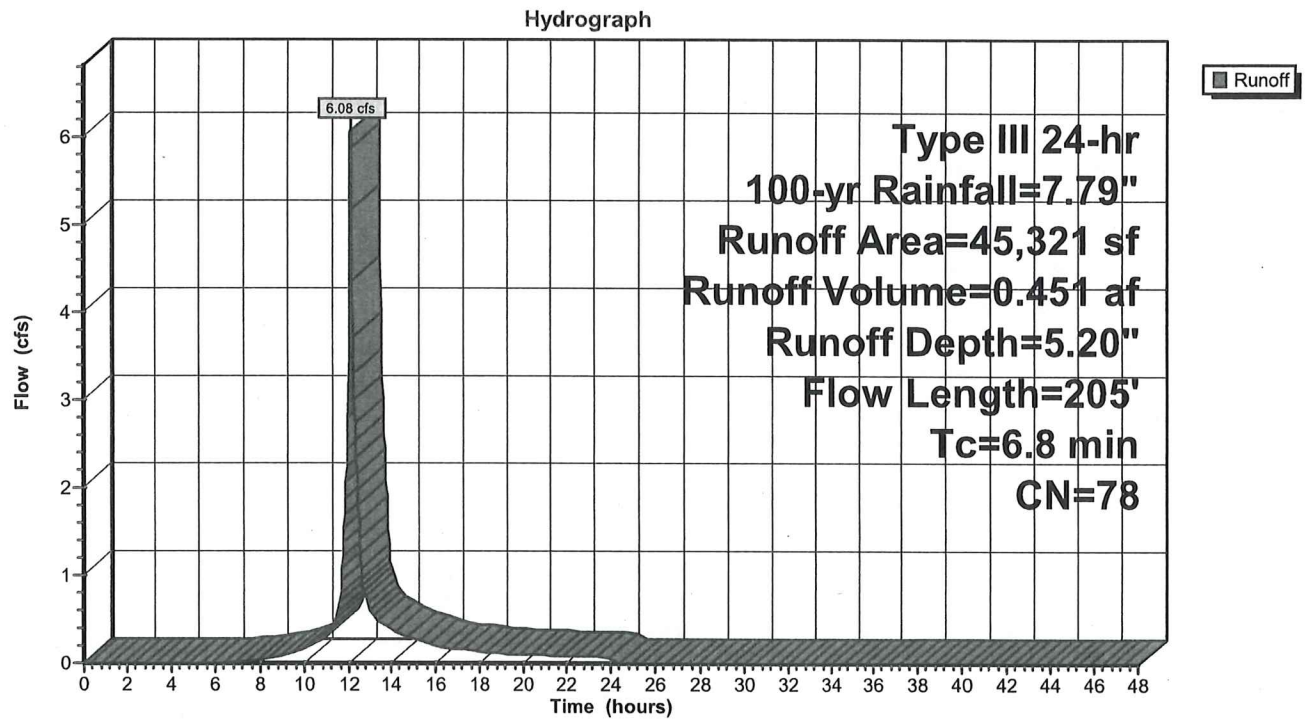
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-yr Rainfall=7.79"

Area (sf)	CN	Description
4,355	80	>75% Grass cover, Good, HSG D
14,079	39	>75% Grass cover, Good, HSG A
26,887	98	Paved parking, HSG D
45,321	78	Weighted Average
18,434		40.67% Pervious Area
26,887		59.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.1	109	0.0250	1.58		Sheet Flow, Segment 1 Smooth surfaces n= 0.011 P2= 3.43"
5.2	41	0.0150	0.13		Sheet Flow, Segment 2 Grass: Short n= 0.150 P2= 3.43"
0.5	55	0.0150	1.84		Shallow Concentrated Flow, Segment 3 Grassed Waterway Kv= 15.0 fps
6.8	205	Total			



Subcatchment C1: PRWS-C1



Summary for Subcatchment C2: PRWS-C2

Runoff = 0.65 cfs @ 12.09 hrs, Volume= 0.047 af, Depth= 4.74"
 Routed to Link 2L : C Total

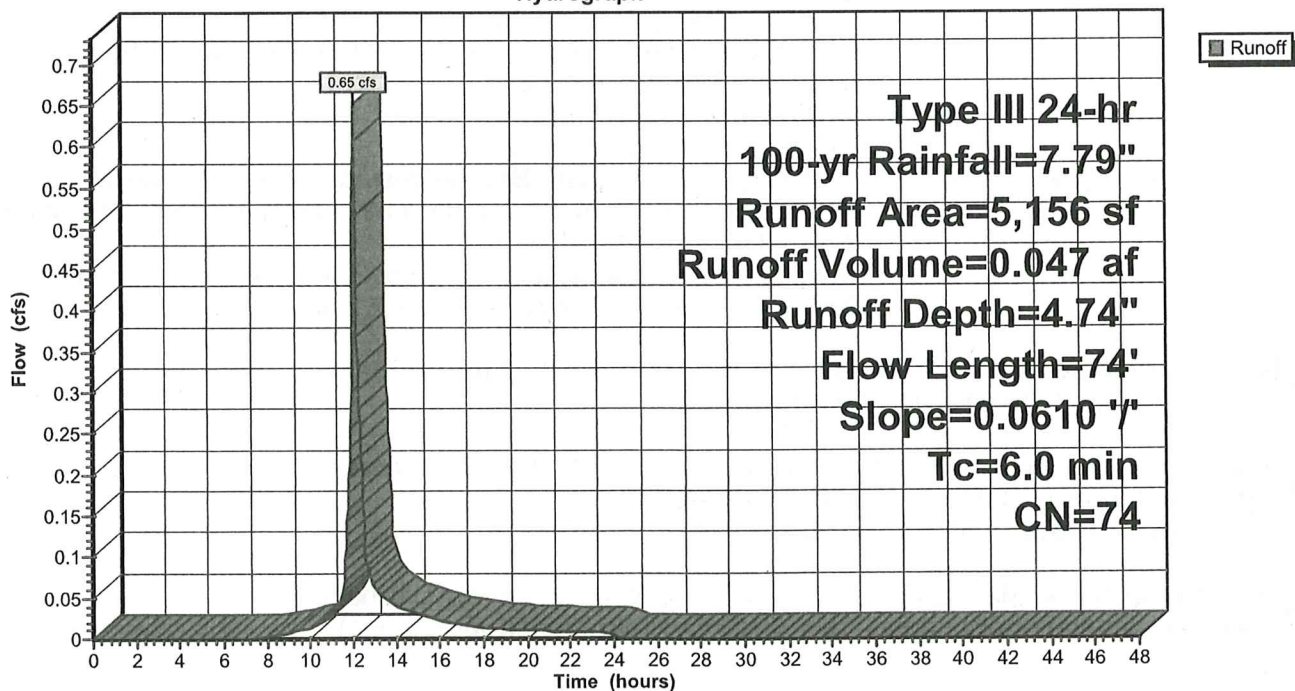
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Type III 24-hr 100-yr Rainfall=7.79"

Area (sf)	CN	Description
557	73	Brush, Good, HSG D
3,991	80	>75% Grass cover, Good, HSG D
608	39	>75% Grass cover, Good, HSG A
5,156	74	Weighted Average
5,156		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.8	74	0.0610	0.26		Sheet Flow, Segment 1 Grass: Short n= 0.150 P2= 3.43"
4.8	74	Total, Increased to minimum Tc = 6.0 min			

**Subcatchment C2: PRWS-C2**

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 100-yr Rainfall=7.79"

Printed 1/3/2025

Page 49

Summary for Pond P-C: Pond C

Inflow Area = 1.040 ac, 59.33% Impervious, Inflow Depth = 5.20" for 100-yr event
 Inflow = 6.08 cfs @ 12.10 hrs, Volume= 0.451 af
 Outflow = 5.20 cfs @ 12.15 hrs, Volume= 0.451 af, Atten= 15%, Lag= 3.2 min
 Discarded = 0.10 cfs @ 12.15 hrs, Volume= 0.153 af
 Primary = 2.60 cfs @ 12.15 hrs, Volume= 0.246 af
 Routed to Link 2L : C Total
 Secondary = 2.49 cfs @ 12.15 hrs, Volume= 0.052 af
 Routed to Link 2L : C Total

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs
 Peak Elev= 32.47' @ 12.15 hrs Surf.Area= 4,467 sf Storage= 3,678 cf

Plug-Flow detention time= 92.1 min calculated for 0.450 af (100% of inflow)
 Center-of-Mass det. time= 92.3 min (901.5 - 809.3)

Volume	Invert	Avail.Storage	Storage Description
#1	31.50'	6,050 cf	Custom Stage Data (Conic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
31.50	3,128	0	0	3,128
32.50	4,507	3,797	3,797	4,524
33.00	4,507	2,254	6,050	4,643

Device	Routing	Invert	Outlet Devices
#1	Discarded	31.50'	1.000 in/hr Exfiltration over Wetted area
#2	Primary	30.50'	12.0" Round Culvert L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 30.50' / 30.20' S= 0.0100 ' /' Cc= 0.900 n= 0.010, Flow Area= 0.79 sf
#3	Device 2	32.00'	12.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	32.25'	10.0' long x 5.0' breadth Broad-Crested Rectangular Weir 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) 2.34 2.50 2.70 2.68 2.68 2.66 2.65 2.65 2.65 2.65 2.67 2.66 2.68 2.70 2.74 2.79 2.88

Discarded OutFlow Max=0.10 cfs @ 12.15 hrs HW=32.47' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 0.10 cfs)

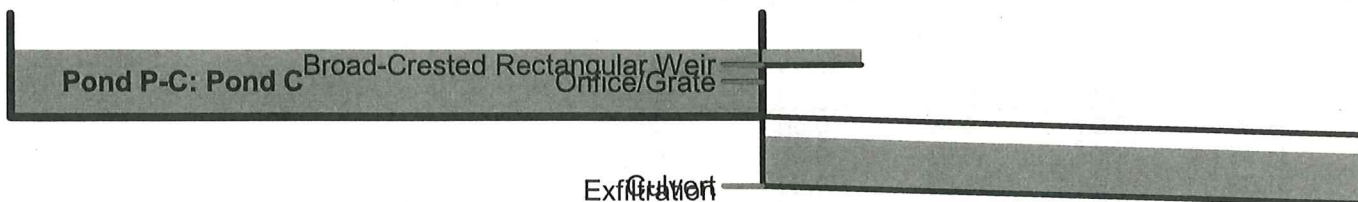
Primary OutFlow Max=2.60 cfs @ 12.15 hrs HW=32.47' (Free Discharge)

↑ **2=Culvert** (Passes 2.60 cfs of 3.62 cfs potential flow)

↑ **3=Orifice/Grate** (Orifice Controls 2.60 cfs @ 3.31 fps)

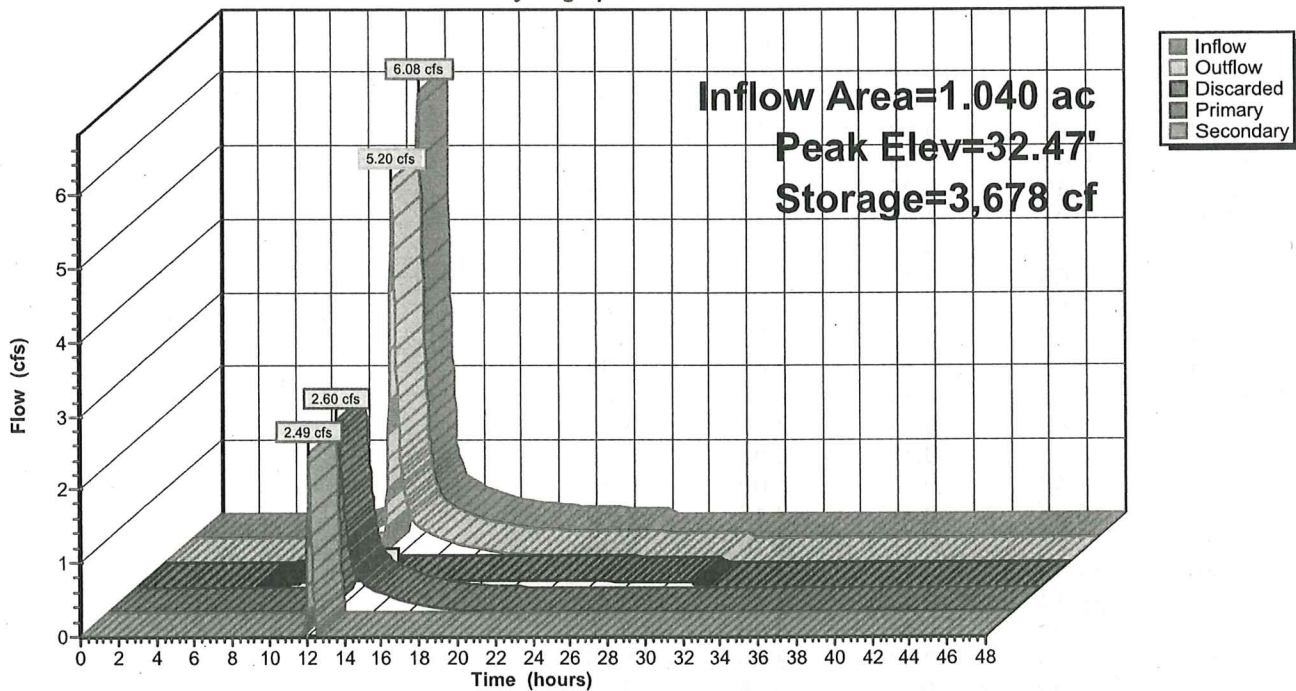
Secondary OutFlow Max=2.49 cfs @ 12.15 hrs HW=32.47' (Free Discharge)

↑ **4=Broad-Crested Rectangular Weir** (Weir Controls 2.49 cfs @ 1.11 fps)



Pond P-C: Pond C

Hydrograph



PR Hydro

Prepared by Langan Engineering

HydroCAD® 10.20-6a s/n 08223 © 2024 HydroCAD Software Solutions LLC

Type III 24-hr 100-yr Rainfall=7.79"

Printed 1/3/2025

Page 51

Stage-Discharge for Pond P-C: Pond C

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
31.50	0.00	0.00	0.00	0.00
31.55	0.07	0.07	0.00	0.00
31.60	0.08	0.08	0.00	0.00
31.65	0.08	0.08	0.00	0.00
31.70	0.08	0.08	0.00	0.00
31.75	0.08	0.08	0.00	0.00
31.80	0.08	0.08	0.00	0.00
31.85	0.08	0.08	0.00	0.00
31.90	0.08	0.08	0.00	0.00
31.95	0.09	0.09	0.00	0.00
32.00	0.09	0.09	0.00	0.00
32.05	0.20	0.09	0.11	0.00
32.10	0.42	0.09	0.32	0.00
32.15	0.69	0.09	0.60	0.00
32.20	1.01	0.09	0.92	0.00
32.25	1.38	0.10	1.28	0.00
32.30	2.05	0.10	1.69	0.26
32.35	2.97	0.10	2.13	0.74
32.40	3.85	0.10	2.39	1.36
32.45	4.73	0.10	2.54	2.09
32.50	5.75	0.10	2.67	2.97
32.55	6.89	0.11	2.80	3.98
32.60	8.13	0.11	2.93	5.09
32.65	9.48	0.11	3.05	6.32
32.70	10.97	0.11	3.16	7.70
32.75	12.57	0.11	3.28	9.19
32.80	14.30	0.11	3.38	10.81
32.85	16.14	0.11	3.49	12.55
32.90	17.82	0.11	3.59	14.12
32.95	19.55	0.11	3.69	15.75
33.00	21.33	0.11	3.78	17.44

Stage-Area-Storage for Pond P-C: Pond C

Elevation (feet)	Surface (sq-ft)	Wetted (sq-ft)	Storage (cubic-feet)
31.50	3,128	3,128	0
31.55	3,191	3,192	158
31.60	3,255	3,256	319
31.65	3,319	3,321	483
31.70	3,384	3,387	651
31.75	3,449	3,453	822
31.80	3,515	3,520	996
31.85	3,582	3,588	1,173
31.90	3,649	3,656	1,354
31.95	3,717	3,725	1,538
32.00	3,786	3,794	1,726
32.05	3,855	3,864	1,917
32.10	3,925	3,935	2,111
32.15	3,996	4,007	2,309
32.20	4,067	4,079	2,511
32.25	4,139	4,151	2,716
32.30	4,211	4,225	2,925
32.35	4,284	4,299	3,137
32.40	4,358	4,373	3,353
32.45	4,432	4,448	3,573
32.50	4,507	4,524	3,797
32.55	4,507	4,536	4,022
32.60	4,507	4,548	4,247
32.65	4,507	4,560	4,473
32.70	4,507	4,572	4,698
32.75	4,507	4,584	4,923
32.80	4,507	4,596	5,149
32.85	4,507	4,607	5,374
32.90	4,507	4,619	5,599
32.95	4,507	4,631	5,825
33.00	4,507	4,643	6,050

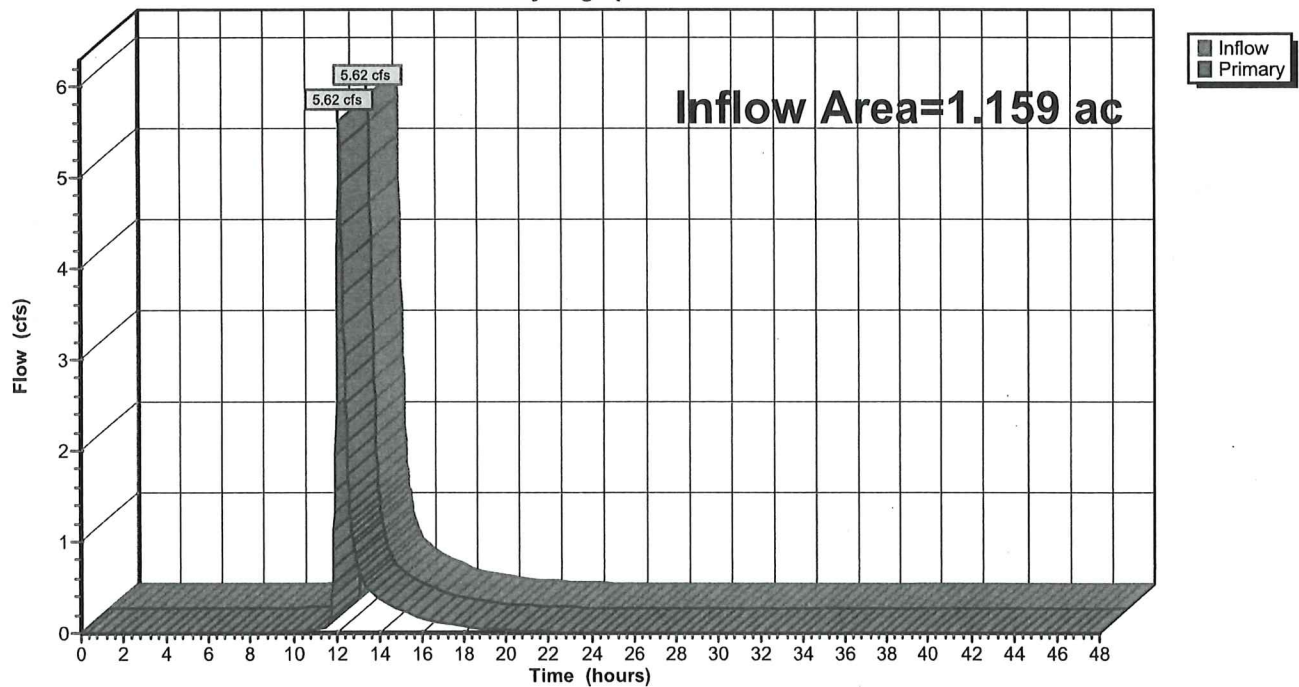
Summary for Link 2L: C Total

Inflow Area = 1.159 ac, 53.27% Impervious, Inflow Depth = 3.57" for 100-yr event
Inflow = 5.62 cfs @ 12.14 hrs, Volume= 0.345 af
Primary = 5.62 cfs @ 12.14 hrs, Volume= 0.345 af, Atten= 0%, Lag= 0.0 min
Routed to Link SITE : Total Site

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs

Link 2L: C Total

Hydrograph



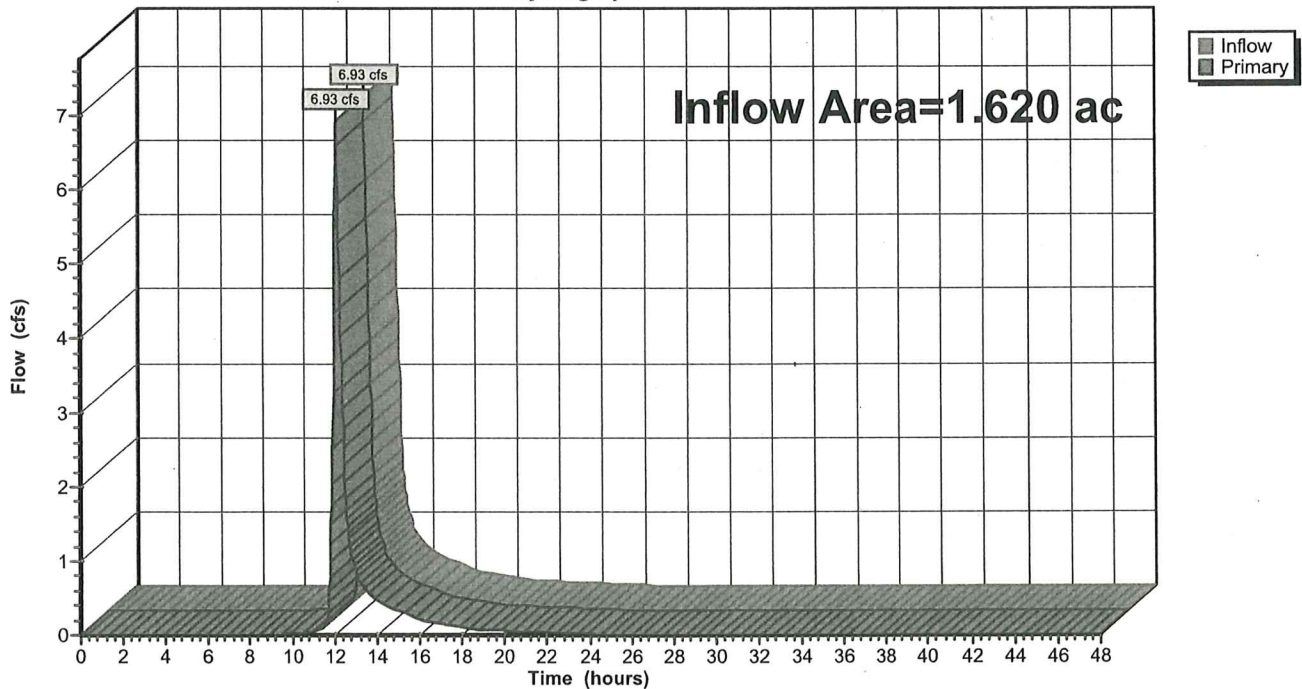
Summary for Link SITE: Total Site

Inflow Area = 1.620 ac, 45.14% Impervious, Inflow Depth = 3.35" for 100-yr event
Inflow = 6.93 cfs @ 12.13 hrs, Volume= 0.453 af
Primary = 6.93 cfs @ 12.13 hrs, Volume= 0.453 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.03 hrs

Link SITE: Total Site

Hydrograph



APPENDIX C
NOAA Rainfall Data

NOAA Atlas 14, Volume 10, Version 3 LAKE

KONOMOC

Station ID: 06-3989

Location name: Waterford, Connecticut, USA*

Latitude: 41.4°, Longitude: -72.1833°

Elevation:

Elevation (station metadata): 180 ft**

* source: ESRI Maps

** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aeriels](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.337 (0.263-0.419)	0.403 (0.315-0.501)	0.511 (0.397-0.637)	0.601 (0.464-0.752)	0.724 (0.542-0.943)	0.816 (0.599-1.08)	0.914 (0.652-1.25)	1.03 (0.692-1.43)	1.19 (0.771-1.71)	1.32 (0.838-1.93)
10-min	0.478 (0.373-0.593)	0.571 (0.446-0.710)	0.724 (0.563-0.903)	0.851 (0.658-1.07)	1.03 (0.768-1.34)	1.16 (0.848-1.53)	1.30 (0.924-1.78)	1.45 (0.979-2.02)	1.68 (1.09-2.41)	1.88 (1.19-2.74)
15-min	0.562 (0.439-0.698)	0.672 (0.524-0.835)	0.852 (0.662-1.06)	1.00 (0.774-1.25)	1.21 (0.904-1.57)	1.36 (0.999-1.81)	1.52 (1.09-2.09)	1.71 (1.15-2.38)	1.98 (1.28-2.84)	2.21 (1.40-3.22)
30-min	0.795 (0.620-0.986)	0.950 (0.741-1.18)	1.20 (0.936-1.50)	1.42 (1.09-1.77)	1.70 (1.28-2.22)	1.92 (1.41-2.55)	2.15 (1.53-2.95)	2.41 (1.63-3.36)	2.79 (1.81-4.00)	3.11 (1.97-4.53)
60-min	1.03 (0.802-1.27)	1.23 (0.957-1.52)	1.56 (1.21-1.94)	1.83 (1.41-2.29)	2.20 (1.65-2.87)	2.48 (1.82-3.29)	2.78 (1.98-3.81)	3.12 (2.10-4.34)	3.60 (2.34-5.17)	4.01 (2.54-5.85)
2-hr	1.35 (1.06-1.67)	1.61 (1.27-1.99)	2.04 (1.60-2.53)	2.40 (1.87-2.98)	2.89 (2.18-3.73)	3.25 (2.41-4.29)	3.64 (2.62-4.96)	4.10 (2.77-5.65)	4.76 (3.10-6.77)	5.32 (3.38-7.69)
3-hr	1.57 (1.24-1.93)	1.87 (1.48-2.30)	2.37 (1.86-2.92)	2.78 (2.17-3.44)	3.34 (2.53-4.30)	3.76 (2.80-4.94)	4.21 (3.04-5.72)	4.74 (3.22-6.50)	5.52 (3.60-7.80)	6.18 (3.94-8.87)
6-hr	2.00 (1.59-2.44)	2.38 (1.89-2.90)	2.99 (2.38-3.66)	3.51 (2.76-4.31)	4.21 (3.22-5.38)	4.74 (3.54-6.16)	5.30 (3.85-7.12)	5.96 (4.07-8.09)	6.93 (4.54-9.68)	7.75 (4.96-11.0)
12-hr	2.47 (1.99-2.99)	2.93 (2.35-3.56)	3.69 (2.95-4.48)	4.31 (3.43-5.27)	5.18 (3.98-6.56)	5.82 (4.38-7.50)	6.51 (4.75-8.65)	7.30 (5.01-9.82)	8.46 (5.58-11.7)	9.44 (6.06-13.3)
24-hr	2.89 (2.35-3.48)	3.45 (2.80-4.16)	4.37 (3.52-5.28)	5.13 (4.11-6.22)	6.17 (4.78-7.76)	6.95 (5.27-8.90)	7.79 (5.72-10.3)	8.76 (6.04-11.7)	10.2 (6.74-13.9)	11.4 (7.35-15.8)
2-day	3.24 (2.65-3.87)	3.91 (3.19-4.67)	5.00 (4.07-5.99)	5.90 (4.77-7.11)	7.15 (5.59-8.94)	8.08 (6.18-10.3)	9.08 (6.74-11.9)	10.3 (7.12-13.6)	12.1 (8.02-16.4)	13.6 (8.82-18.7)
3-day	3.51 (2.89-4.18)	4.24 (3.48-5.05)	5.42 (4.43-6.47)	6.40 (5.20-7.67)	7.75 (6.08-9.64)	8.75 (6.72-11.1)	9.83 (7.33-12.9)	11.1 (7.74-14.6)	13.1 (8.72-17.6)	14.8 (9.59-20.2)
4-day	3.77 (3.11-4.48)	4.53 (3.73-5.38)	5.77 (4.73-6.87)	6.80 (5.54-8.12)	8.21 (6.47-10.2)	9.26 (7.14-11.7)	10.4 (7.77-13.5)	11.8 (8.20-15.4)	13.8 (9.22-18.5)	15.6 (10.1-21.2)
7-day	4.50 (3.73-5.31)	5.32 (4.41-6.29)	6.67 (5.51-7.90)	7.79 (6.39-9.26)	9.34 (7.39-11.5)	10.5 (8.11-13.1)	11.7 (8.77-15.1)	13.2 (9.22-17.1)	15.3 (10.3-20.4)	17.2 (11.2-23.1)
10-day	5.21 (4.34-6.13)	6.07 (5.06-7.15)	7.48 (6.21-8.83)	8.66 (7.13-10.3)	10.3 (8.15-12.6)	11.5 (8.90-14.2)	12.8 (9.56-16.3)	14.2 (10.0-18.3)	16.4 (11.0-21.6)	18.2 (11.9-24.3)
20-day	7.40 (6.23-8.65)	8.33 (7.00-9.73)	9.83 (8.23-11.5)	11.1 (9.21-13.0)	12.8 (10.2-15.4)	14.1 (11.0-17.2)	15.5 (11.6-19.3)	16.9 (11.9-21.5)	18.8 (12.7-24.5)	20.3 (13.3-26.9)
30-day	9.24 (7.81-10.7)	10.2 (8.61-11.9)	11.8 (9.89-13.7)	13.1 (10.9-15.3)	14.8 (11.9-17.8)	16.2 (12.7-19.6)	17.6 (13.1-21.7)	18.9 (13.5-24.0)	20.7 (14.0-26.8)	22.0 (14.4-28.8)
45-day	11.5 (9.78-13.3)	12.5 (10.6-14.5)	14.2 (12.0-16.4)	15.5 (13.0-18.1)	17.4 (14.0-20.7)	18.9 (14.8-22.7)	20.3 (15.2-24.8)	21.6 (15.4-27.1)	23.1 (15.8-29.7)	24.2 (15.9-31.5)
60-day	13.4 (11.4-15.5)	14.4 (12.3-16.7)	16.2 (13.7-18.7)	17.6 (14.8-20.5)	19.6 (15.8-23.1)	21.2 (16.6-25.3)	22.6 (16.9-27.4)	23.9 (17.1-29.8)	25.3 (17.3-32.4)	26.2 (17.4-34.1)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

[Back to Top](#)

PF graphical



NOAA Atlas 14, Volume 10, Version 3
Location name: Waterford, Connecticut, USA*
Latitude: 41.4°, Longitude: -72.1833°
Elevation: 254 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

[PF tabular](#) | [PF graphical](#) | [Maps & aerals](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	4.04 (3.16-5.03)	4.84 (3.78-6.01)	6.13 (4.76-7.64)	7.21 (5.57-9.02)	8.69 (6.50-11.3)	9.79 (7.19-13.0)	11.0 (7.82-15.0)	12.3 (8.30-17.1)	14.3 (9.25-20.5)	15.9 (10.1-23.2)
10-min	2.87 (2.24-3.56)	3.43 (2.68-4.26)	4.34 (3.38-5.42)	5.11 (3.95-6.40)	6.16 (4.61-8.01)	6.94 (5.09-9.20)	7.77 (5.54-10.7)	8.72 (5.87-12.1)	10.1 (6.55-14.5)	11.2 (7.12-16.4)
15-min	2.25 (1.76-2.79)	2.69 (2.10-3.34)	3.41 (2.65-4.25)	4.00 (3.10-5.01)	4.83 (3.62-6.28)	5.44 (4.00-7.22)	6.10 (4.35-8.36)	6.84 (4.61-9.52)	7.92 (5.14-11.4)	8.82 (5.58-12.9)
30-min	1.59 (1.24-1.97)	1.90 (1.48-2.36)	2.41 (1.87-3.00)	2.83 (2.19-3.54)	3.41 (2.55-4.44)	3.85 (2.82-5.10)	4.30 (3.07-5.90)	4.83 (3.25-6.72)	5.59 (3.62-8.01)	6.21 (3.93-9.07)
60-min	1.03 (0.802-1.27)	1.23 (0.957-1.52)	1.56 (1.21-1.94)	1.83 (1.41-2.29)	2.20 (1.65-2.87)	2.48 (1.82-3.29)	2.78 (1.98-3.81)	3.12 (2.10-4.34)	3.60 (2.34-5.17)	4.01 (2.54-5.85)
2-hr	0.675 (0.532-0.833)	0.807 (0.634-0.995)	1.02 (0.800-1.26)	1.20 (0.934-1.49)	1.44 (1.09-1.87)	1.63 (1.20-2.14)	1.82 (1.31-2.48)	2.05 (1.39-2.82)	2.38 (1.55-3.38)	2.66 (1.69-3.84)
3-hr	0.523 (0.413-0.642)	0.623 (0.492-0.766)	0.788 (0.620-0.971)	0.925 (0.723-1.14)	1.11 (0.843-1.43)	1.25 (0.930-1.64)	1.40 (1.01-1.90)	1.58 (1.07-2.16)	1.84 (1.20-2.60)	2.06 (1.31-2.95)
6-hr	0.333 (0.265-0.406)	0.396 (0.315-0.484)	0.499 (0.396-0.612)	0.585 (0.461-0.719)	0.703 (0.536-0.898)	0.791 (0.591-1.03)	0.885 (0.642-1.19)	0.994 (0.679-1.35)	1.16 (0.759-1.62)	1.29 (0.827-1.84)
12-hr	0.205 (0.164-0.248)	0.243 (0.195-0.295)	0.306 (0.244-0.372)	0.358 (0.284-0.437)	0.429 (0.330-0.544)	0.483 (0.363-0.622)	0.540 (0.394-0.718)	0.605 (0.415-0.814)	0.702 (0.462-0.971)	0.783 (0.502-1.10)
24-hr	0.120 (0.097-0.145)	0.143 (0.116-0.173)	0.182 (0.146-0.219)	0.213 (0.171-0.259)	0.257 (0.199-0.323)	0.289 (0.219-0.370)	0.324 (0.238-0.428)	0.364 (0.251-0.486)	0.424 (0.280-0.580)	0.474 (0.306-0.659)
2-day	0.067 (0.055-0.080)	0.081 (0.066-0.097)	0.104 (0.084-0.124)	0.123 (0.099-0.148)	0.148 (0.116-0.186)	0.168 (0.128-0.214)	0.189 (0.140-0.248)	0.214 (0.148-0.282)	0.251 (0.167-0.340)	0.283 (0.183-0.389)
3-day	0.048 (0.040-0.058)	0.058 (0.048-0.070)	0.075 (0.061-0.089)	0.088 (0.072-0.106)	0.107 (0.084-0.133)	0.121 (0.093-0.153)	0.136 (0.101-0.178)	0.154 (0.107-0.202)	0.181 (0.121-0.244)	0.205 (0.133-0.280)
4-day	0.039 (0.032-0.046)	0.047 (0.038-0.056)	0.060 (0.049-0.071)	0.070 (0.057-0.084)	0.085 (0.067-0.106)	0.096 (0.074-0.121)	0.108 (0.080-0.141)	0.122 (0.085-0.160)	0.143 (0.096-0.192)	0.162 (0.105-0.220)
7-day	0.026 (0.022-0.031)	0.031 (0.026-0.037)	0.039 (0.032-0.047)	0.046 (0.038-0.055)	0.055 (0.043-0.068)	0.062 (0.048-0.077)	0.069 (0.052-0.089)	0.078 (0.054-0.101)	0.091 (0.061-0.121)	0.102 (0.066-0.137)
10-day	0.021 (0.018-0.025)	0.025 (0.021-0.029)	0.031 (0.025-0.036)	0.036 (0.029-0.042)	0.042 (0.033-0.052)	0.047 (0.037-0.059)	0.053 (0.039-0.067)	0.059 (0.041-0.076)	0.068 (0.045-0.090)	0.075 (0.049-0.101)
20-day	0.015 (0.012-0.018)	0.017 (0.014-0.020)	0.020 (0.017-0.023)	0.023 (0.019-0.027)	0.026 (0.021-0.032)	0.029 (0.022-0.035)	0.032 (0.024-0.040)	0.035 (0.024-0.044)	0.039 (0.026-0.051)	0.042 (0.027-0.055)
30-day	0.012 (0.010-0.014)	0.014 (0.011-0.016)	0.016 (0.013-0.019)	0.018 (0.015-0.021)	0.020 (0.016-0.024)	0.022 (0.017-0.027)	0.024 (0.018-0.030)	0.026 (0.018-0.033)	0.028 (0.019-0.037)	0.030 (0.020-0.040)
45-day	0.010 (0.009-0.012)	0.011 (0.009-0.013)	0.013 (0.011-0.015)	0.014 (0.012-0.016)	0.016 (0.012-0.019)	0.017 (0.013-0.020)	0.018 (0.014-0.022)	0.019 (0.014-0.025)	0.021 (0.014-0.027)	0.022 (0.014-0.029)
60-day	0.009 (0.007-0.010)	0.010 (0.008-0.011)	0.011 (0.009-0.013)	0.012 (0.010-0.014)	0.013 (0.010-0.016)	0.014 (0.011-0.017)	0.015 (0.011-0.019)	0.016 (0.011-0.020)	0.017 (0.012-0.022)	0.018 (0.012-0.023)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

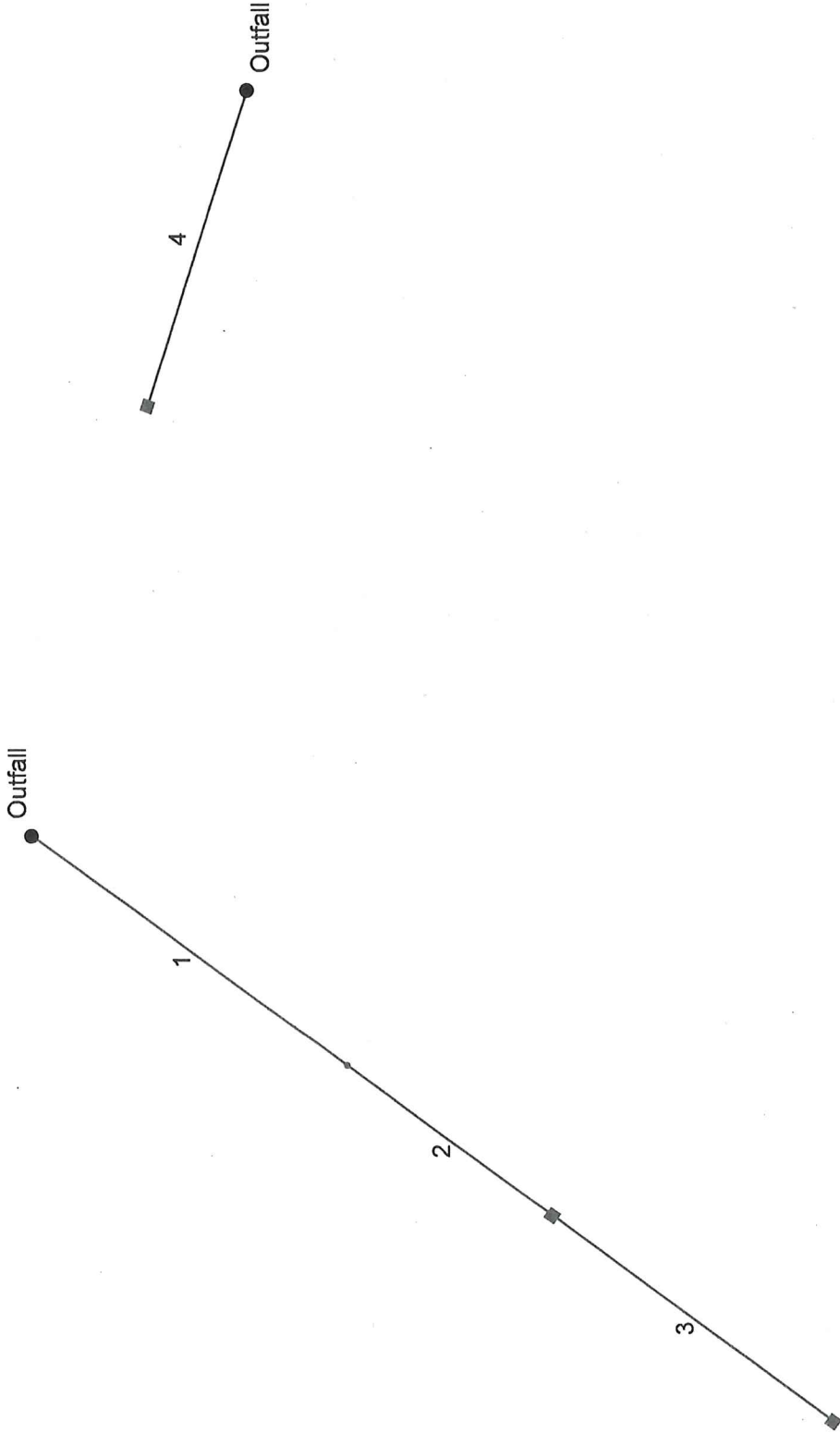
[Back to Top](#)

PF graphical

APPENDIX D

Stormwater Collection System Calculations

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: 2025-01-03 Stormsewers.stm	Number of lines: 4	Date: 1/5/2025
--	--------------------	----------------

Storm Sewer Tabulation

Station Line	To Line	Len (ft)	Drng Area		Rnoff coeff (C)	Area x C		Tc		Rain (I) (in/hr)	Total flow (cfs)	Cap full (cfs)	Vel (ft/s)	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
			Incr (ac)	Total (ac)		Incr	Total	Inlet (min)	Syst (min)					Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	60.389	0.00	0.34	0.00	0.00	0.24	0.0	6.5	6.5	1.56	1.58	4.83	8	1.46	31.50	32.38	32.08	32.96	32.64	35.52	CO-RG
2	1	39.504	0.16	0.34	0.73	0.12	0.24	6.0	6.4	6.6	1.57	0.91	4.51	8	0.48	32.38	32.57	33.05	33.62	35.52	34.93	YD202-CO
3	2	54.194	0.18	0.18	0.68	0.12	0.12	6.0	6.0	6.8	0.83	0.92	2.37	8	0.50	32.57	32.84	33.78	33.99	34.93	34.94	YD203-YD202
4	End	51.616	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	2.32	0.93	6.68	8	0.50	30.24	30.50	30.88	32.42	30.81	32.50	BH201-OUTFALL
Project File: 2025-01-03 Stormsewers.stm												Number of lines: 4		Run Date: 1/5/2025								

NOTES: Intensity = 29.47 / (Inlet time + 3.10) ^ 0.67; Return period = Yrs. 10 ; c = cir e = ellip b = box

APPENDIX E
Supporting Calculations

$$WQV = \frac{(P)(R)(A)}{12}$$

where:

WQV = water quality volume (cubic feet)

P = 1.3 inches (90th percentile rainfall event)

R = volumetric runoff coefficient = $0.05 + 0.009(I)$

I = post-development impervious area (percent) after application of non-structural LID site planning and design strategies and before application of structural stormwater BMPs

A = post-development total drainage area of site or design point (square feet)

Project	140286501 - Oswegatchie Fire Station	Date	12/27/2024
Location	Waterford, CT	By	APF

PRWS-C

Area (SF)	45,321
Impervious (SF)	26,887
I	0.59
R	0.5839
WQV (CF)	2,867

Project Oswegatchie Fire Station

By APF Date 1/7/2024

Location Waterford, CT

Checked BP Date 1/7/2024

Circle one: Present Developed

Job No. 140281101

1. Rational 'C' Runoff Coefficient & Area Calculations

Catchment Area	Total Area		Impervious (C=.9)		Pervious (C=0.3)		Percent Impervious	C
	SF	AC	SF	AC	SF	AC		
YD-202	6,880	0.16	4,967	0.11	1,913	0.04	72%	0.73
YD-203	7,666	0.18	4,869	0.11	2,797	0.06	64%	0.68

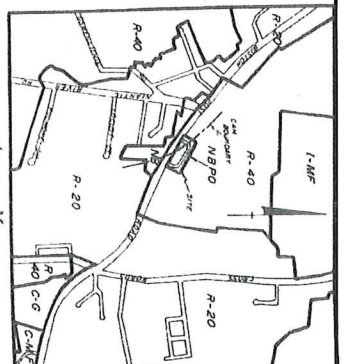
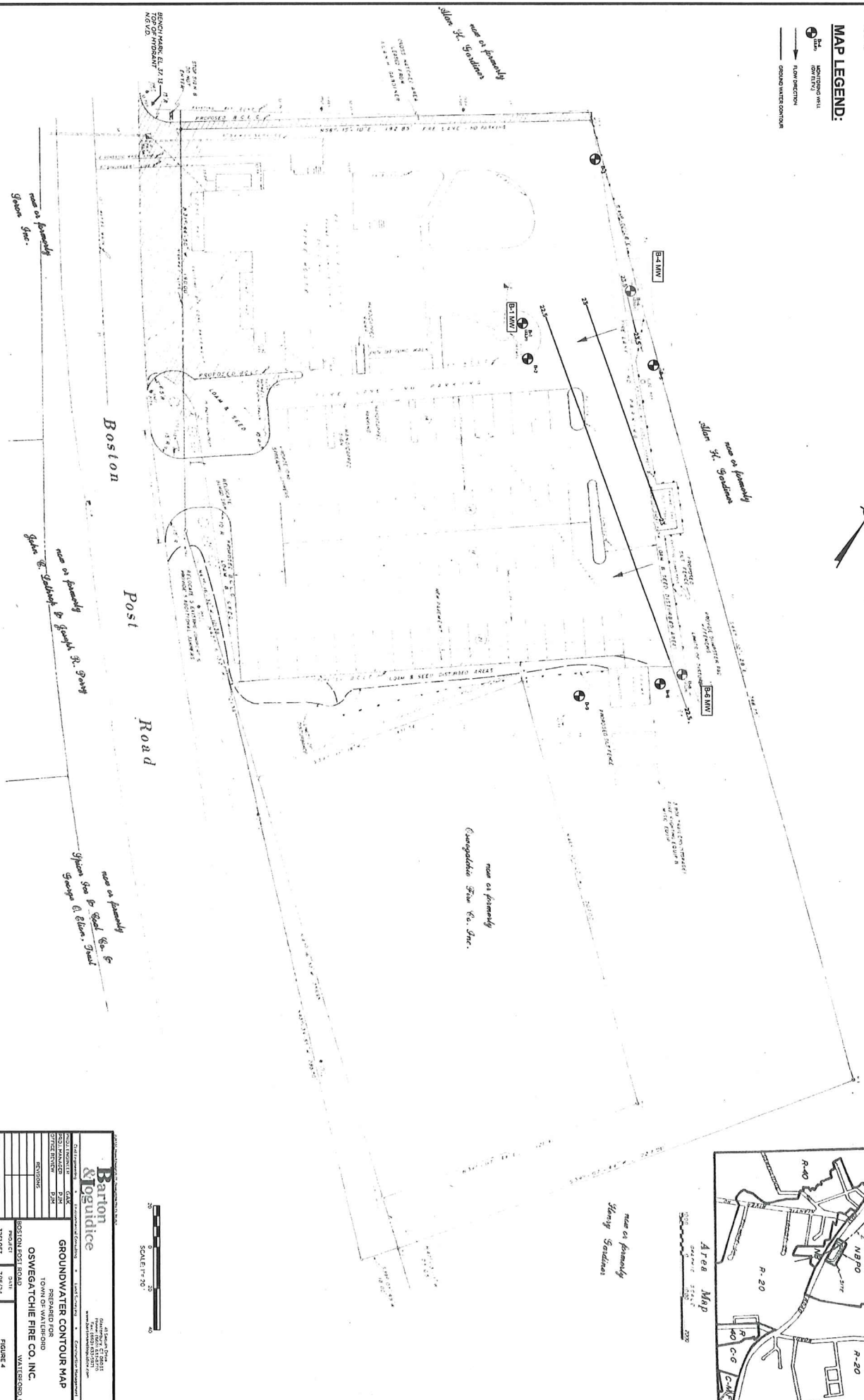
APPENDIX F
Boring Logs (by others)

MAP REFERENCES:

THIS MAP WAS PREPARED BY THE BOSTON FIRE DEPARTMENT, ENGINEERING SECTION, IN COOPERATION WITH THE BOSTON FIRE DEPARTMENT, PLANNING SECTION, AND THE BOSTON FIRE DEPARTMENT, RECORDS SECTION. THE MAP WAS PREPARED IN 1974, AND IS SUBJECT TO REVISION WITHOUT NOTICE.

MAP LEGEND:

- MONITORING WELL
- GROUND WATER CONTOUR
- FLUM SECTION



Barton	
Kyquidice	
GROUNDWATER CONTOUR MAP	
TOWN OF WATERBURY	
OSWEGATCHIE FIRE CO., INC.	
BOSTON POST ROAD	
WATERBURY, CT	
PROJECT	3/8/05
DATE	7/5/04
SCALE	1"=20'
FIGURE	4

BORING LOGS

Barton & Loguidice, LLC
 41 Sequin Drive
 Glastonbury, CT 06033
 Tel. (860) 633-8770 Fax (860) 633-5971

Project #: 3261,053,051 Sheet #: 1 of 1
 Project: Oswegatchie Fire House
 Phase: II
 Location: Waterford CT Boring #: B-1

B&L Personnel: PSM, CED	Drilling Rig: AMS 9520	Date Started: 6/20/24	Surface Elevation:
Drilling Contractor: Ground H2O	Auger/ Core Diameter:	Date Completed:	Groundwater Depth at 0 Hours:
On-Site Drillers: Mark Lacabie	Hammer Wt. & Fall:	Sampling Method:	Groundwater Depth at _____ Hours:

Depth	Sample #	# of Blow Counts	Penetration/ Recovery	Sample Description	Sample Number
0			5/34"	0-17" SAND, fine trace med sand trace coarse sand trace gravel, trace organics brown no staining no odor	
				17"-34" SAND fine, trace silt, trace clay trace med sand trace coarse sand, trace gravel, light brown no staining	
5				init PID=0.0 Hspace PID=0.0 no odor	D-5' sampled 848
			5/43"	0-43" SAND medium trace fines sand trace coarse sand trace gravel, trace cobble light brown, no staining no odor	
				init PID=0.0 Hspace PID=0.0	
10				0-5' SAND, fine, trace silt, trace med sand trace coarse sand trace gravel, trace cobble, light brown, w/ some orange and black mottling no staining no odor saturated @ ~13' BGS	
			5/5'	init PID=0.0 Hspace PID=0.0	
15				end of boring	
20					
25					
30					

REMARKS:

located near generator UST

Proportions Used

Trace	0 to 10%
Little	10 to 20%
Some	20 to 35%
And	35 to 50%

Cohesionless Density

0 - 10	Loose
10 - 30	Med. Dense
30 - 50	Dense
50+	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Mod. Stiff
8 - 15	Stiff
15 - 30	Very Stiff

NOTES:

Water Readings Represent Direct Observations at the Times Noted Above.
 Samples will be Retained for 90 Days Unless Otherwise Requested.

Barton & Loguidice, LLC
 41 Sequin Drive
 Glastonbury, CT 06033
 Tel. (860) 633-8770 Fax (860) 633-5971

Project #: 3261,953,001 Sheet #: 1051
 Project: Oswegatchie Fire House
 Phase II
 Location: Waterford CT Boring #: B-2

B&L Personnel: PJM CED	Drilling Rig: AMS 9520	Date Started: 6/29/04	Surface Elevation:
Drilling Contractor: Ground H2O	Auger/Core Diameter:	Date Completed:	Groundwater Depth at 0 Hours:
On-Site Drillers: ML	Hammer Wt. & Fall:	Sampling Method:	Groundwater Depth at _____ Hours:

Depth	Sample #	# of Blow Counts	Penetration/Recovery	Sample Description	Sample Number
0			5/43'	0-43' SAND fine, trace med, trace coarse, trace gravel/trace cobble, light brown no staining no odor	
5			1/5'	init PID=0.0 Hspace PID=0.0	
			5/5'	0-5' SAND fine some medium, trace coarse sand, trace gravel, trace cobble light brown no staining no odor	sample 0-5' @ 0934
10			1/5'	init PID=0.0 Hspace PID=0.0	
			5/5'	0-5' SAND fine, trace med sand, trace silt, trace coarse sand, trace gravel, trace cobble, light brown, little orange mottling no staining no odor water @ ~ 13' BGS	
15				init PID=0.0 Hspace PID=0.0 end of boring	
20					
25					
30					

REMARKS: Moved over ~ 3' from initial boring line to drill hitting steel - boring down gradient of generator US

Proportions Used	Cohesionless Density	Cohesive Consistency
Trace 0 to 10%	0 - 10 Loose	0 - 4 Soft
Little 10 to 20%	10 - 30 Med. Dense	4 - 8 Mod. Stiff
Some 20 to 35%	30 - 50 Dense	8 - 15 Stiff
And 35 to 50%	50+ Very Dense	15 - 30 Very Stiff

NOTES:
 Water Readings Represent Direct Observations at the Times Noted Above.
 Samples will be Retained for 90 Days Unless Otherwise Requested.

Barton & Loguidice, LLC
 41 Sequin Drive
 Glastonbury, CT 06033
 Tel. (860) 633-8770 Fax (860) 633-5971

Project #: 3261,053,001 Sheet #: 1 of 1
 Project: Oswegatchie Fire House
 Phase II
 Location: Waterford CT
 Boring #: B-3

B&L Personnel: PSM CED	Drilling Rig: AMS Q520	Date Started: 6/20/24	Surface Elevation:
Drilling Contractor: Ground H ₂ O	Auger/Core Diameter:	Date Completed:	Groundwater Depth at 0 Hours:
On-Site Drillers: Mark Larcipie	Hammer Wt. & Fall:	Sampling Method:	Groundwater Depth at _____ Hours:

Depth	Sample #	# of Blow Counts	Penetration/Recovery	Sample Description	Sample Number
0			5'/32"	0-6" SAND fine trace med sand trace coarse sand trace organics dark brown	
				6"-2'6" GRAVEL, little fine sand trace med sand trace coarse sand trace gravel light brown no staining no odor sample 0-5 collect @ 1007	
5			5'/54"	init PID=0.0 Hspace PID=0.0	
				0-32" SAND, medium, trace fine sand, trace coarse sand, trace gravel, trace cobble, light brown some orange mottling	
				32"-54" SAND, fine, trace medium sand trace coarse sand, trace gravel light brown no staining no odor initial PID=0.0 Hspace PID=0.0	
10			5'/42"	0-8" SAND, fine trace med sand trace coarse sand light brown	
				8"-42" SAND, medium, some coarse sand, trace fine, trace gravel trace cobble, light brown no staining no odor	
15				init PID=0.0 Hspace PID=0.0 water @ ~13' BGS end of boring	
20					
25					
30					

REMARKS-

Northern corner of site off edge of drive way

Proportions Used

Trace	0 to 10%
Little	10 to 20%
Some	20 to 35%
And	35 to 50%

Cohesionless Density

0 - 10	Loose
10 - 30	Med. Dense
30 - 50	Dense
50+	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Mod. Stiff
8 - 15	Stiff
15 - 30	Very Stiff

NOTES:

Water Readings Represent Direct Observations at the Times Noted Above.
 Samples will be Retained for 90 Days Unless Otherwise Requested.

Barton & Loguidice, LLC
41 Sequin Drive
Glastonbury, CT 06033
Tel. (860) 633-8770 Fax (860) 633-5971

Project #: Orangeville Firehouse Sheet #: Lot 1
Project: 3261.052.001 2 PL 11
Location: Waterford CT Boring #: B-4

B&L Personnel: <u>PJM / CED</u>	Drilling Rig: <u>AMS 9520</u>	Date Started: <u>6/20/24</u>	Surface Elevation:
Drilling Contractor: <u>Ground H₂O</u>	Auger/Core Diameter:	Date Completed:	Groundwater Depth at 0 Hours:
On-Site Drillers: <u>Mark Lancia</u>	Hammer Wt. & Fall:	Sampling Method:	Groundwater Depth at _____ Hours:

Depth	Sample #	# of Blow Counts	Penetration/Recovery	Sample Description	Sample Number
0			5' / 32"	1-11" Sand, fine trace medium sand, trace coarse sand, trace organics, trace gravel, dark brown	Sample 0-5' @ 11/3
				11-32 Sand fine-medium, trace coarse, trace gravel, trace cobble, dark brown, little white no odor	
5				Initial PID: 0.0 Headspace: 0.0	
			2' / 18"	Sand, coarse, trace medium, trace fine, trace gravel	moist at ~9 ft
			3' / 12"	light brown with orange + black nodding - concrete, ~2-3" medium-coarse sand, trace gravel, light brown	
10				Initial PID: 0.0 Headspace: 0.0	
			5' / 44"	- sand fine-medium, trace coarse sand, trace gravel, trace cobble, light brown with red/orange nodule, saturated, no odor, no obvious stain	
15				Initial PID: 0.0 Headspace: 0.0 end of boring	
20					
25					
30					

REMARKS: located @ UST grave along eastern edge of site concrete @ ~7-8 BGS (possible dead man)

Proportions Used	Cohesionless Density	Cohesive Consistency
Trace 0 to 10%	0 - 10 Loose	0 - 4 Soft
Little 10 to 20%	10 - 30 Med. Dense	4 - 8 Mod. Stiff
Some 20 to 35%	30 - 50 Dense	8 - 15 Stiff
35 to 50%	50+ Very Dense	15 - 30 Very Stiff

NOTES:

Water Readings Represent Direct Observations at the Times Noted Above.
Samples will be Retained for 90 Days Unless Otherwise Requested.

Barton & Loguidice, LLC
 41 Sequin Drive
 Glastonbury, CT 06033
 Tel. (860) 633-8770 Fax (860) 633-5971

Project #: 3261,053,001 Sheet #: 1 of 1
 Project: Orangeville Fire House Phase II
 Location: Waterford CT Boring #: B-5 / B-7

B&L Personnel: <u>PJM / LED</u>	Drilling Rig: <u>AMS 9520</u>	Date Started: <u>6/30/24</u>	Surface Elevation:
Drilling Contractor: <u>Ground H2O</u>	Auger/Core Diameter:	Date Completed:	Groundwater Depth at 0 Hours:
On-Site Drillers: <u>Marques Larcabie</u>	Hammer Wt. & Fall:	Sampling Method:	Groundwater Depth at _____ Hours:

Depth	Sample #	# of Blow Counts	Penetration/ Recovery	Sample Description	Sample Number
0			5'38"	1'-9" top soil, fine sand, trace medium coarse, trace gravel, trace organic, dark brown, weathering wood	B-5 Sample @ 11:47
				7'-38" fine sand, trace clay, trace silt, trace medium sand, trace coarse sand, trace gravel, dark brown, weathering, wood	B-7 Sample @ 11:49
5				Initial PID: 0.0 Headspace: 0.0	
			5'46"	0'-9" Sand fine, trace coarse + medium sand, light brown, orange + red mottling	
				water ~ 7ft BGS	
10				Initial PID: 0.0 Headspace: 0.0	
			5'51"	0'-4" medium sand, trace fine + coarse sand, trace gravel, trace silt, trace clay, light brown	
				40'-6" fine sand, trace medium + coarse sand, trace cobbles	Saturated
15				initial PID: 0.0 Headspace: 0.0	
20					
25					
30					

REMARKS:

boring near concrete structures on eastern boundary

Proportions Used

Trace 0 to 10%
 Little 10 to 20%
 Some 20 to 35%
 And 35 to 50%

Cohesionless Density

0 - 10 Loose
 10 - 30 Med. Dense
 30 - 50 Dense
 50+ Very Dense

Cohesive Consistency

0 - 4 Soft
 4 - 8 Mod. Stiff
 8 - 15 Stiff
 15 - 30 Very Stiff

NOTES:

Water Readings Represent Direct Observations at the Times Noted Above.
 Samples will be Retained for 90 Days Unless Otherwise Requested.

Barton & Loguidice, LLC
 41 Sequin Drive
 Glastonbury, CT 06033
 Tel. (860) 633-8770 Fax (860) 633-5971

Project #: 3261.053 Sheet #: 1 of 1
 Project: Omega Lake Firehouse Pt II
 Location: Waterford, CT Boring #: B-6

B&L Personnel: <u>PJM / CED</u>	Drilling Rig:	Date Started: <u>6/20/24</u>	Surface Elevation:
Drilling Contractor: <u>Ground H₂O</u>	Auger/Core Diameter:	Date Completed:	Groundwater Depth at 0 Hours:
On-Site Drillers: <u>Larsie</u>	Hammer Wt. & Fall:	Sampling Method:	Groundwater Depth at _____ Hours:

Depth	Sample #	# of Blow Counts	Penetration/Recovery	Sample Description	Sample Number
0			5'34"	0-3" brown top soil, fine sand, trace medium/coarse sand, trace organics, ^{ced} 3"-5" gravel + cobbles, 5"-34" fine sand, trace silt, trace silt, trace medium/coarse sand, trace gravel, no odor, no staining, moist ~ 4' 8" Initial: 0.0 Headpiece: 0.0	Sample @ 12:18
5			5'31"	0-12 fine sand, trace medium/coarse trace gravel, trace cobbles, dark brown/grey saturated 12"-31" saturated, black, clay/organics, peat odor	
10			5'42"	grey, silt + clay, ^{some} trace cobbles, trace fine sand, saturated Initial: 0.0 Headpiece: 0.0 End of boring	
15					
20					
25					
30					

REMARKS:

East of shed corner, temp well

Proportions Used

Trace 0 to 10%
 Little 10 to 20%
 Some 20 to 35%
 And 35 to 50%

Cohesionless Density

0 - 10 Loose
 10 - 30 Med. Dense
 30 - 50 Dense
 50+ Very Dense

Cohesive Consistency

0 - 4 Soft
 4 - 8 Mod. Stiff
 8 - 15 Stiff
 15 - 30 Very Stiff

NOTES:

Water Readings Represent Direct Observations at the Times Noted Above.
 Samples will be Retained for 90 Days Unless Otherwise Requested.

Barton & Loguidice, LLC
 41 Sequin Drive
 Glastonbury, CT 06033
 Tel. (860) 633-8770 Fax (860) 633-5971

Project #: 3261,053,001 Sheet #: 1 of 1
 Project: Oswegatchie Fire House
 Phase II
 Location: Waterford CT Boring #: B-8

B&L Personnel: <u>PJM/CED</u>	Drilling Rig: <u>ASM 9520</u>	Date Started: <u>6/20/24</u>	Surface Elevation:
Drilling Contractor: <u>Ground H₂O</u>	Auger/Core Diameter:	Date Completed:	Groundwater Depth at 0 Hours:
On-Site Drillers: <u>Margues Lacroix</u>	Hammer Wt. & Fall:	Sampling Method:	Groundwater Depth at _____ Hours:

Depth	Sample #	# of Blow Counts	Penetration/Recovery	Sample Description	Sample Number
0			5'31"	0-7" SAND fine trace med sand trace coarse sand trace organics dark brown	
				7"-31" SAND fine trace med sand trace coarse sand trace gravel trace cobble brown no staining no odor	
5			1'11"	init PID=0.0 Hspace PID=0.0 sample 0-5' collected @ 1294	
			1.5'17"	0-17" SAND fine trace med sand trace coarse sand trace gravel, dark grey, saturated no staining no odor init PID=0.0 Hspace PID=0.0	
10				refusal @ ~6.5' BGS end of boring	
15					
20					
25					
30					

REMARKS:

located on eastern side of detached garage near driveway

Proportions Used

Trace	0 to 10%
Little	10 to 20%
Some	20 to 35%
And	35 to 50%

Cohesionless Density

0 - 10	Loose
10 - 30	Med. Dense
30 - 50	Dense
50 +	Very Dense

Cohesive Consistency

0 - 4	Soft
4 - 8	Mod. Stiff
8 - 15	Stiff
15 - 30	Very Stiff

NOTES:

Water Readings Represent Direct Observations at the Times Noted Above.
 Samples will be Retained for 90 Days Unless Otherwise Requested.

Barton & Loguidice, LLC
 41 Sequin Drive
 Glastonbury, CT 06033
 Tel. (860) 633-8770 Fax (860) 633-5971

Project #: 3261.053 Sheet #: LOF1
 Project: Omeyah Fire House
 Location: Waterbury LF Ph II Boring #: B-9

B&L Personnel: <u>PSM / CED</u>	Drilling Rig:	Date Started: <u>6/20/24</u>	Surface Elevation:
Drilling Contractor: <u>Ground H2O</u>	Auger/Core Diameter:	Date Completed:	Groundwater Depth at 0 Hours:
On-Site Drillers: <u>Larsie</u>	Hammer Wt. & Fall:	Sampling Method:	Groundwater Depth at _____ Hours:

Depth	Sample #	# of Blow Counts	Penetration/Recovery	Sample Description	Sample Number
0			5' / 25"	0-6" dark brown topsoil, fine sand, trace medium/coarse, trace organic	Sample taken at 13:22
				6"-21" fine sand, trace medium/coarse sand, trace gravel, light brown, dry	
				4'-5' concrete per driller 21"-25"	
5				Initial PID: 0.0 Headspace:	
			1.5' / 14"	0-14" fine sand, trace medium/coarse, trace cobble, light brown, no skin, no odor	
				Initial PID: 0.0 Headspace: 0.0	
10				refusal at ~ 6.5' End of boring	
15					
20					
25					
30					

REMARKS:

West of shed + south of concrete
 dumpster pad

Proportions Used

Trace 0 to 10%
 Little 10 to 20%
 Some 20 to 35%
 And 35 to 50%

Cohesionless Density

0 - 10 Loose
 10 - 30 Med. Dense
 30 - 50 Dense
 50+ Very Dense

Cohesive Consistency

0 - 4 Soft
 4 - 8 Mod. Stiff
 8 - 15 Stiff
 15 - 30 Very Stiff

NOTES:

Water Readings Represent Direct Observations at the Times Noted Above.
 Samples will be Retained for 90 Days Unless Otherwise Requested.

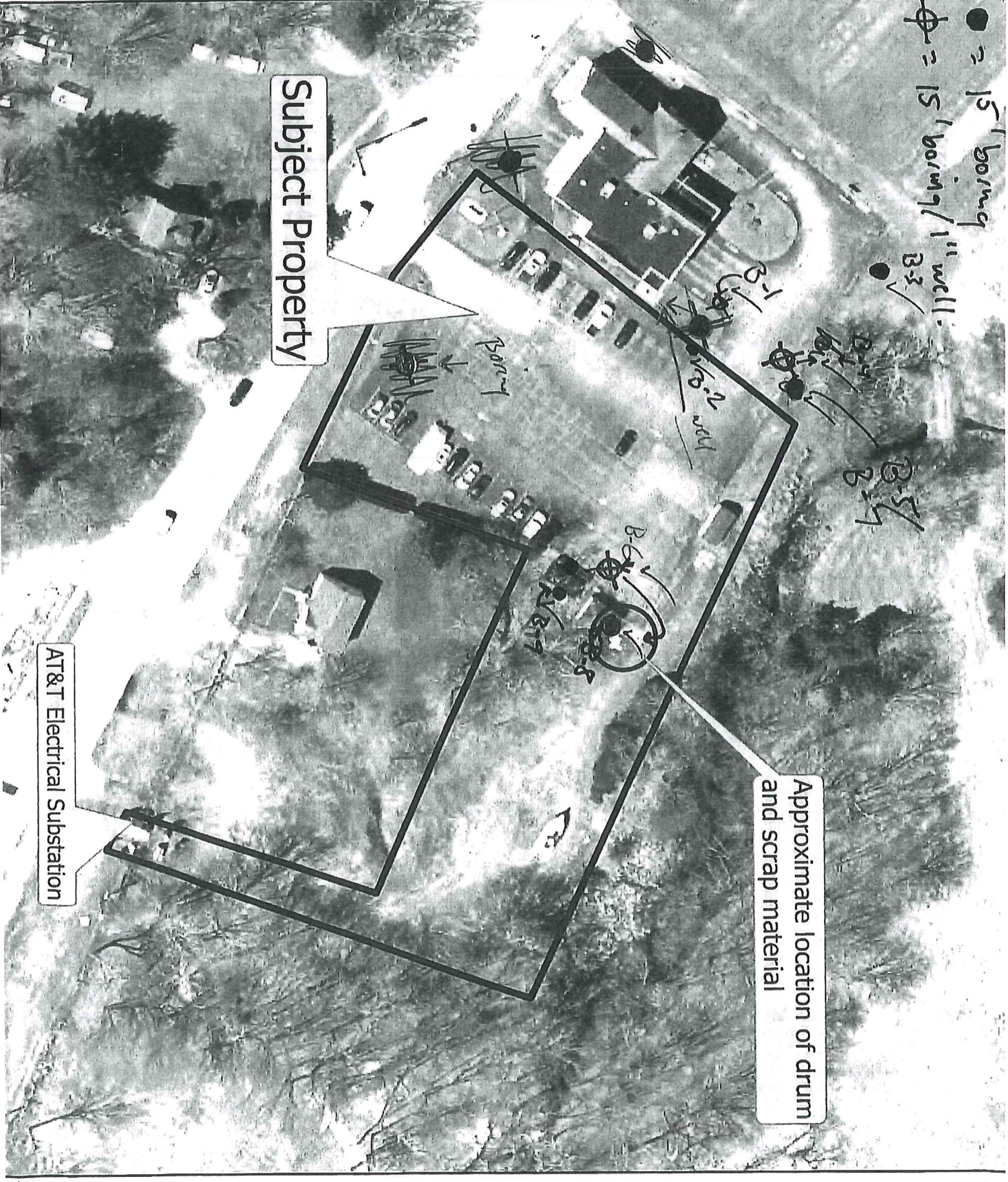
all
level
mark

● = 15' boring
Φ = 15' boring / 1" well

Subject Property

Approximate location of drum
and scrap material

AT&T Electrical Substation



TEMPORARY MONITORING WELL FIELD DATA SHEETS

B-1

Well Condition	
<u>General Condition:</u>	Good / Fair / Requires Repair
<u>Protective Casing:</u>	Steel / PVC / Other
<u>Casing Condition:</u>	Good / Rusty / Bent / Requires Repair
<u>Concrete Collar:</u>	Good / Cracked / None / Requires Maintenance
<u>Comments:</u>	Ponding Near Well: Yes / No Holes Observed Near Well: Yes / No Water Between PVC and Casing: Yes / No Lockable Cap: Yes / No Lock Present: Yes / No

Start Time: _____	Purge Device: Bailer / Peristaltic Pump / Bladder Pump / Waterra _____
Finish Time: _____	Bailer Type: Stainless Steel / Teflon / PVC / _____
Pump Rate: _____ mL/pm (if appl.)	Bailer Size: 2" / 1.05" / N/A
Elapsed Time: _____ min	Equipment Decon: Office / Dedicated / Designated / Field
Volume Purged: _____ gal	Well Recharge: Good / Moderate / Low Dry @ _____ gal
Comments: _____	

Date: _____ Time: _____ Additional Comments: _____
 Sampler: _____ Weather: _____
 Sampling Device: Bailer / Pump / Other _____
 Filtering Required: Yes / No Field Filtered: Yes / No
 Filter Type: Pneumatic / Syringe / Other / N/A _____
 Filter Field Decontaminated: Yes / No _____

[illegible]

Sample Appearance / Description / Odor:

B-4
01
B-5

91

13-

12

B-6

B-6

Water Level Data

Date: 7/15/24			Diam. (in)	Corr. Factor
Weather: Sunny SDS		Water Column Height:	1.5	0.3
Well Diameter: 1 in.		Correction Factor: x	2	0.5
	Measured Depth	Volume to Purge: gal	4	2.0
			6	4.4
Depth to Bottom	13.02	Measuring Device: Tape / Elec. Tape / Other		
Depth to Water	6.11	Measuring Point: PVC / Top of Steel / Other		
Water Column Height:		Comments:		

Well Condition

General Condition:	Good / Fair / Requires Repair	Ponding Near Well:	Yes / No
Protective Casing:	Steel / PVC / Other	Holes Observed Near Well:	Yes / No
Casing Condition:	Good / Rusty / Bent / Requires Repair	Water Between PVC and Casing:	Yes / No
Concrete Collar:	Good / Cracked / None / Requires Maintenance	Lockable Cap:	Yes / No
Comments:	10:15	Lock Present:	Yes / No

Purge Data

Start Time: _____	<u>Purge Device:</u> Bailer / Peristaltic Pump / Bladder Pump / Waterra _____
Finish Time: _____	<u>Bailer Type:</u> Stainless Steel / Teflon / PVC / _____
Pump Rate: _____ mL/pm (if appl.)	<u>Bailer Size:</u> 2" / 1.05" / N/A
Elapsed Time: _____ min	<u>Equipment Decon:</u> Office / Dedicated / Designated / Field
Volume Purged: _____ gal	<u>Well Recharge:</u> Good / Moderate / Low Dry @ _____ gal
Comments: _____	

Sample Data

<u>Date:</u>	_____	<u>Time:</u>	_____	<u>Additional Comments:</u> _____ _____ _____
<u>Sampler:</u>	_____	<u>Weather:</u>	_____	
<u>Sampling Device:</u>	Bailer / Pump / Other _____			
<u>Filtering Required:</u>	Yes / No	<u>Field Filtered:</u>	Yes / No	
<u>Filter Type:</u>	Pneumatic / Syringe / Other / N/A _____			
<u>Filter Field Decontaminated:</u>	Yes / No			

Field Parameters

[illegible]

Sample Appearance / Description / Odor:

APPENDIX G

Stormwater Management System Operation and Maintenance Plan

Operations and Maintenance Plan

*Oswegatchie Fire Station
Waterford, CT*

Scope:

The purpose of the Operations and Maintenance Plan is to ensure that the existing and proposed stormwater components installed at 441 Boston Post Road in Waterford, CT are maintained in operational condition throughout the life of the project. The service procedures associated with this plan shall be performed as required by the parties legally responsible for their maintenance.

Recommended Frequency of Service:

As further defined below, all stormwater components should be checked on a periodic basis and kept in full working order. Ultimately, the required frequency of inspection and service will depend on runoff quantities, pollutant loading, and clogging due to debris. At a minimum, we recommend that all stormwater components be inspected and serviced twice per year, once before winter begins and once during spring cleanup.

Qualified Inspector:

The inspections must be completed by an individual experienced in the construction and maintenance of stormwater drainage systems. If required by the town, the inspections must be completed by a professional engineer.

Service Procedures:

1. Catch Basins & Drainage Inlets:

- a. Catch basins and drainage inlets shall be completely cleaned of accumulated debris and sediments at the completion of construction.
- b. For the first year, catch basins and drainage inlets shall be inspected on a quarterly basis.
- c. Any accumulated debris within the catch basins/inlets shall be removed and any repairs as required.
- d. From the second year onward, visual inspections shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.
- e. Accumulated debris within the catch basins/inlets shall be removed and repairs made as required.
- f. Accumulated sediments shall be removed at which time they are within 12 inches of the invert of the outlet pipe.
- g. Any additional maintenance required per the manufacturer's specifications shall also be completed.

2. Storm Drainage Piping and Cleanouts:

- a. All storm drainage piping shall be completely flushed of debris and accumulated sediment at the completion of construction.
- b. Cleanouts shall be inspected and repaired on an annual basis.
- c. Unless system performance indicates degradation of piping, comprehensive video inspection of storm drainage piping shall occur once every ten years.
- d. Any additional maintenance required per the manufacturer's specifications shall also be completed.

3. Rain Gardens:

- a. Rain gardens shall be inspected annually. Inspect after every major storm (1 inch or more of precipitation) during the first three months of operation.
- b. Remove trash and organic debris in the Spring and Fall.
- c. Remove sediment from the rain garden when the sediment accumulation exceeds 1 inch or more when drawdown exceeds 48 hours after the end of a storm event.
- d. Periodically remove grass clippings to prevent clogging of the surface of the rain garden.

4. Drainage Swales:

- a. All drainage swales shall be completely cleaned of accumulated debris and sediments at the completion of construction.
- b. Spring through fall, mow grass to between 4 to 6 inches, remove grass clippings.
- c. Accumulated debris shall be removed and repairs made as required.
- d. Reseed any bare areas as needed.
- e. Inspect level spreaders twice per year and remove sediment as necessary.

Disposal of Debris and Sediment:

All debris and sediment removed from the stormwater structures and rain gardens shall be disposed of legally. There shall be no dumping of silt or debris into or in proximity to any inland or tidal wetlands.

Maintenance Records:

The Owners(s) must maintain all records (logs, invoices, reports, data, etc.) and have them readily available for inspection at all times.

Operations and Maintenance Log (Page 1 of 2)

Oswegatchie Fire Station

Waterford, CT

Type of Inspection: ☐ Spring ☐ Fall ☐ Other

Inspector's Name: _____ Date of Inspection: _____

Affiliation: _____ Phone #: _____

Catch Basins & Drainage Inlets:

- | | |
|--|---|
| • Has accumulated debris been removed from grates? | ☐ Yes ☐ No ☐ N/A |
| • Do any basins require additional repair? (identify below): | ☐ Yes ☐ No ☐ N/A |
| • Have sumps been cleaned of sediment? | ☐ Yes ☐ No ☐ N/A |

Notes:

Storm Drainage Piping and Cleanouts:

- | | |
|---|---|
| • Has accumulated debris been removed? | ☐ Yes ☐ No ☐ N/A |
| • Do any cleanouts require additional repair? (identify below): | ☐ Yes ☐ No ☐ N/A |
| • Is there any evidence of stormwater piping failure? | ☐ Yes ☐ No ☐ N/A |
| • Has a comprehensive video inspection been completed? | ☐ Yes ☐ No ☐ N/A |

Notes:

Operations and Maintenance Log (Page 2 of 2)

*Oswegatchie Fire Station
Waterford, CT*

Rain Gardens:

- Has accumulated debris or sediment been removed? ☐ Yes ☐ No ☐ N/A
- Are any repairs required? (identify below): ☐ Yes ☐ No ☐ N/A
- Has accumulated grass clippings been removed? ☐ Yes ☐ No ☐ N/A

Notes:

Drainage Swales:

- Has accumulated debris been removed? ☐ Yes ☐ No ☐ N/A
- Do any swales require repair? (identify below): ☐ Yes ☐ No ☐ N/A
- Do swales need to be mowed? (spring through fall only) ☐ Yes ☐ No ☐ N/A
- Are there any bare areas? ☐ Yes ☐ No ☐ N/A

Notes:

Signature of Inspector:

Date:

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553
www.waterfordct.org

9

**FINANCE, WAGE & PERSONNEL STANDING COMMITTEE OF THE RTM
COMMITTEE REPORT
Monday, February 3, 2025**

Dear Moderator Goldstein,

At the December 2, 2025, the body of the RTM discussed a letter received from the First Selectman (See attached), subsequently referring "Salaries of the Elected Officials" to the Finance, Wage, and Personnel Standing Committee of the RTM.

In considering this request, the committee met on January 27, 2025 to discuss the matter. The discussion focused on how increases are calculated for the paid elected officials. During the discussion it was noted over the last ten years that more times than not, elected officials' salary increases were half as much as non union municipal personnel. With rising costs and in all fairness, the committee strongly felt salary increases for elected officials should be equal and consistent with NUMP to retain our employees and to attract new one's when needed.

After the discussion a Motion was made and accepted unanimously to "report this issue out of committee with a recommendation that the RTM annually increase elected official salaries by the percentage approved for non-union management effective July 1, 2025 to align salary increases."

Please accept this report and put forth this recommendation to the RTM for consideration and possible action.

Sincerely,

Harry Colonis
Chair
Finance, Wage and Personnel Committee

RECEIVED FOR RECORD
WATERFORD, CT
2025 FEB - 3 1 A 10 54
ATTEST: *[Signature]*
TOWN CLERK

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553
www.waterfordct.org

MINUTES
FINANCE, WAGE & PERSONNEL STANDING COMMITTEE OF THE RTM
Special Meeting
Monday January 27, 2025
6:00PM – Waterford Town Hall
Louise Appleby Room

1. Call to Order 6:02pm
2. Pledge of Allegiance
3. Roll Call
Present: Chairman Harry Colonis, Danielle Steward-Gelinas, Kate MacKenzie, Ted Olynciw
Absent: Kayla Mullen
Also present: RTM Minority Leader Susan Driscoll, RTM Moderator Paul Goldstein
4. Public Comment: RTM Moderator Paul Goldstein
5. To consider and act upon the minutes of the May 1, 2024 meeting
MOTION by Olynciw, seconded by Steward-Gelinas to accept.
VOTING IN FAVOR: Unanimous
6. Consideration of the possible action on items referred to committee:
 - A. Salaries of Elected Officials (RTC, 12/02/2024)
Discussion ensued
MOTION by Steward-Gelinas, seconded by Olynciw to report this issue out of committee with a recommendation that the RTM annually increase elected official salaries by the percentage approved for non-union management effective July 1, 2025 to align salary increases.
VOTING IN FAVOR: Unanimous
7. Adjournment
MOTION by Steward-Gelinas, seconded by Colonis to adjourn at 6:32.
VOTING IN FAVOR Unanimous

RECEIVED FOR RECORD
WATERFORD, CT
2025 FEB - 31 A 11:19
ATTEST: *[Signature]*
TOWN CLERK

FIFTEEN ROPE FERRY ROAD
WATERFORD, CT 06385-2886



PHONE: 860-442-0553
www.waterfordct.org

December 2, 2024

Mr. Paul Goldstein
Moderator
Representative Town Meeting
15 Rope Ferry Road
Waterford, CT 06385

RECEIVED FOR RECORD
WATERFORD, CT
2024 DEC - 2 P 6:22
ATTEST: *[Signature]*
TOWN CLERK

Dear Mr. Moderator: *Paul,*

I am respectfully requesting that the RTM's Finance, Wage & Personnel Standing Committee consider amending the procedure used for calculating the salary increases for the following elected officials: Town Clerk, Tax Collector, Treasurer and Registrars of Voters.

Back on January 20, 2022, the RTM's Finance, Wage & Personnel Standing Committee voted to annually increase elected official salaries by the "least" of the following effective July 1, 2022:

- a) Percentage increase of the CPI-U from July of the preceding fiscal year
- b) Half (50%) of the percentage increase approved for non-union management
- c) One point five percent (1.5%)

I am hopeful that the Committee and RTM will consider granting these elected officials increases equal to the RTM approved non-union management employee increases.

Thank you for your consideration.

Sincerely,

Robert J. Brule

Robert J. Brule
First Selectman

cc: David Campo, Town Clerk.

Amendments to the Constitution**Article XIX**

Adopted Nov 24, 1982

Except as provided in this section, neither the state nor any political subdivision of the state shall pay or grant to any elected official of the state or any political subdivision of the state, any compensation greater than the amount of compensation set at the beginning of such official's term of office for the office which such official holds or increase the pay or compensation of any public contractor above the amount specified in the contract. The provisions of this section shall not apply to elected officials in towns in which the legislative body is the town meeting. The compensation of an elected official of a political subdivision of the state whose term of office is four years or more may be increased once after such official has completed two years of his term by the legislative body of such political subdivision. The term "compensation" means, with respect to an elected official, such official's salary, exclusive of reimbursement for necessary expenses or any other benefit to which his office would entitle him.

[emphasis added]

https://www.cga.ct.gov/asp/Content/constitutions/Constitution_State_CT.pdf
Recent History of Waterford Elected Officials' Salary Increases

Elected Official	Date of Election	Term Starts*	Term Ends	Raise Allowed** On/After	Increases** * during term (effective dates)
BoS/Tax Collector	Nov 5, 2019	Nov 19, 2019	Nov 6, 2023	Nov 19, 2021	July 1, 2020/21/22/23
BoS/Tax Collector	Nov 7, 2023	Nov 21, 2023	Nov 15, 2027	Nov 21, 2025	July 1, 2024
Treasurer/Town Clerk	Nov 5, 2019	Jan 6, 2020	Jan 1, 2024	Jan 6, 2022	July 1, 2020/21/22/23
Treasurer/Town Clerk	Nov 7, 2023	Jan 1, 2024	Jan 2, 2028	Jan 1, 2026	July 1, 2024
Registrars	Nov 3, 2020	Jan 6, 2021	Jan 7, 2025	Jan 6, 2023	July 1, 21/22/23/24 [also stipend + base increase 1/1/23; EV base increase 1/1/24]
Registrars	Nov 5, 2024	Jan 8, 2025	Jan 2, 2029	Jan 8, 2027	

* CT General Statutes Chapter 146 Sec. 9-189a

BoS/Tax Collector: term starts by 2nd Tuesday following election

Treasurer/Town Clerk: term starts on first Monday of Jan following election

Registrars: term starts on Wed after first Mon following election

** after serving two years of term

*** various % increases to base salary

https://www.cga.ct.gov/2019/pub/chap_146.htm

Waterford Representative Town Meeting
Resolution Number 2025-1

10

WHEREAS, the Town of Waterford, through its Board of Selectmen and Board of Finance, present a yearly budget to the Representative Town Meeting (hereinafter "RTM") for its review and approval; and

The FY2026 budget approved by the RTM contains capital budget requests for both current year capital improvements and capital non-recurring requests; and

Traditionally capital non-recurring requests in the approved yearly budget are required to be presented a second time to the BOF and RTM for a specific re-voted appropriation;

NOW, THEREFORE, the RTM hereby resolves and approves for fiscal year 2026 a pilot program to permit capital non-recurring projects approved in the 2026 budget to be acted upon by the Town Finance Department without a separate, further appropriation vote by the Board of Finance and RTM.

So voted this ____ day of May, 2025.

Paul Goldstein
RTM Moderator

Attest: _____
David Campo
Waterford Town Clerk

RECEIVED FOR RECORD
WATERFORD, CT

2025 MAY 22 A 11:03

ATTEST: *David Campo*
TOWN CLERK

May 2, 2025

John W. "Bill" Sheehan
19 Laurel Crest Dr.
Waterford, CT 06385

Glenn Patterson
7 Leary Dr.
Waterford, CT 06385

Mr. Paul Goldstein
Moderator
Waterford Representative Town Meeting
15 Rope Ferry Road
Waterford, CT 06385

Mr., Goldstein

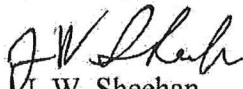
According to the Agenda of the Representative Town Meeting (RTM) for the Annual Budget Hearing and Special Meeting, the RTM will be considering a resolution for a pilot program for approved Capital Projects within the FY26 budget.

Rather than approving that resolution, in our capacity as individual members of the Board of Finance (BOF), we propose that the RTM send to a Standing Committee (possibly the Legislative and Administration Committee) the attached proposed change to the Code of Ordinances.

There is sufficient time between now and the FY2027 budget to pass the proposed ordinance and be ready in the FY2027 budget to have the best of both the designation procedure and the direct appropriation procedure.

We are sending this letter and proposed ordinance as individual members of the Board of Finance and not as a request or recommendation of the BOF.

Sincerely,


J. W. Sheehan


Glenn Patterson.

Copy to (with encl): Town Clerk Campo
First Selectman Brule

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY -2 P 2:38
ATTEST: 
TOWN CLERK

Proposed Ordinance Change for Capital Funds

3.04.020 - Reserve fund for capital and nonrecurring expenditures and Current Capital Fund established.

1. There is created a reserve fund for capital and nonrecurring expenditures.

a. The Reserve fund for capital and nonrecurring expenditures will have two types of funding- Appropriated and Designated.

1) If the expenditure requires accumulating funding over multiple years, the annual funding will be designated for the project. After the total funds needed for the expenditure are accumulated, the funds will be appropriated by action of the Board of Selectmen, the Board of Finance, and the Representative Town Meeting.

2) If the expenditure is well-defined and funding is complete in the initial request, the Board of Selectmen, the Board of Finance and the Representative Town Meeting shall appropriate the funds at the initial presentation.

3) If the expenditure is not well defined in the initial presentation, it will be designated and the Department or Board will have to return to the BOS, BOF, and RTM to become appropriated. This is likely to occur for an expenditure proposed in the First Selectman's Capital Plan.

b. The Current Capital Fund is established for expenditures that are expected to be completed in the Fiscal Year Proposed and funding will be considered appropriated when approved by the Board of Selectmen, Board of Finance, and Representative Town Meeting.

1) If the expenditure is not complete in the fiscal year proposed, It should be transferred to the Reserve fund for capital and nonrecurring Fund by action by the Board of Selectman, Board of Finance, and Representative Town Meeting before the end of the fiscal year.

2) If the expenditure is not complete in the fiscal year proposed and it is not transferred to the Reserve Fund, the remaining expenditure will be transferred to the Unassigned Fund Balance of the General Fund at the end of the fiscal year. If all that remains of the expenditure is final invoicing and payment then the funds may be encumbered to make those final payments in the next fiscal year.

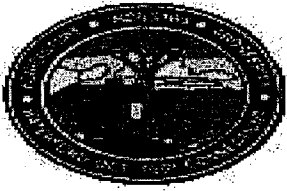
b. The Board of Finance shall review the progress of projects in both funds quarterly.

c. Funds left after the completion of the expenditure shall be returned to the Unassigned Fund Balance of the General Fund if from the Current Capital Fund and to the Undesignated fund

Balance of the Capital and Nonrecurring Fund if from the Reserve fund for capital and nonrecurring expenditures.

2. Implementation

- a. This ordinance change will be effective with the fiscal year 2027 budget.*
- b. In June 2026 the Board of Finance will transfer any outstanding projects from the Capital Improvement Fund to the Capital Nonrecurring Expenditure Fund.*
- c. The Capital Improvement Fund will be renamed the Current Year Capital Fund.*



Town of Waterford

Board Book Report



11

Utility Commission

Basic Information	
Type	Commission
Status	Enabled
Visibility	Public

Board Seats

First Name	Last Name	Address	Email	Political Party	Calculated Start Date	Calculated End Date	Status
					4/1/2025	3/31/2029	Vacant
Jerry	Porter	19 East Neck Road	biddeford5@yahoo.com	Democrat	4/1/2023	3/31/2027	Active
Kenneth	Kirkman	344 Great Neck Road	AIRBORN300@atlanticbb.net	Republican	4/1/2023	3/31/2027	Active
Raymond	Valentini	139 Old Colchester Rd.	valentinir25@gmail.com	Democrat	4/1/2025	3/31/2029	Active
Thomas	Dembek	56 Goshen Road	dembekthomas36@gmail.com	Republican	4/1/2025	3/31/2029	Active

WATERFORD REPUBLICAN TOWN COMMITTEE
P.O. Box 671
Waterford, CT 06385

Mr. David Campo
Waterford Town Clerk
15 Rope Ferry Road
Waterford, CT 06385

RECEIVED FOR RECORD
WATERFORD, CT
2025 MAY 22 P 1:56
ATTEST: *D. J. Campo*
TOWN CLERK

May 22, 2025

Dear Dave,

Please be informed that the Waterford Republican Town Committee has endorsed Ryan Boyle to serve on the Utilities Commission for the June 3, 2025 to March 31, 2029 term.

The Waterford Republican Town Committee respectfully requests that the Representative Town Meeting place in nomination at its meeting on June 2, 2025 the name of Ryan Boyle for a term on the Utilities Commission replacing Rodney Pinkham. Ryan has been a resident of Waterford since 2015. His background as a Director of Operations for a major energy company, combined with his current role as Director of Business Development and Technical Compliance, makes him a strong candidate for the Utility Commission.

Thank you in advance for your cooperation in this request.

Sincerely yours,

Tali Maidelis
WRTC, Chairman

Cc: Paul Goldstein
RTM, Moderator

Danielle Steward-Gelinas
RTM, Majority Leader