WAKE ROBIN INN REDEVELOPMENT

104-106 Sharon Road, Lakeville CT, 06039
53 Wells Hill Road, Lakeville CT, 06039

Application for Site Plan + Special Permit Approval
Town of Salisbury, Connecticut
Planning & Zoning Commission

April 30, 2025

Applicant:
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TRANSMITTAL LETTER

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Hon. Albert M. Rosenblatt

April 30, 2025

Dr. Michael Klemens, Chairman – P&Z Commission
Planning and Zoning Commission Members
Ms. Conroy
Town of Salisbury
PO Box 548
27 Main Street
Salisbury, CT 06068

RE: Application Submission for Site Plan and Special Permit Approval – Wake Robin Inn Redevelopment Project (104-106 Sharon Rd and 53 Wells Hill Rd)
Our File No.: 1308.0001

Dear Chairman Klemens, Planning and Zoning Commission Members, and Ms. Conroy:

We represent Aradev LLC. On their behalf, we are filing the enclosed application for site plan + special permit approval for the redevelopment of the Wake Robin Inn. The redevelopment consists of the properties at 104-106 Sharon Road and 53 Wells Hill Road.

This package contains the following:

- Overview letter
- Exhibit A - Zoning Compliance
- Project Narrative
- Application Forms
- Owners Authorization + Approval Letters
- Introduction to Aradev
- Development Team Bios
- Historical Narrative (from current owner)
- Photographs of Existing Site
- Project Renderings
- Wetlands Permit Approval + Modification Approval
- Traffic Impact Study + New Plan Analysis Letter
- Parking Analysis
- Tree Study + Preservation Report
- Sound Study
- Letter from Trash Company

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- Letter from Fire Marshal
- Building Height/Roof Compliance Analysis
- Sustainability Narrative
- Consistency with POCD
- Soil & Erosion Control Estimate
- WPCA Capacity Analysis
- Drainage Report
- Natural Diversity Data Base Communication

Four (4) copies of this application package are being hand delivered to the Planning & Zoning office at Town Hall. In addition, the following documents will be submitted separately due to their file size:

- Four (4) full sized Site Plan sets (including A2 survey)
- Four (4) full sized Architectural Plan sets

All of the above-mentioned documents (application package, site plan sets, and architectural plan sets) will be hand delivered to the Town. All application materials have been delivered to the Salisbury Planning and Zoning Commission in electronic (PDF) format.

The applicant, Aradev LLC, has included the applicable application fees of $360 payable to the Town of Salisbury.

This application is being filed on April 30,2025 with a request to be on the agenda and accepted at the May 5, 2025 regularly scheduled Planning and Zoning meeting.

A detailed overview of this application is provided in the letter on the proceeding pages including all applicable documents, studies, plans, approvals, etc.

We look forward to presenting this application to the Commission and thank you all for your time and hard work.

Sincerely,

MACKEY BUTTS & WHALEN, LLP

Joshua E. Mackey

cc: ARADEV LLC

OVERVIEW LETTER

MACKEY BUTTS & WHALEN LLP

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April 29, 2025

Dr. Michael Klemens, Chairman – P&Z Commission
Planning and Zoning Commission Members
Ms. Conroy
Town of Salisbury
PO Box 548
27 Main Street
Salisbury, CT 06068

RE: Application Submission for Site Plan and Special Permit Approval – Wake Robin Inn Redevelopment Project (104-106 Sharon Rd and 53 Wells Hill Rd)
Our File No.: 1308.0001

Dear Chairman Klemens, Planning and Zoning Commission Members, and Ms. Conroy:

On behalf of our client, Aradev LLC, we are submitting this application to the Town of Salisbury Planning and Zoning Commission pursuant to Section 213.5 of the Town of Salisbury Zoning Regulations (the "Regulations") for approval of site plan and special permit for the Wake Robin Inn Redevelopment Project located at 104-106 Sharon Rd and 53 Wells Hill Rd (the "Property"). The purpose of this letter is to explain the application in detail and acknowledge that the standards for site plans and special permits contained in the Regulations have been met.

1. History of the Property

The subject property (the Property) consists of two parcels: the Wake Robin Inn (104-106 Sharon Rd) and the "Granbery Property" (53 Wells Hill Rd). Aradev is currently under contract to purchase both parcels. The Property is improved with 38 guestrooms, an event space for approximately 100 people, outdoor event spaces for tented and un-tented events, parking, a single-family house having 4 bedrooms and 3 bathrooms, an accessory dwelling unit, and multiple storage areas. The Property is located within the RR-1 zone bounded by Sharon Rd (Route 41) to the west and Wells Hill Rd to the east. The Property is served by public water and the town sewer system.

The commercial use of the Property dates back more than 125 years to 1899 when it was originally constructed as the Taconic School for Girls and later, in 1914, when it was transformed into a hotel in 1914. At one time in history, the two parcels were all part of the same property, the Granbery Parcel being the house of the inn keeper and/or headmaster of the school.

Aradev filed an application with the Commission for site plan and special permit approval in August 2024 to improve the property with 71 guestrooms (including 14 cottages), a 200-person event facility, various food and beverage spaces, a newly construction spa, and a new in-ground pool. After numerous public hearings, over 35 meetings with neighbors, and making numerous modifications to the plan to address concerns expressed during the public hearing process, Aradev withdrew the application in order to reevaluate the plan with the concerns of the Commission in mind.

During deliberations and its pre-application meeting for this submission, Aradev was made aware of the three main concerns from the Planning and Zoning Commission: (1) overall intensity of the project especially with the number of proposed cottages, (2) the application did not have final water sewer approval from the WPCA, and (3) the application did not meet the burden of proof related to potential disturbance from noise most related to the event facility. This new application addresses the three major areas of concern identified in the pre-application discussions primarily by placing buildings more interior to the lot in a courtyard design and creating a residential-feel on the Wells Hill Rd side with two-cottages as a buffer to the project. Notably, the event room is now connected to the Inn extension, now combining circulation for the Main Inn, Inn extension, restaurant, and event room.

By unanimous vote, Aradev obtained approval from the Inland Wetlands and Watercourses Commission ("IWWC") on November 26, 2024 Given the modifications which are the subject of this application, Aradev subsequently sought and achieved approval for a permit modification on April 28, 2025, once again by unanimous vote of the IWWC.

2. An Appropriate Location for Hotel Development

The photographs of the historical and current use of the Wake Robin Inn contained in the application package illustrate the long history and existence of a hospitality use at 104-106 Sharon Road and 53 Wells Hill Road. The Wake Robin Inn site represents an appropriate and highly suitable location for hotel development based on its historic use, existing infrastructure, and compatibility with the surrounding area. The property has a well-established legacy as a hospitality venue, having operated for over a century as an inn providing overnight accommodations. In more recent decades, the property has hosted weddings and corporate retreats in excess of 200 people. This longstanding use demonstrates both the viability of hotel operations at this location and the property's integration into the character and fabric of the community.

Furthermore, the site is uniquely positioned to meet a demonstrated and growing need for high-quality lodging accommodations in the region, supporting local tourism, cultural events, and the broader regional economy. Aradev's plan will build upon the existing uses and goodwill created by the Wake Robin operators.

The existing improvements on the site, however, are outdated and require significant capital investment in order to meet modern building code requirements, life safety standards, and current guest expectations. The current facility lacks the amenities, operational functionality, and efficiencies necessary to meet the demands of today's hospitality market, particularly in light of the increasing demand for lodging accommodations in the area. Redevelopment of the property will allow for essential upgrades to the buildings and infrastructure, while preserving the historic character of the site and its established hospitality use. This investment will ensure that the property remains a valuable and contributing asset to the local economy.

The proposed redevelopment plan has been thoughtfully designed to respect the scale, aesthetics, and environmental context of the area, while enhancing the property's functionality and long-term viability. For these reasons, the proposed redevelopment aligns with the goals and intent of the Regulations and represents an appropriate, beneficial, and consistent use of the property.

3. Zoning Conformity - 213.5 Hotels in Residential Zones

The property fully complies with the requirements set forth in Section 213.5 of the Regulations for hotels in residential zones. Furthermore, the application, along with its accompanying plans and supporting documents, provides clear and substantive evidence that the applicant has fulfilled the burden of proof with respect to the Site Plan and Special Permit requirements as set forth in the applicable regulations. Exhibit "A" of this letter offers a comprehensive, section-by-section analysis of the Regulations, demonstrating the proposed development's compliance with each provision.

The property is in the RR-1 Zone where hotels are allowed subject to a special permit in accordance with Article VIII, Site Plans and Special Permits. Firstly, the property meets the minimum lot size requirement encompassing over 10 acres. Secondly, the property has more than 150 feet of frontage on a Connecticut state highway, ensuring both the required frontage and access to the site from a state road, as specified in the Regulations. Lastly, the property is already served and will continue to be served by public water and sewer systems, satisfying the requirement for municipal utilities. By meeting all of these key criteria, the redevelopment plan ensures full compliance with the Regulations, while preserving the Property's compatibility with the surrounding residential area.

4. POCD Consistency

The Wake Robin Inn Redevelopment Plan aligns with the 2024 Salisbury Plan of Conservation and Development (POCD) by promoting sustainable development, preserving the historic, rural, scenic and cultural character of the community. The project incorporates environmentally responsible practices, such as compliance with the 2024 Connecticut Stormwater Quality Manual, including the use of rain gardens and sustainable stormwater management systems. Additionally, the redevelopment plan maintains the historical use of the property as a hotel, which is permitted in the RR1 zone via special permit and includes amenities like a spa and event space that are customary for upscale hotels in the region. By revitalizing a longstanding hospitality venue, the plan supports local tourism and contributes to the town's economic development goals outlined in the POCD. (Refer to the "POCD Consistency" document in the binder for a more detailed analysis.)

5. Development Plan

The proposed redevelopment of the Wake Robin Inn property will modernize and expand its hospitality offerings while preserving the historic character of the existing Inn. The project includes the demolition of the structures at 53 Wells Hill Road, the former motel building, various garages, storage structures, and selective portions of the existing Inn to allow for necessary renovations and site improvements. Renovations to the existing Inn will upgrade guest rooms and public spaces, with a modest addition to provide additional guest accommodations. The project also proposes the construction of a new event and dining space for up to 125 guests, four (4) new guest cabins, a seasonal swimming pool, and a new spa building with associated amenities. Additional improvements include the construction of two to three (2-3) garage/storage structures throughout the property, as well as upgrades to site circulation, walkways, driveways, and parking areas. The redevelopment will incorporate sustainable site design practices, including the use of pervious pavement where feasible, rain gardens, wetland buffer enhancements, and naturalized landscaping improvements. The project is intended to preserve the Inn's role as a community landmark while enhancing its long-term viability and environmental stewardship.

Access to the property will be exclusively via the existing entrance on Sharon Road. Consistent with the Connecticut State Building Code and Fire Safety Code, an additional unobstructed gated emergency access point will be established on Wells Hill Road, located to the northeast of the property, to ensure adequate emergency ingress and egress. On-site parking has been thoughtfully designed to minimize tree removal and grading, thereby preserving the natural landscape to the greatest extent feasible. The Landscape plan illustrates the additional plantings of year-round evergreen trees along the edges of the main car parking lot to reduce car headlight spillage.

In accordance with Section 703.9 of the Regulations, “Required Number of Parking Spaces,” the applicant has submitted a detailed Parking Analysis that considers occupancy, facility capacity, and anticipated peak patronage to demonstrate that the proposed parking provisions are sufficient to meet the demands of the site.

The application and its supporting documents demonstrate full compliance with Section 803 Standards for Special Permits by thoroughly addressing all required criteria. The proposal provides detailed plans and assessments to ensure that the redevelopment will not adversely impact the surrounding area, including traffic flow, environmental considerations, and compatibility with the existing neighborhood. It outlines how the project will maintain the character of the community while enhancing the property’s functionality, ensuring it meets modern safety standards and operational efficiencies. The application includes expert evaluations on environmental impact, traffic studies, and other relevant factors, confirming that the redevelopment will serve the public interest, minimize negative effects, and enhance the local economy, aligning with the objectives of Section 803.

6. Building Height & conformance

The Regulations permit a maximum building height of 35 feet, measured from the average grade plane calculated every five feet to the midpoint of a gable, hip, or gambrel roof. All proposed structures and additions fully comply with this 35-foot height restriction, as detailed extensively in the "Building Height Analysis" prepared by Tim Widman of EDM Studio, the project's Connecticut-based architect and code consultant. The existing Wake Robin Inn exceeds the permitted height limit and is thus classified as a non-conforming structure under Section 500.1. Section 503 specifically restricts alterations to non-conforming structures regarding any vertical enlargement (upward or downward expansions). Consequently, all proposed additions to the Main Inn have been thoughtfully designed in strict compliance with Section 309.2 and are thoroughly documented by EDM Studio. The existing non-conforming Inn is permitted to remain in its current condition, as none of the proposed alterations will violate or intensify its non-conforming attributes.

7. Stormwater

Per the Drainage Report prepared by SLR Consulting (April 29, 2025). The parcel is located in the FEMA Area of Minimal Flood Hazard (Zone X). The Drainage Report confirms that there will be no increases in peak runoff rates for the 1, 2, 5, 10, 25, 50, and 100-year storms, and there will be a 50% reduction in the peak runoff rate for the 2-year storm for the runoff to the Sharon Road storm drainage system. The development will implement water quality control measures, such as hydrodynamic separators to treat the Water Quality Flow (WQF) and retention storage for the Water Quality Volume (WQV), within the stormwater basins.

8. Traffic

The Project is anticipated to have a minimal and well-managed impact on area traffic patterns and congestion, as demonstrated through the comprehensive Traffic Impact Study prepared by SLR Consulting, LLC, dated September 13, 2024. The original study was conducted based on a more intensive development program that included a greater number of lodging units and higher anticipated occupancy for events, resulting in a greater projected number of vehicle trips than currently proposed. The study included a detailed assessment of existing traffic conditions along Sharon Road (CT-41) and Wells Hill Road, future traffic volume projections with and without the project, and full capacity analyses of all study area intersections. Sightline evaluations were also conducted for the proposed site access points to ensure safe and compliant ingress and egress in accordance with Connecticut Department of Transportation (CTDOT) standards. The findings of the September 2024 analysis concluded that all studied intersections and lane movements would continue to operate at Level of Service (LOS) C or better under future conditions, even with the originally higher trip generation levels associated with the project. Subject to planned regrading and vegetation clearing along the Sharon Road frontage, the sightlines were determined to meet CTDOT criteria. The complete Traffic Impact Study dated September 13, 2024, is included in the application materials for the Commission’s review.

Following revisions to the development program, a reevaluation for traffic reasons of the updated site plan was conducted on April 29, 2025. The updated analysis determined that the project results in a 7–12% reduction in the number of projected vehicle trips compared to the original September 2024 assumptions. This decrease is attributed to reductions in the number of guest accommodations and the maximum event occupancy. As a result, the already acceptable operational conditions identified in the original study are expected to further improve under the current proposal, ensuring even lesser impacts on area traffic volumes, congestion, and roadway safety. A summary of the April 2025 updated traffic analysis is also included within the application documents for the Commission's review. Based on these findings, the Wake Robin Inn Redevelopment project complies with all applicable traffic and circulation standards required for Special Permit approval and is consistent with the Town of Salisbury's goals to promote orderly, safe, and sustainable development.

9. Sound

Aradev LLC retained Cavanaugh Tocci to conduct a comprehensive sound study for the Project. The study included a review of the State of Connecticut Title 22a-69 Noise Control Regulations, the Regulations, ambient sound monitoring over a seven-day period, and predictive computer modeling of future sound levels associated with the proposed improvements. The analysis confirmed that sound levels from all activities including event space music, parking operations, pool usage, mechanical equipment, and waste collection will fully comply with the applicable Connecticut noise standards and the Regulation 803.2, which prohibits creation of a nuisance to neighboring properties in relation to sound.

Sound monitoring was conducted continuously from February 27, 2025 to March 5, 2025, at eight property-line locations, establishing a nighttime ambient baseline as low as 37 dBA. Although Connecticut regulations permit a maximum nighttime tonal sound level of 40 dBA, the redevelopment plan voluntarily adopts a lower design goal of 32 dBA for music at property lines to further minimize any potential impact. Computer modeling, performed in accordance with ISO 9613-2 (2024) standards, shows that anticipated music levels at neighboring residences will remain below this 32 dBA target. Additionally, all other modeled sources—such as vehicle sounds, pool activities, and HVAC equipment—are predicted to remain well below the respective state thresholds (45 dBA nighttime for continuous noise and 80 dBA for impulse sounds). Based on these findings, it is demonstrated that the redeveloped Wake Robin Inn will not create a nuisance and will operate harmoniously within its residential setting as required by the Regulations. A detailed copy of the full sound study is included in the application materials for the Commission's review.

10. Sustainability & Amenities

The applicant and its team of architects, landscape architects and engineers have carefully crafted a sustainability narrative. Aradev is dedicated to environmental stewardship, incorporating sustainable building practices, materials, and preservation principles into all their projects, making sustainability a top priority.

11. Water & Sewer Capacity

A detailed downstream sanitary sewer capacity analysis was prepared by SLR International Corporation to evaluate the proposed Wake Robin Inn redevelopment's impact on the Town of Salisbury's sanitary sewer collection system. Utilizing conservative flow projections based on Connecticut Public Health Code standards, the analysis estimated the project's average daily sanitary sewer flow at approximately 19,770 gallons per day, with a corresponding peak flow of 41 gallons per minute. Flow metering and hydraulic modeling of the downstream system confirmed that all segments between the Wake Robin Inn and the Town's wastewater treatment facility will continue to operate below 90% of their respective full capacity thresholds, consistent with the Town's established requirements. Additionally, the analysis demonstrated that anticipated ancillary flows, including seasonal pool drainage at a maximum gravity flow rate of 30 gallons per minute, can be accommodated within the system, particularly when scheduled during non-peak hours.

While the study acknowledged the presence of existing infiltration within the Town's collection system, rainfall-induced inflow (RII) was determined to be minimal based on flow monitoring data collected during significant storm events in Spring 2025. No substantial or sustained flow increases indicative of excessive inflow or infiltration were observed. Accordingly, the findings confirm that sufficient downstream sewer capacity exists to support the proposed redevelopment project. The applicant and its team of consultants has and will continue to coordinate closely with the Town's engineering consultant, Tighe & Bond, and the Salisbury Water Pollution Control Authority (WPCA) to obtain all necessary approvals, satisfy applicable sewer connection fees, and actively participate in discussions relating to broader systemwide inflow and infiltration (I&I) management initiatives.

12. Conclusion

Aradev's design team have provided a detailed explanation of the proposed plan in this letter and the accompanying application materials. These documents have been prepared to address all pertinent issues, respond to anticipated inquiries, and narrow the scope of topics to be addressed at the public hearing. Efforts have been made to streamline the review process for peer consultants, Town Staff, and the public. The applicant has also taken steps to demonstrate that the project can be constructed without posing any significant risks to public health or safety. Furthermore, the applicant aims to show that the proposed development will provide tangible benefits to the Town of Salisbury and its residents.

Thank you for your attention to this application. We look forward to presenting it further to the Commission and answering any questions you may have.

Sincerely,

MACKEY BUTTS & WHALEN, LLP

Joshua E. Mackey

cc: ARADEV LLC

EXHIBIT A
ZONING COMPLIANCE

Wake Robin Inn Redevelopment
Exhibit A - Zoning Compliance

213.5 Hotels in Residential Zones	
Hotels are permitted in the RR-1 Zone subject to a special permit in accordance with Article VIII- Site Plans and Special Permits. The following additional standards and specific requirements apply. a. Minimum lot size shall be (10) ten acres. b. Frontage and Access. The property containing a hotel must have 150' feet of frontage on and be accessed from a Connecticut state highway. c. Water and Sewer Service. The property must be served by public water and sewer.	a) The proposed project consists of 13.557 acres. Wake Robin (104-106 Sharon Rd) is 11.280 acres and 53 Wells Hill Rd is 2.277 acres. b) The proposed project has 196 feet of frontage along Sharon Road (state highway) and is the sole entrance for the property. c) The two parcels are currently served by public water & sewer. The new structures will be connected to the public water & sewer as well.
305.1 General - Setback From Water Bodies and Watercourses	
No principal building shall be located within seventy-five(75) feet, and no attached deck or detached accessory building shall be located within fifty (50) feet of a water body or watercourse regulated by The Salisbury Conservation Commission. In the Lake Protection Overlay District no principal building or attached deck or accessory building shall be located within seventy-five (75) feet of the lake shoreline ordinary high water mark as described under Article IV Lake Protection Overlay District.	The applicant received its IWWC approval 11/26/2024 and went back to the IWWC Commission to obtain a permit modification in which was approved on 4/28/2025.
309.2 Maximum Building Height for a Principal Building	
a. The maximum building height requirements for a principal building shall be no more than thirty-five (35) feet for gable, hip and gambrel roofed buildings, and thirty (30) feet for flat, mansard, or any other type of building roof. b. The building height shall be measured as the vertical distance between a horizontal plane passing through the average elevation of the finished lot grade at the base of the building to: • The mid-point between the eaves and ridge of the highest roof for a gable, hip or gambrel roofed building, or • The highest point of the highest roof (including the top of the parapet) for a flat, mansard or any other type of building roof. • The average elevation of the finished lot grade at the base of the building shall be determined from the measurements taken at the finished grade every five (5) feet along the building walls. c. A plan prepared by a Registered Land Surveyor (R.L.S.) showing the calculation of the average elevation of the finished grade and the maximum building height measurement may be required by the Zoning Administrator where such documentation is needed to clearly determine that the application meets the building height requirements.	The alterations and additions for all buildings on the property do not exceed the maximum building height in accordance with 309.2. Refer to the detailed Building Height Conformance analysis that was prepared by EDM Studio (Tim Widman), the projects code consultant and local Connecticut architect. In addition, a detailed average grade calculation plan was prepared by SLR Consulting and used by EDM Studio to calculate the actual building heights which are in conformance with the regulations.
309.3 Exceptions	
The maximum building height limitation as shown in the Tables of Dimensional Requirements shall not apply to: • Church spires, farm buildings, cupolas and similar parts of a structure not used for human occupancy; or • Chimneys, tanks, skylights, communications antennas, windmills and similar mechanical appurtenance usually set above roof level.	See response above
309.4 Building Height for Accessory Buildings	
a. The maximum height for an accessory building shall be the same as for a principal building, with the exception of a storage building in a side or rear yard which shall be under fifteen (15) feet (See 304.2). b. The height of an accessory building or structure shall be determined by measuring the vertical distance between horizontal planes drawn through the lowest point of the building visible above the finished grade to the highest point of the roof.	All Accessory Buildings are in compliance with the maximum building height and are illustrated in the Building Height Comforance analysis prepared by EDM Studio (Tim Widman).
403 Aquifer Protection Overlay District	
All uses permitted in the underlying zone are permitted in the Aquifer Protection Overlay District, except in the Overlay District certain uses or activities shall require a Special Permit, and other uses shall be prohibited.	A portion of the property is located within the Aquifer Protection Overlay (APO) district and the boundary is shown on the site plans submitted. The proposed development is an allowed use via a special permit, is consistent with permitted uses and does not include any of the prohibited uses or activities that use, store, handle or dispose of hazardous materials and other potential ground water contaminants. The total area of APO on the 13.8 acre redevelopment property(s) is approximately 5.71 acres. Of the 5.71 acres within the APO, approximately 0.69 Acres or 12.1% will be impervious coverage as part of the redevelopment project.

503 Enlargement of a Non-Conforming Use, Building or Structure	
503.1 No non-conforming use of land or non-conforming use of a building or a structure shall be extended to occupy a greater area, space or portion of such land, building or structure than was occupied or manifestly arranged for the use on the date that its non-conforming status was established. **503.2** Except as provided below, no non-conforming building or structure shall be altered, enlarged or extended in any way that increases the area or space, including vertical enlargement, of that portion of the building or structure that is non-conforming. For the purposes of this regulation, vertical is defined as enlargement or expansion either upward or downward. In all zones, except the LA Zone, subject to approval of a Special Permit, the Commission may approve second story additions or other vertical additions to the height or bulk of that portion of a residential building which is non-conforming in terms of minimum Yard Setback Requirements provided: a. The proposed addition is designed to be compatible with the existing building in terms of architecture, materials and appearance. b. The proposed addition does not project into the required minimum yard any further than the existing non-conforming building foundation or building façade. c. The Commission determines the application meets the General Standards for Site Plans and Special Permits, particularly sections 801.2, 801.3, 803.2, and 803.3. d. In evaluating the application and reaching its decision, the Commission shall take into consideration the degree of the existing non-conformity.	The existing Wake Robin Inn exceeds the 35-foot height limit and is classified as a non-conforming structure under Section 500.1. In accordance with Sections 500.2 and 503.2, its height may not be increased vertically, and any additions must comply with Section 309; which the application documents clearly illustrate the non-conforming attribute of the non-conforming existing structure is not altered. Refer to the Building Height Conformity analysis prepared by EDM Studio (Tim Widman) for further details.
600 Sedimentation and Erosion Control Plan	
A Sedimentation and Erosion Control Plan shall be required with any application for development when the cumulative disturbed area is more than one-half (1/2) acre. However, a Sedimentation and Erosion Control Plan may be required for applications with disturbed land of less than one-half (1/2) acre, if deemed necessary by the Zoning Administrator. A lot in a subdivision shall be subject to the requirements for a Sedimentation and Erosion Control Plan both as part of the subdivision plan and as part of an application for a Zoning Permit. The applicant shall describe in mapped and narrative form the measures to be taken to control erosion and sedimentation both during and after construction. The plan and its specific measures shall be based upon the best available technology and shall be in accordance with the principles and the minimum standards as stated in the Connecticut Guidelines for Erosion and Sediment Control (2002), as amended. The Sedimentation and Erosion Control Plan shall be designed to result in development that minimizes erosion and sedimentation during construction, prevents off-site erosion or sedimentation and stabilizes and protects against post construction erosion.	The application includes a set of Site Plans which identify the proposed methods of Sedimentation and Erosion Control in accordance with the Connecticut Guidelines for Soil Erosion & Sediment Control (Council on Soil & Water Conservation/CTDEEP/March 2024). These S&E plans can be found within the site plans dated April 29, 2025, Sheet No.10/SE-1/Sediment & Erosion Control Plan and Sheet No.11/SE-2/Sediment & Erosion Control Details.
600.1 Sedimentation and Erosion Control Plan (S&EC) Requirements	
Mapped information as required below shall be shown separately or as part of the Site Plan and/or construction plan. Said plan shall contain, but not be limited to, the following: a. A narrative describing the development project; soil erosion and sedimentation control measures with construction, installation and maintenance details and procedures; time schedules for undertaking and completing all major construction activities; indication of the anticipated start and completion dates; grading operations; and stabilization of disturbed areas. b. A Site Plan map at a scale not to exceed 100 feet to the inch showing: • Existing and proposed topography; • Topographic contours within the disturbed area at no less than two foot contour intervals, based upon a field survey, and • Proposed site alterations and disturbed areas, including cleared, excavated, filled or graded areas and identification and location of all erosion and sedimentation control measures and facilities.	See response above
600.2 Decision	
a. The Commission shall either certify that the Sedimentation and Erosion Control plan complies with the requirements of this section or deny certification when the development proposal does not comply with this section. b. Prior to action on the plan, the Commission may consider requesting a review of the plan from the Northwest Conservation District, its successor agency, or a qualified person designated by the Commission.	N/A
600.3 Conditions	
a. Sedimentation and erosion control measures and facilities shall be installed as scheduled according to the approved plan. The Commission may require a performance bond or other form of surety acceptable to the Commission to guarantee completion of erosion and sedimentation control measures. b. All sedimentation and erosion control measures and facilities shall be maintained in effective condition to ensure compliance with the approved plan.	N/A

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601 Excavation, Filling and Grading	
602.2 General (amended 2.2.2010)	
No loam, topsoil, sand, gravel, clay, stone or other natural earth product shall be excavated or removed, nor shall any filling or grading of land occur unless a Special Permit for Excavation, Filling and Grading for such activity has been approved by the Commission in accord with the requirements of this section, with the following exceptions. The following activities may be undertaken without a Special Permit for Excavation, Filling and Grading provided no dangerous condition is created and there is no damage to surrounding land. a. Excavation in connection with bona fide construction of a building or structure or the alteration of a building where: • Such excavation is confined to the premises on which the structure is located, • A zoning permit and a building permit has been issued for such construction, and • Not more than 250 cubic yards shall be permitted to be removed from the premises. b. Excavation in connection with the bona fide landscaping of premises. c. Excavation in connection with an agricultural operation. d. Excavation in connection with the installation of improvements in accordance with subdivision and/or construction plans approved by the Planning and Zoning Commission.	N/A
601.3 Application	
Before any Special Permit for Excavation, Filling and Grading may be granted, a written application shall be submitted to the Commission by the property owner or by his agent, on forms provided by the Commission, together with maps and plans prepared by an engineer or Registered Land Surveyor licensed to practice in the State of Connecticut, which shows the following: a. The boundaries of the property where the excavation is proposed and the delineation of the area to be excavated. b. The existing contours in the area to be excavated and the proposed contours after completion of the excavation. The contours shall be derived from an actual field survey based on bench marks noted and described on the map and drawn to a scale of not less than 100 feet to the inch with a contour interval not to exceed five (5) feet. c. The existing and proposed drainage during and after the excavation. d. Existing and proposed drainage easement and flowage rights. e. The surrounding access streets and property lines. f. The existing and proposed structures on the premises; and g. The proposed truck access route to the excavation area with particular reference to the route in relation to schools, playgrounds, churches and traffic through residential neighborhoods.	Refer to the Site Plans (dated April 29, 2025) submitted for all applicable maps and drawings
602 Storm Water Management Plan Requirements	
602.1 General	
For any Site Plan application requiring a Storm Water Management Plan such plan shall meet the requirements of this section. A Storm Water Management Plan shall also be required in the C-20, CG-20, LI-1 or LI-20 zones for any Site Plan where the total impervious surface on the lot is greater than 20% or where the proposed Site Plan involves the disturbance of more than one half acre of land. All such plans may be subject to review by an engineer designated by the Commission.	The application includes a complete set of Site Plans and drainage reports, which have previously been reviewed by the Town's third-party engineering consultant, R.R. Hiltbrand Engineers & Surveyors, L.L.C., and are scheduled for further review.

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602.2 Standards and Requirements	
a. The proposed storm water management system and plan shall be designed to meet the following standards and requirements: • Prevent flooding on or off the property. • Minimize pollutant loads in storm water runoff into inland wetlands, surface and subsurface water. • Maintain the hydrology of existing sub-watersheds including wetlands and watercourses. • Prohibit direct channeling (via pipe or paved culvert or the like) of untreated surface water runoff into adjacent ground or surface water. b. On-site storage of storm water shall be employed to the maximum extent feasible. On-site storage methods include, but are not limited to, bio-filters, landscaped depressions, grass swales, infiltration trenches and retention or detention basins. c. Pollutants shall be controlled at their source to the maximum extent feasible using best available control measures and technology to contain the contamination. Measures include, but are not limited to, sweeping of streets and parking lots, especially in the early spring, the use of oil traps and sediment basins prior to infiltration, the use of pervious surfaces and the encouragement of sheet flow to filter strips. d. The maintenance of a private storm water system is the responsibility of the property owner. The Commission may require that a maintenance program be developed and submitted as part of the plan. The Commission may require a bond be posted and/or that periodic reports be filed with the Town to ensure that the required maintenance has been performed e. Storm water runoff control structures located on private property shall be accessible at all times for Town inspection.	The proposed stormwater management plan has been designed and engineered in accordance with Connecticut Stormwater Quality Manual (CTDEEP/March 2024). This application includes a set of detailed Site Plans (April 29, 2025) and detailed Drainage Report (April 2025) which identify the proposed methods of Stormwater Management for the proposed redevelopment project.
700 Residential Driveways, Commercial and Industrial Access and Circulation Requirements	
700.3 Standards for Driveway Design and Construction.	
a. Driveway corridors shall be located to follow the existing contours to the maximum extent possible, in order to minimize disturbance and erosion and to avoid wetlands and watercourses. b. Driveway intersections with a town street or State highway shall be planned for safety and to minimize conflict with vehicular travel on the public roadway. c. The driveway drainage plan shall be designed to shed water along the length of the driveway side slopes and to avoid concentration of water runoff onto existing or proposed streets, street rights of way and adjoining property. d. Crowned driveways are encouraged and driveway curbing is discouraged. e. Driveway grading shall be as follows: • The maximum driveway grade for the first 100 feet beyond the Town or State right of way shall be 12%. • The maximum driveway grade shall be 18%. • Any segment with a grade over 15%, or all segments of a driveway added together with a grade over 15%, shall not exceed 10% of the total driveway length. • A proposed driveway with a grade over 15% shall require submission of a Site Plan, meeting the requirements of these Regulations. f. Driveway length shall be measured from the intersection of the driveway at the street right of way line to the driveway terminus. g. The length of any grade over 15% shall be paved. However, a comparable surfacing may be approved subject to review and recommendation of the Commission's designated engineer. h. The Commission may require submission of an As Built Survey where it determines such is needed to document the final grade, locations of drainage improvements or other elements of the approved driveway plan.	The proposed design of vehicular access to and from the site, as well as internal circulation has been designed and engineered to utilize the existing driveway locations and circulation routes to the greatest extent feasible, while proposing improvements to the overall safety and functionality of vehicular access of the site. The proposed driveway will have a max grade of 12% and will be reconstructed to an appropriate width of 18 feet to 24 feet, depending upon two-way and one-way circulation, with appropriate drainage. The proposed realignment and reconstruction of the primary driveway at Sharon Road (Rte 41) and associated site line improvements are being designed in accordance with CT DOT design standards and will be subject to CT DOT final review and approval. The existing vehicular access onto Wells Hill Road will be gated for Emergency Vehicle Access Only. This application includes a set of detailed Site Plans (April 29, 2025) and a detailed Drainage Report (April 29, 2025) which identify the proposed layout, grading, and drainage proposed for the driveways of the redevelopment.

700.4 Common Driveway	
a. The purpose of this regulation is to encourage the use of common driveways serving a maximum of three lots in the Residential Zoning Districts to: • Minimize the frequency of curb cuts along town ways; • Provide for the safest possible locations for curb cuts; • Avoid or minimize the need for alterations of wetlands, tree lines, and stone walls; • Minimize the amount of impervious surfaces created by driveways providing access to dwellings, and, • Provide standards for safe driveways that are adequate for access by emergency vehicles. b. In any Residential Zone the Commission may approve a maximum of three lots served by a common driveway subject to zoning requirements 700.2 and 700.3, and the following additional requirements: • The common driveway shall be located on a strip of land which is under a deed of joint ownership of the lots it serves. • This deed shall be subject to review and approval by the Commission's attorney and shall contain restrictions that the common driveway shall remain private in perpetuity; that no parking will be allowed on the common drive, and that all roadway maintenance, snowplowing and rubbish collection shall be the land-owner's responsibility. • A copy of this approved and recorded deed shall be provided to the Commission prior to issuance of a Zoning Permit for the homes located on the lots the common driveway serves. c. The jointly owned access strip on which the common driveway is located shall have a minimum width of 50 feet at all points. d. Individual driveways branching off the common driveway shall contain an area at its terminus which is adequate for emergency vehicle access. e. Utilities shall be underground, where feasible. f. Maximum driveway grade for the common portion of the driveway shall be 15%	N/A
701 Landscape Standards for Site Plans in Commercial and Industrial Zones, Special Permit Applications and Certain Other Site Plan Applications	
701.3 Where a Landscape Plan and Landscape Architect is Required	
A Landscape Plan prepared by a registered Landscape Architect shall be required for a Special Permit application and for a Site Plan application in a Commercial or Industrial Zone. The Commission may require a Landscape Plan for any other Site Plan application involving outside storage of goods, material or machinery, or where there are more than fifteen (15) parking spaces, or for a non-residential use in a Residential Zone. At the request of the applicant, the Commission may approve preparation of the Landscape Plan by a landscape designer where it determines a Landscape Architect is not necessary, such as for a landscape buffer planting, parking lot landscape plan or other small plan or one that does not involve significant re-grading.	Please refer to the Landscaping Plan included within the Site Plan Package dated April 29, 2025 (Sheet No.5/LS/Site Plan - Landscaping), prepared and stamped by Mark Arigoni, a Licensed & Registered Landscape Architect in the State of Connecticut (LAR#00859).

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701.4 Plan Standards and Requirements	
The following standards and requirements shall apply to Landscape Plans. a. The plan shall: • Show existing and proposed landscaping and buffering; • Provide a table identifying the plant and tree sizes (at the time of planting), and types, including the botanical and common name of all plant species, and • Include a detailed estimate of the cost of installation and maintenance of the landscape materials. b. Wherever possible the plan shall preserve natural stands of trees and shrubs located within the required yard area and the site's existing topographic patterns and vegetation which can contribute to the beauty of a proposed development. c. Service yards, dumpsters, utility structures, loading areas and other places that tend to be unsightly shall be screened from public view by landscaping, berms, fencing or other means that are effective year round. d. The Commission may require that one or all of the required yard areas along property boundary lines be landscaped with shrubs and trees, or such landscaping combined with berms, fences and/or walls, to provide a screen and transition from the site to the surrounding area. e. Parking Lot Landscaping. To reduce visual and heat impact, excessive drainage and to facilitate snow removal, a lot with more than fifteen (15) parking spaces shall have a landscaped island at each end of each row of parking spaces. Any row of fifteen (15) or more parking spaces shall also have an intermediate landscaped island. Landscaped islands shall be a minimum of eighteen (18) feet in length and nine (9) feet in width. Each landscaped island shall contain a deciduous tree. f. The Commission may waive or modify these parking lot landscape requirements for properties located within the C-20 and CG-20 zones.	a) Refer to the Existing Conditions Plan (Sheet No. 2/EX) and Landscaping Plan (Sheet No. 5/LS) included in the Site Plan package (April 29, 2025) for a detailed depiction of existing and proposed landscaping elements, including the location, species, size, and botanical names of plantings. Cost estimate of installation and maintence of proposed landscaping will be provided prior to the issuance of a zoning permit. b) The application includes a Tree Preservation Plan and Tree Evaluation Report, prepared to promote a healthy site environment. The plan emphasizes preserving as many native trees as possible while thoughtfully integrating with the site's natural topography and areas of ledge. c) As shown on the Landscaping Plan, a significant number of new trees are proposed to enhance natural buffers and provide visual screening of service areas, including dumpsters, utility structures, and ancillary service buildings. d) The plan utilizes both preservation of wooded areas and topographical changes along property lines as well as proposed landscaping, landforms, fencing, and natural stone walls to create a visual buffer to the surrounding areas. e) The parking on the site has been designed to disperse smaller parking areas on the site to avoid large areas of pavement. All parking lot aisles and driveways will be paved for maintenance purposes, however the parking bays (vehicular parking spaces) will be constructed using a permeable pavement system. The proposed plan has intermediate landscaped islands (with one deciduous tree, minimum) after each parking row, with a maximum parking space row of 13 spaces. f) Not Applicable – the property is located within the RR-1 Zone.
g. The Commission may also require that a Landscape Architect provide a professional assessment of the visual impact of the proposed development and landscape plan as viewed from surrounding land uses and public streets where it finds such is needed to insure that the plan meets the purposes and standards of this regulation. For this purpose, the Commission may require cross section views from vantage points off the site that relate to the purposes of this regulation. h. Minimum Planting Requirements At the time of planting: • All deciduous trees shall have a minimum caliper of 2.5 inches measured according to American Association of Nurserymen standard and shall be shade trees which have a minimum branching height of five (5) feet. The Commission may allow the substitution of ornamental trees with a 2.5 inch caliper. A variation of.25 inches in caliper is allowed. • All required non-deciduous trees shall have a minimum height of six (6) feet. • All required shrubs shall have a minimum height of eighteen (18) inches. • All required trees, shrubs, landscaped islands and other buffer areas must be protected from vehicular damage by curbing, railing, landscape timbers or another suitable substitute. • All required trees, shrubs and landscaped areas shall be maintained in good order by the property owner. • No required tree shall be planted on a slope that exceeds 33% (3:1).	g) The application includes architectural renderings, illustrations and sections to illustrate the architectural features of the redevelopment, as well as viewsheds onto the property. h) This redevelopment has been designed to reflect a desirable NW CT Inn & Spa set with a naturalized , environmentally sensitive redevelopment. A detailed Landscaping Plan (Sheet No. 5/LS) is included in the Site Plan package (April 29, 2025). The landscape plan includes a detailed depiction of existing and proposed landscaping elements, including the location, species, size, and botanical names of plantings (all native species). The application package also includes a series of architectural renderings and digital illustrations highlighting the projects proposed primary design elements.
702 Lighting Standards for Site Plans and Special Permits	
702.2 The following lighting standards shall apply to Special Permit and Site Plan applications.	
a. All exterior lights and illuminated signs shall be designed, located, installed and directed in such a manner as to prevent objectionable light and glare across property lines, and disability glare at any location on or off the property. b. All parking lot lighting shall be full cut-off type fixtures. c. Externally illuminated signs must be illuminated from the top and shine downward. The light must be shielded to prevent direct glare and/or light trespass. The light shall be designed to be contained to the target area. d. All building lighting for security or aesthetics shall be full cut-off type or a shielded type, not allowing any upward distribution of light "Wallpack" type fixtures shall not be permitted. Floodlighting is discouraged and if used must be shielded to prevent: • Disability glare for drivers or pedestrians; • Light trespass beyond the property line, and • Light above a 90-degree, horizontal plane. e. Where a high level of illumination is proposed, such as for a parking lot for retail stores with a floor area of over 5,000 square feet, outdoor sales areas and similar uses the Commission may require an "iso-lux plan" or similar detailed plan providing level of illumination in foot candles at ground level. f. Adjacent to residential property, no direct lighting source shall be visible at the property line at ground level or above.	The application includes a Photometric Plan prepared by APEX Lighting Solutions, demonstrating zero foot-candle illumination (0.0) at all property lines. Please refer to the Lighting Plan, included within the Site Plan package, which details all proposed exterior light fixtures and their specifications, each of which is compliant with Dark Sky standards.

703 Parking and Loading Requirements	
703.2 Parking Plans Required	
All Site Plans involving provision for parking spaces shall meet the requirements of this section. All uses requiring a Zoning Permit shall provide the number of parking spaces required as designated in the Table of Parking Requirements.	Refer to Site Plans which include spacing and count of parking spaces.
703.3 Location of Parking	
Required parking shall be located on the same lot as the building or other use served, except where the Commission approves joint or satellite locations.	All parking is located within the property lines of the project (104-106 Sharon Rd and 53 Wells Hill Rd)
703.4 General Requirements – Parking Spaces and Aisles	
a. Parking space requirements shall be exclusive of driveways and aisle space necessary for access. b. Unless otherwise specifically provided for, each required parking space, shall contain a rectangular area at least nineteen (19) feet long by nine (9) feet wide. Lines delineating parking spaces may be drawn at various angles in relation to curbs or aisles provided each parking space contains the rectangular area required in this section. c. In a parking area containing ten (10) or more parking spaces, up to 20% of the parking spaces may contain a rectangular area of seven and a half (7 ½) feet in width by fifteen (15) feet in length. Such spaces shall be conspicuously designated as reserved for small or compact cars only. d. Parallel parking spaces shall be not less than twenty-two (22) feet by nine (9) feet. e. Parking aisle widths for one-way and two-way traffic shall be provided according to the degree of the angle of the parking space as follows:	The parking spaces and driveway aisles have been designed to meet the Town of Salisbury regulations as stated in 703.4.

	Minimum Required Aisle Width	
Angle of Parking Space	One way traffic	Two way traffic
30 degree	11 feet	20 feet
45 degree	13 feet	21 feet
60 degree	18 feet	23 feet
90 degree (perpendicular)	24 feet	24 feet

703.5 General Parking Requirements: All Uses Other Than Single and Two Family Dwellings	
The following shall apply to all uses other than single and two family dwellings. a. Parking areas shall be designed so that vehicles may exit such areas without backing onto a public street. b. Parking areas shall be designed so that sanitation, emergency and other public service vehicles can safely access the site. c. Parking areas shall be graded and surfaced with material that is stable and provides protection against potholes, erosion and dust. d. Paved parking spaces shall be demarcated with painted lines and all parking areas and painted lines shall be well maintained and free from potholes. e. The driveway leading from the parking area to the street shall be paved for a distance of fifteen (15) feet from the edge of the paved street.	All parking areas on the property have been designed in accordance with best practices and zoning requirements. Vehicles are not required to back onto public streets, and appropriate turning radii have been incorporated to accommodate emergency, utility, and service vehicles. The driveways and parking lot aisles will be paved with asphalt and chip-sealed with a decorative native stone to ensure durability and protect against surface damage. The parking spaces will be constructed using a structural permeable pavement system (grid or paver) that will blend harmoniously with the aisleways and driveways. Individual parking spaces will be demarcated with painted lines or a different color paver in accordance with required dimensions and spacing.
703.9 Required Number of Parking Spaces	
a. A sufficient number of parking spaces shall be provided to accommodate the number of vehicles ordinarily attracted to a proposed use, including but not limited to, vehicles of occupants, employees, customers, residents and other persons normally expected to park at any one time. b. A minimum number of parking spaces shall be as specified in the Table of Parking Requirements. Where there is not a parking requirement specified for a particular proposed use in the Table of Parking Requirements, the Commission shall determine the minimum number of required parking spaces by referring to similar uses in this Table and any professionally prepared Parking Analysis. c. In reaching a decision on a Special Permit use the Commission shall determine that the number of parking spaces provided is adequate to meet demands of the proposed use. In addition to the requirements in the Table of Parking Requirements, the Commission may consider projected customer traffic, hours of operation, location, relationship of the proposed use to uses in the surrounding area, and information presented by a qualified Connecticut traffic and parking engineer	The applicant, in coordination with its engineering team, have prepared a comprehensive Parking Analysis (see ancillary documents) that accounts for the number of guests, staff, and occupancy associated with each building and amenity on the property. The analysis carefully considers both peak and off-peak periods throughout the year and evaluates potential overlap in usage among various site components. For detailed scenarios and supporting calculations, please refer to the Parking Analysis worksheet. Section 703.12 of the zoning regulations states there should be "1 space / Room; Additional for other facilities based on parking needs assessment." Therefore, the applicant has provided the Parking Analysis to derive at its # of parking spaces needed.

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703.10 Truck Loading Space	
In the case of hospitals, institutions, hotels, retail stores, wholesale and industrial buildings having a floor area of more than 20,000 square feet, off-street space shall be provided for the loading and unloading of trucks, determined as follows: • One space of not less than 400 square feet in area for any building having a floor area from 20,000 to 39,999 square feet. • Two spaces of not less than 400 square feet in area for any building having a floor area of 40,000 to 99,999 square feet. • Three spaces of not less than 400 sq	Please refer to the submitted Site Plans, which depict the designated Truck Loading Spaces. One loading area is situated adjacent to the Main Inn Building, while a second is located at the "Storage Building" in the southeastern portion of the property. The latter will serve as the primary location for refuse collection, storage, and deliveries.
703.11 Electric Vehicle Charging Stations (EVCS)	
a. EVCS spaces may be included in calculating required off-street parking spaces. b. Any new or substantially improved parking lot with thirty or more parking spaces shall include EVCS infrastructure that supplies no less than two hundred eight to two hundred forty volts alternating current or direct current fast charging stations in at least ten per cent of such parking spaces. For the purposes of this regulation substantial improvement is defined as 50% or more of an existing parking lot that is either paved, repaved, or reconfigured.	The proposed plan provides EVCS charging opportunities for 16 parking spaces.
703.12 Table of Parking Requirements	
HOTEL - 1 / Room; Additional for other facilities based on parking needs assessment	Accounted for in the Parking Analysis and responded to accordingly via the response in 703.9 above
704 Signs (5-20-2014)	
704.3.1 Signs Allowed in Residential Zones with a Zoning Permit	
One Identification Sign of any type for the following uses: • Multiple Dwelling Building - Maximum Sign Area: 4 square feet, • Approved Subdivision - Maximum Sign Area: 6 square feet, • Charitable, Religious, Government or Educational Use involving a single principal building – Maximum Sign Area: 20 square feet, • Other non-residential uses, such as a Bed and Breakfast or a legal non-conforming use. Maximum Sign Area: 12 square feet.	There currently is one sign on the property for the Wake Robin Inn and the application documents include the as-built drawing of the sign. The sign is to remain.
704.3.2 Signs Allowed in Residential Zones With a Special Permit	
Off Premises Signs for Local Governmental Services, Religious, Educational or Institutional Facilities or Non-profit Service Organizations for identifying and/or directing traffic. • The applicant shall provide a written explanation of the need for the sign. • One sign for an individual use or a composite sign for multiple uses • Maximum sign area: 4 square feet. • Maximum sign height: 10 feet • The sign shall not be illuminated • The sign shall be located in such a way that it does not obstruct the sightlines of motor vehicles. • Locations of off-premises signs are limited to intersections of Town owned and maintained streets and State highways either on private property with the approval of the land owner or within Town owned street rights-of-way approved for such a sign by the Board of Selectmen. ** Note: Where more than one off premises sign is proposed at the same location the Commission may require a composite sign for all uses based on factors such as room available for signage, reduction of clutter, signage visibility and vehicle travel safety.	N/A - the existing sign on the property in included in the Site Plan drawings and will remain in place

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704.5 General Requirements	
a. Location. No sign shall be located where it would cause a hazard to vehicular or pedestrian public safety, such as to obscure the view of street traffic from a vehicle entering or leaving a driveway or parking area. b. Materials and Condition. Permanent signs must be constructed of solid durable material, firmly supported. All signs must be maintained in good condition and removed when the purpose for which they were erected no longer exists. c. Calculation of Maximum Sign Area. • Calculation of a required maximum sign area allowed on a building or on a lot shall not include the area of temporary signs, signs in windows, awning signs, incidental signs, sandwich board signs or signs that do not require a Zoning Permit. • The area of a sign for the purpose of calculation of maximum sign area shall be the smallest rectangle containing the entire sign, excluding supports or for a sign composed of individual letters or symbols on the wall of a building the smallest rectangle encompassing the letters or symbols. The total area of a double-sided sign shall be deemed the area of the largest face and not the combination of the two faces provided the internal angle between them does not exceed 45 degrees. A sandwich board sign shall be an exception to this maximum 45 degree rule. d. Freestanding, Wall and Projecting Sign Requirements. • Maximum height of a freestanding sign: 12 feet in all zones. A freestanding sign must be located entirely on the applicant's property unless otherwise permitted by these regulations and no part of any sign may project over any property line. Signs to be measured from ground level to the top of the sign, or any part thereof, including supports and lights. • Projecting signs shall not project more than 5 feet from the side of the building. The bottom of the sign shall be a minimum of 10 feet and a maximum of 15 feet above finished grade. • No wall sign shall project above the roof line or higher than 20 feet from ground level, or more than 1 foot from the face of the building.	N/A - the existing sign on the property in included in the Site Plan drawings and will remain in place
e. Sign Illumination. No signs shall be of the flashing, animated, pulsating, moving or rotating type. Except for a scoreboard in an athletic field, internally illuminated signs shall not be permitted. Externally illuminated signs may be permitted provided the light source is properly shielded, the lighting is focused upon the sign and is designed to minimize glare to adjacent properties, to streets and toward the sky. Signs proposed as part of a Site Plan or Special Permit application are subject to the Lighting Standards under section 702 of these Regulations. Naked or un-shaded incandescent or fluorescent electric light bulbs shall not be allowed by themselves or as part of any sign, except as part of holiday season decorations or community events or celebrations. f. Off-site advertising, unless otherwise permitted by these regulations, shall not be permitted. g. The Zoning Enforcement Officer may order the removal of any signs that are not maintained or erected in accordance with the provisions of these regulations. h. Zoning Permit, Site Plan and Special Permit Applications. Applications shall include a scaled drawing showing the type of lettering, sign dimensions, colors, materials, and method of illumination, if any, and a plan showing the location of the sign on the building or property. The Zoning Administrator or the Commission may require additional information as needed to determine compliance with these Regulations. A Zoning Permit shall be required for any change in the size, shape, lighting, materials, or location of an existing sign. No zoning permit shall be required if only the words or images on the sign are changed.	N/A - the existing sign on the property in included in the Site Plan drawings and will remain in place
704.6 Non-conforming Signs	
Signs that do not conform to this section that were legally in existence and met the sign regulations in effect prior to the adoption of this section (enter here the effective date of this new Sign section of the Zoning Regulations) shall be permitted to continue. Non-conforming signs may be altered only if the alterations conform with this section.	The existing sign located on the property, as depicted in the Site Plan package of drawings, predates the adoption of the Salisbury Zoning Regulations (effective October 6, 2009) and is therefore permitted to remain as a pre-existing non-conforming structure.
800 Site Plans	
800.1 Purpose	
A Site Plan provides the Commission with information necessary to determine whether or not a proposed activity meets the standards and requirements of these Regulations.	N/A
800.2 General	
A Site Plan shall be required for uses as specified in the Tables of Uses (see Article II). A Special Permit application shall be accompanied by a Site Plan where necessary to determine conformity with these Regulations. Site Plans shall be reviewed and decided upon by the Commission. Every Site Plan application shall be accompanied by such information and reports as required in these Regulations and as necessary to determine conformity with these Regulations.	N/A

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800.3 Site Plan Application Requirements	
Four (4) copies of a Site Plan shall be submitted. Site Plans shall be accurately drawn to a scale not to exceed 100 feet to the inch on sheets not to exceed 24 x 36 inches. Two (2) copies of preliminary plans shall be submitted for all proposed buildings, structures and signs, including general exterior elevations, perspective drawings, general floor plans and drawings of proposed signs. The Site Plan shall meet requirements for landscaping, lighting, parking, loading, storm water management and/or erosion and sedimentation control as specified in Article VII and shall include such additional information required by the Commission when necessary to determine conformity with these Regulations. This information may be provided on separate plan sheets at the same scale and sheet size required for a Site Plan, or it may be incorporated onto the Site Plan provided such additional information can be shown clearly. Site Plans shall be prepared to Class A-2 Survey Standards. Upon the request of an applicant and where the Commission determines an A-2 Survey is not necessary to determine compliance with these Regulations, the Commission may accept a Site Plan and survey with a lesser degree of accuracy. The design, layout, computations and plans showing existing and proposed drainage patterns, and construction of storm drainage improvements, driveways, access ways, parking areas, loading areas and other site construction improvements shall be prepared by a Connecticut Registered Engineer. A Site Plan shall contain the following information:	The applicant has submitted four copies of the properly scaled Site Plan package, including preliminary plans, to the Town of Salisbury. Prepared by SLR Consulting and stamped by a Connecticut-licensed Professional Engineer, the Site Plan package complies with all applicable regulatory requirements and exceeds the minimum standards outlined in the Salisbury Zoning Regulations. The submission comprehensively addresses numerous categories, including landscaping, lighting, parking, loading, stormwater management, erosion and sedimentation control, signage, and other relevant provisions. Refer to the "Survey" for a certified A-2 survey of the premises.
a. Name of applicant and owner of property; Names of owners of record of abutting properties. b. Scale and North arrow; Property boundary, dimensions, angles, area, zoning and overlay district classifications, and zoning setback lines. c. A key map drawn at a scale of at least one (1) inch = 400 feet showing the locations of buildings and facilities on abutting land, driveway entrances on both sides of the street or streets within 500 feet of the site and zone boundaries within 500 feet of the site. d. Locations and dimensions of all existing and proposed buildings, outside storage areas, drainage improvements and utilities e. Location of existing and proposed roads, driveways, access ways, parking areas and loading areas, and sight lines from driveways or access ways intersections with existing and proposed roads, when determined necessary by the Commission. f. Location of existing and proposed fences, walls, earth berms, landscaping and landscaped buffer strips, inland wetlands and watercourses, natural and artificial water features. g. The proposed limits of areas to be disturbed by construction or other activity, including any disturbance of existing conditions between the site property boundary and the traveled surface of a public or private road. Within these disturbed area limits the following existing conditions shall be shown: • Boundaries of wooded areas and location of specimen trees; • Location of historic and archeological sites; • Location of stone walls and built features such as foundations and dams; • Rock outcroppings; • Slopes in excess of 20%, and • Location of any threatened or endangered species or species of special concern as defined and provided by the Connecticut Department of Energy and Environmental Protection (DEEP) including locations from the State DEEP Natural Diversity Data Base	a) included in the Site Plan and on the Special Permit Application form (abutting properties) b) included in the Site Plan drawing set c) included in the Site Plan drawing set (refer to title sheet) d) included in the Site Plan drawing set (refer to existing conditions) e) included in the Site Plan drawing set (separate sight line drawing provided along Sharon Rd) f) included in the Site Plan drawing set (refer to existing conditions) g) included in the Site Plan drawing set
h. Exterior lighting, showing location and type of fixture. i. Existing and proposed signs. j. Locations and methods of water supply and sewage disposal facilities; certification by the Health Officer, either on the plan or separately, concerning satisfactory conditions for sewage disposal, consistent with the State Health Code. k. Proposed methods of refuse storage and disposal. l. Where grading is required, existing and proposed contours at two-foot intervals based upon a field survey. m. Existing and post construction surface drainage patterns. n. Recreation areas and open space. o. A data block providing zoning information with applicable dimensional requirements for the zone and the dimensions proposed for the site, including but not limited to: lot area, building height, yard setbacks, building coverage, building height, impervious surface coverage, number and mix of units, required parking and number of spaces provided.	h) included in the Site Plan drawing set (refer to the Site Lighting Photometric/sheet SL-IC) i) included in the Site Plan drawing set (refer to title sheet) j) included in the Site Plan drawing set (refer to Utilities Plan/sheet UT). Also refer to the "WPCA Capacity Study" in which the applicant illustrates the capacity in the Town Sewage system for the proposed development. Prior to the deliberations, the applicant will have sign off and approval from the WPCA's 3rd party engineer and the WPCA board. k) Dumpster area location and enclosure details included in Site Plan drawing set l) included in the Site Plan drawing set (refer to Grading Plan/sheet GR) m) included in the Site Plan drawing set (refer to Grading Plan/sheet GR and Utilities Plan/sheet UT) n) included in the Site Plan drawing set (refer to Landscaping Plan/Sheet LS) o) included in the Site Plan drawing set (refer to Title Sheet)

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801 Site Plan Review Standards	
801.1 Preservation of Existing Landscape	
Excavation, filling, grading of earth materials and the removal of existing vegetation should be generally limited to the extent necessary to reasonably accommodate the needs of the proposed or existing uses while avoiding substantial and unnecessary changes to the landscape. Where vegetative cover does not exist or has been removed, new plantings may be required.	The Wake Robin Redevelopment has been thoughtfully designed to minimize excavation, filling, grading, and vegetation removal, restricting such activities strictly to areas essential for proposed structures and improvements. The project retains existing natural landscape features, mature trees, and vegetative buffers wherever feasible to maintain site character and minimize environmental impacts. Additionally, recognizing the presence of endangered species on-site, the applicant has coordinated with environmental specialists to safely relocate and protect these species, further demonstrating the project's commitment to environmental stewardship and compliance with zoning standards.
801.2 Relation of Buildings to Environment	
The design of the proposed project or development shall, to the extent practical, be related harmoniously to the terrain and the design and siting of existing buildings in the vicinity of the site. All buildings and other structures shall be sited to protect the character of the neighborhood. In its review of this standard the Commission may consider the functional, visual, and spatial relationships of all structures, buildings, landscaped elements and paved areas.	The Project has been designed to ensure compatibility with the surrounding neighborhood and the broader Lakeville/Salisbury context. The two proposed cottages along Wells Hill Road have been carefully scaled and sited to fit within the existing character of the neighboring properties and streetscape, maintaining appropriate setbacks and architectural features that reflect the area’s vernacular. All buildings within the redevelopment have been designed with aesthetic elements such as rooflines, materials, and massing that are consistent with traditional Lakeville/Salisbury design, and have been strategically located interior to the lot to preserve viewsheds, minimize visual impact, and maintain the rural character of the surrounding area.
801.3 Landscape and Buffer Areas	
All landscaped and/or screened areas, including yard setback areas, shall be so designed as to be consistent and compatible with nearby residential uses and properties.	The applicant and its team are committed to high-quality landscaping and place strong emphasis on establishing natural buffers between neighboring properties and enhancing the overall environment. All proposed landscaped areas feature native plant species and seed mixes that are well-suited to the site and harmonize with the existing character of the property and surrounding neighborhood.
801.4 Circulation	
With respect to vehicular and pedestrian circulation, including entrances, ramps, walkways, drives and parking, special attention shall be given to the location and minimization of access points to public streets, the width of interior drives and access points, the general interior circulation, the separation of pedestrian and vehicular traffic, suitability of access for emergency vehicles, access to community or public facilities, and arrangement of parking areas. These elements of the circulation system shall be designed to be safe and convenient and, insofar as practical, not detract from the use and enjoyment of the proposed buildings and structures and the neighboring properties.	The proposed development enhances site access and safety by consolidating vehicular entry to a single access point on Sharon Road, while converting the Wells Hill Road entrance into gated emergency access only. All internal roads and pathways are sustainably designed and fully comply with regulatory requirements for width, grade transitions, ADA accessibility, emergency vehicle access and turnaround, and efficient circulation. Additionally, the plan includes sight line improvements along Sharon Road to enhance safety for pedestrians, vehicles, and guests entering and exiting the property. For additional details, refer to the Site Plan package prepared by SLR Consulting.
801.5 Storm Water Drainage	
Special attention shall be given to proper surface water drainage so that it will not adversely affect neighboring properties or public storm drainage facilities, obstruct the flow of vehicular or pedestrian traffic or create standing water in paved or pedestrian areas. All surface water drained from roofs, streets, parking lots, and other site features shall be disposed of in a safe and efficient manner that will not create problems of water runoff or erosion on the site or on neighboring sites or pollution of surface water or groundwater. Insofar as possible, natural drainage courses and swales shall be properly stabilized and drainage-impounding areas shall be utilized to infiltrate water on the site through natural percolation to a degree equivalent to that existing prior to development. Also, appropriate erosion control measures shall be employed, including slope stabilization measures and the seeding of exposed areas to replace vegetative cover.	The proposed stormwater management plan has been designed and engineered in accordance with Connecticut Stormwater Quality Manual (CTDEEP/March 2024). This application includes a set of detailed Site Plans (April 29, 2025) and detailed Drainage Report (April 2025) which identify the proposed methods of Stormwater Management for the proposed redevelopment project.
801.6 Preservation of Water Quality and Quantity	
The proposed use and the site shall be designed to minimize any risk of surface-water or groundwater pollution, soil erosion and sedimentation, and water diversion.	The proposed stormwater management plan has been designed and engineered in accordance with Connecticut Stormwater Quality Manual (CTDEEP/March 2024). This application includes a set of detailed Site Plans (April 29, 2025) and detailed Drainage Report (April 2025) which identify the proposed methods of Stormwater Management for the proposed redevelopment project.
801.7 Utilities	
The placement of electric, telephone, or other utility lines and equipment shall be underground, except where not practical due to unusual limiting conditions, such as the presence of ledge. Planning for utility locations shall take into account the need to avoid adverse impact on groundwater levels and to minimize disturbance by coordinating the location of the various utility services planned for the site.	Refer to the Utility Plan within the Site Plan drawings for the schematic layout of utilities, the majority of which are proposed to be located underground. The applicant and its team of consultants have coordinated extensively with service providers, including but not limited to Eversource, Aquarion Water Company, and Frontier, to review and confirm the utility design. The civil engineering team at SLR Consulting has carefully designed the utility systems to minimize disturbance to groundwater levels, avoid significant disruption to existing ledge formations, and ensure efficient and sustainable site development.
801.8. Other Site Features	
Exposed storage or utility areas, machinery installations, and service areas shall be designed with screen plantings, fencing, or other screening methods to be compatible with the environment and the surrounding properties.	As shown on the Utility Plan included in the Site Plan package, all utility areas have been carefully located to minimize visibility and maintain compatibility with the surrounding environment. Furthermore, the Landscaping Plan provides for substantial plantings and natural buffers specifically designed to obscure and soften the view of utility, storage, and service areas. This integrated approach ensures that all such features are discreetly screened, preserving the property's aesthetic character and protecting the visual quality of the neighboring properties.

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801.9 Safety	
All open and enclosed spaces shall be designed to facilitate emergency evacuation and to insure accessibility by fire, police, and other emergency personnel and equipment.	The project team has closely coordinated with the Fire Marshal, including a detailed review of the site plans and an on-site walk-through, to ensure that the layout and design of each building provide full accessibility for fire, police, and other emergency services. Fire hydrants, sprinkler systems, and alarm systems have been thoughtfully incorporated into the design to promote the safety, accessibility, and protection of the property and its occupants.
801.10 Natural and Historical Resources	
The Site Plan shall be designed to minimize any damage or destruction to locally significant natural or historical resources.	As part of the planning process, a comprehensive Tree Evaluation and Preservation Analysis was conducted to identify and protect healthy, mature trees throughout the property. The Site Plan reflects a conscious effort to preserve as many existing trees as possible, with tree removal limited to only those instances necessary for site functionality and safety. In addition to the preservation of trees, the development plan prioritizes the protection and retention of existing rock outcrops and native plant species, integrating them into the overall site design to maintain the property's natural character. Importantly, the Project also focuses on the sensitive rehabilitation and revitalization of the historic Wake Robin Inn and its surrounding grounds. By restoring the Inn and thoughtfully enhancing its landscape with native plantings and historically appropriate features, the Project ensures that both the natural and cultural heritage of the property are respected, preserved, and brought back to life for future generations.
802 Special Permit Uses	
802.1 Purpose	
Special Permit uses are a class of uses that have characteristics or a location that unless properly planned and designed could be detrimental to properties in the neighborhood, the zone or overlay district. Accordingly this Article provides standards and requirements permitting the Commission to conduct a comprehensive review of the proposed Special Permit plan to: a. Assess the layout of the building(s), structure(s) or use(s) in relationship to the topographical and other natural features of the land, and of the impact of the use(s) upon the environment, health, safety, welfare, and convenience of the members of the community. b. Insure that the design and layout of the site and the proposed use(s) will constitute suitable and appropriate development in character with the neighborhood and will not result in an unreasonable decrease in property values or a detriment to the present and potential use of the area in which it is to be located. c. Assure that proposed buildings, structures and uses will provide for the maintenance of air, surface-water, and groundwater quality and will not be detrimental to existing sources of potable water or other natural or historic resources.	The design team carefully considered months of feedback from the PZC commission, neighbors, town staff, and third party reviewing engineers comments to create a site development plan and associated architectural, that blend within the existing context of the existing property use, the neighborhood and the environment. The project proposes many improvements to the property that will benefit the health, safety, and welfare of the property guests as well as community, including but not limited to, significant improvements to the stormwater quality and drainage from the site, removal of invasive species from the wetlands and upland review areas, new native landscaping enhancements, significant sight line improvements at the site entry driveway along Sharon Road, dark skies compliant lighting plan, and relocation of outdoor events to an acoustically designed indoor event space. The project design was a collaborative effort of technical and professional experts in the fields of Traffic Engineering, Land Use & Planning, Acoustical Engineering, Landscape Architecture, Civil Engineering, Stormwater Management, Architecture, Mechanical & Electrical Engineering, Lighting Design, Wastewater Engineering, Soil & Environmental Science, Arborists, and Botanists. The design team created a plan that is extremely sensitive to the environment, as well as to the size, scale, location, and character of the renovated and proposed buildings, community character, relationships to neighboring properties, mitigation of any noise concerns, improvements to stormwater quality, energy efficiency, and overall sustainability of the property.
802.2 General	
Special Permit Applications shall be reviewed and decided upon by the Commission. A Special Permit Application shall be accompanied by a Site Plan when necessary to determine conformity with these Regulations.	Site Plan has been included in the documentation submitted
803 Standards for Special Permits	
803.1 General	
All buildings, structures and uses for which a Special Permit is required under these Regulations must meet the applicable standards set forth throughout these Regulations, including, but not limited to, the standards set forth in 801 Site Plan Review Standards. In addition, the following standards shall apply to Special Permit uses.	All buildings, structures, and uses for the proposed Special Permit meet the standards in Sections 801 and 803
803.2 Relation of Buildings to Environment	
The size and intensity, as well as the design, of the proposed project or development shall be related harmoniously to the terrain and to the use, scale, and siting of existing buildings in the vicinity of the site. The use shall not create a nuisance to neighboring properties, whether by noise, air, or water pollution; offensive odors, dust, smoke, vibrations, lighting, or other effects.	Refer to the response to 802.1 above and all application materials (traffic study, sound study, drainage report, site plans, landscaping plan, project narrative, parking analysis, sustainability analysis, photometric plan, etc.)
803.3 Neighboring Properties	
The proposed uses shall not unreasonably adversely affect the enjoyment, usefulness and value of properties in the general vicinity thereof, or cause undue concentration of population or structures. In assessing the impact on surrounding properties the factors the Commission shall consider include, but are not limited to, the existing and proposed pedestrian and vehicular circulation, parking and loading plans, storm water management systems, exterior lighting, landscaping, and signage.	Refer to the response to 802.1 above and all application materials (traffic study, sound study, drainage report, site plans, landscaping plan, project narrative, parking analysis, sustainability analysis, photometric plan, etc.)

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803.4 Adequacy of Proposed Methods, Measures and Plans	
The Commission shall be satisfied that the applicant has shown the adequacy of proposed methods, measures and/or plans for: a. Disposal of wastes and provision for protection of surface and groundwater water quality, including but not limited to, factors such as; hazardous material and storage areas; underground fuel storage facilities, location and size of floor drains; storm water run-off from parking lot areas and other impervious surfaces, and any other use that may adversely affect the quality or quantity of groundwater. b. Proposed measures to control storm water run-off. c. Proposed measures to foster an energy efficient layout. d. Proposed methods of site landscaping, e. Existing fire and police protection, transportation, water and sewer facilities, schools or other public facilities to meet the needs of the proposed use. f. Provisions for signs, if any, and proposed exterior lighting with reference to glare, traffic, safety, compatibility and harmony with adjacent properties and the neighborhood. g. Provisions for open space and landscaping and other safeguards to be compatible with the adjacent property and the neighborhood in general.	a) Please refer to the Site Plan drawings, which detail existing drains, current stormwater management measures, culverts, and other existing site features. These drawings illustrate how the proposed construction activities and enhanced stormwater management practices, designed in full compliance with Connecticut State Code, significantly improve site conditions compared to the current state. b) refer to the Site Plan drawings and drainage report by SLR c) The site design includes many (LID) low impact development strategies including but not limited to promoting walking or use of electric carts when on the site, electric vehicle charging stations, building grouping and solar orientation, extension tree plantings, above ground, non-conventional storm water management strategy (as feasible). d) refer to the Landscaping Plan prepared by Mark Arigoni (SLR). Landscaping and nature was a major focus of the development e) The project design team consulted with local emergency services for general compliance and access throughout the site, is currently coordinating with CT DOT for improvements to the existing site lines at the Sharon Road driveway entrance, received 'will serve' for public water, and completed a sewer capacity study, including metering and survey, that validates adequate capacity of public sewer system to accommodate the project. f) The existing sign on the property is to remain in place, having posed no issues or received any complaints over the past 20 years. Regarding lighting, the application includes a photometric plan demonstrating the use of fully dark-sky compliant fixtures, with a measured light level of 0.0 at all property lines. This ensures that lighting remains unobtrusive, safe, and in harmony with the surrounding properties. g) The existing and proposed buildings have been strategically sited to maximize separation from neighboring properties by placing all structures toward the interior of the site. The overall building footprint represents a small fraction of the total lot area, resulting in an abundance of open space and landscaping that significantly exceeds typical development patterns in the area and surpasses the requirements set forth in the zoning regulations.
803.5 Amendments or Modifications	
A Special Permit use may be amended or modified provided an application is made in the same manner as the original application and subject to the same procedures for approval, with the following exception. An amendment or modification, which does not materially alter the Special Permit as determined by the Commission, may be approved as an amendment to a Site Plan for the Special Permit use.	N/A
805 Application Forms, Fees, Submission Dates, Information and Referral Notices	
805.1 Application Forms	
Application for approval of a Special Permit or Site Plan shall be made to the Commission in writing on Salisbury Planning and Zoning Commission forms. The application shall be signed by the property owner. However, the application may be signed by an agent for the owner provided the property owner submits a signed letter of authorization agreeing to the submission of the application and to its terms and requirements.	The Application Forms have been submitted with all applicable signatures and statement of purpose.
805.2 Application Fee	
Fees for applications to the Planning and Zoning Commission shall be as set by Town Ordinance and shall be submitted with the application. As provided in the Town Ordinance as a part of such application fee the Commission may include the cost to retain outside consultants to assist the Planning and Zoning staff and Commission in analyzing, reviewing, and reporting on areas of the application requiring technical review.	The application included a $360.00 check made out to the Town of Salisbury
805.3 Application Prior to Meeting or Public Hearing	
The application with all required maps, documents and reports shall be submitted to the Planning and Zoning Office at least fourteen (14) calendar days prior to the next Commission meeting. Where additional information or reports are required prior to the date of a scheduled public hearing these also shall be submitted at least fourteen (14) days prior to the hearing date.	The application and its ancillary documents are being sent at least 14 calendar days prior to the May 5th Planning & Zoning Commissions meeting (the next meeting).
805.4 Date of Submission and Date of Receipt	
The date of application submission shall be the date the signed application and fee has been filed with the Planning and Zoning Commission Office. The date of receipt of an application, which is the date that starts the time clock for decision on an application, shall be the date of the next regularly scheduled meeting of the Commission immediately following the date of submission to the Commission, or thirty-five (35) days after the date of submission, whichever is sooner. An application which does not include all required application material shall serve as a basis for denial.	The application is being submitted prior to the May 5, 2025 Planning & Zoning regularly scheduled meeting
805.5 Additional Information May Be Required	
The Commission may require the submission of additional information deemed necessary to determine compliance with the standards and requirements of these Regulations.	N/A
805.6 Commission May Determine If Certain Site Plan Information Is Not Necessary	
Upon the written request of an applicant, the Commission may, by resolution, determine that any part of the information required with a Site Plan application is not necessary to enable the Commission to decide upon the application and the Commission may then accept the application without such information.	N/A - the applicant is not seeking the request to remove certain submission requirements from the application.

805.7 Submission of an Application Involving Inland Wetlands or Watercourses	
Where a Site Plan Application involves an activity regulated pursuant to the requirements of the Salisbury Inland Wetlands Regulations, the applicant shall provide documentation that an application for an Inland Wetland permit has been filed with the Conservation and Inland Wetland and Watercourse Commission (Inland Wetlands Agency) not later than the date of submission of the Site Plan application with the Planning and Zoning Commission.	The applicant received its IWWC approval 11/26/2024 and went back to the IWWC Commission to obtain a permit modification in which was approved on 4/28/2025.
805.8 Notice by Applicant to Commission on Public Health Where Property is in a Public Water Supply Aquifer or the Watershed of a Water Company	
When an application is filed to conduct or cause to be conducted any action requiring approval of the Commission on a property, any portion of which is within a public water supply aquifer as identified in accordance with CGS §22a-354c or the watershed area of a water company, the applicant shall notify the Commission of Public Health as required by CGS Section 8-3i and shall certify such notice to the Commission prior to any action by the Commission on the application.	Proof of notification will be provided prior to the action by the Commission
805.9 Notice by Commission to Adjoining Municipality of Applications with Potential Inter Town Impact	
As required by Connecticut General Statutes the Commission shall notify the clerk of any adjoining municipality of any pending application, petition, appeal, request or plan concerning any project on any site meeting the criteria set forth in the statutes and as stated in 901.5 of these Regulations.	N/A
Appendix - Definitions	
HOTEL. A facility offering transient lodging accommodations, that may include additional facilities and services, such as restaurants, banquet facilities, meeting rooms and event spaces, personal services, gift shop and convenience store, and recreational facilities.	The proposed use, consisting of transient lodging accommodations, together with the planned amenities—including guest rooms, a restaurant and bar, spa facilities, meeting rooms, event space, and a pool—are all encompassed within the definition of a “hotel” as set forth in the zoning regulations.

PROJECT NARRATIVE

Overview

Aradev is planning the redevelopment of the Wake Robin Inn into a boutique hotel that will serve both the local Salisbury and greater areas. The project will include the restoration and expansion of the main inn building, 4 cottages spread throughout the property – 2 of which are placed on the Wells Hill Road side, creating a residential-feel buffer, an outdoor seasonal pool, a spa, and event space attached to the main inn building to hold 125 person gatherings. A food & beverage program will be spread across the buildings to serve both patrons of the property and local community members. There will be walking paths to highlight the natural features of the area. The property will be redeveloped with a focus on sustainability throughout its stormwater management practices, the use of pervious pavement when practical, the installation of rain gardens, and the enhancement of natural landscapes, including wetland buffer improvements.

Event Space

The event space can be rented out any day of the week, and most events are expected to take place on weekends/holidays with occasional afternoon or midday events on the weekends (trade shows, art fairs, or corporate events as examples). Events within the event space that occur on Monday, Tuesday, Wednesday, or Thursday will be allowed between the hours of 9AM and 10PM. Events within the event space that occur on Friday, Saturday, Sunday, or any Holiday will be allowed between the hours of 9AM and 12AM (midnight). An event will encompass the pre-function area, event room, and vestibule – sequencing at different times throughout. There will only be one event ongoing in the event space at one time. All doors and windows open to the outside elements will be closed at 9pm except for fire and life safety reasons. Note: fireworks will not be permitted at any time.

Usable Space (sf): 4,680 sq ft
Capacity: The event space will have a capacity limit of 125 guests, whether seated or standing. The venue may be reserved for private events by both hotel guests and members of the public. In addition, Aradev anticipates utilizing the event space to host a range of community-oriented and public events, including but not limited to trade shows, art exhibitions, philanthropic gatherings, and town hall meetings.

Fast Casual Restaurant

The fast casual restaurant will be open daily from 11am to 9pm and will have outdoor seating via picnic benches. There is a 500-600sf space in the basement of the main inn building which will have a service window for patrons to use to purchase, order, and receive food. The fast casual restaurant is open to the public.

Usable Space (sf): N/A
Capacity: The fast casual restaurant will be an order at the counter service and picnic tables + tables placed throughout the lawn. No official capacity as this is outdoors but expected peak patronage at one time around 30 – 40 people.

Restaurant + Bar

The three-meal restaurant inside the hotel will be open daily at 7AM and conclude service in accordance with the proposed hours of operation in the proceeding pages.

Usable Space (sf): 3,000 sq ft
Capacity: Anticipated interior usage at one time will be between 40 – 80 persons and exterior usage at 40 – 80 persons. The maximum seating & standing capacity will be determined during the construction documents phase pending Fire Marshal approval.

Pool

The seasonal pool will feature lounge chairs, umbrellas, and tables for hotel guests only. Guests will be able to order drinks and lite bites at the pool which will be serviced from the main inn building. The hours of operation will be 9am to 8pm daily.

Usable Space (sf): 4,985 sq ft. The usable space square footage number above includes a 1,000 sq ft pool, 2,825 sq ft pool deck + entrance, and 1,160 sq ft of actual buildings (restrooms and storage).
Capacity: An estimated occupancy of 40-50 people (not including staff).

Spa

The spa will contain a tranquility/reading room, 4-5 treatment rooms, women's lockers, men's lockers, hot and cold plunges, a sauna, and a yoga studio. The hours of operation will be 7am to 7pm daily. The spa is open to the public via advanced reservations for treatments only. Hotel guests receive priority in booking treatments and are allowed to purchase day passes (maximum 2 hours of use) with no more than 5 day passes in use at a time (depending on the capacity of treatments booked).

Usable Space (sf): 4,550 sq ft
Capacity: An estimated occupancy of 10-12 people (not including staff)

Employees

Venue	Employee Count
Hotel	20
Food & Beverage	20
Event space Events	20 - 25
Spa	5
Pool	2

Assumes peak weekend (assume 30% less during weekday hours).

Key Census

Room Type	Count	Average SF
Cottages	4	2,000
Existing Main Inn	14	382
New Inn Addition	39	390
Total Keys	**57**	

Guestroom Mix - the property will contain a maximum of fifty-seven (57 rentable guest room units ("keys")

Room Type	Count	% of Total Keys	Maximum Occupancy	Anticipated Occupancy
King / Double	29	51%	2.0	1.5
Double Double	12	21%	4.0	3.0
Suite	7	12%	2.0	1.5
Suite w/ Alcove	4	7%	4.0	3.0
Loft Suite	1	2%	6.0	4.0
Cottage	4	7%	6.0	6.0
Total	**57**	**100%**	**166**	**130**

Building Totals

Building	Basement	Total Above Grade
Cottages	-	8,000 sf
Main Inn + Addition	11,000 sf	33,600 sf
Event Room + Vestibules	-	5,430 sf
Spa	-	5,220 sf
Pool House	-	1,160 sf
Storage + Deliveries + Trash	-	3,540 sf

**The Main Inn + Addition square footage above includes around 2,500 sf of seating space which is open to the public and hotel guests.*

Parking & Traffic

- All deliveries will be made from Sharon Rd
- All guests will enter/exit via Sharon Rd
- Hotel + restaurant guests will be directed to drive to the main Hotel entrance and use Valet parking
- All events will either (or both) have valet parking or parking lot attendants to ensure proper use of parking areas and traffic control
- During non-event, weekdays, it is expected that guests will have the option to self-park in marked, available parking spots in vicinity of the Hotel/Inn pedestrian entry
- Parking Analysis included as a separate document

Truck Route to the Property

All vehicular access to the Wake Robin Inn will be directed to use designated state roads, with the sole entrance to the property located on Sharon Road. The applicant will coordinate with mapping services to formally decommission the former Wells Hill Road entrance, ensuring that all traffic, both during construction and post-construction, utilizes Sharon Road for ingress and egress. Arrival and departure traffic will be routed along state highways, specifically Routes 7, 41, 44, and 112. All construction traffic and deliveries will be contractually required to follow the prescribed routes as outlined below:

- From the West: Route 44 to Route 41, then enter the site driveway (left turn).
- From the North: Route 7 to Route 44, to Route 41, then enter the site driveway (left turn).
- From the East: Route 112 to Route 41, then enter the site driveway (right turn).
- From the South: Route 7 to Route 112 to Route 41, or alternatively Route 41 directly, then enter the site driveway (right turn).

Garbage Storage + Collection

- All garbage pickup will be between the hours of 9am and 3pm as agreed with Welsh Sanitation Service
- Bottles and recyclables will be kept inside buildings and brought to their respective containers (outside) during the hours mentioned above

Peak Hours (Arrival)

- Check in: 2pm to 4pm daily
- Events: 3pm to 4:30pm with an estimated 65% of people staying at the hotel
- F&B (dinner & bar only): 6pm to 8pm with an estimated 50% of people staying at the hotel

Peak Hours (Departure)

- Check out: 10am to 11am daily
- Events: 9:30pm to 11:30pm with an estimated 65% of people staying at the hotel
- F&B (dinner & bar only): 8pm to 10pm with an estimated 50% of people staying at the hotel

Security, Training, and Safety

Private events serving alcohol inside the event space which are greater than 50 attendees are required to hire private security for the duration of the event. Hotel staff will be assisted by the security personnel in overseeing traffic operations, closing of doors/windows, alcohol compliance, and implementing hours of operation. In addition, all of the staff serving alcohol (waiters, waitresses, bartenders, etc.) will be required to be certified in ServSafe Alcohol training to promote safe alcohol consumption and be in compliance with the regulations set forth by the Connecticut Liquor Control. The hotel will have cameras throughout the property (with a focus on the property lines, entrance/exit, and areas where patrons would be exiting alcohol consumption areas) which will be 24/7 monitored by hotel personnel. Furthermore, once a general manager is brought on board, the neighbors will have their direct phone number and email address in the effort to maintain relationships and alleviate any concerns in a timely manner.

Hours of Operation

Space	Hours of Operation
Hotel Food & Beverage *Mon, Tues, Wed, Thurs*	7am – 10pm
Hotel Food & Beverage *Fri, Sat, Sun + Holidays*	7am – 11pm
Event Space Events *Mon, Tues, Wed, Thurs*	9am – 10pm
Event Space Events *Fri, Sat, Sun + Holidays*	9am – 12am
Private Events on Property *Mon, Tues, Wed, Thurs*	9am – 10pm
Private Events on Property *Fri, Sat, Sun + Holidays*	9am – 12am
Fast Casual Restaurant	11am – 9pm
Spa	7am – 7pm
Pool *Seasonal (May 1 – Oct 1)*	9am – 8pm

About Aradev

Aradev is a hospitality development firm based in New York City, specializing in the acquisition, development, and asset management of hotel and hospitality properties. Led by principals Jonathan Marrale and Steven Cohen, Aradev brings over 30 years of combined industry expertise across all facets of hospitality real estate. The company was formed in 2023 although the founding principals have worked together since 2015. Their experience spans the full life cycle of development, from ground-up new builds to the thoughtful restoration and adaptive reuse of historic properties, as well as strategic asset management of operating assets.

Aradev is currently engaged in projects and transactions across Connecticut, New York, Massachusetts, Illinois, and New Mexico, with a focus on delivering long-term value through design-driven, sustainable development. The firm is committed to environmental stewardship, integrating sustainable building practices, materials, and preservation principles into each of its projects to create enduring hospitality assets that respect both their architectural heritage and surrounding communities.

APPLICATION FORMS

27 Main Street
P.O. Box 0548
Salisbury, CT 06068

(860) 435-5190
FAX: (860) 435-5172

TOWN OF SALISBURY
PLANNING AND ZONING COMMISSION

Number _______

APPLICATION FOR SPECIAL PERMIT

Owner of Record: WAKE ROBIN, LLC & Ms Serena Granbery
Address of Owner: PO BOX 660 Lakeville, CT 06039 & 53 Wells Hill Rd Lakeville, CT 06039
Property Location: Tax Map #47, 47 Lot# 02, 02-1 Land Records: Vol. 184/247 Page 509/216
Property Address: 104-106 Sharon Road Lakeville, CT 06039 & 53 Wells Hill Road Lakeville, CT 06039
Acreage: 13.8 acres Zone: RR-1
Bounded generally on the (Full name of owner of record. Attach addition pages if needed)
North by: ____
East by: See Below
South by: ____
West by: ____
Special Permit Use Requested: Hotel
Section 213.5 of the Salisbury Zoning Regulations.
Written statement of Proposed Use (4 copies): See Below
Site Plan - 4 copies (See attached sheet)
Soil Erosion and Sediment Control Plan: See Site Plans
Approval from TAHD, WPCA, or BHC regarding sewer and water: See capacity analysis attached
Historic District Commission, if applicable: N/A
Conservation District Commission, if applicable: Approved on 11.26.2024
Preliminary Architectural Plans for Proposed structures & signs (2 copies) See attached
Estimated Site Improvement Costs (other than buildings): $750,000.00
Written Assurance of Bond or Letter of Credit: TBD
Additional Remarks: N/A

Owners Signature: ________________________

Wake Robin LLC (104 &106 Sharon Road)

Owners Signature: ________________________

Serena Granbery (53 Wells Hill Road)

Applicants Signature & Title: ________________________

ARADEV LLC (Steven Cohen, Member)

Filed at the Planning and Zoning Commission Office this _______ day of ________________, 20____

Fee Paid: ________________ Received By: ________________________
Title: ________________________

NOTE: One copy of the written statement of proposed use SHALL be sent to all abutting landowners by certified mail. This is the responsibility of the owner/applicant. The signed return receipts shall be submitted with this application.

ABUTTERS

Parcel ID	Site Address	Owner Name	Mailing Address	Mailing City	Mailing State	Mailing Zip
47-09	110 SHARON ROAD	FB SQUARE LK LLC	139 GRAND STREET	JERSEY CITY	NJ	07032- 0000
37-07	138 SHARON ROAD	BOLMER DAVID P	PO BOX 466	LAKEVILLE	CT	06039- 0000
36-08	86+88 WELLS HILL ROAD	CRUGER WILLIAM F + ANGELA	993 FIFTH AVE	NEW YORK	NY	10028- 0000
47-10	126 SHARON ROAD	WATSON PAUL SURV & ELAINE SURV	PO BOX 269	LAKEVILLE	CT	06039-0269- 0000
37-13	93 WELLS HILL ROAD	BROWN SHANNON TYREE	93 WELLS HILL ROAD	LAKEVILLE	CT	06039- 0000
47-53	64 WELLS HILL ROAD	WARD MARY SURV & MICHAEL SURV	64 WELLS HILL ROAD	LAKEVILLE	CT	06039- 0000
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47-03	33 WELLS HILL ROAD	KALISON CHARLES + SANDRA	PO BOX 1951	LAKEVILLE	CT	06039- 0000
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47-08	90 SHARON ROAD	CANIE TODI	90 SHARON ROAD	LAKEVILLE	CT	06068- 0000
47-01	77 WELLS HILL ROAD	VIRDEN SARAH PATTERSON	77 WELLS HILL ROAD	LAKEVILLE	CT	06039- 0000
47-52	50 WELLS HILL ROAD	WILMORE GREGORY &	50 WELLS HILL ROAD	LAKEVILLE	CT	06039- 0000

STATEMENT OF PROPOSED USE

The Applicant proposes the redevelopment of the Wake Robin Inn property to modernize and expand its hospitality offerings while preserving the historic character of the existing Inn. The project includes the demolition of the structures at 53 Wells Hill Road, the former motel building, various garages, storage structures, and selective portions of the existing Inn to allow for necessary renovations and site improvements. Renovations to the existing Inn will upgrade guest rooms and public spaces, with a modest addition to provide additional guest accommodations. The project also proposes the construction of a new event and dining pavilion for up to 125 guests, four (4) new guest cabins, a seasonal swimming pool, and a new spa building with associated amenities. Additional improvements include the construction of two to three (2-3) garage/storage structures throughout the property, as well as upgrades to site circulation, walkways, driveways, and parking areas. The redevelopment will incorporate sustainable site design practices, including the use of pervious pavement where feasible, rain gardens, wetland buffer enhancements, and naturalized landscaping improvements. The project is intended to preserve the Inn's role as a community landmark while enhancing its long-term viability and environmental stewardship.

27 Main Street
P.O. Box 0548
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TOWN OF SALISBURY

PLANNING AND ZONING COMMISSION

Number ______

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Bounded generally on the North by:
(Full name of owner of record. East by: See Below
Attach addition pages if needed) South by:
West by:
Special Permit Use Requested: Hotel
Section 213.5 of the Salisbury Zoning Regulations.
Written statement of Proposed Use (4 copies): See Below
Site Plan - 4 copies (See attached sheet)
Soil Erosion and Sediment Control Plan: See Site Plans
Approval from TAHD, WPCA, or BHC regarding sewer and water: See capacity analysis attached
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Conservation District Commission, if applicable: Approved on 11.26.2024
Preliminary Architectural Plans for Proposed structures & signs (2 copies) See attached
Estimated Site Improvement Costs (other than buildings): $750,000.00
Written Assurance of Bond or Letter of Credit: TBD
Additional Remarks: N/A

Owners Signature: ______________________

Wake Robin LLC (104 &106 Sharon Road)

Owners Signature: Serena W. Granbery

Serena Granbery (53 Wells Hill Road)

Applicants Signature & Title: ______________________

ARADEV LLC (Steven Cohen, Member)

Filed at the Planning and Zoning Commission Office this ______ day of ______________, 20____

Fee Paid: ______________ Received By: ______________
Title: ______________

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Owners Signature: ______________________________

Serena Granbery (53 Wells Hill Road)

Applicants Signature & Title: ______________________________

ARADEV LLC (Steven Cohen, Member)

Filed at the Planning and Zoning Commission Office this ______ day of ______________, 20____

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NOTE: One copy of the written statement of proposed use SHALL be sent to all abutting landowners by certified mail. This is the responsibility of the owner/applicant. The signed return receipts shall be submitted with this application.

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OWNERS AUTHORIZATION + APPROVAL LETTERS

April 10, 2025

Planning and Zoning Commission
Town of Salisbury
27 Main Street
Salisbury, CT 06068

RE: Authorization and Support of Application

Dear Members of the Planning and Zoning Commission:

Wake Robin, LLC hereby authorizes ARADEV LLC which is in the process of purchasing our property located at 104-106 Sharon Road Lakeville, CT 06039, to submit applications for Site Plan approval and for a Special Permit to the Planning and Zoning Commission for the redevelopment of the Wake Robin Inn and to pursue such applications at meetings, hearings, and other discussions with staff relative to such application.

Wake Robin, LLC, as the current property owner, supports ARADEV LLC's applications for redevelopment of the Wake Robin Inn.

Thank you for your attention and assistance in this regard.

Sincerely,

WAKE ROBIN, LLC

By:_________________________
Shaffin Shariff
Its Manager

April 11, 2025

Planning and Zoning Commission
Town of Salisbury
27 Main Street
Salisbury, CT 06068

RE: Authorization and Support of Application

Dear Members of the Planning and Zoning Commission:

I hereby authorize ARADEV LLC which is in the process of purchasing my property located at 53 Wells Hill Road Lakeville, CT 06039, to submit applications for Site Plan approval and for a Special Permit to the Planning and Zoning Commission for the redevelopment of the Wake Robin Inn and to pursue such applications at meetings, hearings, and other discussions with staff relative to such application.

I, as the current property owner, support ARADEV LLC's applications for redevelopment of the Wake Robin Inn.

Thank you for your attention and assistance in this regard.

Sincerely,

Serena Granbery

Serena Granbery

INTRODUCTION TO ARADEV

About Aradev

Aradev is a hospitality development firm based in New York City, specializing in the acquisition, development, and asset management of hotel and hospitality properties. Led by principals Jonathan Marrale and Steven Cohen, Aradev brings over 30 years of combined industry expertise across all facets of hospitality real estate. The company was formed in 2023 although the founding principals have worked together since 2015. Their experience spans the full life cycle of development, from ground-up new builds to the thoughtful restoration and adaptive reuse of historic properties, as well as strategic asset management of operating assets.

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Jonathan Marrale

Principal

Jonathan Marrale was raised in the greater New York City area and gained early experience working in both construction and hospitality prior to attending college. He brings over 15 years of experience in the hospitality and real estate development industries, with expertise spanning the full life cycle of development projects. Most recently, Mr. Marrale has served as Director of Development at a New York City-based family office, where he has been responsible for overseeing the day-to-day planning, design, and development of several hotel and restaurant projects. The firm operates with a cradle-to-cradle development approach and currently self-manages a portfolio of over 1,000 hotel rooms in the greater New York City area. Mr. Marrale's responsibilities have included zoning and feasibility analysis, budgeting and financial modeling, consultant management, asset leasing and disposition, license agreement negotiations, construction financing, and comprehensive project management from concept through completion. He holds a degree in Economics and Mathematics from Rutgers University.

Steven Cohen

Principal

Steven Cohen was born and raised outside of Chicago in a family with a long-standing background in real estate. He began learning the fundamentals of the industry during high school, which led him to pursue a career in real estate development. Steven holds a Master's Degree in Real Estate Development from NYU's Schack Institute of Real Estate, with a concentration in Sustainability. Since moving to New York City, Steven has worked with several high-net-worth families and development firms specializing in ground-up construction of residential, mixed-use, and hospitality projects. His experience includes managing the development of luxury condominiums, townhouses, and hotel properties throughout the New York City area. To date, Steven has successfully overseen more than 425,000 square feet of hospitality and residential development. Steven is committed to sustainable development practices, thoughtful design, and responsible growth that enhances the communities in which he works.

DEVELOPMENT TEAM BIOS

Project Development Team

SLR International Corporation – Civil Engineering, Traffic Engineering, Ecology & Natural Resources, Landscape Architecture, Wastewater Management, Surveying
SLR Consulting is a global sustainability consultancy founded in 1994, specializing in providing strategic advice and technical support across the full project lifecycle—from planning and design to compliance and remediation. With over 4,400 staff in more than 130 offices worldwide, SLR partners with clients to address complex environmental and sustainability challenges, guided by its purpose of "Making Sustainability Happen"

Mackey Butts & Whalen LLP – Zoning Counsel
Mackey Butts & Whalen LLP is a comprehensive law firm based in Millbrook, New York, serving clients across the Hudson Valley and Northwest Connecticut. Since its founding in 2016, the firm has provided a broad range of legal services, including real estate, trusts and estates, litigation, and business law. With a team of 14 attorneys, they are committed to delivering strategic, client-centered legal solutions. Partner Josh Mackey has notably represented numerous hotel developments and large-scale land use projects in the region.

EDM Studio – Code Compliance
EDM Studio, Inc., based in Unionville, Connecticut, is an architectural firm known for its sustainable design approach and inventive solutions for the built environment. Established in 2023 as a spin-off of EDM Architecture & Engineering, the studio is led by architect Tim Eagles, AIA, and is dedicated to delivering innovative, client-focused projects. With extensive experience in the Town of Salisbury, particularly for boarding schools, EDM is also a trusted authority on Connecticut building code.

Marcello Pozzi Architects – Building Design and Planning
Marcello Pozzi Architects (MLLO Inc.) is an award-winning, Los Angeles-based design studio founded by Italian architect Marcello Pozzi, AIA. With over two decades of experience, the firm specializes in architecture, interior, and industrial design, delivering projects ranging from boutique hotels and multifamily residences to office buildings and custom furnishings. Pozzi's design philosophy blends European modernism with contemporary urban influences, emphasizing material honesty and sculptural form

Kuegler Associates – Mechanical and Electrical Engineering
Kuegler Associates, LLC is a multidisciplinary MEP (Mechanical, Electrical, and Plumbing) engineering firm headquartered in Watertown, Connecticut, with additional offices in Massachusetts. Established in 1992, the firm offers a comprehensive range of services including HVAC, plumbing, fire protection, electrical systems, communications, and energy conservation, serving clients throughout the Northeast.

Art Holland & Associates – Surveyor
Arthur H. Howland & Associates, P.C. is a full-service civil engineering, land surveying, environmental services, and land use planning firm based in New Milford, Connecticut. Founded in 1955, the company has built a reputation for delivering cost-effective, high-quality, and accurate services throughout the state. Under the leadership of President Paul Szymanski since 2005, the firm is known for its collaborative approach and deep understanding of local, state, and federal regulations, making it a trusted partner for clients across commercial, residential, and municipal sectors.

Cavanaugh Tocci – Acoustics Engineer
Cavanaugh Tocci Associates is a nationally recognized acoustic consulting firm founded in 1975, specializing in architectural acoustics, environmental noise, and vibration control across a wide range of building and infrastructure projects. With a multidisciplinary team of engineers, physicists, and architects, Cavanaugh Tocci delivers strategic guidance and technical expertise to create environments that meet the highest standards for sound quality and noise mitigation. Their practice is built on a commitment to precision, performance, and client-focused solutions.

HISTORICAL NARRATIVE

(from current owner)

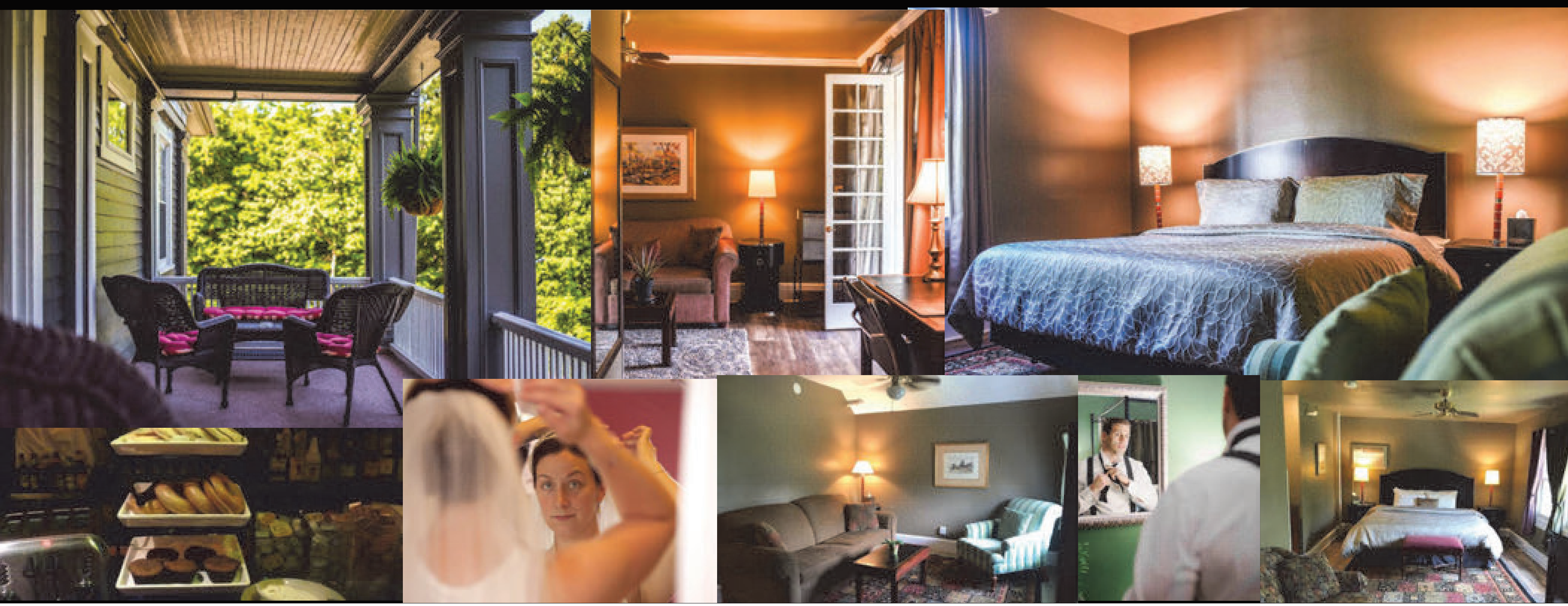

WAKE
ROBIN
INN
CURRENT OWNERSHIP SINCE 2002

OVERVIEW

The Wake Robin uniquely follows a large groups strategy—with thousands of guests and local families welcomed not only for lodging but also outdoor and indoor celebrations—private Schools, Lime Rock corporate partners, retreats, parties, and weddings.

LODGING

38 private rooms in two separate buildings—up to 90 lodging guests staying overnight, especially on weekends. In 2024, the Inn hosted 3,000 guest lodging nights during its season. This represented a 10% increase from the previous year.



WEDDINGS

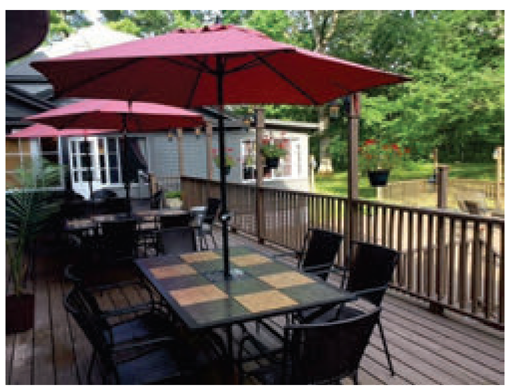
Outdoor, tented weddings for up to 200 guests—including local brides and grooms. Celebrations met building inspector and fire marshal guidelines. Indoor events went until 1am-2am with no complaints over the 22 years. Including lodging and restaurant guests, total guests onsite—300.

TRAFFIC, LAWN PARKING, INCLUDING RESTAURANT

Cars & trucks self-park, including on Wells Hill side. Shuttles & coaches utilize main driveway until 2AM on weekends. 18-wheelers are a fixture during Lime Rock. No neighbor complaints.

PHOTOGRAPHS OF EXISTING SITE

Photographs of Existing Site



PROJECT RENDERINGS

Conceptual Schematic Renderings

For Visual Purposes Only
April 29, 2025

Hotel Entrance

Hotel Side View

Restaurant Entrance

Rear Courtyard

Event Room – Exterior

Rear Courtyard – Dining

Rear Courtyard + Spa Side View

Event Space Entrance

Event Space – Interior Main Room

Event Space – Interior Main Room

Event Space – Vestibule / Pre Function

Cottage

Restaurant Interior

Restaurant Interior

Pool

Emergency Gate on Wells Hill Rd

WETLANDS PERMIT APPROVAL + MODIFICATION APPROVAL

SALISBURY INLAND WETLANDS AND WATERCOURSES COMMISSION
MEETING AGENDA
MONDAY, APRIL 28, 2025 – 6:30 PM

Remote Meeting by Live Internet Video Stream and Telephone in Accordance with CT Gen Stat § 1-225a

Meeting Link
https://us06web.zoom.us/j/83060876066?pwd=TMnKWzmd9IJmBBwPQuu1zgi9v45des.1
Webinar ID: 830 6087 6066
Passcode:017874
1 646 558 8656 US (New York)
International numbers available: https://us06web.zoom.us/u/keBDOPBvHa

Approval of the permit modification will be uploaded upon receipt from the Town of Salisbury IWWC.

Brief Items and Announcements

1. Call to Order
2. Roll Call & Seating of Alternates
3. Approval of Agenda
4. Minutes April 14, 2025 – *pending*
5. Public Comment: *Public Comment is restricted to items that are neither on the agenda nor the subject of any pending Inland Wetlands application or action and are limited to three minutes per person.*

Pending Business:

6. #2025-IW-052 / Kevin and Cara McCaffery (Anne Fredericks & Marc Fasteau) / 29 Morgan Lane / Main House Addition, accessory building removal, and associated site work / Map 64 / Lot 07 / DOR: 4/14/2025 / *Possible Consideration*

7. #2025-IW-053 / Andrew C and Sarah B Elken (Joline Audet) / 21 Greystone Lane / New Pool and Patio / Map 03 / Lot 14-6 / DOR: 4/14/2025 / *Possible Consideration*

New Business

8. #2025-IW-054 / Agostino Galuzzo (Allied Engineering Assoc., Inc.) / 226 Millerton Road / Construct a One Bedroom Accessory Structure with a Septic System and Well / Map 43 / Lot 32 / DOR: 4/14/2025 / *Reception, Pending Engineering Review*

9. #2025-IW-055 / William J Colaric (Allied Engineering Assoc., Inc.) / 67 Old CNE Road / Landscaping, Hardscaping, and other work in the Upland Review Area / Map 40 / Lot 30 / DOR: 4/14/2025 / *Reception, Pending Engineering Review*

Other Business

10. Request for Modification of Approved Site Plan Associated with Permit #2024-IW-028 / ARADEV, LLC (SLR) / 104 & 106 Sharon Road & 53 Wells Hill Road / Redevelopment and Expansion of the Wake Robin Inn Property / Map 47 / Lot 2 & 2-1 / Approved by resolution 11/26/2024 subject to conditions / *Possible Consideration*

11. Salisbury Pathways Committee / Discussion of Preliminary Sidewalk Design from Hotchkiss School to Lakeville Along Route 41

Tabled Business

12. #2025-IW-051 / Kenneth & Elizabeth Burdick / 152 South Shore Road / Demo and Rebuild Existing Single Family Dwelling and Associated Site improvements / Map 60 / Lot 17 / DOR: 4/14/2025 / *Pending Engineering Review*

Adjournment

Inland Wetlands &
Watercourses Commission

Telephone: 860-435-5190 Fax: 860-435-5172
Email: landuse@salisburyct.us

TOWN OF SALISBURY
CONNECTICUT

Town Hall
P.O. Box 548
27 Main Street
Salisbury, Connecticut 06068

December 2, 2024

ARADEV LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

Re: Inland Wetlands application #2024-IW-028 for Redevelopment and Expansion of the Wake Robin Inn Property at 104 & 106 Sharon Road in Lakeville.

To Whom it May Concern,

At the meeting of the Salisbury Inland Wetlands and Watercourses Commission (Commission) held November 26, 2024, the members voted to approve by resolution (attached) an application for Redevelopment and Expansion of the Wake Robin Inn Property.

The notice of this decision will be published in the December 5, 2024 edition of the Lakeville Journal.

This approval is subject to the conditions listed on the attached resolution, and to the following standard conditions:

Standard Conditions

1. The permittee shall notify the Salisbury Inland Wetlands Agent immediately upon the commencement of work and its completion. **A pre-construction meeting with the contractor and the Agent is required.**

2. All work and all regulated activities conducted pursuant to this authorization shall be consistent with the terms and conditions of this permit. Any structures, excavation, fill, obstructions, encroachments, or regulated activities not specifically identified and authorized herein shall constitute a violation of this permit and may result in its modification, suspension or revocation.

3. This authorization is not transferable without written consent of the Commission.

4. In evaluating an application, the Commission and their Agent rely on the information provided by the applicant. If such information is subsequently proven to be false, incomplete or misleading, this permit may be modified, suspended, or revoked and the permittee may be subject to any other remedies or penalties provided by law.

5. **The permittee shall immediately inform the Agent of any problems involving the wetlands or watercourses that have developed or are caused by the authorized work.**

6. No equipment or material including without limitation, fill construction materials or debris shall be deposited, placed or stored in any wetland or watercourse on the site.

7. This authorization is subject to and does not derogate any rights and powers of the Town of Salisbury, conveys no property rights or exclusive privileges, and is subject to all public and private rights and to all applicable federal, state and local laws. In conducting and maintaining any activities authorized herein, the permittee may not cause pollution, impairment or destruction of the wetlands and watercourses.

8. If the activity authorized also involves activity or a project that requires zoning or subdivision approval, special permit, variance, or special exception, no work pursuant to the wetlands permit may begin until such approval is obtained.

9. The permittee shall maintain sediment and erosion controls at the site in such an operable condition as to prevent the pollution of wetlands and watercourses. Said controls are to be inspected by the permittee for deficiencies at least once per week and immediately after rain events. The permittee shall correct any such deficiencies within 24 hours of said deficiency being found. The permittee shall maintain such control measures until all areas of disturbed soils, at the site, are stabilized.

10. Erosion and sediment controls must be installed and inspected prior to construction.

11. The site must be stabilized within 30 days of completing any ground disturbance.

If you have any questions or need any assistance with this approval, please contact the Land Use Administrator.

Sincerely,

Abby Conroy

Abby Conroy
Town of Salisbury
Land Use Director and Inland Wetlands Agent

CC:
Wake Robin LLC
P.O. Box 660
Lakeville, CT 06039

Serena Granbery
53 Wells Hill Road
Lakeville, CT 06039

Joshua E. Mackey
Mackey Butts & Whalen LLP
319 Mill Street
Poughkeepsie, NY 12601

#2024-IW-028 Wake Robin (SLR)
104 & 106 Sharon Road
(53 Wells Hill Road)
Map 47 Lot 2
(Map 47 Lot 2-1)
Redevelopment and Expansion of Wake Robin Inn Property

WHEREAS, the Town of Salisbury Inland Wetlands & Watercourses Commission (IWWC) is in receipt of application for regulated activity permit #2024-IW-028 by ARADEV LLC contract vendee for 104-106 Sharon Road and 53 Wells Hill Road represented by SLR Consulting.

WHEREAS, the applicant proposes the redevelopment of properties into an expanded Inn and related amenities and support services.

WHEREAS, the IWWC finds that such development involves "Regulated Activities" within wetland(s) watercourses and the within 75 feet of wetlands or watercourses (Upland Review Area herein referred to as the URA).

WHEREAS, regulated activities including construction, earth moving, clearing, filling, grading, paving, excavating, and depositing or discharging of stormwater on land within wetlands or watercourses or the URA have been detailed on engineering plans dated July 29, 2024, revised November 6, 2024 by SLR.

Specific regulated activities include:

- demolition of existing "motel" structure and wooden footbridges,
- improvement of an existing undersized wetlands crossing over an intermittent watercourse,
- upgraded stormwater and drainage infrastructure in accordance with best management practices (BMPs) outlined in the 2024 Connecticut Stormwater Quality Manual,
- construction of new accessory buildings
- additional crossing of a second intermittent watercourse facilitating dedicated site egress,
- and miscellaneous earth moving, clearing, filling, grading, paving, excavating in support of above identified BMPs.

WHEREAS, the IWWC finds that the application contains information as is necessary for a fair and informed determination thereon in accordance with section 7.5 of their Regulations.

WHEREAS, the IWWC has evaluated the application against the criteria for decision outlined in section 10.2 of their Regulations and finds that the applicant proposes BMPs to mitigate short-term and long-term impacts on wetlands or watercourses.

WHEREAS, the applicant also proposes activities that will restore and enhance wetland and watercourse resources on site.

The IWWC finds that:

1. The proposed replacement of an existing culvert over an intermittent watercourse, and the installation of stormwater and drainage infrastructure in accordance with BMPs outlined in the 2024 Connecticut Stormwater Quality Manual constitute a reduction of impact over existing

conditions, enhancing wetland or watercourse resources.

2. The landscaping plan has been designed to not only stabilize but augment vegetative areas, and includes native plants.

3. The building and pathway layout are intended to create the minimal amount of site disturbance and shall be strategically placed into the landscape to avoid unnecessary tree or non-invasive understory clearing. Note: The IWWC recognizes that minor field changes may occur in the siting of improvements. Such field changes may vary slightly from this plan but disturbances shall be no closer to any wetland or watercourse. If occurring farther away from the wetlands and watercourses such changes will have either the same or no greater impact on wetlands or watercourses.

4. The existing ingress and egress pose hazards to vehicular circulation on Sharon Road. The Applicant proposes a dedicated ingress and egress which will result in improved site lines on Sharon Road. Although the dedicated egress involves a new crossing over an existing intermittent watercourse, the improved egress will result in improved public safety.

NOW THEREFORE BE IT RESOLVED THAT, 2024-IW-028 be approved with the following conditions:

1. Per the most recent edition of the State of CT DEEP Storm Water Quality Manual (Revised March 26, 2024), to approve exfiltration on-site, a minimum of two permeability tests are required from soil taken within each proposed basin where HSG C/D soils occur, of which the manual allows for the use of 50% of the slowest measured rate. Provide all permeability test data for review by the Town Consulting Engineer prior to Planning and Zoning Commission (PZC) approval.

2. Revised engineering plans shall be submitted to the Town Consulting Engineer for review/approval.

3. The proposed planting plan shall be implemented, including the use of native plant species, not cultivars of native plants. A revised planting plan shall be submitted to the Land Use Office to reflect this condition

4. The Applicant shall submit a detailed Invasive Plant Management Plan (IPMP) which includes treatment and removal of wetland and URAs for invasive plant growth as deemed appropriate by an environmental, ecological, or other similarly qualified professional. Herbicide applications shall be carried out by Connecticut certified applicators and consistent with the federal pesticide label. The environmental, ecological, or other similarly qualified professional is responsible for monitoring for three growing seasons, and implementing additional corrective measures as needed based upon such monitoring. Such environmental, ecological, or other similarly qualified professional shall submit reports annually at the end of the growing season (by November 30 of each year) to the Land Use Office. If at the end of the second growing season and upon inspection by an environmental, ecological, or other similarly qualified professional, the site is stable and invasive plants have been controlled, monitoring of the IPMP may be discontinued.

5. Final approved plans shall have live signature and embossed seal of the Engineer and Surveyor of record. These shall be submitted to the Town of Salisbury Land Use Administrator prior to any construction.

6. The Applicant's Engineer shall provide an Erosion and Sedimentation Control Measures Bond Estimate, which shall be reviewed and approved by the Town Engineer. The Town Engineer shall set the final bond amount. The Bond shall be a cash bond payable to the Town of Salisbury. No permits shall be issued until the bond has been posted.

7. A Pre-Construction Meeting is required with Town staff prior to the start of construction to inspect E & S control measures and to discuss construction sequencing/phasing.

8. Daily inspections and required maintenance of all erosion & sedimentation control measures shall be completed by the General Contractor until a permanent vegetated cover is established. Repairs shall be made immediately after inspections.

9. A Third-Party State of Connecticut Licensed Professional Engineer or a Certified Professional in Erosion & Sedimentation Control, shall, at the expense of the Owner/Developer/Contractor inspect all phases of the Site work and provide a monthly report with photographs to the Land Use Office.

10. During the construction process, the Owner/Developer/Contractor shall add erosion and sedimentation control measures as deemed necessary by the Town of Salisbury staff, Third-Party State of Connecticut Licensed Professional Engineer or a Certified Professional in Erosion & Sedimentation Control, and/or the Consulting Town Engineer.

11. The Owner/Developer/Contractor shall provide an escrow to cover three inspections by the Consulting Town Engineer for each phase (1-4) identified on the site development plans: one preconstruction meeting, one in-process inspection, and one final inspection upon completion of the phase or prior to issuance of Certificate of Zoning Compliance for any improvements.

12. An As-Built Site Improvement and Grading Plan, prepared by a State of Connecticut Registered Land Surveyor, shall be submitted to the Land Use Administrator after all the site work is completed, and prior to requesting a Certificate of Occupancy.

13. A final site inspection shall be completed by the Land Use Administrator and/or the Town Engineer prior to the release of the Erosion & Sedimentation Control Bond and/or the issuance of a Certificate of Occupancy.

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Notice of Decision
Town of Salisbury
Inland Wetlands &
Watercourses Commission

Notice is hereby given that the following action was taken by the Inland Wetlands & Watercourses Commission of the Town of Salisbury, Connecticut on November 26, 2024: Approved by resolution application 2024-IW-028 by ARADEV LLC for redevelopment and expansion of the Wake Robin Inn property including regulated activities in wetland and upland review areas subject to conditions. The subject property is shown on Salisbury Assessor's map 47 as lots 02 and 02-1 and is known as 104 & 106 Sharon Road and 53 Wells Hill Road, Lakeville. Conditions include provisions for management of invasives plants, native non-cultivar plantings, erosion and sedimentation control bonding, pre-construction meeting, escrow for inspections by the Town, third-party erosion control monitoring, and an as-built site improvement and grading plan.

Any aggrieved person may appeal this decision to the Connecticut Superior Court in accordance with the provisions of Connecticut General Statutes §22a-43(a) & §8-8.

12-05-24

TRAFFIC IMPACT STUDY + NEW PLAN ANALYSIS LETTER

SLR International Corporation
195 Church Street, 7th Floor, New Haven, Connecticut, 06510

April 29, 2025

Attention: Mr. Steven Cohen
ARADEV LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

SLR Project No.: 141.21278.00001

Client File No.: 22100.00001

**RE: Trip Generation Potential – Updated Occupancy Estimates for the Redevelopment of the Wake Robin Inn Property
104 & 106 Sharon Road and 53 Well Hill Road, Lakeville, Connecticut**

SLR International Corporation (SLR) has prepared this letter to update the trip generation potential between the following two site plan scenarios. The first scenario is the current application, which consists of 57 hotel rooms and cabins, 5,220 square feet (SF) of spa, a 160-seat hotel restaurant and bar, a 125-seat occupancy event venue, and 2,000-SF of fast casual provisions redevelopment. The first scenario was compared to the recently studied[1] plan which includes 70 hotel rooms and cabins, 3,760 square feet (SF) of spa, 160-seat hotel restaurant and bar, 175-seat event venue, and 2,500-SF fast casual provisions. The latter scenario is the basis for our September 9, 2024, Traffic Study. This letter provides a comparison of the overall trip generation potential between the two redevelopment scenarios. Based on our review of the newly proposed plans, the conclusions of the previously submitted traffic analysis remain valid. Table 2 (Redevelopment Scenario – April 2025) reflects a reduction in overall units, square footage, and peak patronage, resulting in either equivalent or reduced traffic trip generation.

Development Site Trip Generation Comparison

In this letter are two tables which include the trip generation potential of the two site redevelopment scenarios that have been estimated based on statistical data published by the Institute of Transportation Engineers (ITE) using their Land Use Code (LUC) #310, 492, 931, and 930. **Table 1** presents the potential trip generation if the site were redeveloped using the proposed data of September 9, 2024. In the table, trip estimates are divided between two scenarios. During an event at the wedding venue, the casual restaurant is assumed to be closed. Therefore, two scenarios were analyzed: one with an event taking place, and one with the casual dining facility open.

In the September 9, 2024, study, the redevelopment scenario with 70 hotel rooms and cabins, a 3,760-square-foot (SF) spa, a hotel restaurant and bar with 160 seats, a wedding venue with 175 seats, and a 2,500-SF fast casual provisions was estimated to generate approximately:

Without an event:

- 40 total vehicle trips (23 entering, 17 exiting) during the morning peak hour
- 130 total vehicle trips (68 entering, 62 exiting) during the afternoon peak hour

[1] Traffic Impact Study – Proposed Redevelopment of the Wake Robin Inn Property
104 & 106 Sharon Road and 53 Wells Hill Road, Lakeville, Connecticut. SLR, September 13, 2024

- 197 total vehicle trips (109 entering, 88 exiting) during the Saturday midday peak hour

With an event:

- 40 total vehicle trips (23 entering, 17 exiting) during the morning peak hour
- 155 total vehicle trips (89 entering, 66 exiting) during the afternoon peak hour
- 171 total vehicle trips (97 entering, 74 exiting) during the Saturday midday peak hour

Table 1: Site-Generated Traffic Estimates (September 9, 2024 Study)

Land Use	ITE Land Use #	Number of Vehicle Trips								
		Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Saturday Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
Hotel Rooms & Cabins (70 Rooms)	310	18	14	32	21	20	41	28	22	50
Spa (3,760-SF)[1]	492	3	2	5	7	6	13	6	6	12
Hotel Restaurant & Bar (160 Seats)	931	2	1	3	23	22	45	30	23	53
Wedding Venue (175 Seats)[2]	N/A	-	-	-	38	18	56	33	23	56
Fast Casual Provisions (2,500-SF)[3]	930	-	-	-	17	14	31	45	37	82
Total Without Event		**23**	**17**	**40**	**68**	**62**	**130**	**109**	**88**	**197**
Total With Event		**23**	**17**	**40**	**89**	**66**	**155**	**97**	**74**	**171**

Trip Generation, 11th Edition. Institute of Transportation Engineers, 2021

[1] Based off Health/Fitness Club ITE Trip Generation, the closest ITE Trip Generation to spa. Half of the trips are predicted to be hotel guests. Conservative spa estimate

[2] Trip generation based on correspondence with the Connecticut Department of Transportation, available in Appendix

[3] Fast Casual Provisions will not be in operation at the same time as a wedding

As shown in **Table 2**, the new redevelopment scenario, containing 57 hotel rooms and cabins, a 5,220-SF spa, a hotel restaurant and bar with 160 seats, a wedding venue with 125 seats, and 2,000-SF fast casual provisions is expected to generate approximately:

Without an event:

- 36 total vehicle trips (20 entering, 16 exiting) during the morning peak hour
- 121 total vehicle trips (64 entering, 57 exiting) during the afternoon peak hour
- 175 total vehicle trips (97 entering, 78 exiting) during Saturday midday peak hour

With an event:

- 36 total vehicle trips (20 entering, 16 exiting) during the morning peak hour
- 136 total vehicle trips (77 entering, 59 exiting) during the afternoon peak hour
- 150 total vehicle trips (85 entering, 65 exiting) during Saturday midday peak hour

Table 2: Site-Generated Traffic Estimates (April 2025 Study)

Land Use	ITE Land Use #	Number of Vehicle Trips								
		Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Saturday Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
Hotel Rooms & Cabins (57 Rooms)	310	15	12	27	17	16	33	23	18	41
Spa (5,220-SF)[1]	492	3	3	6	10	8	18	8	8	16
Hotel Restaurant & Bar (160 Seats)	931	2	1	3	23	22	45	30	23	53
Wedding Venue (125 Seats)[2]	N/A	--	--	--	27	13	40	24	16	40
Fast Casual Provisions (2,000-SF)[3]	930	--	--	--	14	11	25	36	29	65
Total Without Event		**20**	**16**	**36**	**64**	**57**	**121**	**97**	**78**	**175**
Total With Event		**20**	**16**	**36**	**77**	**59**	**136**	**85**	**65**	**150**

Trip Generation, 11th Edition. Institute of Transportation Engineers, 2021

[1] Based off Health/Fitness Club ITE Trip Generation, the closest ITE Trip Generation to spa. Half of the trips are predicted to be hotel guests. Conservative spa estimate

[2] Trip generation based on correspondence with the Connecticut Department of Transportation, available in Appendix

[3] Fast Casual Provisions will not be in operation at the same time as a wedding

Summary and Conclusion

At the redevelopment site, both the spa and fast-casual provisions facilities will remain closed during wedding events. This analysis reflects the closure of the fast casual provisions, but not the spa. The spa trips were left in to allow for a direct comparison with the September 9, 2024 estimate, and as such these estimates are somewhat conservative.

Under the updated redevelopment scenario (Redevelopment Scenario – April 2025), the number of estimated vehicle trips will be significantly lower than the September 9, 2024 study. When no event is taking place, estimated trips are projected to be 10% lower during the weekday morning peak hour, 7% lower during the weekday afternoon peak hour, and 11% lower during the Saturday midday peak hour. During an event, estimated trips are expected to decrease even further; by 10% during the weekday morning peak hour, 12% during the weekday afternoon peak hour, and 12% during the Saturday midday peak hour. Consequently, the Traffic Study conducted on September 9, 2024, and the findings and recommendations therein, are appropriate for the current proposal, which is of lesser intensity from a traffic perspective.

We hope this traffic letter is useful to you in further assessing the traffic/transportation aspects of either scenario of this proposed development. If you have any questions or need any further information, please do not hesitate to contact us.

SLR International Corporation

David G. Sullivan, PE
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SLR International Corporation
195 Church Street, 7th Floor, New Haven, Connecticut, 06510

September 13, 2024

Attention: Mr. Steven Cohen
ARADEV LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

SLR Project No.: 141.21278.00001

Client Reference No.: US.221000

RE: Traffic Impact Study – Proposed Redevelopment of the Wake Robin Inn Property 104 & 106 Sharon Road and 53 Wells Hill Road, Lakeville, Connecticut

Dear Mr. Cohen:

At your request, SLR International Corporation (SLR) has prepared this study to assess the traffic impact of a proposed hotel/event space redevelopment to be located at 104 & 106 Sharon Road (CT-41) and 53 Wells Hill Road in Salisbury, Connecticut. The project will include the construction of a new event barn, pool, spa facility, cottages, and an extension to the existing hotel building. Access to the site will be off Sharon Road through two driveways, an exit-only driveway toward the north, and an entrance-only driveway where the existing driveway is. The existing driveway to Wells Hill Road will also be maintained, but for emergency access only.

The work comprising the study consisted of several tasks including field reconnaissance, data collection, review of driveway and roadway traffic conditions, estimation of site-generated traffic volumes, and assessment of future traffic operations at and near the site. The site location and area roadways are shown in **Figure 1**.

Existing Conditions

Site Environs

The key intersections at, and surrounding, the site that have been analyzed as part of this study are as follows:

- Sharon Road (CT- 41) at Millerton Road/Main Street (US- 44) (Unsignalized)
- Sharon Road (CT- 41) at Wake Robin Inn Site Driveway (Unsignalized)
- Sharon Road (CT- 41) at Lime Rock Road/Interlaken Road (CT- 112) (Unsignalized)

Sharon Road (Route 41) runs north/south past the site with one lane in each direction, and is categorized by the Connecticut Department of Transportation (CTDOT) as a major collector road; the posted speed limit is 40 miles per hour (mph) past the site. South of the site is the Hotchkiss School, which features a mid-block pedestrian crossing with Rectangular Rapid Flashing Beacons (RRFB). There are narrow sidewalks present along the north of Sharon Road, ending at 90 Sharon Road, 300 feet north of the existing Wake Robin Inn driveway.

Land uses in the area include commercial and residential to the north, and residential and the Hotchkiss School to the south.

Wells Hill Road runs northwest/southeast past the proposed emergency access only driveway at 53 Wells Hill Road. The road has one lane in each direction and is categorized by the CTDOT as a local road; the posted speed limit is 35 mph past the site. The proposed driveway off Wells Hill Road will be located at the 53 Wells Hill Road existing driveway. The driveway will be for emergency vehicles only, with gates installed to prevent non-emergency vehicles from coming in and out.

The land use in this area is residential.

Traffic Volume and Speed Data

Turning movement counts were conducted at the two off-site study intersections on Friday, June 21, 2024, and Saturday, June 22, 2024, during the Friday afternoon and Saturday midday commuter peak periods. The peak hours were found to be 4:00 p.m. to 5:00 p.m., and 12:15 p.m. to 1:15 p.m., for Friday afternoon and Saturday midday peak hours, respectively. These 2024 existing peak-hour traffic volumes can be seen on **Figure 2**.

Travel speed data was also collected on Sharon Road (CT-41) and Wells Hill Road along the site frontages on Friday through Sunday, June 14, 2024, to June 16, 2024, by means of an Automatic Traffic Recorder (ATR). The ATR collected data on hourly traffic volumes and travel speeds. The peak-hour traffic volumes are shown on Figure 2. This speed data, included in the **Appendix**, indicated that the 85th percentile speed was 45 mph for northbound vehicles and 44 mph for southbound vehicles on Sharon Road (CT- 41), and 44 mph for both eastbound and westbound vehicles on Wells Hill Road. The 85th percentile speed is the speed at which 85 percent of the traffic travels at or below. The measurement is used for assessing certain design standards, such as sight distance, as will be discussed later in this report.

Historical Crash Data

Information on crash statistics at and near the site were obtained from the Connecticut Crash Data Repository for the over 5-year period of January 1, 2019, to June 11, 2024. The crash data collected for this period is shown in **Table 1**, summarized by location, type of collision and crash severity.

A total of 33 crashes were reported within the study area. Approximately 76 percent of the collisions resulted in property damage only, one collision resulted in a suspected serious injury, and no collision resulted in a fatality. The most common collision type was rear-end type collisions, comprising 39 percent of the reported crashes, followed by angle type collisions at approximately 15 percent.

The intersection of Sharon Road (CT-41) at Millerton Road/Main Street (US 44) is located approximately 2,500 feet north of the site on Sharon Road. Approximately 21 percent of collisions in the study area took place at this intersection with seven collisions. Of these collisions, two resulted in suspected minor injuries, with the remaining collisions resulting in property damage only. Approximately 71 percent of the collisions at this intersection were rear-end type. One collision involved a school bus, resulting in property damage only.

One collision involved a bicyclist on Sharon Road (CT- 41) between Millerton Road/Main Street (US 44) and Farnum Road which resulted in a suspected minor injury.

At the site's frontage on Sharon Road (Route 41) two collisions took place, both resulting in property damage only. Both collisions were unrelated to the site's driveway.

One collision resulted from an object leaving the driveway of 92 Sharon Road, and the other was a collision with a fixed object.

Table 1: Crash Data Summary

Location	Crash Severity				Type Of Collision							
	Suspected Serious Injury	Suspected Minor Injury	Property Damage Only	Total	Angle	Bicycle	Fixed Object	Read-End	School Bus	Sideswipe, Same Direction	Unknown	Total
Sharon Road (CT-41) at Millerton Road/Main Street (US-44)	-	2	5	**7**	-	-	1	5	1	-	-	**7**
Sharon Road (CT-41) Between Millerton Road/Main Street (US-44) and Farnum Road	-	2	1	**3**	-	1	-	2	-	-	-	**3**
Sharon Road (CT-41) at Farnum Road/Ethan Allen Street	-	1	1	**2**	-	-	-	2	-	-	-	**2**
Sharon Road (CT-41) Between Farnum Road and Wells Hill Road	-	1	1	**2**	-	-	1	1	-	-	-	**2**
Sharon Road (CT-41) at Wells Hill Road	-	-	2	**2**	-	-	1	1	-	-	-	**2**
Wells Hill Road Between Sharon Road (CT-41) and 53 Wells Hill Road Driveway	-	-	3	**3**	-	-	3	-	-	-	-	**3**
Wells Hill Road at 53 Wells Hill Road Proposed Site Driveway	-	-	-	**0**	-	-	-	-	-	-	-	**0**
Sharon Road (CT-41) Between Wells Hill Road and Site Frontage	-	-	-	**0**	-	-	-	-	-	-	-	**0**
Sharon Road (CT-41) at Site Frontage	-	-	2	**2**	-	-	1	-	-	-	1	**2**
Sharon Road (CT-41) Between Site Frontage and Deer Path	-	-	-	**0**	-	-	-	-	-	-	-	**0**

Location	Crash Severity				Type Of Collision							
	Suspected Serious Injury	Suspected Minor Injury	Property Damage Only	Total	Angle	Bicycle	Fixed Object	Read-End	School Bus	Sideswipe, Same Direction	Unknown	Total
Sharon Road (CT-41) at Deer Path	-	-	-	**0**	-	-	-	-	-	-	-	**0**
Sharon Road (CT-41) Between Deer Path and North Road	-	-	4	**4**	-	-	3	-	-	1	-	**4**
Sharon Road (CT-41) at North Road	-	-	-	**0**	-	-	-	-	-	-	-	**0**
Sharon Road (CT-41) Between North Road and Easy Street	-	-	-	**0**	-	-	-	-	-	-	-	**0**
Sharon Road (CT-41) at Easy Street	1	-	-	**1**	1	-	-	-	-	-	-	**1**
Sharon Road (CT-41) Between Easy Street and Hotchkiss School Driveway	-	-	1	**1**	-	-	1	-	-	-	-	**1**
Sharon Road (CT-41) at Hotchkiss School Driveway	-	1	-	**1**	1	-	-	-	-	-	-	**1**
Sharon Road (CT-41) Between Hotchkiss School Driveway and Lime Rock Road	-	-	1	**1**	-	-	-	1	-	-	-	**1**
Sharon Road (CT-41) at Lime Rock Road/Interlaken Road (CT-112)	-	-	4	**4**	3	-		1	-	-	-	**4**
Total	**1**	**7**	**25**	**33**	**5**	**1**	**11**	**13**	**1**	**1**	**1**	**33**

Proposed Development

The development site is located approximately 1,300 feet south of the Wells Hill Road and Sharon Road (CT-41) intersection. The existing site's land uses include the Wake Robin Inn, a hotel, consisting of 38 rooms, an approximately 2,750-square foot (SF) fine dining style restaurant area that is only used for continental breakfast for hotel guests, a 2,600 SF banquet room and a single-family residential building.

The development plan will include a new event barn with a fast casual restaurant, a new pool house with storage (approximately 5,000 SF), a spa facility (approximately 3,760 SF), 12 to 14 new cabins, 16 existing rooms (the remainder after the demolition of 22 of the existing 38 rooms), and a new extension to the existing hotel which will add approximately 41 rooms. Upon completion there will be 69 to 71 guest spaces between hotel rooms and cabins. For analysis we assumed 70 rooms/cabins. The banquet hall will also be removed during the renovations.

Access to the development will be through two driveways on Sharon Road, an entrance only at the existing driveway, and an exit only to the north of the existing driveway. The buildings will be connected through an interior road system with additional pathways. The interior road system will also connect the interior parking network spread through the development.

An emergency-access driveway will be available at the existing driveway on the east side of the site at 53 Wells Hill Road. The driveway will have gates installed to prevent all non-emergency traffic from entering and exiting in this direction. The gates will be able to be opened to allow emergency vehicles to enter and exit the site when needed.

Sight Distances

Sight distances were measured at the proposed main site driveways in accordance with criteria set forth in the CTDOT *Highway Design Manual*. Intersection sight distance (ISD), stopping sight distance (SSD), and left turn sight distance (LTSD) were reviewed. ISD is the more liberal sight distance parameter and is determined through the creation of clear sight line triangles adjacent to the driveway points of egress, looking to the left and to the right. Each side of the site driveways should be free of obstructions to visibility such that the available sight distance for an egressing driver is far enough to see approaching vehicles on Sharon Road (CT-41), and to determine if they can adequately turn out of the site without approaching motorists on Sharon Road needing to slow down. SSD is the distance needed for someone driving on Sharon Road to see, react, and slow-down/stop should a vehicle enter their traffic stream from the sites driveway or slow to enter the driveway. SSD is considered the failsafe requirement, the minimum criteria to be met. In addition to these two measures, we looked at the visibility requirements for a vehicle turning left into the site to see oncoming traffic.

Travel speed data was collected on Sharon Road (CT-41) along the site frontages on Friday through Sunday, June 14, 2024, to June 16, 2024, by means of an ATR. This speed data is included in the **Appendix**. It was found that the 85th percentile speed was 45 mph for northbound vehicles, and 44 mph for southbound vehicles on Sharon Road. As a point of comparison, the average speed was measured to be around 40 mph (the posted speed limit) in both directions. Sight distances are typically based on the 85th percentile speed, from state guidelines in the CTDOT *Highway Design Manual*.

Intersection sight distances (ISD), stopping sight distances (SSD), and left turn sight distances (LTSD) were extensively analyzed at the driveway locations. Due to the vertical grade of Wells Hill Road, SSD could not be achieved in the northbound direction without significant re-grading of the road. Consequently, the driveway off Wells Hill Road is recommended to be emergency access only.

Analysis of a combined driveway off Sharon Road (CT-41) at its current location was considered. There is a steep embankment along the east side of the road that would require significant grading and a large retaining wall affecting two adjacent properties to the south. This work would also compromise the use of much of the property just south of the driveway. Current plans for a swimming pool, for instance, would need to be scrapped. Consequently, egress here was found to be impracticable.

We then focused on egress further north, a divided driveway, with separate the entrance remaining at the existing driveway location. Initial investigation indicated that the ISD from a 15-foot setback and the 85th percentile speed (45 mph) was still problematic. The height of the retaining wall and the impact on the two properties to the south was still unmanageable. Further analysis showed that a workable design was achievable from slightly more than a 10-foot offset and the posted speed limit of 40 mph, requiring an ISD of 40 mph. Note that only one property would be impacted under this plan and the western yard of that property would not be compromised. A retaining wall of approximately 10 feet would still be required, however.

We further studied the driveway visibility to determine if adequate ISD and LTSD would be achievable for the 85th percentile speed. We found that with the proposed regrading south of the site, SSD and LTSD would be available for vehicles at the entrance driveway and SSD would be available at the egress drive for the 85th percentile speed on Sharon Road. **Table 2** summarizes the sight distance guidelines per the CTDOT *Highway Design Manual* for each of the sight distance parameters that were used.

Table 2: Sight Distances at Proposed Site Driveways

Roadway	ISD	SSD	LTSD
Sharon Road	445 feet	360 feet	365 feet

SSD and LTSD calculations were based on 45 mph 85th percentile speed.
ISD calculations were based on average/posted 40-mph speed from 10-foot offset from travel way.

Development Site Trip Generation and Distribution

The amount of peak-hour site traffic for the proposed development was estimated based on review of statistical data published by the Institute of Transportation Engineers (ITE). Specific LUCs are explained below.

- ITE Land Use Code (LUC) #310, Hotel, was used for the guest rooms.
- LUC #492, Health/Fitness Club, was used for the spa based on discussions with CTDOT Bureau of Policy and Planning since ITE does not have “Spa” as a land use in their data base. Note that the spa will generate traffic at a much lower rate than a Health/Fitness Club, and approximately one-half of the spa patrons will be Hotel guests. Therefore, our analysis related to the spa will be conservative.

- For the Hotel Restaurant and Bar, LUC #931, Fine Dining Restaurant, was used. There will be some 40 to 80 seats inside and, seasonally, about the same number of seats outside. Again, to be conservative, our analysis was based on 160 seats. Clearly a scenario highly unlikely to materialize.
- For the Event Barn Wedding Venue, the trip generation was estimated based on correspondence from CTDOT Bureau of Policy and Planning. This is another Land Use where their input was required since ITE does not include a definitive LUC. A copy of the correspondence between our Office and CTDOT is included in the Appendix.
- For the Event Barn fast casual restaurant, ITE LUC #930, Fast Casual Restaurant, was used. Since this area is essentially a kitchen (around 500 SF) with no indoor seating, we based the trip generation on the approximate seating area that will be available on the covered porch and plaza nearby the order/pick-up window. Specifically, we assume 2,000 SF of patron area which can easily accommodate seating for 40 people, which is the peak projected customer load.

The sites proposed trip generation based on these assumptions can be seen in **Table 3**. One important caveat is that when there is an event in the main event space, the casual dining kitchen will be closed. Consequently, we looked at both scenarios; one with an event and one with the casual dining open. As shown, during the morning peak hour, both the event space and casual dining space will be dormant. In the afternoon peak hour, the event space will generate more traffic than the casual dining. On Saturday, the casual dining will generate more traffic than the event space, due to this, calculation for level of service will be based on the higher of the two daily traffic generations.

Table 3: Site-Generated Traffic Estimates

Land Use	ITE Land Use #	Number of Vehicle Trips								
		Weekday Morning Peak Hour			Weekday Afternoon Peak Hour			Saturday Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
Hotel Rooms & Cabins *(70 Rooms)*	310	18	14	32	21	20	41	28	22	50
Spa *(3,760 SF)*	492	3	2	5	7	6	13	6	6	12
Hotel Restaurant & Bar *(160 Seats)*	931	2	1	3	23	22	45	30	23	53
Wedding Venue *(175 Seats)*	N/A	--	--	--	38	18	56	33	23	56
Event Barn Restaurant *(2,500 SF)*	930	--	--	--	17	14	31	45	37	82
Total Without Event		**23**	**17**	**40**	**68**	**62**	**130**	**109**	**88**	**197**
Total With Event		**23**	**17**	**40**	**89**	**66**	**155**	**97**	**74**	**171**

The geographic distribution was estimated based on the area's roadway travel patterns and our understanding of the market area for this facility. The generalized distribution of traffic is shown in **Figure 3**. All trips will enter through the Sharon Road driveways, with 50 percent coming from the north, and 50 percent coming from the south. The peak-hour site generated traffic estimates routed via this distribution are shown on **Figure 4**.

Future Conditions

Estimated Future Roadway Traffic

Future roadway traffic volumes were estimated both with and without the subject development in place to determine possible traffic impacts. The projected opening year was assumed as 2026 in these scenarios.

The background traffic scenario is reflective of Future (2026) Conditions before the proposed development is built/opened. The Background (2026) Conditions were developed by expanding the baseline (2024 Existing) traffic volumes to the estimated opening year of 2026 using an annual growth rate of 0.5 percent per input from CTDOT. The annual growth rate accounts for general traffic increases within the area including small developments that might open in the next few years that would add traffic to the study area. The 2026 Background Conditions traffic volumes reflect future conditions without the proposed development in place and can be seen in **Figure 5**.

The estimated site-generated traffic volumes from the proposed mixed-use development were then added to the 2026 Background traffic volumes to derive the future 2026 combined traffic volumes, which reflect future conditions after the proposed development is built/opened and are shown in **Figure 6** for the weekday afternoon and Saturday midday peaks.

Intersection Capacity Analysis

The study intersections were evaluated by means of capacity analysis techniques whereby Levels of Service (LOS) are determined. LOS are qualitative measures of the efficiency of operations in terms of delay and inconvenience to motorists that range from LOS A through LOS F, with LOS A reflecting traffic flow with very low average control delay per vehicle while LOS F would reflect operations with long average delays. In most communities, LOS D or better during peak hours is considered acceptable. **Table 4** summarizes the findings of future anticipated LOS at the intersection without (Background Conditions) versus with (Combined Conditions) the estimated future traffic from this proposed development to assess potential traffic impacts from this development. A more detailed explanation of LOS and the analysis worksheets are provided in the Appendix.

As can be seen, all lane movements at the study intersections are expected to operate at LOS C or better in the future, even with the addition of site traffic from the proposed development. Thus, this development is expected to be easily accommodated on the area roadways.

The lanes with a change in LOS were for left and right turning movements from Sharon Road onto Millerton Road/Main Street, and the northbound and southbound all-way movements at the intersection of Sharon Road at Interlaken Road/Lime Rock Road. The change in LOS was from LOS B to LOS C at the Millerton Road intersection, and from LOS A to LOS B at the Interlaken Road intersection. Note that these are all very acceptable LOS.

Table 4: Intersection Capacity Analysis Summary

Movement /Lane Groups	Level Of Service (LOS)			
	Weekday Afternoon Peak Hour		Saturday Peak Hour	
	Background	Combined	Background	Combined
Unsignalized				
Millerton Road/Main Street at Sharon Road				
Westbound Left/Right (Sharon Road)	C	C	B	C
Southbound Left (Main Street)	A	A	A	A
Sharon Road at Site Driveway*				
Westbound Left/Right (Site Driveway)	-	B	-	B
Southbound Left (Sharon Road)	-	A	-	A
Sharon Road at Interlaken Road/Lime Rock Road All-way Stop Control (AWSC)				
Northbound (Sharon Road)	A	B	A	A
Eastbound (Interlaken Road)	A	A	A	A
Westbound (Lime Rock Road)	A	A	A	A
Southbound (Sharon Road)	A	B	A	A

Notes: LOS calculations were performed using *Synchro 11*
*The divided site driveway was combined for analysis purposes.

Summary

A study was conducted to assess the traffic impact of the proposed wedding venue and hotel development to be located on at 104 & 106 Sharon Road, and 53 Wells Hill Road. The project will include the construction of a new event barn, pool, spa facility, cottages, and an extension to the existing hotel building. Site access will be provided via two driveways on Sharon Road (CT-41), one for entrance only, and one for exit only, with an emergency access only driveway proposed on Wells Hill Road. A study of traffic conditions was undertaken through a detailed data assembly effort; traffic generated by the proposed development was estimated based on review of industry standard data and input from CTDOT Bureau of Policy and Planning. Future roadway traffic volumes were estimated with and without the development in place, and capacity analyses of Future Conditions at and near the site were performed. Sightlines were also reviewed corresponding with the proposed site driveways, roadway travel speeds, and CTDOT guidelines/criteria.

Based on the capacity analyses, it was found that all lane movements are expected to operate at LOS C or better in the future, even with the addition of site traffic from the proposed development. Thus, this development is anticipated to have a minimal impact to area traffic flow.

Lastly, sightlines relative to the proposed driveways are also expected to be adequate, subject to significant regrading and clearing of existing vegetation along the Sharon Road (CT- 41) site frontage.

We hope this traffic study is useful to you and the town of Salisbury in assessing the traffic aspects of this proposed development. If you have any questions or need any further information, please do not hesitate to contact us.

Regards,

SLR International Corporation

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Cameron N. Natusch
Staff Transportation Planner
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Attachments

Figures

- Figure 1 – Site Location and Surrounding Roadway Area
- Figure 2 – 2024 Existing Traffic Volumes
- Figure 3 – Site Traffic Distribution
- Figure 4 – Site-Generated Trips
- Figure 5 – 2026 Background Traffic Scenario
- Figure 6 – 2026 Combined Traffic Scenario

Appendix

- LOS Designation Descriptions
- Traffic Counts
- *Synchro* Analysis Reports
- Wedding Venue Trip Generation
- Background Development Trip Generation

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Figure 1
Site Location and Surrounding Roadway Network

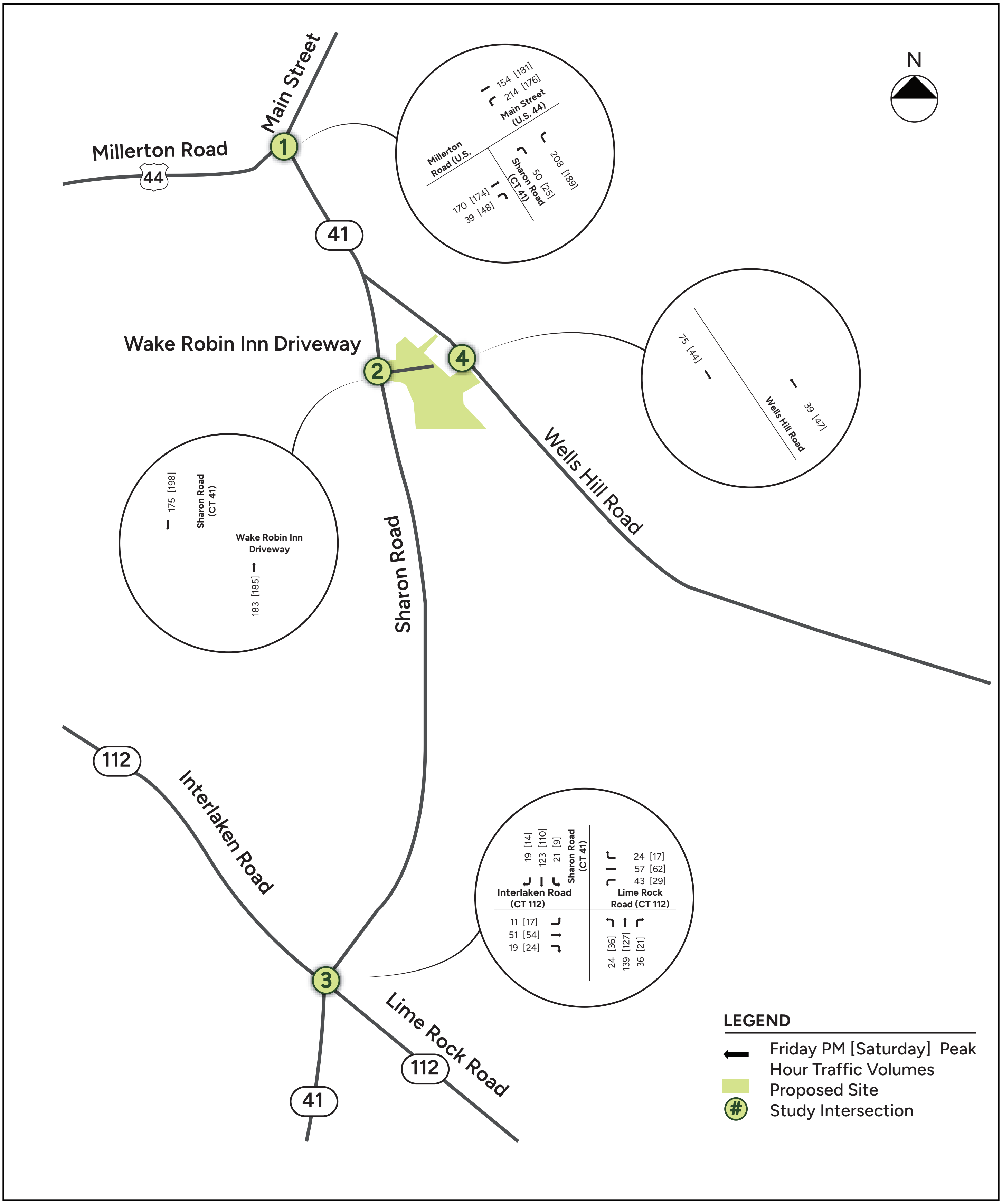


Figure 2
2024 Existing Traffic Volumes

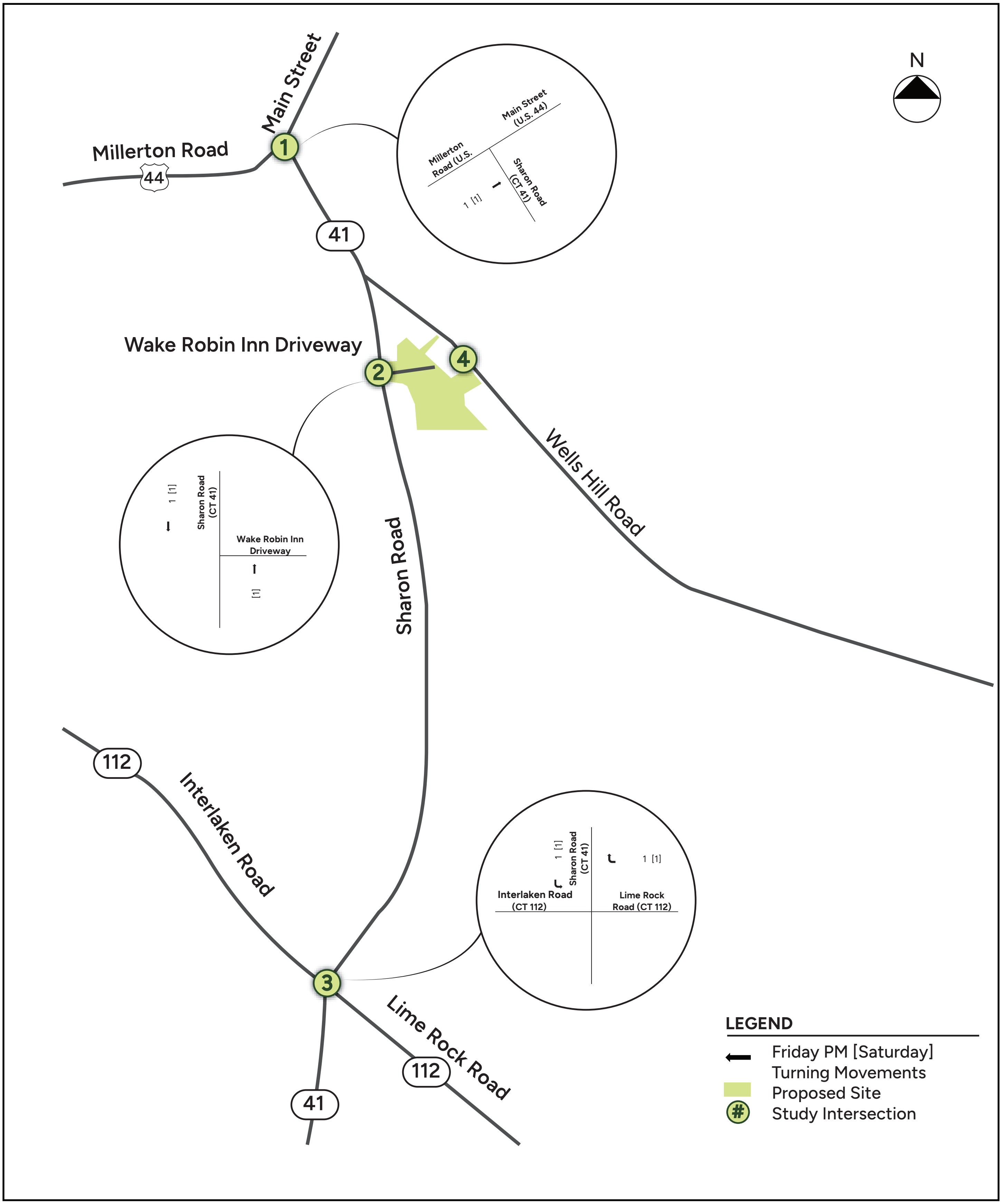


Figure 3
Background Development Affordable Housing at 11 Holley Street

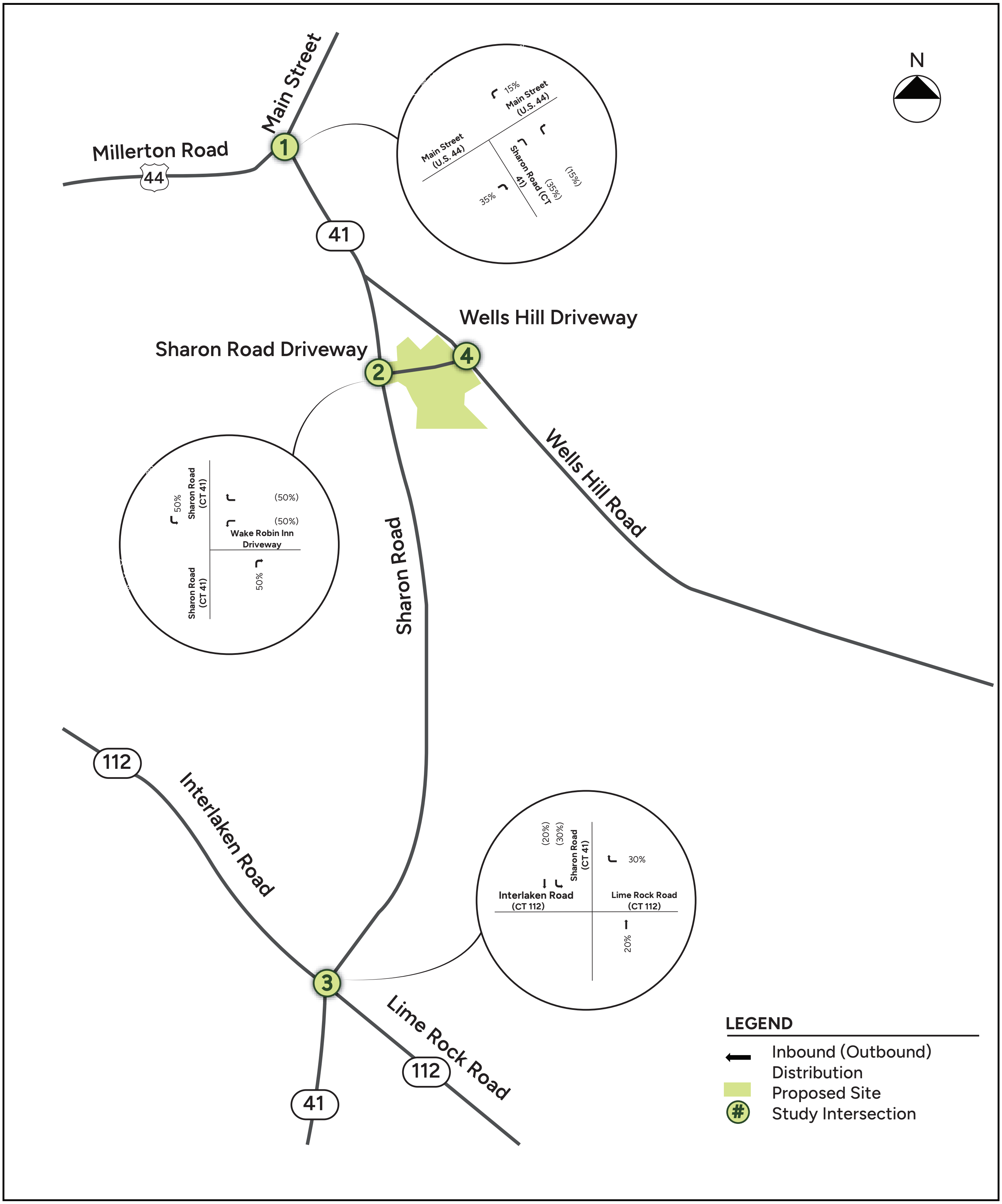


Figure 4
Site Traffic Distribution

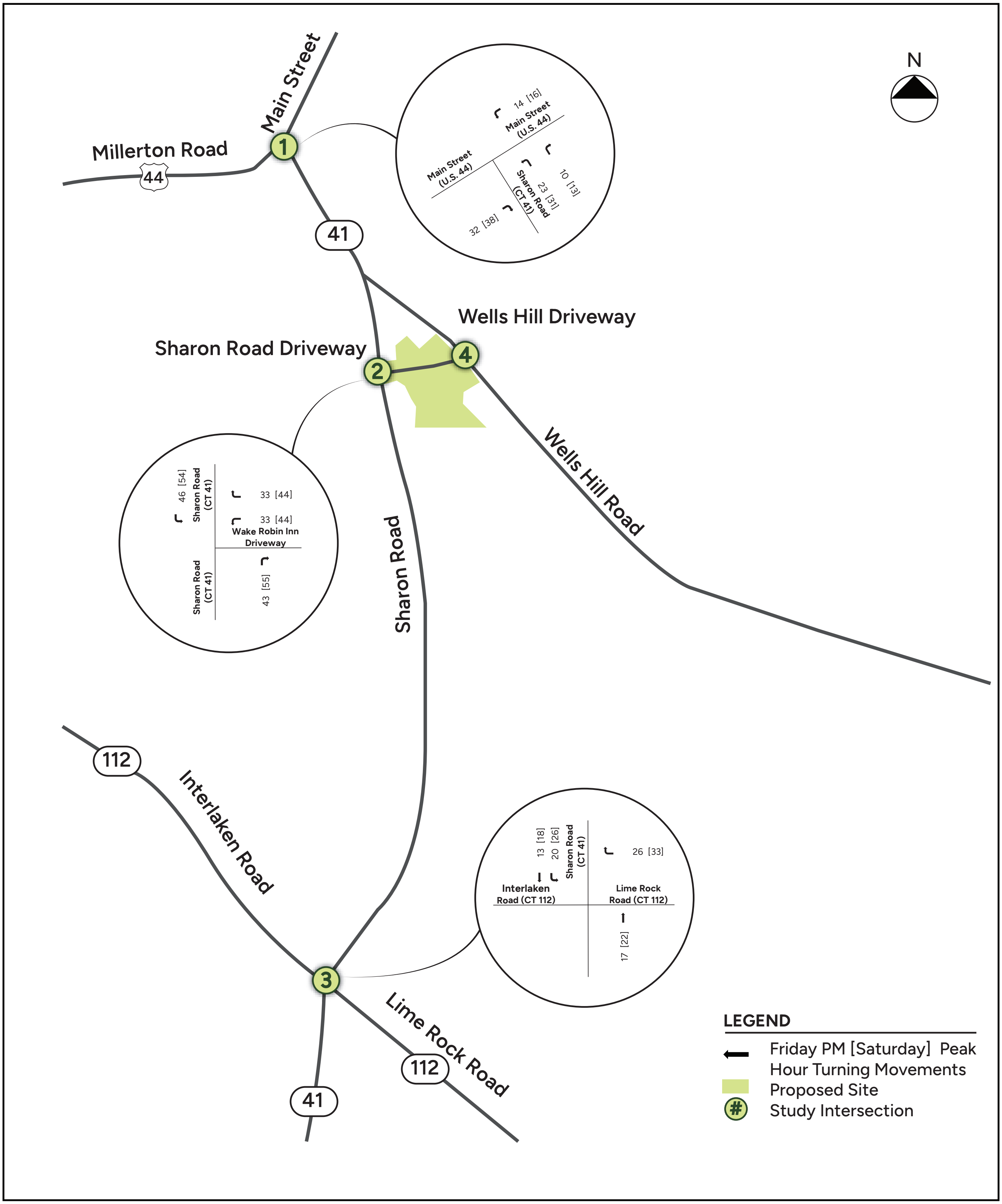


Figure 5
Site Generated Trips

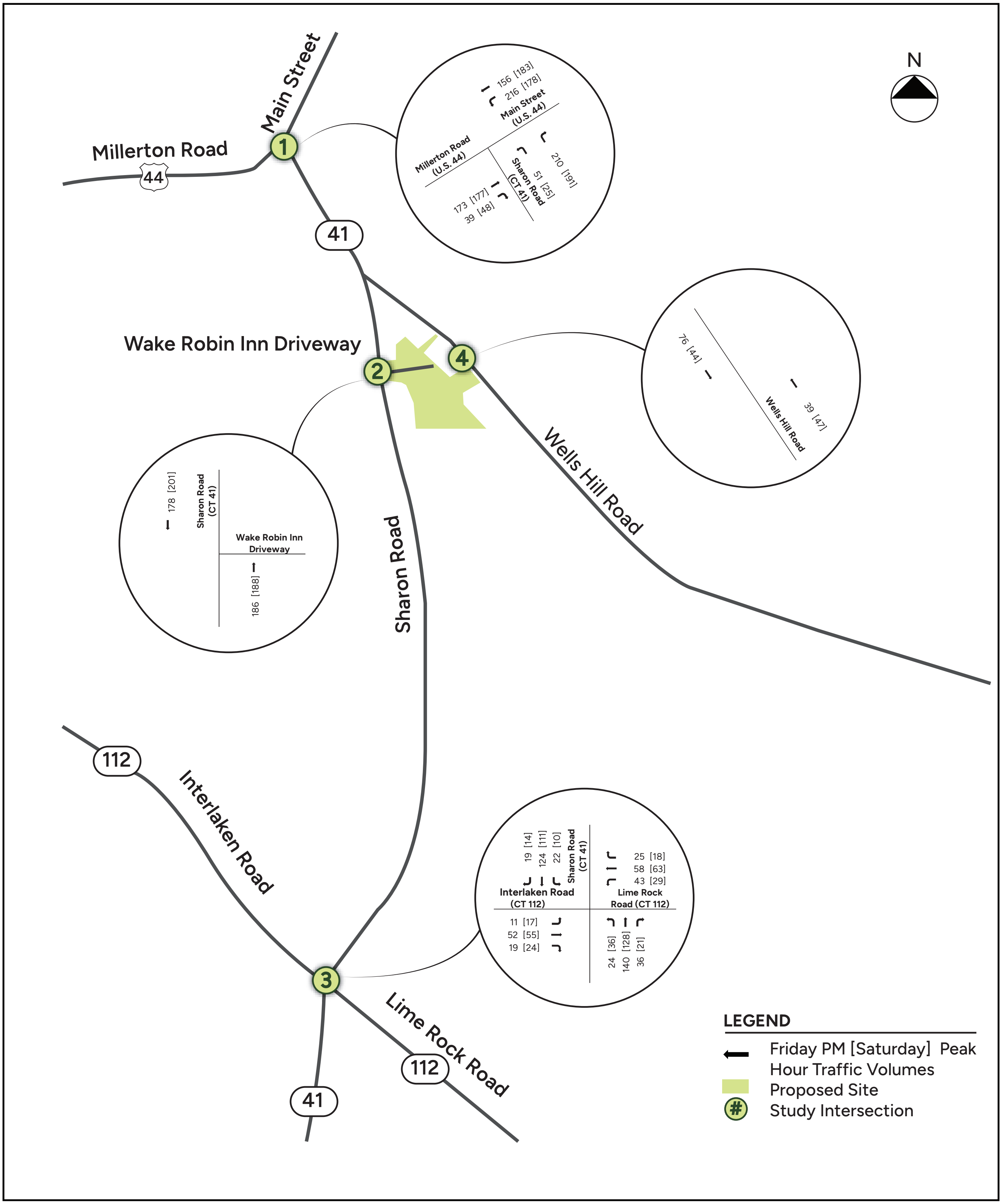


Figure 6
2026 Background Traffic

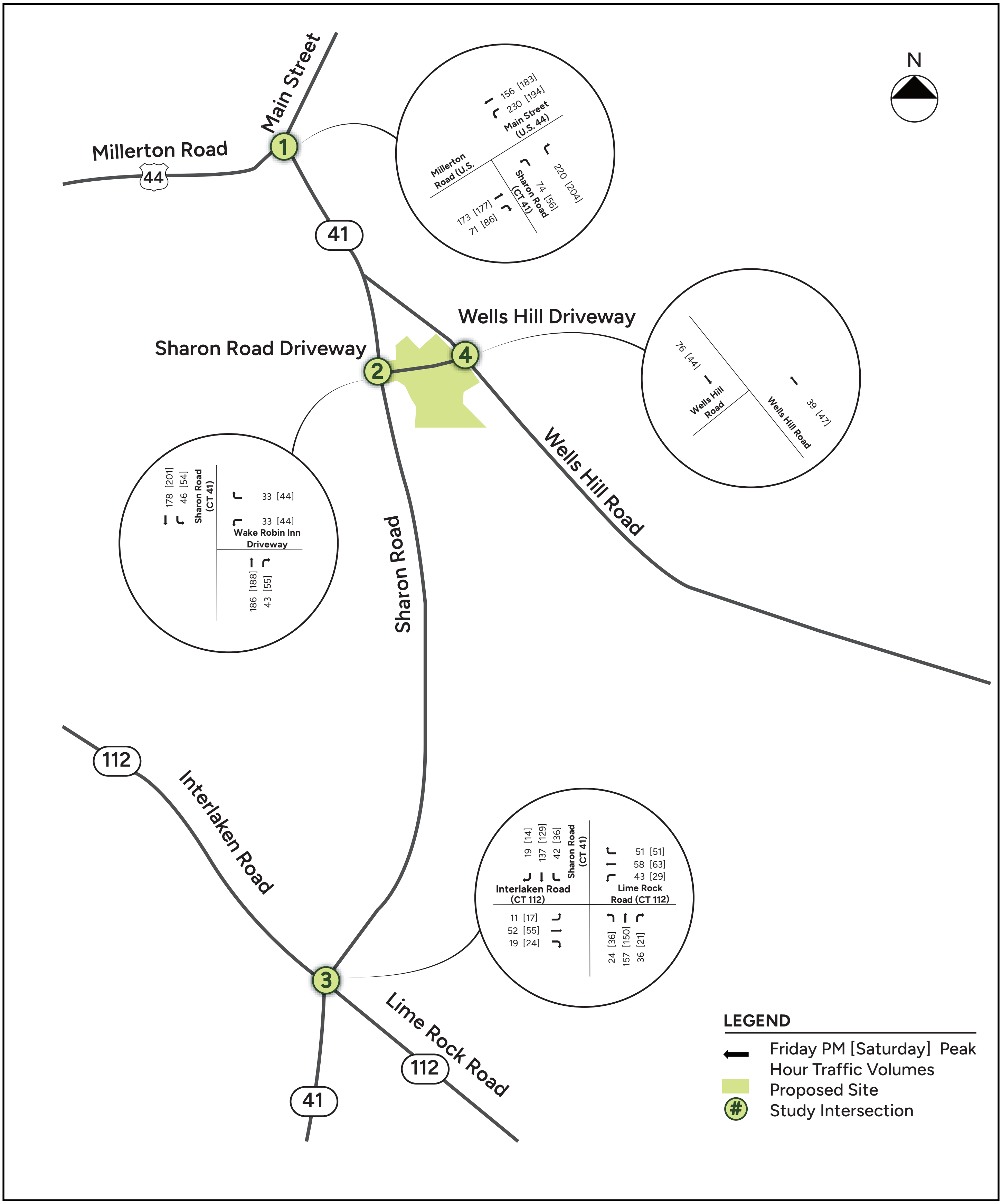


Figure 7
2026 Combined Traffic

APPENDIX

LEVEL OF SERVICE
FOR
SIGNALIZED INTERSECTIONS
(MOTORIZED VEHICLE MODE)

Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions: in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, LOS criteria for traffic signals are stated in terms of the average control delay per vehicle, typically for a 15-min analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the green ratio, and the v/c ratio for the lane group. The criteria are given below.

LEVEL-OF SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS MOTORIZED VEHICLE MODE		
LOS By Volume-to-Capacity Ratio[1]		CONTROL DELAY (s/veh)
v/c ≤ 1.0	v/c > 1.0	
A	F	≤ 10
B	F	> 10 AND ≤ 20
C	F	> 20 AND ≤ 35
D	F	> 35 AND ≤ 55
E	F	> 55 AND ≤ 80
F	F	> 80

[1] For approach-based and intersection-wide assessments, LOS is defined solely by control delay.

Specific descriptions of each LOS for signalized intersections are provided below:

Level of Service A describes operations with a control delay of 10 s/veh and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If LOS A is the result of favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

Level of Service B describes operations with control delay between 10 and 20 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A.

Level of Service C describes operations with control delay between 20 and 35 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

Level of Service D describes operations with control delay between 35 and 55 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

Level of Service E describes operations with control delay between 55 and 80 s/veh and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

Level of Service F describes operations with control delay exceeding 80 s/veh or a volume-to-capacity ratio greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.

Reference: Highway Capacity Manual 6, Transportation Research Board, 2016.

LEVEL OF SERVICE
FOR
UNSIGNALIZED INTERSECTIONS
ALL-WAY STOP-CONTROL (AWSC)

The criteria for AWSC intersections have different threshold values than do those for signalized intersections primarily because drivers expect different levels of performance from distinct types of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an AWSC intersection. Thus a higher level of control delay is acceptable at a signalized intersection for the same LOS. The level-of-service criteria are given below.

LEVEL-OF SERVICE CRITERIA FOR AWSC INTERSECTIONS	
LOS[1]	**CONTROL DELAY (s/veh)**
A	**≤ 10**
B	**> 10 AND ≤ 15**
C	**> 15 AND ≤ 25**
D	**> 25 AND ≤ 35**
E	**> 35 AND ≤ 50**
F	**> 50**

[1] For approaches and intersection-wide assessment, LOS is defined solely by control delay.

Note: LOS F is assigned to a movement if the volume-to-capacity ratio exceeds 1.0, regardless of the control delay.

Reference: Highway Capacity Manual Version 6.0, Transportation Research Board, 2016.

LEVEL OF SERVICE
FOR TWO-WAY
STOP SIGN CONTROLLED INTERSECTIONS

The level of service for a TWSC (two-way stop controlled) intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service is not defined for the intersection as a whole. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. LOS criteria are given in the Table. LOS criteria are given below:

LEVEL-OF SERVICE CRITERIA FOR AWSC INTERSECTIONS	
LOS[1]	CONTROL DELAY (s/veh)
A	≤ 10
B	> 10 AND ≤ 15
C	> 15 AND ≤ 25
D	> 25 AND ≤ 35
E	> 35 AND ≤ 50
F	> 50

Note: LOS criteria apply to each lane on a given approach and to each approach on the minor street.
LOS is not calculated for major-street approaches or for the intersection as a whole.
LOS F is assigned to a movement if the volume-to-capacity ratio exceeds 1.0, regardless of the control delay

Reference: Highway Capacity Manual Version 6.0, Transportation Research Board, 2016.

P.M.TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Locations 1,2 and 3
June 21st, 2024
Salisbury, CT

Main St. Milleton Rd Rte. 44 at Sharon Rd.

P.M. TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-1FRIDAY
Site Code : 00000001
Start Date : 6/21/2024
Page No : 1

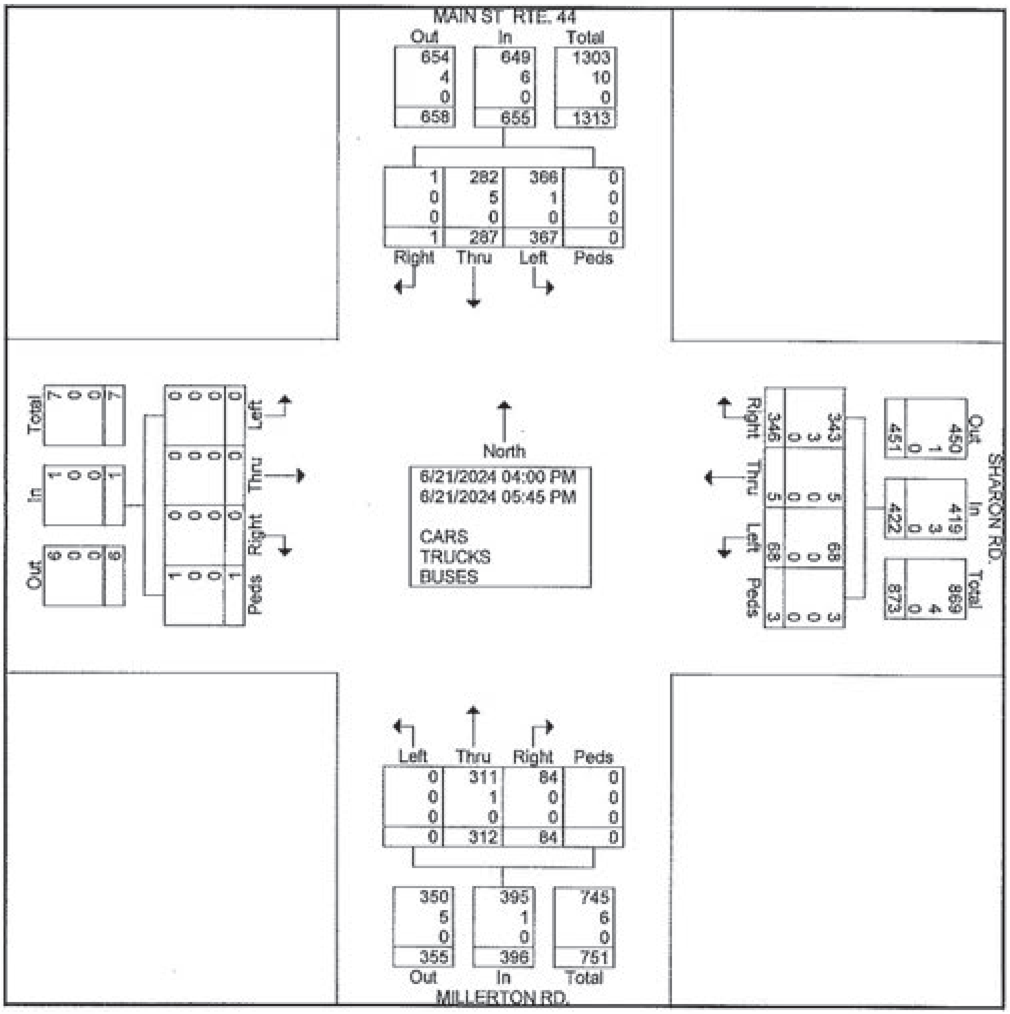
Groups Printed- CARS - TRUCKS - BUSES

	MAIN ST RTE. 44 SOUTHBOUND					SHARON RD. WESTBOUND					MILLERTON RD. NORTHBOUND					EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	44	61	0	105	65	0	7	1	73	12	50	0	0	62	0	0	0	0	0	240
04:15 PM	0	38	58	0	96	52	0	10	0	62	15	57	0	0	72	0	0	0	0	0	230
04:30 PM	1	35	46	0	82	45	0	12	0	57	9	26	0	0	35	0	0	0	0	0	174
04:45 PM	0	37	49	0	86	46	0	10	0	56	3	37	0	0	40	0	0	0	0	0	182
Total	1	154	214	0	369	208	0	39	1	248	39	170	0	0	209	0	0	0	0	0	826
05:00 PM	0	42	49	0	91	39	5	11	1	56	11	39	0	0	50	0	0	0	0	0	197
05:15 PM	0	27	41	0	68	41	0	7	0	48	13	37	0	0	50	0	0	0	1	1	167
05:30 PM	0	33	32	0	65	29	0	4	0	33	14	35	0	0	49	0	0	0	0	0	147
05:45 PM	0	31	31	0	62	29	0	7	1	37	7	31	0	0	38	0	0	0	0	0	137
Total	0	133	153	0	286	138	5	29	2	174	45	142	0	0	187	0	0	0	1	1	648
Grand Total	1	287	367	0	655	346	5	68	3	422	84	312	0	0	396	0	0	0	1	1	1474
Apprch %	0.2	43.8	56	0		82	1.2	16.1	0.7		21.2	78.8	0	0		0	0	0	100		
Total %	0.1	19.5	24.9	0	44.4	23.5	0.3	4.6	0.2	28.6	5.7	21.2	0	0	26.9	0	0	0	0.1	0.1	
CARS	1	282	366	0	649	343	5	68	3	419	84	311	0	0	395	0	0	0	1	1	1464
% CARS	100	98.3	99.7	0	99.1	99.1	100	100	100	99.3	100	99.7	0	0	99.7	0	0	0	100	100	99.3
TRUCKS	0	5	1	0	6	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	10
% TRUCKS	0	1.7	0.3	0	0.9	0.9	0	0	0	0.7	0	0.3	0	0	0.3	0	0	0	0	0	0.7
BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Main St. Milleton Rd Rte. 44 at Sharon Rd.
P.M. TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-1FRIDAY
Site Code : 00000001
Start Date : 6/21/2024
Page No : 2



Main St. Milleton Rd Rte. 44 at Sharon Rd.

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Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-1FRIDAY
Site Code : 00000001
Start Date : 6/21/2024
Page No : 3

	MAIN ST RTE. 44 SOUTHBOUND					SHARON RD. WESTBOUND					MILLERTON RD. NORTHBOUND					EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 04:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	**44**	**61**	0	**105**	**65**	0	7	1	**73**	12	50	0	0	62	0	0	0	0	0	**240**
04:15 PM	0	38	58	0	96	52	0	10	0	62	**15**	**57**	0	0	**72**	0	0	0	0	0	230
04:30 PM	**1**	35	46	0	82	45	0	**12**	0	57	9	26	0	0	35	0	0	0	0	0	174
04:45 PM	0	37	49	0	86	46	0	10	0	56	3	37	0	0	40	0	0	0	0	0	182
Total Volume	1	154	214	0	369	208	0	39	1	248	39	170	0	0	209	0	0	0	0	0	826
% App. Total	0.3	41.7	58	0		83.9	0	15.7	0.4		18.7	81.3	0	0		0	0	0	0		
PHF	.250	.875	.877	.000	.879	.800	.000	.813	.250	.849	.650	.746	.000	.000	.726	.000	.000	.000	.000	.000	.860
CARS	1	150	214	0	365	207	0	39	1	247	39	169	0	0	208	0	0	0	0	0	820
% CARS	100	97.4	100	0	98.9	99.5	0	100	100	99.6	100	99.4	0	0	99.5	0	0	0	0	0	99.3
TRUCKS	0	4	0	0	4	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	6
% TRUCKS	0	2.6	0	0	1.1	0.5	0	0	0	0.4	0	0.6	0	0	0.5	0	0	0	0	0	0.7
BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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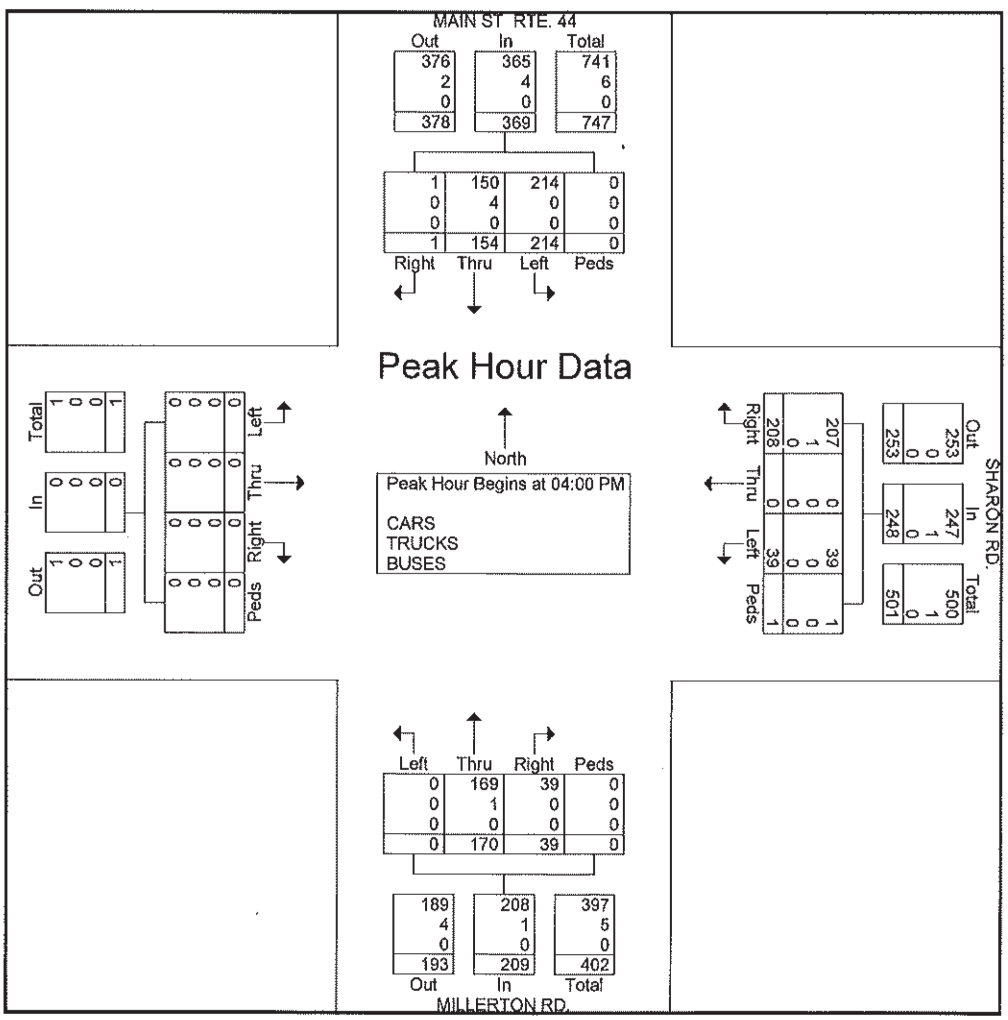

Main St. Milleton Rd Rte. 44 at Sharon Rd.

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Salisbury, CT
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TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-1FRIDAY
Site Code : 00000001
Start Date : 6/21/2024
Page No : 4

Groups Printed- CARS

	MAIN ST RTE. 44 SOUTHBOUND					SHARON RD. WESTBOUND					MILLERTON RD. NORTHBOUND					EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	41	61	0	102	65	0	7	1	73	12	50	0	0	62	0	0	0	0	0	237
04:15 PM	0	38	58	0	96	52	0	10	0	62	15	56	0	0	71	0	0	0	0	0	229
04:30 PM	1	35	46	0	82	44	0	12	0	56	9	26	0	0	35	0	0	0	0	0	173
04:45 PM	0	36	49	0	85	46	0	10	0	56	3	37	0	0	40	0	0	0	0	0	181
Total	1	150	214	0	365	207	0	39	1	247	39	169	0	0	208	0	0	0	0	0	820
05:00 PM	0	42	48	0	90	38	5	11	1	55	11	39	0	0	50	0	0	0	0	0	195
05:15 PM	0	27	41	0	68	40	0	7	0	47	13	37	0	0	50	0	0	0	1	1	166
05:30 PM	0	33	32	0	65	29	0	4	0	33	14	35	0	0	49	0	0	0	0	0	147
05:45 PM	0	30	31	0	61	29	0	7	1	37	7	31	0	0	38	0	0	0	0	0	136
Total	0	132	152	0	284	136	5	29	2	172	45	142	0	0	187	0	0	0	1	1	644
Grand Total	1	282	366	0	649	343	5	68	3	419	84	311	0	0	395	0	0	0	1	1	1464
Apprch %	0.2	43.5	56.4	0		81.9	1.2	16.2	0.7		21.3	78.7	0	0		0	0	0	100		
Total %	0.1	19.3	25	0	44.3	23.4	0.3	4.6	0.2	28.6	5.7	21.2	0	0	27	0	0	0	0.1	0.1	

Main St. Milleton Rd Rte. 44 at Sharon Rd.

P.M. TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-1FRIDAY
Site Code : 00000001
Start Date : 6/21/2024
Page No : 5

Groups Printed- TRUCKS

	MAIN ST RTE. 44 SOUTHBOUND					SHARON RD. WESTBOUND					MILLERTON RD. NORTHBOUND					EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
04:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	4	0	0	4	1	0	0	0	1	0	1	0	0	1	0	0	0	0	0	6
05:00 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	1	0	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
Grand Total	0	5	1	0	6	3	0	0	0	3	0	1	0	0	1	0	0	0	0	0	10
Apprch %	0	83.3	16.7	0		100	0	0	0		0	100	0	0		0	0	0	0		
Total %	0	50	10	0	60	30	0	0	0	30	0	10	0	0	10	0	0	0	0	0	

Main St. Milleton Rd Rte. 44 at Sharon Rd.

P.M. TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-1FRIDAY
Site Code : 00000001
Start Date : 6/21/2024
Page No : 6

Groups Printed- BUSES

	MAIN ST RTE. 44 SOUTHBOUND					SHARON RD. WESTBOUND					MILLERTON RD. NORTHBOUND					EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

Sharon Rd. at Interlake Rd. and Lime Rock Rd.

P.M. TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-3FRIDAY
Site Code : 00000003
Start Date : 6/21/2024
Page No : 1

Groups Printed- CARS - TRUCKS - BUSES

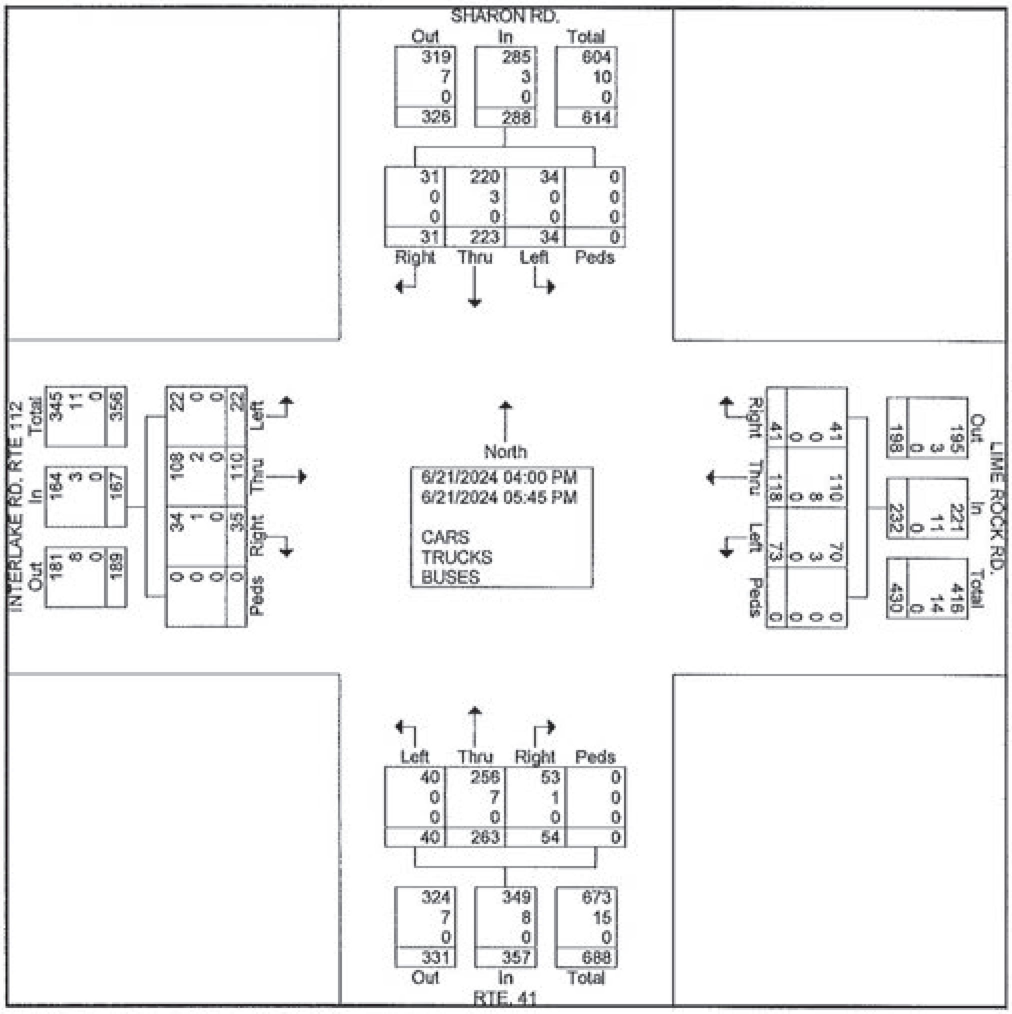
	SHARON RD. SOUTHBOUND					LIME ROCK RD. WESTBOUND					RTE. 41 NORTHBOUND					INTERLAKE RD. RTE 112 EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	6	31	6	0	43	7	16	16	0	39	4	34	11	0	49	8	17	3	0	28	159
04:15 PM	6	35	8	0	49	5	15	9	0	29	15	40	3	0	58	4	13	4	0	21	157
04:30 PM	4	28	1	0	33	6	12	11	0	29	8	29	5	0	42	5	12	3	0	20	124
04:45 PM	3	29	6	0	38	6	14	7	0	27	9	36	5	0	50	2	9	1	0	12	127
Total	19	123	21	0	163	24	57	43	0	124	36	139	24	0	199	19	51	11	0	81	567
05:00 PM	2	28	2	0	32	5	14	9	0	28	5	29	3	0	37	3	18	2	0	23	120
05:15 PM	5	30	3	0	38	5	25	6	0	36	6	37	0	0	43	3	21	2	0	26	143
05:30 PM	4	25	6	0	35	6	15	10	0	31	2	29	6	0	37	6	13	4	0	23	126
05:45 PM	1	17	2	0	20	1	7	5	0	13	5	29	7	0	41	4	7	3	0	14	88
Total	12	100	13	0	125	17	61	30	0	108	18	124	16	0	158	16	59	11	0	86	477
Grand Total	31	223	34	0	288	41	118	73	0	232	54	263	40	0	357	35	110	22	0	167	1044
Apprch %	10.8	77.4	11.8	0		17.7	50.9	31.5	0		15.1	73.7	11.2	0		21	65.9	13.2	0		
Total %	3	21.4	3.3	0	27.6	3.9	11.3	7	0	22.2	5.2	25.2	3.8	0	34.2	3.4	10.5	2.1	0	16	
CARS	31	220	34	0	285	41	110	70	0	221	53	256	40	0	349	34	108	22	0	164	1019
% CARS	100	98.7	100	0	99	100	93.2	95.9	0	95.3	98.1	97.3	100	0	97.8	97.1	98.2	100	0	98.2	97.6
TRUCKS	0	3	0	0	3	0	8	3	0	11	1	7	0	0	8	1	2	0	0	3	25
% TRUCKS	0	1.3	0	0	1	0	6.8	4.1	0	4.7	1.9	2.7	0	0	2.2	2.9	1.8	0	0	1.8	2.4
BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Sharon Rd. at Interlake Rd. and Lime Rock Rd.

P.M. TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-3FRIDAY
Site Code : 00000003
Start Date : 6/21/2024
Page No : 2



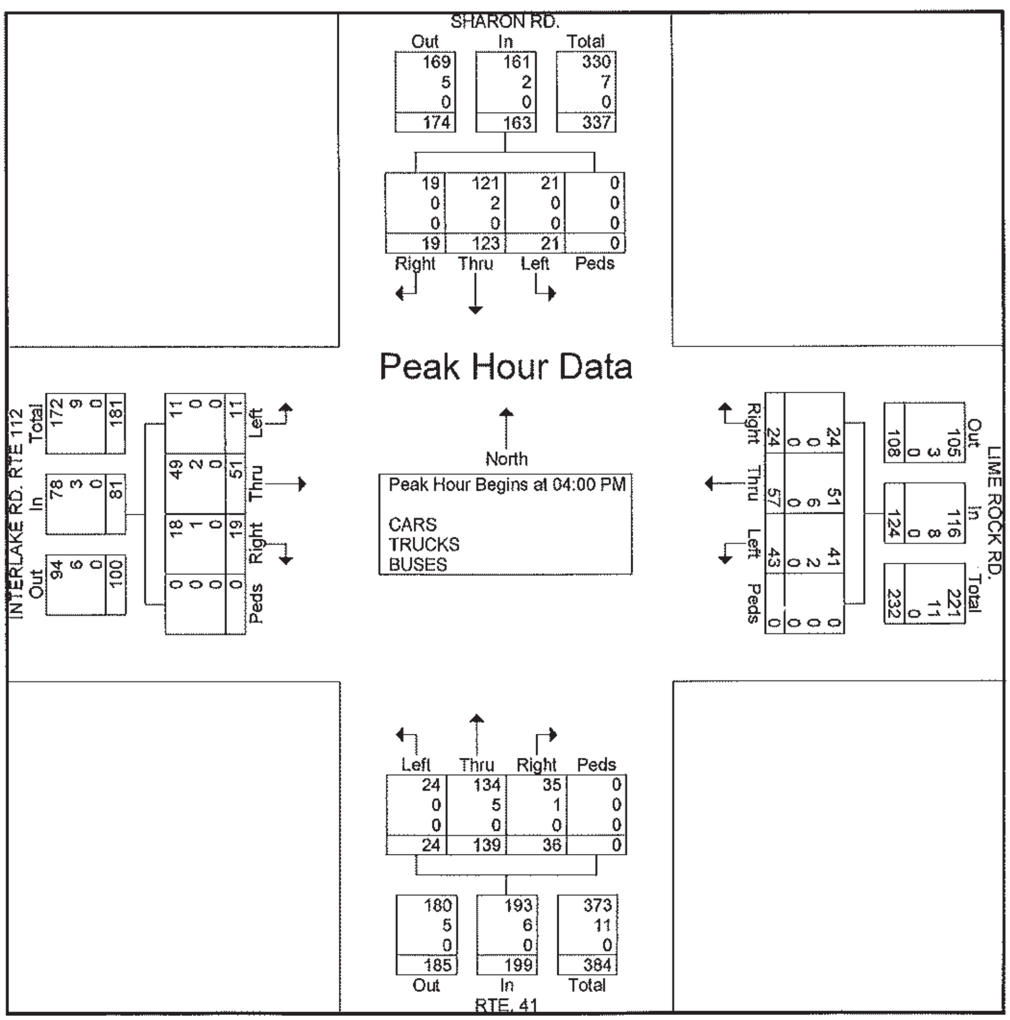
Sharon Rd. at Interlake Rd. and Lime Rock Rd.

P.M. TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-3FRIDAY
Site Code : 00000003
Start Date : 6/21/2024
Page No : 3

	SHARON RD. SOUTHBOUND					LIME ROCK RD. WESTBOUND					RTE. 41 NORTHBOUND					INTERLAKE RD. RTE 112 EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	6	31	6	0	43	7	16	16	0	39	4	34	11	0	49	8	17	3	0	28	159
04:15 PM	6	35	8	0	49	5	15	9	0	29	15	40	3	0	58	4	13	4	0	21	157
04:30 PM	4	28	1	0	33	6	12	11	0	29	8	29	5	0	42	5	12	3	0	20	124
04:45 PM	3	29	6	0	38	6	14	7	0	27	9	36	5	0	50	2	9	1	0	12	127
Total Volume	19	123	21	0	163	24	57	43	0	124	36	139	24	0	199	19	51	11	0	81	567
% App. Total	11.7	75.5	12.9	0		19.4	46	34.7	0		18.1	69.8	12.1	0		23.5	63	13.6	0		
PHF	.792	.879	.656	.000	.832	.857	.891	.672	.000	.795	.600	.869	.545	.000	.858	.594	.750	.688	.000	.723	.892
CARS	19	121	21	0	161	24	51	41	0	116	35	134	24	0	193	18	49	11	0	78	548
% CARS	100	98.4	100	0	98.8	100	89.5	95.3	0	93.5	97.2	96.4	100	0	97.0	94.7	96.1	100	0	96.3	96.6
TRUCKS	0	2	0	0	2	0	6	2	0	8	1	5	0	0	6	1	2	0	0	3	19
% TRUCKS	0	1.6	0	0	1.2	0	10.5	4.7	0	6.5	2.8	3.6	0	0	3.0	5.3	3.9	0	0	3.7	3.4
BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Sharon Rd. at Interlake Rd. and Lime Rock Rd.

P.M. TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-3FRIDAY
Site Code : 00000003
Start Date : 6/21/2024
Page No : 4

Groups Printed- CARS

	SHARON RD. SOUTHBOUND					LIME ROCK RD. WESTBOUND					RTE. 41 NORTHBOUND					INTERLAKE RD. RTE 112 EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	6	31	6	0	43	7	14	15	0	36	3	34	11	0	48	8	17	3	0	28	155
04:15 PM	6	33	8	0	47	5	14	9	0	28	15	39	3	0	57	4	13	4	0	21	153
04:30 PM	4	28	1	0	33	6	10	11	0	27	8	27	5	0	40	4	10	3	0	17	117
04:45 PM	3	29	6	0	38	6	13	6	0	25	9	34	5	0	48	2	9	1	0	12	123
Total	19	121	21	0	161	24	51	41	0	116	35	134	24	0	193	18	49	11	0	78	548
05:00 PM	2	28	2	0	32	5	14	9	0	28	5	27	3	0	35	3	18	2	0	23	118
05:15 PM	5	29	3	0	37	5	24	6	0	35	6	37	0	0	43	3	21	2	0	26	141
05:30 PM	4	25	6	0	35	6	14	9	0	29	2	29	6	0	37	6	13	4	0	23	124
05:45 PM	1	17	2	0	20	1	7	5	0	13	5	29	7	0	41	4	7	3	0	14	88
Total	12	99	13	0	124	17	59	29	0	105	18	122	16	0	156	16	59	11	0	86	471
Grand Total	31	220	34	0	285	41	110	70	0	221	53	256	40	0	349	34	108	22	0	164	1019
Apprch %	10.9	77.2	11.9	0		18.6	49.8	31.7	0		15.2	73.4	11.5	0		20.7	65.9	13.4	0		
Total %	3	21.6	3.3	0	28	4	10.8	6.9	0	21.7	5.2	25.1	3.9	0	34.2	3.3	10.6	2.2	0	16.1	

Sharon Rd. at Interlake Rd. and Lime Rock Rd.

P.M. TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-3FRIDAY
Site Code : 00000003
Start Date : 6/21/2024
Page No : 5

Groups Printed- TRUCKS

	SHARON RD. SOUTHBOUND					LIME ROCK RD. WESTBOUND					RTE. 41 NORTHBOUND					INTERLAKE RD. RTE 112 EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	2	1	0	3	1	0	0	0	1	0	0	0	0	0	4
04:15 PM	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	4
04:30 PM	0	0	0	0	0	0	2	0	0	2	0	2	0	0	2	1	2	0	0	3	7
04:45 PM	0	0	0	0	0	0	1	1	0	2	0	2	0	0	2	0	0	0	0	0	4
Total	0	2	0	0	2	0	6	2	0	8	1	5	0	0	6	1	2	0	0	3	19
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	2
05:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	2	1	0	3	0	2	0	0	2	0	0	0	0	0	6
Grand Total	0	3	0	0	3	0	8	3	0	11	1	7	0	0	8	1	2	0	0	3	25
Apprch %	0	100	0	0		0	72.7	27.3	0		12.5	87.5	0	0		33.3	66.7	0	0		
Total %	0	12	0	0	12	0	32	12	0	44	4	28	0	0	32	4	8	0	0	12	

Sharon Rd. at Interlake Rd. and Lime Rock Rd.

P.M. TRAFFIC COUNTS (4:00 to 6:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
4:00 TO 5:00 P.M.

File Name : 1524-3FRIDAY
Site Code : 00000003
Start Date : 6/21/2024
Page No : 6

Groups Printed- BUSES

	SHARON RD. SOUTHBOUND					LIME ROCK RD. WESTBOUND					RTE. 41 NORTHBOUND					INTERLAKE RD. RTE 112 EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

Mid-day TRAFFIC COUNTS (12:00 to 2:00 p.m.)
Locations 1,2 and 3
June 22nd, 2024
Salisbury, CT

Main St. Millerton Rd. Rte 44 at Sharon Rd.

Mid-day TRAFFIC COUNTS (12:00 TO 2:00 P.M.)
Salisbury, CT
preparde by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:30 TO 1:30 P.M.

File Name : 1424-1SATURDAY
Site Code : 00000001
Start Date : 6/22/2024
Page No : 1

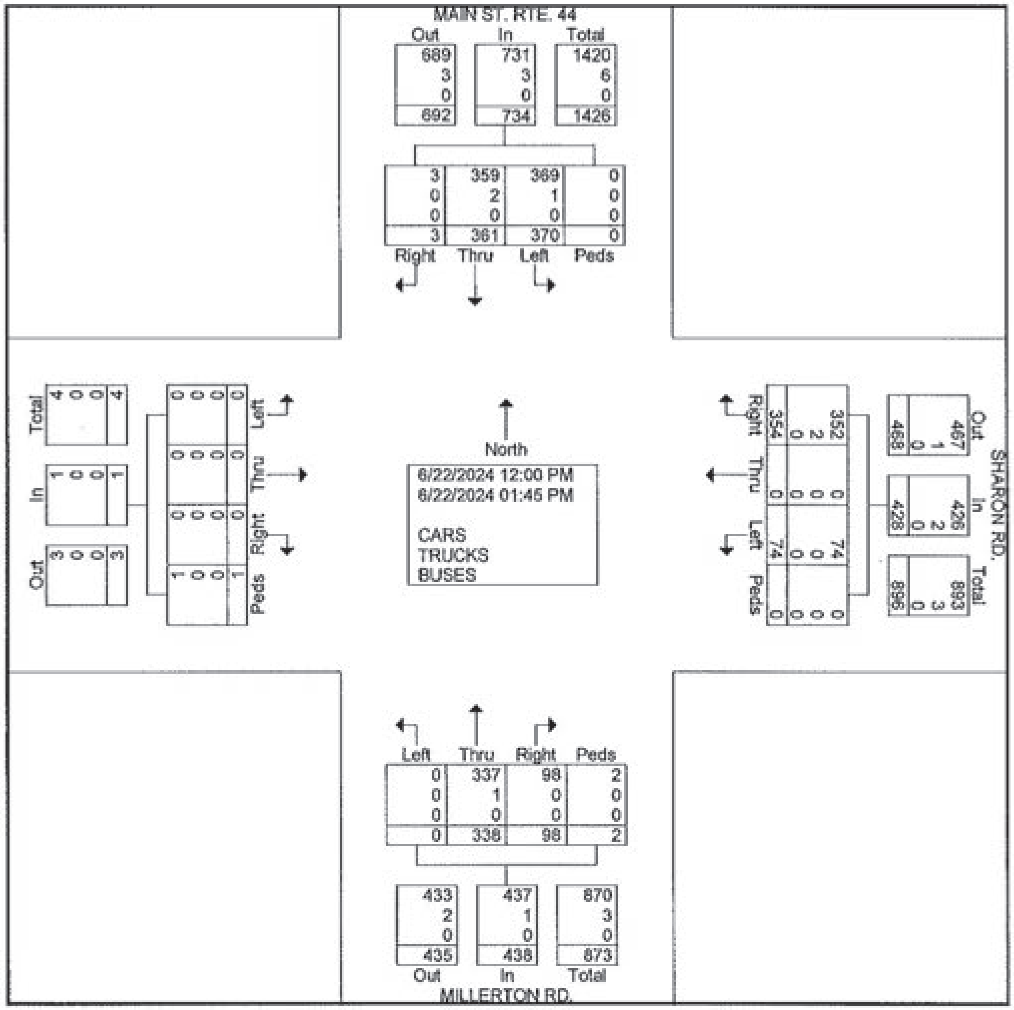
Groups Printed- CARS - TRUCKS - BUSES

	MAIN ST. RTE. 44 SOUTHBOUND					SHARON RD. WESTBOUND					MILLERTON RD. NORTHBOUND					EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
12:00 PM	3	52	57	0	112	48	0	12	0	60	15	46	0	0	61	0	0	0	0	0	233
12:15 PM	0	42	38	0	80	45	0	7	0	52	11	38	0	0	49	0	0	0	0	0	181
12:30 PM	0	48	48	0	96	42	0	7	0	49	8	46	0	1	55	0	0	0	0	0	200
12:45 PM	0	39	31	0	70	47	0	3	0	50	15	51	0	0	66	0	0	0	0	0	186
Total	3	181	174	0	358	182	0	29	0	211	49	181	0	1	231	0	0	0	0	0	800
01:00 PM	0	52	59	0	111	55	0	8	0	63	14	39	0	0	53	0	0	0	0	0	227
01:15 PM	0	41	43	0	84	42	0	9	0	51	10	46	0	1	57	0	0	0	0	0	192
01:30 PM	0	42	53	0	95	33	0	14	0	47	13	42	0	0	55	0	0	0	1	1	198
01:45 PM	0	45	41	0	86	42	0	14	0	56	12	30	0	0	42	0	0	0	0	0	184
Total	0	180	196	0	376	172	0	45	0	217	49	157	0	1	207	0	0	0	1	1	801
Grand Total	3	361	370	0	734	354	0	74	0	428	98	338	0	2	438	0	0	0	1	1	1601
Apprch %	0.4	49.2	50.4	0		82.7	0	17.3	0		22.4	77.2	0	0.5		0	0	0	100		
Total %	0.2	22.5	23.1	0	45.8	22.1	0	4.6	0	26.7	6.1	21.1	0	0.1	27.4	0	0	0	0.1	0.1	
CARS	3	359	369	0	731	352	0	74	0	426	98	337	0	2	437	0	0	0	1	1	1595
% CARS	100	99.4	99.7	0	99.6	99.4	0	100	0	99.5	100	99.7	0	100	99.8	0	0	0	100	100	99.6
TRUCKS	0	2	1	0	3	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	6
% TRUCKS	0	0.6	0.3	0	0.4	0.6	0	0	0	0.5	0	0.3	0	0	0.2	0	0	0	0	0	0.4
BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Main St. Millerton Rd. Rte 44 at Sharon Rd.
Mid-day TRAFFIC COUNTS (12:00 TO 2:00 P.M.)
Salisbury, CT
preparde by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:30 TO 1:30 P.M.

File Name : 1424-1SATURDAY
Site Code : 00000001
Start Date : 6/22/2024
Page No : 2



Main St. Millerton Rd. Rte 44 at Sharon Rd.

Mid-day TRAFFIC COUNTS (12:00 TO 2:00 P.M.)
Salisbury, CT
preparde by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:30 TO 1:30 P.M.

File Name : 1424-1SATURDAY
Site Code : 00000001
Start Date : 6/22/2024
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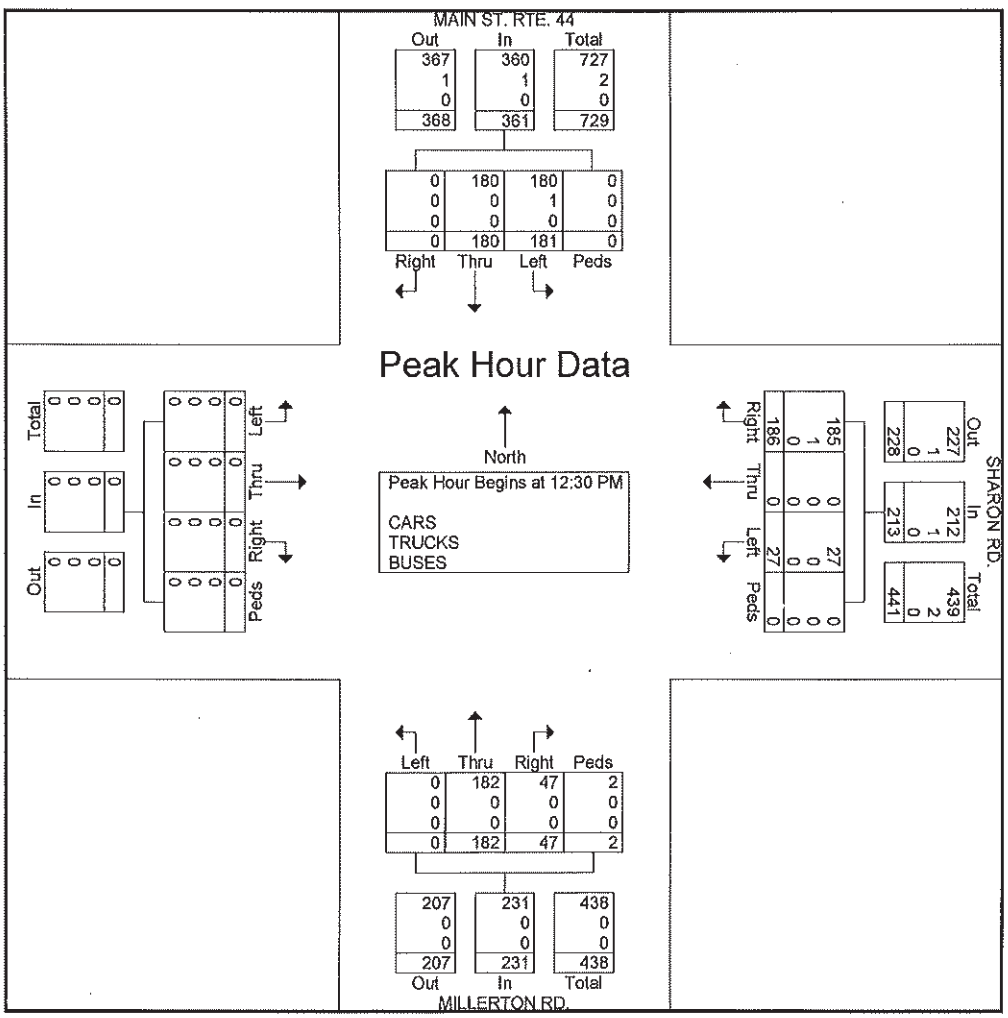
	MAIN ST. RTE. 44 SOUTHBOUND					SHARON RD. WESTBOUND					MILLERTON RD. NORTHBOUND					EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:30 PM to 01:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:30 PM																					
12:30 PM	0	48	48	0	96	42	0	7	0	49	8	46	0	**1**	55	0	0	0	0	0	200
12:45 PM	0	39	31	0	70	47	0	3	0	50	**15**	**51**	0	0	**66**	0	0	0	0	0	186
01:00 PM	0	**52**	**59**	0	**111**	**55**	0	8	0	**63**	14	39	0	0	53	0	0	0	0	0	**227**
01:15 PM	0	41	43	0	84	42	0	**9**	0	51	10	46	0	1	57	0	0	0	0	0	192
Total Volume	0	180	181	0	361	186	0	27	0	213	47	182	0	2	231	0	0	0	0	0	805
% App. Total	0	49.9	50.1	0		87.3	0	12.7	0		20.3	78.8	0	0.9		0	0	0	0		
PHF	.000	.865	.767	.000	.813	.845	.000	.750	.000	.845	.783	.892	.000	.500	.875	.000	.000	.000	.000	.000	.887
CARS	0	180	180	0	360	185	0	27	0	212	47	182	0	2	231	0	0	0	0	0	803
% CARS	0	100	99.4	0	99.7	99.5	0	100	0	99.5	100	100	0	100	100	0	0	0	0	0	99.8
TRUCKS	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
% TRUCKS	0	0	0.6	0	0.3	0.5	0	0	0	0.5	0	0	0	0	0	0	0	0	0	0	0.2
BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Main St. Millerton Rd. Rte 44 at Sharon Rd.

Mid-day TRAFFIC COUNTS (12:00 TO 2:00 P.M.)
Salisbury, CT
preparde by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:30 TO 1:30 P.M.

File Name : 1424-1SATURDAY
Site Code : 00000001
Start Date : 6/22/2024
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Groups Printed- CARS

	MAIN ST. RTE. 44 SOUTHBOUND					SHARON RD. WESTBOUND					MILLERTON RD. NORTHBOUND					EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
12:00 PM	3	51	57	0	111	47	0	12	0	59	15	46	0	0	61	0	0	0	0	0	231
12:15 PM	0	41	38	0	79	45	0	7	0	52	11	37	0	0	48	0	0	0	0	0	179
12:30 PM	0	48	47	0	95	41	0	7	0	48	8	46	0	1	55	0	0	0	0	0	198
12:45 PM	0	39	31	0	70	47	0	3	0	50	15	51	0	0	66	0	0	0	0	0	186
Total	3	179	173	0	355	180	0	29	0	209	49	180	0	1	230	0	0	0	0	0	794
01:00 PM	0	52	59	0	111	55	0	8	0	63	14	39	0	0	53	0	0	0	0	0	227
01:15 PM	0	41	43	0	84	42	0	9	0	51	10	46	0	1	57	0	0	0	0	0	192
01:30 PM	0	42	53	0	95	33	0	14	0	47	13	42	0	0	55	0	0	0	1	1	198
01:45 PM	0	45	41	0	86	42	0	14	0	56	12	30	0	0	42	0	0	0	0	0	184
Total	0	180	196	0	376	172	0	45	0	217	49	157	0	1	207	0	0	0	1	1	801
Grand Total	3	359	369	0	731	352	0	74	0	426	98	337	0	2	437	0	0	0	1	1	1595
Apprch %	0.4	49.1	50.5	0		82.6	0	17.4	0		22.4	77.1	0	0.5		0	0	0	100		
Total %	0.2	22.5	23.1	0	45.8	22.1	0	4.6	0	26.7	6.1	21.1	0	0.1	27.4	0	0	0	0.1	0.1	

Main St. Millerton Rd. Rte 44 at Sharon Rd.

Mid-day TRAFFIC COUNTS (12:00 TO 2:00 P.M.)
Salisbury, CT
preparde by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:30 TO 1:30 P.M.

File Name : 1424-1SATURDAY
Site Code : 00000001
Start Date : 6/22/2024
Page No : 5

Groups Printed- TRUCKS

	MAIN ST. RTE. 44 SOUTHBOUND					SHARON RD. WESTBOUND					MILLERTON RD. NORTHBOUND					EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
12:00 PM	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
12:15 PM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	2
12:30 PM	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	1	0	3	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	6
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	2	1	0	3	2	0	0	0	2	0	1	0	0	1	0	0	0	0	0	6
Apprch %	0	66.7	33.3	0		100	0	0	0		0	100	0	0		0	0	0	0		
Total %	0	33.3	16.7	0	50	33.3	0	0	0	33.3	0	16.7	0	0	16.7	0	0	0	0	0	

Main St. Millerton Rd. Rte 44 at Sharon Rd.

Mid-day TRAFFIC COUNTS (12:00 TO 2:00 P.M.)
Salisbury, CT
preparde by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:30 TO 1:30 P.M.

File Name : 1424-1SATURDAY
Site Code : 00000001
Start Date : 6/22/2024
Page No : 6

Groups Printed- BUSES

	MAIN ST. RTE. 44 SOUTHBOUND					SHARON RD. WESTBOUND					MILLERTON RD. NORTHBOUND					EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

Sharon Rd. at Interlake Rd. and Lime Rock Rd.

Mid-day TRAFFIC COUNTS (12:00 to 2:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:15 TO 1:15 P.M.

File Name : 1524-3SATURDAY
Site Code : 00000003
Start Date : 6/22/2024
Page No : 1

Groups Printed- CARS - TRUCKS - BUSES

	SHARON RD. SOUTHBOUND					LIME ROCK RD. WESTBOUND					RTE. 41 NORTHBOUND					INTERLAKE RD. RTE 112 EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
12:00 PM	8	21	9	0	38	4	8	1	0	13	12	30	11	0	53	6	20	2	0	28	132
12:15 PM	7	21	2	0	30	5	21	12	2	40	5	22	10	0	37	10	12	8	0	30	137
12:30 PM	3	29	3	0	35	3	8	3	0	14	7	34	7	0	48	6	8	1	0	15	112
12:45 PM	2	24	2	0	28	4	20	10	0	34	4	26	11	0	41	5	15	5	1	26	129
Total	20	95	16	0	131	16	57	26	2	101	28	112	39	0	179	27	55	16	1	99	510
01:00 PM	2	36	2	0	40	5	13	4	0	22	5	45	8	0	58	3	19	3	0	25	145
01:15 PM	3	25	5	0	33	3	16	7	0	26	8	20	4	0	32	7	5	3	0	15	106
01:30 PM	6	32	5	0	43	2	19	7	0	28	8	15	7	0	30	4	12	4	0	20	121
01:45 PM	2	25	2	0	29	1	19	6	0	26	10	22	3	0	35	8	10	3	0	21	111
Total	13	118	14	0	145	11	67	24	0	102	31	102	22	0	155	22	46	13	0	81	483
Grand Total	33	213	30	0	276	27	124	50	2	203	59	214	61	0	334	49	101	29	1	180	993
Apprch %	12	77.2	10.9	0		13.3	61.1	24.6	1		17.7	64.1	18.3	0		27.2	56.1	16.1	0.6		
Total %	3.3	21.5	3	0	27.8	2.7	12.5	5	0.2	20.4	5.9	21.6	6.1	0	33.6	4.9	10.2	2.9	0.1	18.1	
CARS	33	211	30	0	274	27	121	49	2	199	57	210	59	0	326	48	100	29	1	178	977
% CARS	100	99.1	100	0	99.3	100	97.6	98	100	98	96.6	98.1	96.7	0	97.6	98	99	100	100	98.9	98.4
TRUCKS	0	2	0	0	2	0	3	1	0	4	2	4	2	0	8	1	1	0	0	2	16
% TRUCKS	0	0.9	0	0	0.7	0	2.4	2	0	2	3.4	1.9	3.3	0	2.4	2	1	0	0	1.1	1.6
BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Sharon Rd. at Interlake Rd. and Lime Rock Rd.

Mid-day TRAFFIC COUNTS (12:00 to 2:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:15 TO 1:15 P.M.

File Name : 1524-3SATURDAY
Site Code : 00000003
Start Date : 6/22/2024
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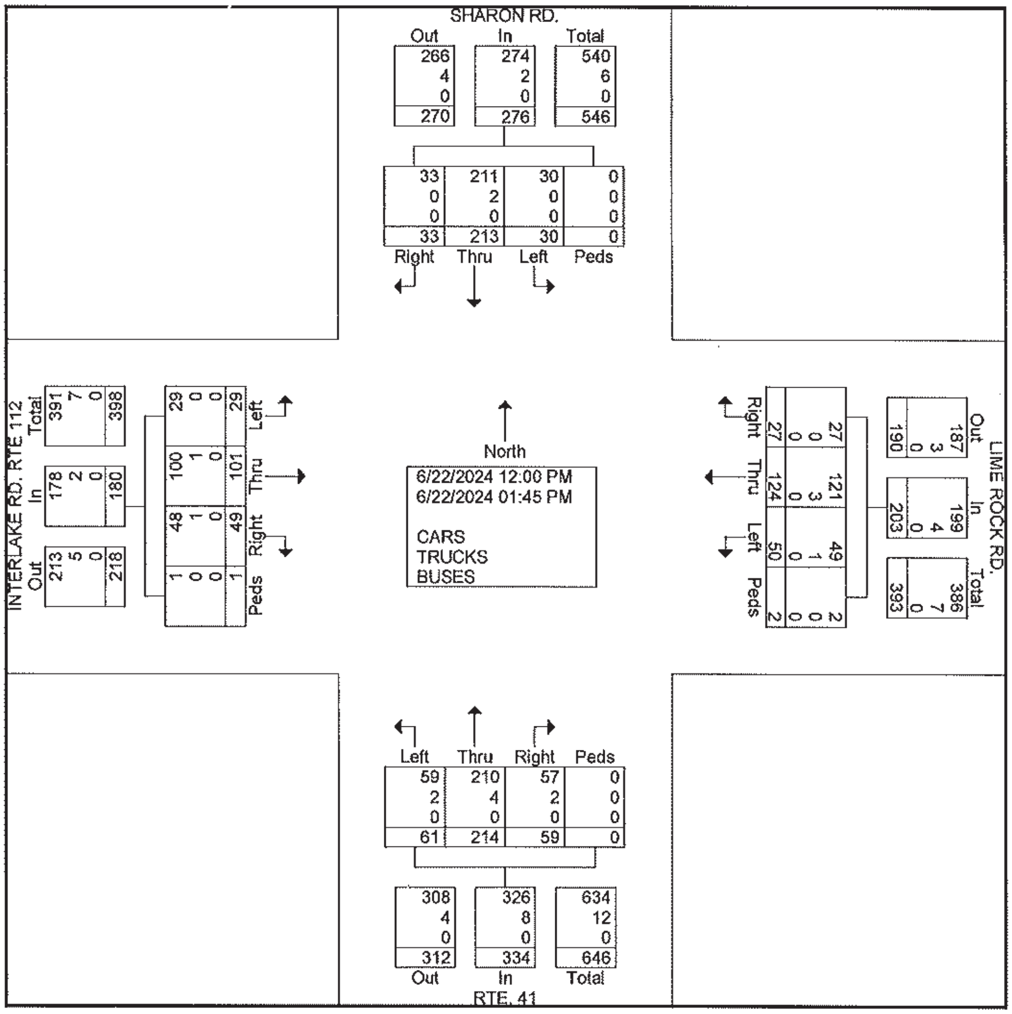

Sharon Rd. at Interlake Rd. and Lime Rock Rd.

Mid-day TRAFFIC COUNTS (12:00 to 2:00 p.m.)
Salisbury, CT
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Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:15 TO 1:15 P.M.

File Name : 1524-3SATURDAY
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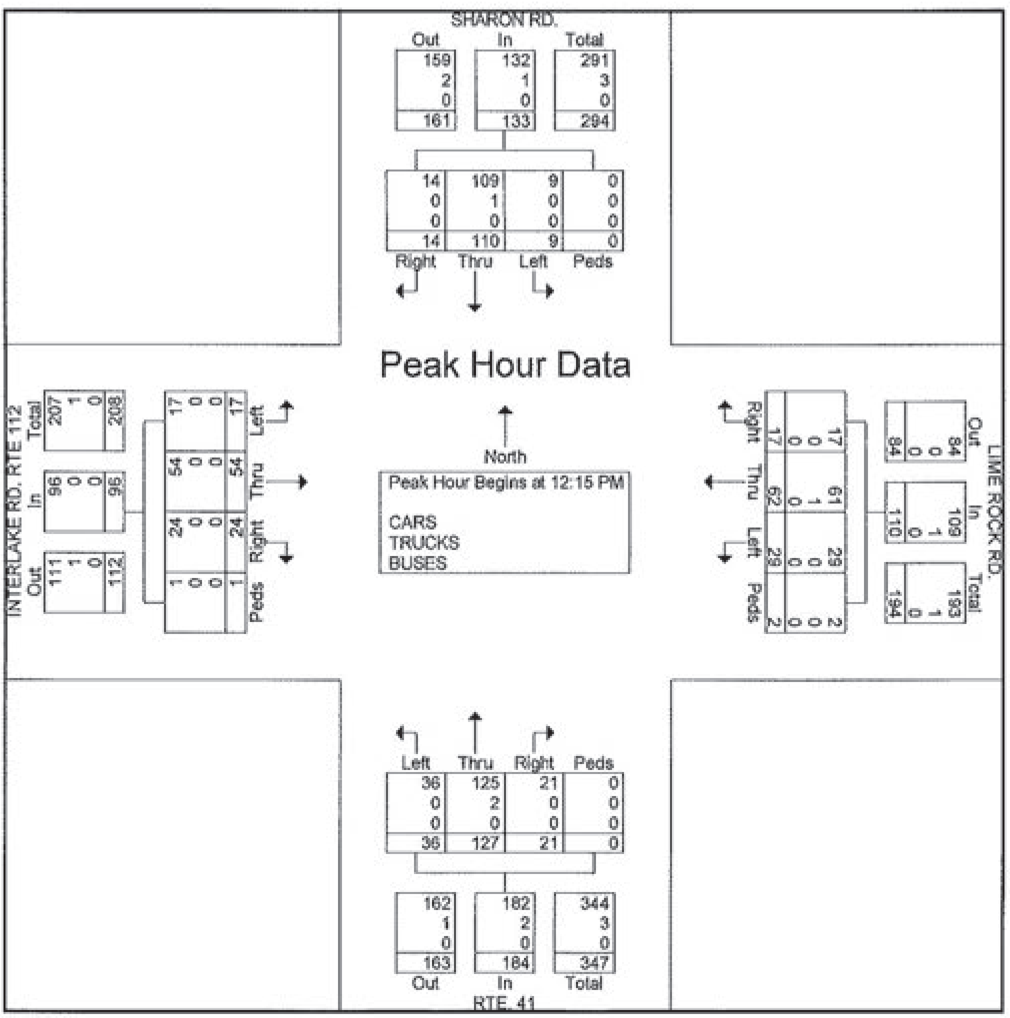
	SHARON RD. SOUTHBOUND					LIME ROCK RD. WESTBOUND					RTE. 41 NORTHBOUND					INTERLAKE RD. RTE 112 EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:15 PM to 01:00 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 12:15 PM																					
12:15 PM	**7**	21	2	0	30	**5**	**21**	**12**	**2**	**40**	5	22	10	0	37	**10**	12	**8**	0	**30**	137
12:30 PM	3	29	**3**	0	35	3	8	3	0	14	**7**	34	7	0	48	6	8	1	0	15	112
12:45 PM	2	24	2	0	28	4	20	10	0	34	4	26	**11**	0	41	5	15	5	**1**	26	129
01:00 PM	2	**36**	2	0	**40**	5	13	4	0	22	5	**45**	8	0	**58**	3	**19**	3	0	25	**145**
Total Volume	14	110	9	0	133	17	62	29	2	110	21	127	36	0	184	24	54	17	1	96	523
% App. Total	10.5	82.7	6.8	0		15.5	56.4	26.4	1.8		11.4	69	19.6	0		25	56.2	17.7	1		
PHF	.500	.764	.750	.000	.831	.850	.738	.604	.250	.688	.750	.706	.818	.000	.793	.600	.711	.531	.250	.800	.902
CARS	14	109	9	0	132	17	61	29	2	109	21	125	36	0	182	24	54	17	1	96	519
% CARS	100	99.1	100	0	99.2	100	98.4	100	100	99.1	100	98.4	100	0	98.9	100	100	100	100	100	99.2
TRUCKS	0	1	0	0	1	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	4
% TRUCKS	0	0.9	0	0	0.8	0	1.6	0	0	0.9	0	1.6	0	0	1.1	0	0	0	0	0	0.8
BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% BUSES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Sharon Rd. at Interlake Rd. and Lime Rock Rd.

Mid-day TRAFFIC COUNTS (12:00 to 2:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:15 TO 1:15 P.M.

File Name : 1524-3SATURDAY
Site Code : 00000003
Start Date : 6/22/2024
Page No : 4

Groups Printed- CARS

	SHARON RD. SOUTHBOUND					LIME ROCK RD. WESTBOUND					RTE. 41 NORTHBOUND					INTERLAKE RD. RTE 112 EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
12:00 PM	8	21	9	0	38	4	8	1	0	13	11	28	10	0	49	6	20	2	0	28	128
12:15 PM	7	21	2	0	30	5	21	12	2	40	5	22	10	0	37	10	12	8	0	30	137
12:30 PM	3	29	3	0	35	3	8	3	0	14	7	33	7	0	47	6	8	1	0	15	111
12:45 PM	2	23	2	0	27	4	20	10	0	34	4	26	11	0	41	5	15	5	1	26	128
Total	20	94	16	0	130	16	57	26	2	101	27	109	38	0	174	27	55	16	1	99	504
01:00 PM	2	36	2	0	40	5	12	4	0	21	5	44	8	0	57	3	19	3	0	25	143
01:15 PM	3	25	5	0	33	3	15	7	0	25	8	20	3	0	31	6	5	3	0	14	103
01:30 PM	6	31	5	0	42	2	18	6	0	26	7	15	7	0	29	4	11	4	0	19	116
01:45 PM	2	25	2	0	29	1	19	6	0	26	10	22	3	0	35	8	10	3	0	21	111
Total	13	117	14	0	144	11	64	23	0	98	30	101	21	0	152	21	45	13	0	79	473
Grand Total	33	211	30	0	274	27	121	49	2	199	57	210	59	0	326	48	100	29	1	178	977
Apprch %	12	77	10.9	0		13.6	60.8	24.6	1		17.5	64.4	18.1	0		27	56.2	16.3	0.6		
Total %	3.4	21.6	3.1	0	28	2.8	12.4	5	0.2	20.4	5.8	21.5	6	0	33.4	4.9	10.2	3	0.1	18.2	

Sharon Rd. at Interlake Rd. and Lime Rock Rd.

Mid-day TRAFFIC COUNTS (12:00 to 2:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:15 TO 1:15 P.M.

File Name : 1524-3SATURDAY
Site Code : 00000003
Start Date : 6/22/2024
Page No : 5

Groups Printed- TRUCKS

	SHARON RD. SOUTHBOUND					LIME ROCK RD. WESTBOUND					RTE. 41 NORTHBOUND					INTERLAKE RD. RTE 112 EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	2	1	0	4	0	0	0	0	0	4
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1
12:45 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	1	0	0	1	0	0	0	0	0	1	3	1	0	5	0	0	0	0	0	6
01:00 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	2
01:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1	3
01:30 PM	0	1	0	0	1	0	1	1	0	2	1	0	0	0	1	0	1	0	0	1	5
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1	0	0	1	0	3	1	0	4	1	1	1	0	3	1	1	0	0	2	10
Grand Total	0	2	0	0	2	0	3	1	0	4	2	4	2	0	8	1	1	0	0	2	16
Apprch %	0	100	0	0		0	75	25	0		25	50	25	0		50	50	0	0		
Total %	0	12.5	0	0	12.5	0	18.8	6.2	0	25	12.5	25	12.5	0	50	6.2	6.2	0	0	12.5	

Sharon Rd. at Interlake Rd. and Lime Rock Rd.

Mid-day TRAFFIC COUNTS (12:00 to 2:00 p.m.)
Salisbury, CT
prepared by Reliable Traffic Counts, LLC
Weather Clear

TRAFFIC COUNTS
PEAK HOUR
12:15 TO 1:15 P.M.

File Name : 1524-3SATURDAY
Site Code : 00000003
Start Date : 6/22/2024
Page No : 6

Groups Printed- BUSES

	SHARON RD. SOUTHBOUND					LIME ROCK RD. WESTBOUND					RTE. 41 NORTHBOUND					INTERLAKE RD. RTE 112 EASTBOUND					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		
Total %																					

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

6/10/2024	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Week Average	
Time	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB	NB	SB
12:00 AM									11	3	12	7	12	9	12	6
1:00									5	5	8	6	7	4	7	5
2:00									2	0	2	2	5	1	3	1
3:00									2	2	0	2	1	1	1	2
4:00									5	3	3	4	2	2	3	3
5:00									14	20	9	10	11	10	11	13
6:00									52	73	33	36	21	23	35	44
7:00									95	110	76	71	36	45	69	75
8:00									125	133	112	101	64	80	100	105
9:00									152	139	143	116	94	93	130	116
10:00									132	143	146	135	122	118	133	132
11:00									164	152	156	176	142	186	154	171
12:00 PM									194	157	181	219	143	131	173	169
1:00									178	161	165	148	120	143	154	151
2:00									176	153	163	154	118	161	152	156
3:00									188	189	150	165	99	136	146	163
4:00									183	175	139	176	94	142	139	164
5:00									187	167	143	155	83	136	138	153
6:00									174	109	105	114	95	123	125	115
7:00									99	108	60	85	86	85	82	93
8:00									93	89	67	68	62	63	74	73
9:00									64	41	50	44	32	35	49	40
10:00									54	45	53	25	20	15	42	28
11:00									24	14	55	21	6	7	28	14
Total	0	0	0	0	0	0	0	0	2373	2191	2031	2040	1475	1749	1960	1992
Day	0		0		0		0		4564		4071		3224		3952	
AM Peak									11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00
Volume									164	152	156	176	142	186	154	171
PM Peak									12:00 PM	3:00	12:00 PM	12:00 PM	12:00 PM	2:00	12:00 PM	12:00 PM
Volume									194	189	181	219	143	161	173	169
Comb Total	0		0		0		0		4564		4071		3224		3952	
ADT	ADT: 3,953		AADT: 3,953													

![NE Traffic Counts]

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: NB

6/14/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	No Class	Total
12:00 AM	1	5	3	0	1	0	0	1	0	0	0	0	0	0	11
1:00	0	3	2	0	0	0	0	0	0	0	0	0	0	0	5
2:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	3	0	1	1	0	0	0	0	0	0	0	0	0	5
5:00	0	5	6	0	1	0	0	2	0	0	0	0	0	0	14
6:00	0	27	8	1	13	0	0	1	2	0	0	0	0	0	52
7:00	1	44	21	0	19	2	1	3	3	0	0	0	0	1	95
8:00	1	72	26	1	16	3	3	1	2	0	0	0	0	0	125
9:00	1	92	28	5	17	2	2	1	2	0	0	0	0	2	152
10:00	0	88	23	2	14	0	1	2	2	0	0	0	0	0	132
11:00	0	100	32	3	20	0	4	3	2	0	0	0	0	0	164
12:00 PM	6	114	45	1	19	3	2	2	1	0	0	0	0	1	194
1:00	1	116	35	1	21	1	2	1	0	0	0	0	0	0	178
2:00	0	125	33	2	11	0	3	0	2	0	0	0	0	0	176
3:00	0	137	33	1	13	0	1	3	0	0	0	0	0	0	188
4:00	0	130	34	1	14	0	1	2	1	0	0	0	0	0	183
5:00	0	126	37	0	15	0	2	5	2	0	0	0	0	0	187
6:00	0	131	37	0	4	0	0	2	0	0	0	0	0	0	174
7:00	0	67	25	1	5	0	0	1	0	0	0	0	0	0	99
8:00	0	79	10	0	3	0	0	1	0	0	0	0	0	0	93
9:00	0	44	20	0	0	0	0	0	0	0	0	0	0	0	64
10:00	0	47	3	2	2	0	0	0	0	0	0	0	0	0	54
11:00	0	16	5	1	2	0	0	0	0	0	0	0	0	0	24
Total	11	1574	467	23	211	11	22	31	19	0	0	0	0	4	2373
Percent	0.5%	66.3%	19.7%	1.0%	8.9%	0.5%	0.9%	1.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.2%	
AM Peak	12:00 AM	11:00	11:00	9:00	11:00	8:00	11:00	7:00	7:00					9:00	11:00
	1	100	32	5	20	3	4	3	3					2	164
PM Peak	12:00 PM	3:00	12:00 PM	2:00	1:00	12:00 PM	2:00	5:00	2:00					12:00 PM	12:00 PM
	6	137	45	2	21	3	3	5	2					1	194

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: NB

6/15/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	No Class	Total
12:00 AM	0	6	4	0	2	0	0	0	0	0	0	0	0	0	12
1:00	0	6	1	0	1	0	0	0	0	0	0	0	0	0	8
2:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	2	0	0	1	0	0	0	0	0	0	0	0	0	3
5:00	0	3	3	0	3	0	0	0	0	0	0	0	0	0	9
6:00	0	25	4	0	4	0	0	0	0	0	0	0	0	0	33
7:00	0	48	15	1	9	1	0	1	1	0	0	0	0	0	76
8:00	1	71	27	1	11	0	0	0	0	1	0	0	0	0	112
9:00	1	110	20	0	10	1	0	1	0	0	0	0	0	0	143
10:00	2	108	25	0	9	0	1	1	0	0	0	0	0	0	146
11:00	3	114	29	1	6	0	0	1	0	0	0	0	0	2	156
12:00 PM	8	125	28	2	11	0	0	1	0	0	0	0	0	6	181
1:00	1	122	32	0	8	1	0	1	0	0	0	0	0	0	165
2:00	1	131	22	1	8	0	0	0	0	0	0	0	0	0	163
3:00	6	104	31	2	6	0	0	0	1	0	0	0	0	0	150
4:00	2	96	29	0	6	1	0	3	0	0	0	0	0	2	139
5:00	3	106	28	0	4	0	0	2	0	0	0	0	0	0	143
6:00	0	90	13	0	1	0	0	1	0	0	0	0	0	0	105
7:00	0	45	11	0	4	0	0	0	0	0	0	0	0	0	60
8:00	1	61	5	0	0	0	0	0	0	0	0	0	0	0	67
9:00	0	41	8	0	1	0	0	0	0	0	0	0	0	0	50
10:00	0	45	6	2	0	0	0	0	0	0	0	0	0	0	53
11:00	0	40	10	2	3	0	0	0	0	0	0	0	0	0	55
Total	29	1501	351	12	108	4	1	12	2	1	0	0	0	10	2031
Percent	1.4%	73.9%	17.3%	0.6%	5.3%	0.2%	0.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.5%	
AM Peak	11:00	11:00	11:00	7:00	8:00	7:00	10:00	7:00	7:00	8:00				11:00	11:00
	3	114	29	1	11	1	1	1	1	1				2	156
PM Peak	12:00 PM	2:00	1:00	12:00 PM	12:00 PM	1:00		4:00	3:00					12:00 PM	12:00 PM
	8	131	32	2	11	1		3	1					6	181

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: NB

6/16/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	No Class	Total
12:00 AM	0	4	5	1	2	0	0	0	0	0	0	0	0	0	12
1:00	0	5	1	0	1	0	0	0	0	0	0	0	0	0	7
2:00	0	3	0	0	2	0	0	0	0	0	0	0	0	0	5
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00	0	6	3	0	2	0	0	0	0	0	0	0	0	0	11
6:00	0	16	3	0	2	0	0	0	0	0	0	0	0	0	21
7:00	1	21	11	0	3	0	0	0	0	0	0	0	0	0	36
8:00	1	46	11	0	5	0	0	1	0	0	0	0	0	0	64
9:00	1	72	16	0	4	0	0	1	0	0	0	0	0	0	94
10:00	1	88	26	0	7	0	0	0	0	0	0	0	0	0	122
11:00	7	104	22	0	6	0	0	1	0	0	0	0	0	2	142
12:00 PM	8	106	20	1	6	0	0	1	0	0	0	0	0	1	143
1:00	8	77	26	0	7	0	0	1	0	0	0	0	0	1	120
2:00	4	85	22	0	6	0	0	1	0	0	0	0	0	0	118
3:00	2	73	20	0	2	0	0	2	0	0	0	0	0	0	99
4:00	0	72	18	0	2	0	0	1	0	0	0	0	0	1	94
5:00	1	64	11	0	6	0	0	1	0	0	0	0	0	0	83
6:00	0	78	12	0	5	0	0	0	0	0	0	0	0	0	95
7:00	1	66	14	0	5	0	0	0	0	0	0	0	0	0	86
8:00	1	53	8	0	0	0	0	0	0	0	0	0	0	0	62
9:00	0	26	4	0	2	0	0	0	0	0	0	0	0	0	32
10:00	0	12	6	0	1	0	0	0	1	0	0	0	0	0	20
11:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	36	1086	259	2	76	0	0	10	1	0	0	0	0	5	1475
Percent	2.4%	73.6%	17.6%	0.1%	5.2%	0.0%	0.0%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.3%	
AM Peak	11:00	11:00	10:00	12:00 AM	10:00			8:00						11:00	11:00
	7	104	26	1	7			1						2	142
PM Peak	12:00 PM	12:00 PM	1:00	12:00 PM	1:00			3:00	10:00					12:00 PM	12:00 PM
	8	106	26	1	7			2	1					1	143
Grand Total	76	4161	1077	37	395	15	23	53	22	1	0	0	0	19	5879
Percent	1.3%	70.8%	18.3%	0.6%	6.7%	0.3%	0.4%	0.9%	0.4%	0.0%	0.0%	0.0%	0.0%	0.3%	

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: SB

6/14/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	No Class	Total
12:00 AM	0	1	1	0	0	0	0	0	1	0	0	0	0	0	3
1:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	1	0	0	0	0	0	0	1	0	0	0	0	0	2
4:00	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
5:00	0	11	7	0	1	1	0	0	0	0	0	0	0	0	20
6:00	0	46	23	0	2	1	0	1	0	0	0	0	0	0	73
7:00	2	66	26	3	6	2	0	1	4	0	0	0	0	0	110
8:00	1	83	30	2	9	2	5	1	0	0	0	0	0	0	133
9:00	0	95	28	2	5	6	1	0	1	0	0	0	0	1	139
10:00	0	99	28	0	7	5	0	1	3	0	0	0	0	0	143
11:00	0	102	34	3	6	2	0	3	1	1	0	0	0	0	152
12:00 PM	0	102	35	3	9	3	4	0	1	0	0	0	0	0	157
1:00	0	109	35	2	4	5	1	2	2	0	0	0	0	1	161
2:00	1	120	26	0	3	1	0	1	1	0	0	0	0	0	153
3:00	1	141	37	1	6	2	0	0	1	0	0	0	0	0	189
4:00	0	129	29	1	14	1	0	1	0	0	0	0	0	0	175
5:00	0	127	22	1	10	2	0	2	2	0	0	0	0	1	167
6:00	0	90	15	1	2	0	0	1	0	0	0	0	0	0	109
7:00	0	90	15	0	1	0	0	1	1	0	0	0	0	0	108
8:00	0	75	13	0	1	0	0	0	0	0	0	0	0	0	89
9:00	0	36	5	0	0	0	0	0	0	0	0	0	0	0	41
10:00	0	38	5	1	1	0	0	0	0	0	0	0	0	0	45
11:00	0	9	4	0	1	0	0	0	0	0	0	0	0	0	14
Total	5	1577	419	20	88	33	11	15	19	1	0	0	0	3	2191
Percent	0.2%	72.0%	19.1%	0.9%	4.0%	1.5%	0.5%	0.7%	0.9%	0.0%	0.0%	0.0%	0.0%	0.1%	
AM Peak	7:00	11:00	11:00	7:00	8:00	9:00	8:00	11:00	7:00	11:00				9:00	11:00
	2	102	34	3	9	6	5	3	4	1				1	152
PM Peak	2:00	3:00	3:00	12:00 PM	4:00	1:00	12:00 PM	1:00	1:00					1:00	3:00
	1	141	37	3	14	5	4	2	2					1	189

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: SB

6/15/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	No Class	Total
12:00 AM	0	5	1	0	1	0	0	0	0	0	0	0	0	0	7
1:00	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
2:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
5:00	0	8	2	0	0	0	0	0	0	0	0	0	0	0	10
6:00	1	21	13	0	1	0	0	0	0	0	0	0	0	0	36
7:00	0	49	20	0	1	1	0	0	0	0	0	0	0	0	71
8:00	0	80	18	1	2	0	0	0	0	0	0	0	0	0	101
9:00	1	95	17	0	1	0	0	0	2	0	0	0	0	0	116
10:00	0	109	22	0	3	0	0	0	1	0	0	0	0	0	135
11:00	2	143	22	1	5	0	0	1	1	0	0	0	0	1	176
12:00 PM	21	164	24	0	4	0	0	0	0	0	0	0	0	6	219
1:00	3	118	24	0	2	0	1	0	0	0	0	0	0	0	148
2:00	5	120	23	0	4	0	0	1	0	0	0	0	0	1	154
3:00	11	130	21	2	1	0	0	0	0	0	0	0	0	0	165
4:00	4	143	27	0	1	0	0	0	0	0	0	0	0	1	176
5:00	2	135	17	0	1	0	0	0	0	0	0	0	0	0	155
6:00	2	99	12	0	1	0	0	0	0	0	0	0	0	0	114
7:00	0	70	12	0	2	0	0	1	0	0	0	0	0	0	85
8:00	1	59	5	1	2	0	0	0	0	0	0	0	0	0	68
9:00	0	43	0	1	0	0	0	0	0	0	0	0	0	0	44
10:00	0	25	0	0	0	0	0	0	0	0	0	0	0	0	25
11:00	0	17	3	1	0	0	0	0	0	0	0	0	0	0	21
Total	53	1646	284	7	32	1	1	3	4	0	0	0	0	9	2040
Percent	2.6%	80.7%	13.9%	0.3%	1.6%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.4%	
AM Peak	11:00	11:00	10:00	8:00	11:00	7:00		11:00	9:00					11:00	11:00
	2	143	22	1	5	1		1	2					1	176
PM Peak	12:00 PM	12:00 PM	4:00	3:00	12:00 PM		1:00	2:00						12:00 PM	12:00 PM
	21	164	27	2	4		1	1						6	219

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: SB

6/16/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	No Class	Total
12:00 AM	0	7	0	1	1	0	0	0	0	0	0	0	0	0	9
1:00	0	3	0	0	1	0	0	0	0	0	0	0	0	0	4
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
5:00	0	5	4	0	0	0	0	1	0	0	0	0	0	0	10
6:00	0	19	4	0	0	0	0	0	0	0	0	0	0	0	23
7:00	0	35	6	0	4	0	0	0	0	0	0	0	0	0	45
8:00	7	51	18	0	3	0	1	0	0	0	0	0	0	0	80
9:00	4	71	16	0	1	0	0	0	0	0	0	0	0	1	93
10:00	1	104	13	0	0	0	0	0	0	0	0	0	0	0	118
11:00	1	162	17	0	3	0	0	1	1	0	0	0	0	1	186
12:00 PM	6	109	12	0	4	0	0	0	0	0	0	0	0	0	131
1:00	4	111	21	0	4	0	0	2	0	0	0	0	0	1	143
2:00	22	118	15	1	1	0	0	0	0	0	0	0	0	4	161
3:00	7	116	9	0	2	0	0	1	0	0	0	0	0	1	136
4:00	6	120	12	0	1	0	0	2	0	0	0	0	0	1	142
5:00	1	114	17	0	3	0	0	1	0	0	0	0	0	0	136
6:00	0	107	12	0	3	0	0	1	0	0	0	0	0	0	123
7:00	1	74	9	0	1	0	0	0	0	0	0	0	0	0	85
8:00	0	60	3	0	0	0	0	0	0	0	0	0	0	0	63
9:00	0	33	2	0	0	0	0	0	0	0	0	0	0	0	35
10:00	0	15	0	0	0	0	0	0	0	0	0	0	0	0	15
11:00	0	3	3	0	0	0	0	0	1	0	0	0	0	0	7
Total	60	1441	193	2	32	0	1	9	2	0	0	0	0	9	1749
Percent	3.4%	82.4%	11.0%	0.1%	1.8%	0.0%	0.1%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.5%	
AM Peak	8:00	11:00	8:00	12:00 AM	7:00		8:00	5:00	11:00					9:00	11:00
	7	162	18	1	4		1	1	1					1	186
PM Peak	2:00	4:00	1:00	2:00	12:00 PM			1:00	11:00					2:00	2:00
	22	120	21	1	4			2	1					4	161
Grand Total	118	4664	896	29	152	34	13	27	25	1	0	0	0	21	5980
Percent	2.0%	78.0%	15.0%	0.5%	2.5%	0.6%	0.2%	0.5%	0.4%	0.0%	0.0%	0.0%	0.0%	0.4%	

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

NE TRAFFIC COUNTS

Direction: Combined

6/14/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	No Class	Total
12:00 AM	1	6	4	0	1	0	0	1	1	0	0	0	0	0	14
1:00	0	8	2	0	0	0	0	0	0	0	0	0	0	0	10
2:00	0	1	1	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	3	0	0	0	0	0	0	1	0	0	0	0	0	4
4:00	0	5	1	1	1	0	0	0	0	0	0	0	0	0	8
5:00	0	16	13	0	2	1	0	2	0	0	0	0	0	0	34
6:00	0	73	31	1	15	1	0	2	2	0	0	0	0	0	125
7:00	3	110	47	3	25	4	1	4	7	0	0	0	0	1	205
8:00	2	155	56	3	25	5	8	2	2	0	0	0	0	0	258
9:00	1	187	56	7	22	8	3	1	3	0	0	0	0	3	291
10:00	0	187	51	2	21	5	1	3	5	0	0	0	0	0	275
11:00	0	202	66	6	26	2	4	6	3	1	0	0	0	0	316
12:00 PM	6	216	80	4	28	6	6	2	2	0	0	0	0	1	351
1:00	1	225	70	3	25	6	3	3	2	0	0	0	0	1	339
2:00	1	245	59	2	14	1	3	1	3	0	0	0	0	0	329
3:00	1	278	70	2	19	2	1	3	1	0	0	0	0	0	377
4:00	0	259	63	2	28	1	1	3	1	0	0	0	0	0	358
5:00	0	253	59	1	25	2	2	7	4	0	0	0	0	1	354
6:00	0	221	52	1	6	0	0	3	0	0	0	0	0	0	283
7:00	0	157	40	1	6	0	0	2	1	0	0	0	0	0	207
8:00	0	154	23	0	4	0	0	1	0	0	0	0	0	0	182
9:00	0	80	25	0	0	0	0	0	0	0	0	0	0	0	105
10:00	0	85	8	3	3	0	0	0	0	0	0	0	0	0	99
11:00	0	25	9	1	3	0	0	0	0	0	0	0	0	0	38
Total	16	3151	886	43	299	44	33	46	38	1	0	0	0	7	4564
Percent	0.4%	69.0%	19.4%	0.9%	6.6%	1.0%	0.7%	1.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.2%	
AM Peak	7:00	11:00	11:00	9:00	11:00	9:00	8:00	11:00	7:00	11:00				9:00	11:00
	3	202	66	7	26	8	8	6	7	1				3	316
PM Peak	12:00 PM	3:00	12:00 PM	12:00 PM	12:00 PM	12:00 PM	12:00 PM	5:00	5:00					12:00 PM	3:00
	6	278	80	4	28	6	6	7	4					1	377

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: Combined

6/15/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	No Class	Total
12:00 AM	0	11	5	0	3	0	0	0	0	0	0	0	0	0	19
1:00	0	12	1	0	1	0	0	0	0	0	0	0	0	0	14
2:00	0	3	1	0	0	0	0	0	0	0	0	0	0	0	4
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	6	0	0	1	0	0	0	0	0	0	0	0	0	7
5:00	0	11	5	0	3	0	0	0	0	0	0	0	0	0	19
6:00	1	46	17	0	5	0	0	0	0	0	0	0	0	0	69
7:00	0	97	35	1	10	2	0	1	1	0	0	0	0	0	147
8:00	1	151	45	2	13	0	0	0	0	1	0	0	0	0	213
9:00	2	205	37	0	11	1	0	1	2	0	0	0	0	0	259
10:00	2	217	47	0	12	0	1	1	1	0	0	0	0	0	281
11:00	5	257	51	2	11	0	0	2	1	0	0	0	0	3	332
12:00 PM	29	289	52	2	15	0	0	1	0	0	0	0	0	12	400
1:00	4	240	56	0	10	1	1	1	0	0	0	0	0	0	313
2:00	6	251	45	1	12	0	0	1	0	0	0	0	0	1	317
3:00	17	234	52	4	7	0	0	0	1	0	0	0	0	0	315
4:00	6	239	56	0	7	1	0	3	0	0	0	0	0	3	315
5:00	5	241	45	0	5	0	0	2	0	0	0	0	0	0	298
6:00	2	189	25	0	2	0	0	1	0	0	0	0	0	0	219
7:00	0	115	23	0	6	0	0	1	0	0	0	0	0	0	145
8:00	2	120	10	1	2	0	0	0	0	0	0	0	0	0	135
9:00	0	84	8	1	1	0	0	0	0	0	0	0	0	0	94
10:00	0	70	6	2	0	0	0	0	0	0	0	0	0	0	78
11:00	0	57	13	3	3	0	0	0	0	0	0	0	0	0	76
Total	82	3147	635	19	140	5	2	15	6	1	0	0	0	19	4071
Percent	2.0%	77.3%	15.6%	0.5%	3.4%	0.1%	0.0%	0.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.5%	
AM Peak	11:00	11:00	11:00	8:00	8:00	7:00	10:00	11:00	9:00	8:00				11:00	11:00
	5	257	51	2	13	2	1	2	2	1				3	332
PM Peak	12:00 PM	12:00 PM	1:00	3:00	12:00 PM	1:00	1:00	4:00	3:00					12:00 PM	12:00 PM
	29	289	56	4	15	1	1	3	1					12	400

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: Combined

6/16/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	No Class	Total
12:00 AM	0	11	5	2	3	0	0	0	0	0	0	0	0	0	21
1:00	0	8	1	0	2	0	0	0	0	0	0	0	0	0	11
2:00	0	4	0	0	2	0	0	0	0	0	0	0	0	0	6
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
5:00	0	11	7	0	2	0	0	1	0	0	0	0	0	0	21
6:00	0	35	7	0	2	0	0	0	0	0	0	0	0	0	44
7:00	1	56	17	0	7	0	0	0	0	0	0	0	0	0	81
8:00	8	97	29	0	8	0	1	1	0	0	0	0	0	0	144
9:00	5	143	32	0	5	0	0	1	0	0	0	0	0	1	187
10:00	2	192	39	0	7	0	0	0	0	0	0	0	0	0	240
11:00	8	266	39	0	9	0	0	2	1	0	0	0	0	3	328
12:00 PM	14	215	32	1	10	0	0	1	0	0	0	0	0	1	274
1:00	12	188	47	0	11	0	0	3	0	0	0	0	0	2	263
2:00	26	203	37	1	7	0	0	1	0	0	0	0	0	4	279
3:00	9	189	29	0	4	0	0	3	0	0	0	0	0	1	235
4:00	6	192	30	0	3	0	0	3	0	0	0	0	0	2	236
5:00	2	178	28	0	9	0	0	2	0	0	0	0	0	0	219
6:00	0	185	24	0	8	0	0	1	0	0	0	0	0	0	218
7:00	2	140	23	0	6	0	0	0	0	0	0	0	0	0	171
8:00	1	113	11	0	0	0	0	0	0	0	0	0	0	0	125
9:00	0	59	6	0	2	0	0	0	0	0	0	0	0	0	67
10:00	0	27	6	0	1	0	0	0	1	0	0	0	0	0	35
11:00	0	9	3	0	0	0	0	0	1	0	0	0	0	0	13
Total	96	2527	452	4	108	0	1	19	3	0	0	0	0	14	3224
Percent	3.0%	78.4%	14.0%	0.1%	3.3%	0.0%	0.0%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.4%	
AM Peak	8:00	11:00	10:00	12:00 AM	11:00		8:00	11:00	11:00					11:00	11:00
	8	266	39	2	9		1	2	1					3	328
PM Peak	2:00	12:00 PM	1:00	12:00 PM	1:00			1:00	10:00					2:00	2:00
	26	215	47	1	11			3	1					4	279
Grand Total	194	8825	1973	66	547	49	36	80	47	2	0	0	0	40	11859
Percent	1.6%	74.4%	16.6%	0.6%	4.6%	0.4%	0.3%	0.7%	0.4%	0.0%	0.0%	0.0%	0.0%	0.3%	

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: NB

6/14/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	5	1	3	2	0	0	0	0	0	0	0	0	0	11
1:00	0	0	4	1	0	0	0	0	0	0	0	0	0	5
2:00	0	1	0	0	1	0	0	0	0	0	0	0	0	2
3:00	0	0	1	1	0	0	0	0	0	0	0	0	0	2
4:00	1	2	0	2	0	0	0	0	0	0	0	0	0	5
5:00	0	2	3	7	2	0	0	0	0	0	0	0	0	14
6:00	1	15	16	12	8	0	0	0	0	0	0	0	0	52
7:00	7	26	40	20	2	0	0	0	0	0	0	0	0	95
8:00	8	35	59	16	7	0	0	0	0	0	0	0	0	125
9:00	11	30	78	29	4	0	0	0	0	0	0	0	0	152
10:00	21	42	51	12	5	1	0	0	0	0	0	0	0	132
11:00	11	75	56	21	1	0	0	0	0	0	0	0	0	164
12:00 PM	25	55	67	41	5	0	0	1	0	0	0	0	0	194
1:00	13	53	84	23	3	1	0	1	0	0	0	0	0	178
2:00	22	56	70	24	4	0	0	0	0	0	0	0	0	176
3:00	22	53	87	20	2	4	0	0	0	0	0	0	0	188
4:00	17	66	83	16	1	0	0	0	0	0	0	0	0	183
5:00	12	48	92	31	4	0	0	0	0	0	0	0	0	187
6:00	19	44	79	24	7	1	0	0	0	0	0	0	0	174
7:00	16	21	43	15	3	1	0	0	0	0	0	0	0	99
8:00	25	30	30	8	0	0	0	0	0	0	0	0	0	93
9:00	16	27	15	3	2	1	0	0	0	0	0	0	0	64
10:00	17	18	17	1	0	1	0	0	0	0	0	0	0	54
11:00	6	7	8	2	0	0	1	0	0	0	0	0	0	24
Total	275	707	986	331	61	10	1	2	0	0	0	0	0	2373

New Line				
Percentile	15th	50th	85th	95th
Speed	35	40	44	47
Mean Speed (Average)	40.6			
10 MPH Pace Speed	36-45			
Number in Pace	1693			
Percent in Pace	71.0%			
Number 45 MPH	405			
Percent 45 MPH	17.1%			

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: NB

6/15/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	1	4	4	1	1	1	0	0	0	0	0	0	0	12
1:00	3	3	1	1	0	0	0	0	0	0	0	0	0	8
2:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	1	1	0	1	0	0	0	0	0	0	0	0	0	3
5:00	0	1	4	2	2	0	0	0	0	0	0	0	0	9
6:00	0	9	9	9	4	2	0	0	0	0	0	0	0	33
7:00	6	22	37	9	2	0	0	0	0	0	0	0	0	76
8:00	6	30	46	21	9	0	0	0	0	0	0	0	0	112
9:00	10	38	56	33	5	1	0	0	0	0	0	0	0	143
10:00	3	52	65	22	3	1	0	0	0	0	0	0	0	146
11:00	9	44	64	34	5	0	0	0	0	0	0	0	0	156
12:00 PM	1	53	79	40	4	3	0	0	0	0	0	0	1	181
1:00	6	35	76	43	4	0	1	0	0	0	0	0	0	165
2:00	13	45	74	25	6	0	0	0	0	0	0	0	0	163
3:00	11	53	61	21	4	0	0	0	0	0	0	0	0	150
4:00	22	50	57	8	1	0	1	0	0	0	0	0	0	139
5:00	16	51	50	21	4	1	0	0	0	0	0	0	0	143
6:00	10	39	39	15	2	0	0	0	0	0	0	0	0	105
7:00	10	24	19	5	1	1	0	0	0	0	0	0	0	60
8:00	12	15	19	18	3	0	0	0	0	0	0	0	0	67
9:00	11	24	10	3	1	1	0	0	0	0	0	0	0	50
10:00	9	15	20	8	1	0	0	0	0	0	0	0	0	53
11:00	13	18	20	4	0	0	0	0	0	0	0	0	0	55
Total	173	628	810	344	62	11	2	0	0	0	0	0	1	2031

New Line					
	Percentile	15th	50th	85th	95th
	Speed	36	40	45	48
	Mean Speed (Average)	41.5			
	10 MPH Pace Speed	36-45			
	Number in Pace	1438			
	Percent in Pace	71.0%			
	Number 45 MPH	420			
	Percent 45 MPH	20.7%			

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: NB

6/16/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	2	2	3	5	0	0	0	0	0	0	0	0	0	12
1:00	1	3	1	2	0	0	0	0	0	0	0	0	0	7
2:00	1	1	3	0	0	0	0	0	0	0	0	0	0	5
3:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00	1	0	0	1	0	0	0	0	0	0	0	0	0	2
5:00	2	1	6	0	1	0	1	0	0	0	0	0	0	11
6:00	1	6	5	6	2	1	0	0	0	0	0	0	0	21
7:00	3	10	12	9	2	0	0	0	0	0	0	0	0	36
8:00	9	17	27	9	2	0	0	0	0	0	0	0	0	64
9:00	11	27	35	17	4	0	0	0	0	0	0	0	0	94
10:00	7	43	51	16	5	0	0	0	0	0	0	0	0	122
11:00	6	35	71	26	4	0	0	0	0	0	0	0	0	142
12:00 PM	3	31	69	33	7	0	0	0	0	0	0	0	0	143
1:00	11	32	55	17	4	0	1	0	0	0	0	0	0	120
2:00	8	31	45	30	4	0	0	0	0	0	0	0	0	118
3:00	12	28	50	7	2	0	0	0	0	0	0	0	0	99
4:00	6	27	39	18	4	0	0	0	0	0	0	0	0	94
5:00	9	35	32	6	1	0	0	0	0	0	0	0	0	83
6:00	12	38	28	13	4	0	0	0	0	0	0	0	0	95
7:00	12	20	35	16	3	0	0	0	0	0	0	0	0	86
8:00	12	21	15	11	3	0	0	0	0	0	0	0	0	62
9:00	2	10	13	6	1	0	0	0	0	0	0	0	0	32
10:00	4	3	5	2	3	3	0	0	0	0	0	0	0	20
11:00	0	0	5	0	1	0	0	0	0	0	0	0	0	6
Total	136	421	605	250	57	4	2	0	0	0	0	0	0	1475

New Line	Percentile	15th	50th	85th	95th
	Speed	36	40	45	48
	Mean Speed (Average)	41.7			
	10 MPH Pace Speed	36-45			
	Number in Pace	1013			
	Percent in Pace	70.0%			
	Number 45 MPH	313			
	Percent 45 MPH	21.2%			
Grand Total	Percentile	15th	50th	85th	95th
	Speed	35	40	45	48
	Mean Speed (Average)	41.2			
	10 MPH Pace Speed	36-45			
	Number in Pace	4152			
	Percent in Pace	71.0%			
	Number 45 MPH	1138			
	Percent 45 MPH	19.4%			

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: SB

6/14/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	0	2	1	0	0	0	0	0	0	0	0	0	0	3
1:00	0	1	3	1	0	0	0	0	0	0	0	0	0	5
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:00	1	1	0	0	1	0	0	0	0	0	0	0	0	3
5:00	2	5	11	2	0	0	0	0	0	0	0	0	0	20
6:00	1	17	26	20	9	0	0	0	0	0	0	0	0	73
7:00	13	34	39	18	5	1	0	0	0	0	0	0	0	110
8:00	17	42	55	17	2	0	0	0	0	0	0	0	0	133
9:00	15	54	52	17	1	0	0	0	0	0	0	0	0	139
10:00	33	62	37	9	2	0	0	0	0	0	0	0	0	143
11:00	20	59	60	11	2	0	0	0	0	0	0	0	0	152
12:00 PM	19	57	55	23	2	1	0	0	0	0	0	0	0	157
1:00	23	70	53	11	4	0	0	0	0	0	0	0	0	161
2:00	23	52	66	11	1	0	0	0	0	0	0	0	0	153
3:00	17	75	75	19	3	0	0	0	0	0	0	0	0	189
4:00	23	63	64	25	0	0	0	0	0	0	0	0	0	175
5:00	22	58	53	28	6	0	0	0	0	0	0	0	0	167
6:00	19	36	38	16	0	0	0	0	0	0	0	0	0	109
7:00	22	45	24	13	4	0	0	0	0	0	0	0	0	108
8:00	20	30	29	4	5	1	0	0	0	0	0	0	0	89
9:00	17	12	11	0	1	0	0	0	0	0	0	0	0	41
10:00	15	14	11	4	1	0	0	0	0	0	0	0	0	45
11:00	0	5	6	2	0	1	0	0	0	0	0	0	0	14
Total	322	794	771	251	49	4	0	0	0	0	0	0	0	2191

New Line					
	Percentile	15th	50th	85th	95th
	Speed	34	39	44	47
	Mean Speed (Average)	39.3			
	10 MPH Pace Speed	36-45			
	Number in Pace	1565			
	Percent in Pace	71.0%			
	Number 45 MPH	304			
	Percent 45 MPH	13.9%			

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

NE TRAFFIC COUNTS

Direction: SB

6/15/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	1	2	2	0	0	1	1	0	0	0	0	0	0	7
1:00	1	3	1	1	0	0	0	0	0	0	0	0	0	6
2:00	1	0	1	0	0	0	0	0	0	0	0	0	0	2
3:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00	1	2	1	0	0	0	0	0	0	0	0	0	0	4
5:00	1	0	6	3	0	0	0	0	0	0	0	0	0	10
6:00	4	10	11	8	3	0	0	0	0	0	0	0	0	36
7:00	8	17	36	8	2	0	0	0	0	0	0	0	0	71
8:00	8	38	40	14	0	1	0	0	0	0	0	0	0	101
9:00	19	42	37	15	3	0	0	0	0	0	0	0	0	116
10:00	13	50	52	17	1	1	1	0	0	0	0	0	0	135
11:00	16	66	72	17	4	1	0	0	0	0	0	0	0	176
12:00 PM	30	93	72	19	2	3	0	0	0	0	0	0	0	219
1:00	14	51	57	24	1	1	0	0	0	0	0	0	0	148
2:00	21	57	57	14	3	2	0	0	0	0	0	0	0	154
3:00	22	50	74	15	3	1	0	0	0	0	0	0	0	165
4:00	21	75	62	15	2	1	0	0	0	0	0	0	0	176
5:00	11	76	57	8	3	0	0	0	0	0	0	0	0	155
6:00	11	52	32	14	3	1	1	0	0	0	0	0	0	114
7:00	27	22	28	6	0	2	0	0	0	0	0	0	0	85
8:00	18	31	14	3	1	0	1	0	0	0	0	0	0	68
9:00	8	15	16	3	2	0	0	0	0	0	0	0	0	44
10:00	3	13	7	1	1	0	0	0	0	0	0	0	0	25
11:00	7	6	7	1	0	0	0	0	0	0	0	0	0	21
Total	266	772	743	206	34	15	4	0	0	0	0	0	0	2040

New Line	Percentile	15th	50th	85th	95th
	Speed	34	39	43	47
	Mean Speed (Average)	39.7			
	10 MPH Pace Speed	36-45			
	Number in Pace	1515			
	Percent in Pace	74.0%			
	Number 45 MPH	259			
	Percent 45 MPH	12.7%			

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: SB

6/16/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	1	4	3	0	1	0	0	0	0	0	0	0	0	9
1:00	3	1	0	0	0	0	0	0	0	0	0	0	0	4
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2
5:00	2	2	3	3	0	0	0	0	0	0	0	0	0	10
6:00	1	5	11	4	0	1	0	1	0	0	0	0	0	23
7:00	3	12	20	10	0	0	0	0	0	0	0	0	0	45
8:00	9	28	28	15	0	0	0	0	0	0	0	0	0	80
9:00	13	43	29	4	4	0	0	0	0	0	0	0	0	93
10:00	19	40	46	7	6	0	0	0	0	0	0	0	0	118
11:00	14	64	86	19	3	0	0	0	0	0	0	0	0	186
12:00 PM	5	49	58	17	1	0	1	0	0	0	0	0	0	131
1:00	4	58	55	24	2	0	0	0	0	0	0	0	0	143
2:00	13	63	59	21	0	4	0	1	0	0	0	0	0	161
3:00	8	39	68	16	5	0	0	0	0	0	0	0	0	136
4:00	14	58	51	17	2	0	0	0	0	0	0	0	0	142
5:00	17	45	59	15	0	0	0	0	0	0	0	0	0	136
6:00	24	48	34	12	4	0	0	1	0	0	0	0	0	123
7:00	10	29	30	13	1	2	0	0	0	0	0	0	0	85
8:00	6	14	31	7	4	1	0	0	0	0	0	0	0	63
9:00	9	14	5	4	3	0	0	0	0	0	0	0	0	35
10:00	0	6	6	0	2	1	0	0	0	0	0	0	0	15
11:00	1	1	3	2	0	0	0	0	0	0	0	0	0	7
Total	177	626	685	210	38	9	1	3	0	0	0	0	0	1749

New Line	Percentile	15th	50th	85th	95th
	Speed	35	39	44	47
	Mean Speed (Average)	40.6			
	10 MPH Pace Speed	36-45			
	Number in Pace	1295			
	Percent in Pace	75.0%			
	Number 45 MPH	261			
	Percent 45 MPH	14.9%			
Grand Total	Percentile	15th	50th	85th	95th
	Speed	34	39	44	47
	Mean Speed (Average)	39.8			
	10 MPH Pace Speed	36-45			
	Number in Pace	4387			
	Percent in Pace	73.0%			
	Number 45 MPH	824			
	Percent 45 MPH	13.8%			

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: Combined

6/14/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	5	3	4	2	0	0	0	0	0	0	0	0	0	14
1:00	0	1	7	2	0	0	0	0	0	0	0	0	0	10
2:00	0	1	0	0	1	0	0	0	0	0	0	0	0	2
3:00	0	0	3	1	0	0	0	0	0	0	0	0	0	4
4:00	2	3	0	2	1	0	0	0	0	0	0	0	0	8
5:00	2	7	14	9	2	0	0	0	0	0	0	0	0	34
6:00	2	32	42	32	17	0	0	0	0	0	0	0	0	125
7:00	20	60	79	38	7	1	0	0	0	0	0	0	0	205
8:00	25	77	114	33	9	0	0	0	0	0	0	0	0	258
9:00	26	84	130	46	5	0	0	0	0	0	0	0	0	291
10:00	54	104	88	21	7	1	0	0	0	0	0	0	0	275
11:00	31	134	116	32	3	0	0	0	0	0	0	0	0	316
12:00 PM	44	112	122	64	7	1	0	1	0	0	0	0	0	351
1:00	36	123	137	34	7	1	0	1	0	0	0	0	0	339
2:00	45	108	136	35	5	0	0	0	0	0	0	0	0	329
3:00	39	128	162	39	5	4	0	0	0	0	0	0	0	377
4:00	40	129	147	41	1	0	0	0	0	0	0	0	0	358
5:00	34	106	145	59	10	0	0	0	0	0	0	0	0	354
6:00	38	80	117	40	7	1	0	0	0	0	0	0	0	283
7:00	38	66	67	28	7	1	0	0	0	0	0	0	0	207
8:00	45	60	59	12	5	1	0	0	0	0	0	0	0	182
9:00	33	39	26	3	3	1	0	0	0	0	0	0	0	105
10:00	32	32	28	5	1	1	0	0	0	0	0	0	0	99
11:00	6	12	14	4	0	1	1	0	0	0	0	0	0	38
Total	597	1501	1757	582	110	14	1	2	0	0	0	0	0	4564

New Line	Percentile	15th	50th	85th	95th
	Speed	34	39	44	47
	Mean Speed (Average)	40.0			
	10 MPH Pace Speed	36-45			
	Number in Pace	3258			
	Percent in Pace	71.0%			
	Number 45 MPH	709			
	Percent 45 MPH	15.5%			

NE TRAFFIC COUNTS

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

Direction: Combined

6/15/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	2	6	6	1	1	2	1	0	0	0	0	0	0	19
1:00	4	6	2	2	0	0	0	0	0	0	0	0	0	14
2:00	1	2	1	0	0	0	0	0	0	0	0	0	0	4
3:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
4:00	2	3	1	1	0	0	0	0	0	0	0	0	0	7
5:00	1	1	10	5	2	0	0	0	0	0	0	0	0	19
6:00	4	19	20	17	7	2	0	0	0	0	0	0	0	69
7:00	14	39	73	17	4	0	0	0	0	0	0	0	0	147
8:00	14	68	86	35	9	1	0	0	0	0	0	0	0	213
9:00	29	80	93	48	8	1	0	0	0	0	0	0	0	259
10:00	16	102	117	39	4	2	1	0	0	0	0	0	0	281
11:00	25	110	136	51	9	1	0	0	0	0	0	0	0	332
12:00 PM	31	146	151	59	6	6	0	0	0	0	0	0	1	400
1:00	20	86	133	67	5	1	1	0	0	0	0	0	0	313
2:00	34	102	131	39	9	2	0	0	0	0	0	0	0	317
3:00	33	103	135	36	7	1	0	0	0	0	0	0	0	315
4:00	43	125	119	23	3	1	1	0	0	0	0	0	0	315
5:00	27	127	107	29	7	1	0	0	0	0	0	0	0	298
6:00	21	91	71	29	5	1	1	0	0	0	0	0	0	219
7:00	37	46	47	11	1	3	0	0	0	0	0	0	0	145
8:00	30	46	33	21	4	0	1	0	0	0	0	0	0	135
9:00	19	39	26	6	3	1	0	0	0	0	0	0	0	94
10:00	12	28	27	9	2	0	0	0	0	0	0	0	0	78
11:00	20	24	27	5	0	0	0	0	0	0	0	0	0	76
Total	439	1400	1553	550	96	26	6	0	0	0	0	0	1	4071

New Line					
	Percentile	15th	50th	85th	95th
	Speed	35	40	44	48
	Mean Speed (Average)	40.6			
	10 MPH Pace Speed	36-45			
	Number in Pace	2953			
	Percent in Pace	73.0%			
	Number 45 MPH	679			
	Percent 45 MPH	16.7%			

City: Lakeville, CT
Location 1: Sharon Rd
Location 2: S/O Well Hills Rd
Tech: YVM
Latitude: 41.957152
Longitude: -73.436926

NE TRAFFIC COUNTS

Direction: Combined

6/16/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	3	6	6	5	1	0	0	0	0	0	0	0	0	21
1:00	4	4	1	2	0	0	0	0	0	0	0	0	0	11
2:00	1	2	3	0	0	0	0	0	0	0	0	0	0	6
3:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2
4:00	2	1	0	1	0	0	0	0	0	0	0	0	0	4
5:00	4	3	9	3	1	0	1	0	0	0	0	0	0	21
6:00	2	11	16	10	2	2	0	1	0	0	0	0	0	44
7:00	6	22	32	19	2	0	0	0	0	0	0	0	0	81
8:00	18	45	55	24	2	0	0	0	0	0	0	0	0	144
9:00	24	70	64	21	8	0	0	0	0	0	0	0	0	187
10:00	26	83	97	23	11	0	0	0	0	0	0	0	0	240
11:00	20	99	157	45	7	0	0	0	0	0	0	0	0	328
12:00 PM	8	80	127	50	8	0	1	0	0	0	0	0	0	274
1:00	15	90	110	41	6	0	1	0	0	0	0	0	0	263
2:00	21	94	104	51	4	4	0	1	0	0	0	0	0	279
3:00	20	67	118	23	7	0	0	0	0	0	0	0	0	235
4:00	20	85	90	35	6	0	0	0	0	0	0	0	0	236
5:00	26	80	91	21	1	0	0	0	0	0	0	0	0	219
6:00	36	86	62	25	8	0	0	1	0	0	0	0	0	218
7:00	22	49	65	29	4	2	0	0	0	0	0	0	0	171
8:00	18	35	46	18	7	1	0	0	0	0	0	0	0	125
9:00	11	24	18	10	4	0	0	0	0	0	0	0	0	67
10:00	4	9	11	2	5	4	0	0	0	0	0	0	0	35
11:00	1	1	8	2	1	0	0	0	0	0	0	0	0	13
Total	313	1047	1290	460	95	13	3	3	0	0	0	0	0	3224

New Line		Percentile	15th	50th	85th	95th
		Speed	35	40	45	48
	Mean Speed (Average)		41.1			
	10 MPH Pace Speed		36-45			
	Number in Pace		2308			
	Percent in Pace		73.0%			
	Number	45 MPH	574			
	Percent	45 MPH	17.8%			
Grand Total		Percentile	15th	50th	85th	95th
		Speed	35	40	44	48
	Mean Speed (Average)		40.5			
	10 MPH Pace Speed		36-45			
	Number in Pace		8539			
	Percent in Pace		72.0%			
	Number	45 MPH	1962			
	Percent	45 MPH	16.5%			

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

6/10/2024	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday		Week Average	
Time	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM									1	1	1	1	1	0	1	1
1:00									1	1	1	0	1	0	1	0
2:00									0	0	0	0	0	0	0	0
3:00									0	0	1	1	1	0	1	0
4:00									0	1	2	5	2	2	1	3
5:00									5	4	1	1	1	1	2	2
6:00									12	26	13	14	2	7	9	16
7:00									41	42	27	21	9	13	26	25
8:00									50	61	40	37	18	43	36	47
9:00									34	62	37	38	17	22	29	41
10:00									45	53	48	53	48	41	47	49
11:00									54	49	58	45	32	39	48	44
12:00 PM									63	62	51	45	36	34	50	47
1:00									60	59	36	42	39	34	45	45
2:00									62	47	50	40	26	17	46	35
3:00									85	61	51	38	34	40	57	46
4:00									75	39	47	47	27	24	50	37
5:00									53	56	62	41	19	34	45	44
6:00									39	40	42	29	33	20	38	30
7:00									32	23	27	24	21	14	27	20
8:00									24	35	29	25	23	15	25	25
9:00									23	15	25	16	8	7	19	13
10:00									14	8	10	6	6	5	10	6
11:00									4	3	4	5	4	0	4	3
Total	0	0	0	0	0	0	0	0	777	748	663	574	408	412	617	579
Day	0		0		0		0		1525		1237		820		1196	
AM Peak									11:00	9:00	11:00	10:00	10:00	8:00	11:00	10:00
Volume									54	62	58	53	48	43	48	49
PM Peak									3:00	12:00 PM	5:00	4:00	1:00	3:00	3:00	12:00 PM
Volume									85	62	62	47	39	40	57	47
Comb Total	0		0		0		0		1525		1237		820		1196	
ADT	ADT: 1,194		AADT: 1,194													

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: EB

6/14/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	Total
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	2	2	0	1	0	0	0	0	0	0	0	0	5
6:00	0	9	3	0	0	0	0	0	0	0	0	0	0	12
7:00	0	27	8	0	6	0	0	0	0	0	0	0	0	41
8:00	0	30	15	0	4	0	0	1	0	0	0	0	0	50
9:00	0	16	14	0	4	0	0	0	0	0	0	0	0	34
10:00	2	29	9	0	5	0	0	0	0	0	0	0	0	45
11:00	0	36	8	1	7	0	0	2	0	0	0	0	0	54
12:00 PM	0	41	16	0	5	0	0	1	0	0	0	0	0	63
1:00	0	46	9	1	4	0	0	0	0	0	0	0	0	60
2:00	0	37	20	1	2	0	0	1	1	0	0	0	0	62
3:00	0	58	20	0	7	0	0	0	0	0	0	0	0	85
4:00	0	52	19	0	3	0	0	1	0	0	0	0	0	75
5:00	0	38	12	1	2	0	0	0	0	0	0	0	0	53
6:00	0	27	7	0	4	0	0	1	0	0	0	0	0	39
7:00	1	20	7	0	2	0	0	1	1	0	0	0	0	32
8:00	0	16	7	0	1	0	0	0	0	0	0	0	0	24
9:00	0	19	3	0	1	0	0	0	0	0	0	0	0	23
10:00	0	12	1	0	1	0	0	0	0	0	0	0	0	14
11:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
Total	3	520	181	4	59	0	0	8	2	0	0	0	0	777
Percent	0.4%	66.9%	23.3%	0.5%	7.6%	0.0%	0.0%	1.0%	0.3%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	8:00	11:00	11:00			11:00						11:00
	2	36	15	1	7			2						54
PM Peak	7:00	3:00	2:00	1:00	3:00			12:00 PM	2:00					3:00
	1	58	20	1	7			1	1					85

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

NE TRAFFIC COUNTS

Direction: EB

6/15/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	Total
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00	1	8	2	0	2	0	0	0	0	0	0	0	0	13
7:00	0	16	8	1	2	0	0	0	0	0	0	0	0	27
8:00	0	26	10	0	3	0	0	0	0	1	0	0	0	40
9:00	0	26	7	0	4	0	0	0	0	0	0	0	0	37
10:00	0	36	9	0	2	0	0	1	0	0	0	0	0	48
11:00	0	42	13	0	2	0	0	1	0	0	0	0	0	58
12:00 PM	0	42	5	0	3	0	0	1	0	0	0	0	0	51
1:00	0	27	3	0	6	0	0	0	0	0	0	0	0	36
2:00	2	40	6	0	2	0	0	0	0	0	0	0	0	50
3:00	2	43	5	0	1	0	0	0	0	0	0	0	0	51
4:00	2	35	9	0	1	0	0	0	0	0	0	0	0	47
5:00	0	58	4	0	0	0	0	0	0	0	0	0	0	62
6:00	5	29	8	0	0	0	0	0	0	0	0	0	0	42
7:00	0	24	2	0	1	0	0	0	0	0	0	0	0	27
8:00	0	24	5	0	0	0	0	0	0	0	0	0	0	29
9:00	0	23	1	0	1	0	0	0	0	0	0	0	0	25
10:00	0	9	1	0	0	0	0	0	0	0	0	0	0	10
11:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
Total	12	516	100	1	30	0	0	3	0	1	0	0	0	663
Percent	1.8%	77.8%	15.1%	0.2%	4.5%	0.0%	0.0%	0.5%	0.0%	0.2%	0.0%	0.0%	0.0%	
AM Peak	6:00	11:00	11:00	7:00	9:00			10:00		8:00				11:00
	1	42	13	1	4			1		1				58
PM Peak	6:00	5:00	4:00		1:00			12:00 PM						5:00
	5	58	9		6			1						62

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

NE TRAFFIC COUNTS

Direction: EB

6/16/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	Total
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
7:00	1	7	0	0	1	0	0	0	0	0	0	0	0	9
8:00	0	17	1	0	0	0	0	0	0	0	0	0	0	18
9:00	0	15	2	0	0	0	0	0	0	0	0	0	0	17
10:00	2	39	6	0	1	0	0	0	0	0	0	0	0	48
11:00	0	27	2	0	2	0	0	1	0	0	0	0	0	32
12:00 PM	1	25	6	0	4	0	0	0	0	0	0	0	0	36
1:00	2	31	6	0	0	0	0	0	0	0	0	0	0	39
2:00	1	23	2	0	0	0	0	0	0	0	0	0	0	26
3:00	3	26	4	0	1	0	0	0	0	0	0	0	0	34
4:00	0	25	2	0	0	0	0	0	0	0	0	0	0	27
5:00	0	17	1	0	1	0	0	0	0	0	0	0	0	19
6:00	0	30	2	0	1	0	0	0	0	0	0	0	0	33
7:00	1	18	1	0	0	0	0	1	0	0	0	0	0	21
8:00	0	20	2	0	1	0	0	0	0	0	0	0	0	23
9:00	0	7	0	0	1	0	0	0	0	0	0	0	0	8
10:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
11:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
Total	11	341	40	0	14	0	0	2	0	0	0	0	0	408
Percent	2.7%	83.6%	9.8%	0.0%	3.4%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	10:00	10:00		11:00			11:00						10:00
	2	39	6		2			1						48
PM Peak	3:00	1:00	12:00 PM		12:00 PM			7:00						1:00
	3	31	6		4			1						39
Grand Total	26	1377	321	5	103	0	0	13	2	1	0	0	0	1848
Percent	1.4%	74.5%	17.4%	0.3%	5.6%	0.0%	0.0%	0.7%	0.1%	0.1%	0.0%	0.0%	0.0%	

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: WB

6/14/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	Total
12:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	1
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00	0	2	0	0	2	0	0	0	0	0	0	0	0	4
6:00	1	10	6	0	8	0	0	1	0	0	0	0	0	26
7:00	0	26	8	0	7	0	0	1	0	0	0	0	0	42
8:00	0	35	19	0	6	0	0	1	0	0	0	0	0	61
9:00	1	31	16	0	12	0	0	2	0	0	0	0	0	62
10:00	0	29	11	0	12	0	0	1	0	0	0	0	0	53
11:00	0	26	13	0	9	0	0	0	1	0	0	0	0	49
12:00 PM	0	44	10	0	7	0	0	1	0	0	0	0	0	62
1:00	1	35	14	1	6	0	0	2	0	0	0	0	0	59
2:00	0	34	7	0	2	0	0	3	0	1	0	0	0	47
3:00	0	36	15	0	10	0	0	0	0	0	0	0	0	61
4:00	2	24	6	0	7	0	0	0	0	0	0	0	0	39
5:00	0	37	12	1	4	0	0	1	1	0	0	0	0	56
6:00	0	27	7	0	5	0	0	1	0	0	0	0	0	40
7:00	0	11	8	0	4	0	0	0	0	0	0	0	0	23
8:00	0	24	8	0	3	0	0	0	0	0	0	0	0	35
9:00	0	14	0	0	1	0	0	0	0	0	0	0	0	15
10:00	0	5	1	0	2	0	0	0	0	0	0	0	0	8
11:00	0	2	0	0	1	0	0	0	0	0	0	0	0	3
Total	5	454	161	2	109	0	0	14	2	1	0	0	0	748
Percent	0.7%	60.7%	21.5%	0.3%	14.6%	0.0%	0.0%	1.9%	0.3%	0.1%	0.0%	0.0%	0.0%	
AM Peak	6:00	8:00	8:00		9:00			9:00	11:00					9:00
	1	35	19		12			2	1					62
PM Peak	4:00	12:00 PM	3:00	1:00	3:00			2:00	5:00	2:00				12:00 PM
	2	44	15	1	10			3	1	1				62

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: WB

6/15/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	Total
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	3	1	0	1	0	0	0	0	0	0	0	0	5
5:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00	0	9	4	0	1	0	0	0	0	0	0	0	0	14
7:00	0	14	3	0	3	0	0	1	0	0	0	0	0	21
8:00	0	25	9	0	3	0	0	0	0	0	0	0	0	37
9:00	0	28	4	0	3	0	0	2	1	0	0	0	0	38
10:00	2	30	12	0	9	0	0	0	0	0	0	0	0	53
11:00	0	32	10	0	2	0	0	1	0	0	0	0	0	45
12:00 PM	0	25	10	0	9	0	0	1	0	0	0	0	0	45
1:00	1	29	6	0	6	0	0	0	0	0	0	0	0	42
2:00	0	28	9	0	2	0	0	1	0	0	0	0	0	40
3:00	0	29	7	0	2	0	0	0	0	0	0	0	0	38
4:00	2	32	9	0	4	0	0	0	0	0	0	0	0	47
5:00	0	30	9	0	2	0	0	0	0	0	0	0	0	41
6:00	0	17	8	0	3	0	0	1	0	0	0	0	0	29
7:00	0	20	3	0	1	0	0	0	0	0	0	0	0	24
8:00	0	19	5	0	1	0	0	0	0	0	0	0	0	25
9:00	0	12	3	0	1	0	0	0	0	0	0	0	0	16
10:00	0	3	2	0	1	0	0	0	0	0	0	0	0	6
11:00	0	4	1	0	0	0	0	0	0	0	0	0	0	5
Total	5	391	116	0	54	0	0	7	1	0	0	0	0	574
Percent	0.9%	68.1%	20.2%	0.0%	9.4%	0.0%	0.0%	1.2%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	10:00		10:00			9:00	9:00					10:00
	2	32	12		9			2	1					53
PM Peak	4:00	4:00	12:00 PM		12:00 PM			12:00 PM						4:00
	2	32	10		9			1						47

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: WB

6/16/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
6:00	0	4	2	0	1	0	0	0	0	0	0	0	0	7
7:00	0	9	1	0	3	0	0	0	0	0	0	0	0	13
8:00	0	34	5	0	3	0	0	1	0	0	0	0	0	43
9:00	3	14	4	0	1	0	0	0	0	0	0	0	0	22
10:00	0	34	5	0	2	0	0	0	0	0	0	0	0	41
11:00	2	22	10	0	5	0	0	0	0	0	0	0	0	39
12:00 PM	1	27	3	0	3	0	0	0	0	0	0	0	0	34
1:00	1	25	5	0	3	0	0	0	0	0	0	0	0	34
2:00	1	12	3	0	1	0	0	0	0	0	0	0	0	17
3:00	0	29	7	0	3	0	0	1	0	0	0	0	0	40
4:00	0	17	5	0	2	0	0	0	0	0	0	0	0	24
5:00	0	24	8	0	2	0	0	0	0	0	0	0	0	34
6:00	0	18	2	0	0	0	0	0	0	0	0	0	0	20
7:00	0	9	5	0	0	0	0	0	0	0	0	0	0	14
8:00	0	12	2	0	1	0	0	0	0	0	0	0	0	15
9:00	0	5	1	0	1	0	0	0	0	0	0	0	0	7
10:00	0	5	0	0	0	0	0	0	0	0	0	0	0	5
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	8	302	69	0	31	0	0	2	0	0	0	0	0	412
Percent	1.9%	73.3%	16.7%	0.0%	7.5%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	9:00	8:00	11:00		11:00			8:00						8:00
	3	34	10		5			1						43
PM Peak	12:00 PM	3:00	5:00		12:00 PM			3:00						3:00
	1	29	8		3			1						40
Grand Total	18	1147	346	2	194	0	0	23	3	1	0	0	0	1734
Percent	1.0%	66.1%	20.0%	0.1%	11.2%	0.0%	0.0%	1.3%	0.2%	0.1%	0.0%	0.0%	0.0%	

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: Combined

6/14/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	Total
12:00 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	2
1:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00	0	4	2	0	3	0	0	0	0	0	0	0	0	9
6:00	1	19	9	0	8	0	0	1	0	0	0	0	0	38
7:00	0	53	16	0	13	0	0	1	0	0	0	0	0	83
8:00	0	65	34	0	10	0	0	2	0	0	0	0	0	111
9:00	1	47	30	0	16	0	0	2	0	0	0	0	0	96
10:00	2	58	20	0	17	0	0	1	0	0	0	0	0	98
11:00	0	62	21	1	16	0	0	2	1	0	0	0	0	103
12:00 PM	0	85	26	0	12	0	0	2	0	0	0	0	0	125
1:00	1	81	23	2	10	0	0	2	0	0	0	0	0	119
2:00	0	71	27	1	4	0	0	4	1	1	0	0	0	109
3:00	0	94	35	0	17	0	0	0	0	0	0	0	0	146
4:00	2	76	25	0	10	0	0	1	0	0	0	0	0	114
5:00	0	75	24	2	6	0	0	1	1	0	0	0	0	109
6:00	0	54	14	0	9	0	0	2	0	0	0	0	0	79
7:00	1	31	15	0	6	0	0	1	1	0	0	0	0	55
8:00	0	40	15	0	4	0	0	0	0	0	0	0	0	59
9:00	0	33	3	0	2	0	0	0	0	0	0	0	0	38
10:00	0	17	2	0	3	0	0	0	0	0	0	0	0	22
11:00	0	5	1	0	1	0	0	0	0	0	0	0	0	7
Total	8	974	342	6	168	0	0	22	4	1	0	0	0	1525
Percent	0.5%	63.9%	22.4%	0.4%	11.0%	0.0%	0.0%	1.4%	0.3%	0.1%	0.0%	0.0%	0.0%	
AM Peak	10:00	8:00	8:00	11:00	10:00			8:00	11:00					8:00
	2	65	34	1	17			2	1					111
PM Peak	4:00	3:00	3:00	1:00	3:00			2:00	2:00	2:00				3:00
	2	94	35	2	17			4	1	1				146

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: Combined

6/15/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	Total
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
4:00	0	4	2	0	1	0	0	0	0	0	0	0	0	7
5:00	0	0	2	0	0	0	0	0	0	0	0	0	0	2
6:00	1	17	6	0	3	0	0	0	0	0	0	0	0	27
7:00	0	30	11	1	5	0	0	1	0	0	0	0	0	48
8:00	0	51	19	0	6	0	0	0	0	1	0	0	0	77
9:00	0	54	11	0	7	0	0	2	1	0	0	0	0	75
10:00	2	66	21	0	11	0	0	1	0	0	0	0	0	101
11:00	0	74	23	0	4	0	0	2	0	0	0	0	0	103
12:00 PM	0	67	15	0	12	0	0	2	0	0	0	0	0	96
1:00	1	56	9	0	12	0	0	0	0	0	0	0	0	78
2:00	2	68	15	0	4	0	0	1	0	0	0	0	0	90
3:00	2	72	12	0	3	0	0	0	0	0	0	0	0	89
4:00	4	67	18	0	5	0	0	0	0	0	0	0	0	94
5:00	0	88	13	0	2	0	0	0	0	0	0	0	0	103
6:00	5	46	16	0	3	0	0	1	0	0	0	0	0	71
7:00	0	44	5	0	2	0	0	0	0	0	0	0	0	51
8:00	0	43	10	0	1	0	0	0	0	0	0	0	0	54
9:00	0	35	4	0	2	0	0	0	0	0	0	0	0	41
10:00	0	12	3	0	1	0	0	0	0	0	0	0	0	16
11:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
Total	17	907	216	1	84	0	0	10	1	1	0	0	0	1237
Percent	1.4%	73.3%	17.5%	0.1%	6.8%	0.0%	0.0%	0.8%	0.1%	0.1%	0.0%	0.0%	0.0%	
AM Peak	10:00	11:00	11:00	7:00	10:00			9:00	9:00	8:00				11:00
	2	74	23	1	11			2	1	1				103
PM Peak	6:00	5:00	4:00		12:00 PM			12:00 PM						5:00
	5	88	18		12			2						103

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: Combined

6/16/2024 Time	Motor Cycles	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	5 Axl Double	5 Axle Double	6 Axl Double	6 Axl Multi	6 Axle Multi	6 Axl Multi	Total
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
5:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
6:00	0	6	2	0	1	0	0	0	0	0	0	0	0	9
7:00	1	16	1	0	4	0	0	0	0	0	0	0	0	22
8:00	0	51	6	0	3	0	0	1	0	0	0	0	0	61
9:00	3	29	6	0	1	0	0	0	0	0	0	0	0	39
10:00	2	73	11	0	3	0	0	0	0	0	0	0	0	89
11:00	2	49	12	0	7	0	0	1	0	0	0	0	0	71
12:00 PM	2	52	9	0	7	0	0	0	0	0	0	0	0	70
1:00	3	56	11	0	3	0	0	0	0	0	0	0	0	73
2:00	2	35	5	0	1	0	0	0	0	0	0	0	0	43
3:00	3	55	11	0	4	0	0	1	0	0	0	0	0	74
4:00	0	42	7	0	2	0	0	0	0	0	0	0	0	51
5:00	0	41	9	0	3	0	0	0	0	0	0	0	0	53
6:00	0	48	4	0	1	0	0	0	0	0	0	0	0	53
7:00	1	27	6	0	0	0	0	1	0	0	0	0	0	35
8:00	0	32	4	0	2	0	0	0	0	0	0	0	0	38
9:00	0	12	1	0	2	0	0	0	0	0	0	0	0	15
10:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
11:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
Total	19	643	109	0	45	0	0	4	0	0	0	0	0	820
Percent	2.3%	78.4%	13.3%	0.0%	5.5%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	9:00	10:00	11:00		11:00			8:00						10:00
	3	73	12		7			1						89
PM Peak	1:00	1:00	1:00		12:00 PM			3:00						3:00
	3	56	11		7			1						74
Grand Total	44	2524	667	7	297	0	0	36	5	2	0	0	0	3582
Percent	1.2%	70.5%	18.6%	0.2%	8.3%	0.0%	0.0%	1.0%	0.1%	0.1%	0.0%	0.0%	0.0%	

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: EB

6/14/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00	0	0	4	0	1	0	0	0	0	0	0	0	0	5
6:00	2	2	3	2	0	3	0	0	0	0	0	0	0	12
7:00	10	10	10	7	3	0	1	0	0	0	0	0	0	41
8:00	9	19	18	4	0	0	0	0	0	0	0	0	0	50
9:00	7	13	11	3	0	0	0	0	0	0	0	0	0	34
10:00	15	16	13	1	0	0	0	0	0	0	0	0	0	45
11:00	8	22	17	3	4	0	0	0	0	0	0	0	0	54
12:00 PM	18	18	19	6	2	0	0	0	0	0	0	0	0	63
1:00	10	22	15	12	1	0	0	0	0	0	0	0	0	60
2:00	15	27	11	7	2	0	0	0	0	0	0	0	0	62
3:00	12	32	29	10	2	0	0	0	0	0	0	0	0	85
4:00	9	30	19	11	4	1	1	0	0	0	0	0	0	75
5:00	9	14	19	9	2	0	0	0	0	0	0	0	0	53
6:00	13	14	6	3	3	0	0	0	0	0	0	0	0	39
7:00	10	7	12	3	0	0	0	0	0	0	0	0	0	32
8:00	7	12	1	2	2	0	0	0	0	0	0	0	0	24
9:00	14	5	3	0	0	1	0	0	0	0	0	0	0	23
10:00	4	5	3	1	1	0	0	0	0	0	0	0	0	14
11:00	2	1	1	0	0	0	0	0	0	0	0	0	0	4
Total	174	270	215	84	27	5	2	0	0	0	0	0	0	777

New Line					
	Percentile	15th	50th	85th	95th
	Speed	32	38	44	48
	Mean Speed (Average)	39.2			
	10 MPH Pace Speed	36-45			
	Number in Pace	485			
	Percent in Pace	62.0%			
	Number 45 MPH	118			
	Percent 45 MPH	15.2%			

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

NE TRAFFIC COUNTS

Direction: EB

6/15/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	1
1:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
4:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
5:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
6:00	2	7	1	3	0	0	0	0	0	0	0	0	0	13
7:00	5	10	9	3	0	0	0	0	0	0	0	0	0	27
8:00	8	17	10	2	3	0	0	0	0	0	0	0	0	40
9:00	5	14	14	3	1	0	0	0	0	0	0	0	0	37
10:00	7	17	18	4	1	1	0	0	0	0	0	0	0	48
11:00	13	21	13	10	1	0	0	0	0	0	0	0	0	58
12:00 PM	7	16	17	9	2	0	0	0	0	0	0	0	0	51
1:00	6	13	13	0	3	1	0	0	0	0	0	0	0	36
2:00	5	19	18	5	2	0	1	0	0	0	0	0	0	50
3:00	11	19	12	8	0	1	0	0	0	0	0	0	0	51
4:00	9	19	13	5	1	0	0	0	0	0	0	0	0	47
5:00	24	19	9	8	0	2	0	0	0	0	0	0	0	62
6:00	14	13	9	3	1	0	0	2	0	0	0	0	0	42
7:00	6	10	8	3	0	0	0	0	0	0	0	0	0	27
8:00	9	10	6	4	0	0	0	0	0	0	0	0	0	29
9:00	9	10	5	1	0	0	0	0	0	0	0	0	0	25
10:00	6	3	1	0	0	0	0	0	0	0	0	0	0	10
11:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
Total	146	240	180	73	16	5	1	2	0	0	0	0	0	663

New Line					
	Percentile	15th	50th	85th	95th
	Speed	32	38	44	48
	Mean Speed (Average)	39.1			
	10 MPH Pace Speed	36-45			
	Number in Pace	420			
	Percent in Pace	63.0%			
	Number 45 MPH	97			
	Percent 45 MPH	14.6%			

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: EB

6/16/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	1	0	0	1	0	0	0	0	0	0	0	0	2
5:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
6:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2
7:00	3	4	2	0	0	0	0	0	0	0	0	0	0	9
8:00	3	7	3	4	0	0	1	0	0	0	0	0	0	18
9:00	3	7	2	4	1	0	0	0	0	0	0	0	0	17
10:00	6	18	14	9	0	1	0	0	0	0	0	0	0	48
11:00	5	13	11	2	0	0	0	0	1	0	0	0	0	32
12:00 PM	7	16	11	2	0	0	0	0	0	0	0	0	0	36
1:00	6	14	10	9	0	0	0	0	0	0	0	0	0	39
2:00	10	6	8	1	1	0	0	0	0	0	0	0	0	26
3:00	5	10	9	9	1	0	0	0	0	0	0	0	0	34
4:00	4	13	8	2	0	0	0	0	0	0	0	0	0	27
5:00	5	5	7	1	1	0	0	0	0	0	0	0	0	19
6:00	6	14	10	2	1	0	0	0	0	0	0	0	0	33
7:00	9	5	3	3	1	0	0	0	0	0	0	0	0	21
8:00	7	7	6	2	1	0	0	0	0	0	0	0	0	23
9:00	2	3	3	0	0	0	0	0	0	0	0	0	0	8
10:00	3	2	0	1	0	0	0	0	0	0	0	0	0	6
11:00	0	1	1	2	0	0	0	0	0	0	0	0	0	4
Total	85	148	110	54	8	1	1	0	1	0	0	0	0	408

New Line		Percentile	15th	50th	85th	95th
		Speed	33	38	44	47
	Mean Speed (Average)		39.7			
	10 MPH Pace Speed		36-45			
	Number in Pace		254			
	Percent in Pace		64.0%			
	Number	45 MPH	65			
	Percent	45 MPH	15.9%			
Grand Total		Percentile	15th	50th	85th	95th
		Speed	32	38	44	48
	Mean Speed (Average)		39.3			
	10 MPH Pace Speed		36-45			
	Number in Pace		1161			
	Percent in Pace		63.0%			
	Number	45 MPH	280			
	Percent	45 MPH	15.2%			

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

NE TRAFFIC COUNTS

Direction: WB

6/14/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00	0	1	1	2	0	0	0	0	0	0	0	0	0	4
6:00	2	7	15	2	0	0	0	0	0	0	0	0	0	26
7:00	7	16	11	7	1	0	0	0	0	0	0	0	0	42
8:00	9	24	20	6	1	1	0	0	0	0	0	0	0	61
9:00	14	18	27	2	1	0	0	0	0	0	0	0	0	62
10:00	11	18	18	5	0	1	0	0	0	0	0	0	0	53
11:00	15	14	13	6	1	0	0	0	0	0	0	0	0	49
12:00 PM	10	22	17	11	1	0	0	1	0	0	0	0	0	62
1:00	8	21	18	8	3	0	1	0	0	0	0	0	0	59
2:00	7	20	16	3	1	0	0	0	0	0	0	0	0	47
3:00	12	27	13	6	2	1	0	0	0	0	0	0	0	61
4:00	11	7	12	8	1	0	0	0	0	0	0	0	0	39
5:00	13	22	13	5	2	1	0	0	0	0	0	0	0	56
6:00	12	13	8	5	2	0	0	0	0	0	0	0	0	40
7:00	5	7	5	5	0	0	1	0	0	0	0	0	0	23
8:00	7	12	10	3	0	3	0	0	0	0	0	0	0	35
9:00	3	7	3	1	0	0	1	0	0	0	0	0	0	15
10:00	3	2	1	0	2	0	0	0	0	0	0	0	0	8
11:00	0	0	1	1	1	0	0	0	0	0	0	0	0	3
Total	151	259	222	86	19	7	3	1	0	0	0	0	0	748

New Line					
	Percentile	15th	50th	85th	95th
	Speed	33	38	44	48
	Mean Speed (Average)	39.6			
	10 MPH Pace Speed	36-45			
	Number in Pace	481			
	Percent in Pace	64.0%			
	Number 45 MPH	116			
	Percent 45 MPH	15.5%			

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: WB

6/15/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	0	0	0	1	0	0	0	0	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	1	1	1	2	0	0	0	0	0	0	0	0	0	5
5:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:00	3	4	4	3	0	0	0	0	0	0	0	0	0	14
7:00	5	6	8	1	0	1	0	0	0	0	0	0	0	21
8:00	7	12	14	4	0	0	0	0	0	0	0	0	0	37
9:00	8	17	11	2	0	0	0	0	0	0	0	0	0	38
10:00	9	15	17	9	2	1	0	0	0	0	0	0	0	53
11:00	9	21	10	4	1	0	0	0	0	0	0	0	0	45
12:00 PM	8	17	13	6	0	1	0	0	0	0	0	0	0	45
1:00	7	22	9	3	1	0	0	0	0	0	0	0	0	42
2:00	7	14	12	5	2	0	0	0	0	0	0	0	0	40
3:00	3	22	6	6	1	0	0	0	0	0	0	0	0	38
4:00	9	21	9	6	2	0	0	0	0	0	0	0	0	47
5:00	8	14	17	2	0	0	0	0	0	0	0	0	0	41
6:00	3	8	13	4	1	0	0	0	0	0	0	0	0	29
7:00	5	8	8	3	0	0	0	0	0	0	0	0	0	24
8:00	8	8	6	3	0	0	0	0	0	0	0	0	0	25
9:00	4	7	5	0	0	0	0	0	0	0	0	0	0	16
10:00	0	1	2	3	0	0	0	0	0	0	0	0	0	6
11:00	0	0	5	0	0	0	0	0	0	0	0	0	0	5
Total	104	219	171	67	10	3	0	0	0	0	0	0	0	574

New Line					
	Percentile	15th	50th	85th	95th
	Speed	33	38	44	47
	Mean Speed (Average)	39.7			
	10 MPH Pace Speed	36-45			
	Number in Pace	390			
	Percent in Pace	68.0%			
	Number 45 MPH	80			
	Percent 45 MPH	13.9%			

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: WB

6/16/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	1	1	0	0	0	0	0	0	0	0	0	0	0	2
5:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
6:00	1	2	2	2	0	0	0	0	0	0	0	0	0	7
7:00	3	3	5	2	0	0	0	0	0	0	0	0	0	13
8:00	4	24	14	0	1	0	0	0	0	0	0	0	0	43
9:00	8	10	4	0	0	0	0	0	0	0	0	0	0	22
10:00	6	16	14	3	2	0	0	0	0	0	0	0	0	41
11:00	5	17	13	4	0	0	0	0	0	0	0	0	0	39
12:00 PM	8	8	11	5	1	1	0	0	0	0	0	0	0	34
1:00	8	9	6	9	2	0	0	0	0	0	0	0	0	34
2:00	3	6	8	0	0	0	0	0	0	0	0	0	0	17
3:00	7	12	15	4	2	0	0	0	0	0	0	0	0	40
4:00	3	6	10	4	1	0	0	0	0	0	0	0	0	24
5:00	5	15	11	2	1	0	0	0	0	0	0	0	0	34
6:00	5	6	6	2	1	0	0	0	0	0	0	0	0	20
7:00	3	4	3	2	0	2	0	0	0	0	0	0	0	14
8:00	2	4	6	3	0	0	0	0	0	0	0	0	0	15
9:00	0	4	1	1	1	0	0	0	0	0	0	0	0	7
10:00	5	0	0	0	0	0	0	0	0	0	0	0	0	5
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	77	147	129	44	12	3	0	0	0	0	0	0	0	412

New Line		Percentile	15th	50th	85th	95th
		Speed	33	38	44	48
	Mean Speed (Average)		40.0			
	10 MPH Pace Speed		36-45			
	Number in Pace		276			
	Percent in Pace		68.0%			
	Number	45 MPH	59			
	Percent	45 MPH	14.3%			
Grand Total		Percentile	15th	50th	85th	95th
		Speed	33	38	44	48
	Mean Speed (Average)		39.7			
	10 MPH Pace Speed		36-45			
	Number in Pace		1147			
	Percent in Pace		66.0%			
	Number	45 MPH	255			
	Percent	45 MPH	14.7%			

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: Combined

6/14/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00	1	0	1	0	0	0	0	0	0	0	0	0	0	2
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00	0	1	5	2	1	0	0	0	0	0	0	0	0	9
6:00	4	9	18	4	0	3	0	0	0	0	0	0	0	38
7:00	17	26	21	14	4	0	1	0	0	0	0	0	0	83
8:00	18	43	38	10	1	1	0	0	0	0	0	0	0	111
9:00	21	31	38	5	1	0	0	0	0	0	0	0	0	96
10:00	26	34	31	6	0	1	0	0	0	0	0	0	0	98
11:00	23	36	30	9	5	0	0	0	0	0	0	0	0	103
12:00 PM	28	40	36	17	3	0	0	1	0	0	0	0	0	125
1:00	18	43	33	20	4	0	1	0	0	0	0	0	0	119
2:00	22	47	27	10	3	0	0	0	0	0	0	0	0	109
3:00	24	59	42	16	4	1	0	0	0	0	0	0	0	146
4:00	20	37	31	19	5	1	1	0	0	0	0	0	0	114
5:00	22	36	32	14	4	1	0	0	0	0	0	0	0	109
6:00	25	27	14	8	5	0	0	0	0	0	0	0	0	79
7:00	15	14	17	8	0	0	1	0	0	0	0	0	0	55
8:00	14	24	11	5	2	3	0	0	0	0	0	0	0	59
9:00	17	12	6	1	0	1	1	0	0	0	0	0	0	38
10:00	7	7	4	1	3	0	0	0	0	0	0	0	0	22
11:00	2	1	2	1	1	0	0	0	0	0	0	0	0	7
Total	325	529	437	170	46	12	5	1	0	0	0	0	0	1525

New Line					
	Percentile	15th	50th	85th	95th
	Speed	32	38	44	48
	Mean Speed (Average)	39.4			
	10 MPH Pace Speed	36-45			
	Number in Pace	966			
	Percent in Pace	63.0%			
	Number 45 MPH	234			
	Percent 45 MPH	15.3%			

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: Combined

6/15/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	2
1:00	0	0	0	1	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
4:00	1	2	2	2	0	0	0	0	0	0	0	0	0	7
5:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
6:00	5	11	5	6	0	0	0	0	0	0	0	0	0	27
7:00	10	16	17	4	0	1	0	0	0	0	0	0	0	48
8:00	15	29	24	6	3	0	0	0	0	0	0	0	0	77
9:00	13	31	25	5	1	0	0	0	0	0	0	0	0	75
10:00	16	32	35	13	3	2	0	0	0	0	0	0	0	101
11:00	22	42	23	14	2	0	0	0	0	0	0	0	0	103
12:00 PM	15	33	30	15	2	1	0	0	0	0	0	0	0	96
1:00	13	35	22	3	4	1	0	0	0	0	0	0	0	78
2:00	12	33	30	10	4	0	1	0	0	0	0	0	0	90
3:00	14	41	18	14	1	1	0	0	0	0	0	0	0	89
4:00	18	40	22	11	3	0	0	0	0	0	0	0	0	94
5:00	32	33	26	10	0	2	0	0	0	0	0	0	0	103
6:00	17	21	22	7	2	0	0	2	0	0	0	0	0	71
7:00	11	18	16	6	0	0	0	0	0	0	0	0	0	51
8:00	17	18	12	7	0	0	0	0	0	0	0	0	0	54
9:00	13	17	10	1	0	0	0	0	0	0	0	0	0	41
10:00	6	4	3	3	0	0	0	0	0	0	0	0	0	16
11:00	0	2	7	0	0	0	0	0	0	0	0	0	0	9
Total	250	459	351	140	26	8	1	2	0	0	0	0	0	1237

New Line	Percentile	15th	50th	85th	95th
	Speed	33	38	44	48
	Mean Speed (Average)	39.4			
	10 MPH Pace Speed	36-45			
	Number in Pace	810			
	Percent in Pace	65.0%			
	Number 45 MPH	177			
	Percent 45 MPH	14.3%			

NE TRAFFIC COUNTS

City: Lakeville
Location 1: Wells Hill Rd
Location 2: E/O Sharon Rd
Tech: YVM
Latitude: 41.955381
Longitude: -73.430269

Direction: Combined

6/16/2024 Time	0 - 35 MPH	35 - 40 MPH	40 - 45 MPH	45 - 50 MPH	50 - 55 MPH	55 - 60 MPH	60 - 65 MPH	65 - 70 MPH	70 - 75 MPH	75 - 80 MPH	80 - 85 MPH	85 - 90 MPH	90 MPH	Total
12:00 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	1	2	0	0	1	0	0	0	0	0	0	0	0	4
5:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2
6:00	1	3	3	2	0	0	0	0	0	0	0	0	0	9
7:00	6	7	7	2	0	0	0	0	0	0	0	0	0	22
8:00	7	31	17	4	1	0	1	0	0	0	0	0	0	61
9:00	11	17	6	4	1	0	0	0	0	0	0	0	0	39
10:00	12	34	28	12	2	1	0	0	0	0	0	0	0	89
11:00	10	30	24	6	0	0	0	0	1	0	0	0	0	71
12:00 PM	15	24	22	7	1	1	0	0	0	0	0	0	0	70
1:00	14	23	16	18	2	0	0	0	0	0	0	0	0	73
2:00	13	12	16	1	1	0	0	0	0	0	0	0	0	43
3:00	12	22	24	13	3	0	0	0	0	0	0	0	0	74
4:00	7	19	18	6	1	0	0	0	0	0	0	0	0	51
5:00	10	20	18	3	2	0	0	0	0	0	0	0	0	53
6:00	11	20	16	4	2	0	0	0	0	0	0	0	0	53
7:00	12	9	6	5	1	2	0	0	0	0	0	0	0	35
8:00	9	11	12	5	1	0	0	0	0	0	0	0	0	38
9:00	2	7	4	1	1	0	0	0	0	0	0	0	0	15
10:00	8	2	0	1	0	0	0	0	0	0	0	0	0	11
11:00	0	1	1	2	0	0	0	0	0	0	0	0	0	4
Total	162	295	239	98	20	4	1	0	1	0	0	0	0	820

New Line	Percentile	15th	50th	85th	95th
	Speed	33	38	44	47
	Mean Speed (Average)	39.9			
	10 MPH Pace Speed	36-45			
	Number in Pace	530			
	Percent in Pace	66.0%			
	Number 45 MPH	124			
	Percent 45 MPH	15.1%			
Grand Total	Percentile	15th	50th	85th	95th
	Speed	33	38	44	48
	Mean Speed (Average)	39.5			
	10 MPH Pace Speed	36-45			
	Number in Pace	2308			
	Percent in Pace	65.0%			
	Number 45 MPH	535			
	Percent 45 MPH	14.9%			

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	51	210	173	39	216	156
Future Volume (vph)	51	210	173	39	216	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	162	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				115	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.891			0.850		
Flt Protected	0.990				0.950	
Satd. Flow (prot)	1643	0	1863	1583	1770	1863
Flt Permitted	0.990				0.950	
Satd. Flow (perm)	1643	0	1863	1583	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	1474		484			616
Travel Time (s)	33.5		11.0			14.0
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	59	244	201	45	251	181
Shared Lane Traffic (%)						
Lane Group Flow (vph)	303	0	201	45	251	181
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 47.0% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	7.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	51	210	173	39	216	156
Future Vol, veh/h	51	210	173	39	216	156
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	0	-	-	0	162	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	59	244	201	45	251	181

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	885	202	0	0	202	0
Stage 1	202	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	315	839	-	-	1370	-
Stage 1	832	-	-	-	-	-
Stage 2	502	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	257	838	-	-	1369	-
Mov Cap-2 Maneuver	257	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	410	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.8	0	4.8
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	581	1369	-
HCM Lane V/C Ratio	-	-	0.522	0.183	-
HCM Control Delay (s)	-	-	17.8	8.2	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	3	0.7	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	186	0	0	178
Future Volume (vph)	0	0	186	0	0	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		40			40
Link Distance (ft)	681		2144			888
Travel Time (s)	15.5		36.5			15.1
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	0	0	211	0	0	202
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	211	0	0	202
Sign Control	Stop		Free			Free

Intersection Summary
Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 13.2% ICU Level of Service A
Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	186	0	0	178
Future Vol, veh/h	0	0	186	0	0	178
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	211	0	0	202

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	414	212	0	0	212	0
Stage 1	212	-	-	-	-	-
Stage 2	202	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	595	828	-	-	1358	-
Stage 1	823	-	-	-	-	-
Stage 2	832	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	594	827	-	-	1357	-
Mov Cap-2 Maneuver	594	-	-	-	-	-
Stage 1	822	-	-	-	-	-
Stage 2	832	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1357	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	52	19	43	58	25	24	140	36	22	124	19
Future Volume (vph)	11	52	19	43	58	25	24	140	36	22	124	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.973			0.976			0.985	
Flt Protected		0.993			0.983			0.994			0.993	
Satd. Flow (prot)	0	1792	0	0	1782	0	0	1807	0	0	1822	0
Flt Permitted		0.993			0.983			0.994			0.993	
Satd. Flow (perm)	0	1792	0	0	1782	0	0	1807	0	0	1822	0
Link Speed (mph)		40			30			30			40	
Link Distance (ft)		1356			81			80			1149	
Travel Time (s)		23.1			1.8			1.8			19.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	12	58	21	48	65	28	27	157	40	25	139	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	91	0	0	141	0	0	224	0	0	185	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 34.4%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	52	19	43	58	25	24	140	36	22	124	19
Future Vol, veh/h	11	52	19	43	58	25	24	140	36	22	124	19
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	58	21	48	65	28	27	157	40	25	139	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	9.2	9.6	9.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	13%	34%	13%
Vol Thru, %	70%	63%	46%	75%
Vol Right, %	18%	23%	20%	12%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	82	126	165
LT Vol	24	11	43	22
Through Vol	140	52	58	124
RT Vol	36	19	25	19
Lane Flow Rate	225	92	142	185
Geometry Grp	1	1	1	1
Degree of Util (X)	0.291	0.127	0.195	0.244
Departure Headway (Hd)	4.654	4.973	4.964	4.739
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	769	715	718	753
Service Time	2.707	3.042	3.027	2.796
HCM Lane V/C Ratio	0.293	0.129	0.198	0.246
HCM Control Delay	9.6	8.8	9.2	9.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.2	0.4	0.7	1

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	25	191	177	48	178	183
Future Volume (vph)	25	191	177	48	178	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	162	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				115	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.880			0.850		
Flt Protected	0.994				0.950	
Satd. Flow (prot)	1629	0	1863	1583	1770	1863
Flt Permitted	0.994				0.950	
Satd. Flow (perm)	1629	0	1863	1583	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	1474		484			616
Travel Time (s)	33.5		11.0			14.0
Confl. Peds. (#/hr)	1					
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	28	217	201	55	202	208
Shared Lane Traffic (%)						
Lane Group Flow (vph)	245	0	201	55	202	208
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 42.4%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	5.3					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	191	177	48	178	183
Future Vol, veh/h	25	191	177	48	178	183
Conflicting Peds, #/hr	1	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	0	-	-	0	162	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	217	201	55	202	208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	814	201	0	0	201	0
Stage 1	201	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	347	840	-	-	1371	-
Stage 1	833	-	-	-	-	-
Stage 2	541	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	296	840	-	-	1371	-
Mov Cap-2 Maneuver	296	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	461	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13	0	4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	693	1371	-
HCM Lane V/C Ratio	-	-	0.354	0.148	-
HCM Control Delay (s)	-	-	13	8.1	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	1.6	0.5	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	188	0	0	201
Future Volume (vph)	0	0	188	0	0	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1863	0	0	1863
Link Speed (mph)	30		40			40
Link Distance (ft)	681		2144			888
Travel Time (s)	15.5		36.5			15.1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	0	216	0	0	231
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	216	0	0	231
Sign Control	Free		Free			Free

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 13.9%	ICU Level of Service A
Analysis Period (min) 15	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	55	24	29	63	18	36	128	21	10	111	14
Future Volume (vph)	17	55	24	29	63	18	36	128	21	10	111	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.966			0.978			0.985			0.986	
Flt Protected		0.991			0.987			0.990			0.996	
Satd. Flow (prot)	0	1783	0	0	1798	0	0	1816	0	0	1829	0
Flt Permitted		0.991			0.987			0.990			0.996	
Satd. Flow (perm)	0	1783	0	0	1798	0	0	1816	0	0	1829	0
Link Speed (mph)		40			30			30			40	
Link Distance (ft)		1356			81			80			1149	
Travel Time (s)		23.1			1.8			1.8			19.6	
Confl. Peds. (#/hr)							1		2	2		1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	19	61	27	32	70	20	40	142	23	11	123	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	122	0	0	205	0	0	150	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 35.2% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	55	24	29	63	18	36	128	21	10	111	14
Future Vol, veh/h	17	55	24	29	63	18	36	128	21	10	111	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	61	27	32	70	20	40	142	23	11	123	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.7	8.9	9.4	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	19%	18%	26%	7%
Vol Thru, %	69%	57%	57%	82%
Vol Right, %	11%	25%	16%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	185	96	110	135
LT Vol	36	17	29	10
Through Vol	128	55	63	111
RT Vol	21	24	18	14
Lane Flow Rate	206	107	122	150
Geometry Grp	1	1	1	1
Degree of Util (X)	0.265	0.143	0.165	0.195
Departure Headway (Hd)	4.64	4.81	4.856	4.687
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	771	742	736	762
Service Time	2.685	2.863	2.909	2.736
HCM Lane V/C Ratio	0.267	0.144	0.166	0.197
HCM Control Delay	9.4	8.7	8.9	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.1	0.5	0.6	0.7

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	74	220	173	71	230	156
Future Volume (vph)	74	220	173	71	230	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	162	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				115	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.899			0.850		
Flt Protected	0.988				0.950	
Satd. Flow (prot)	1655	0	1863	1583	1770	1863
Flt Permitted	0.988				0.950	
Satd. Flow (perm)	1655	0	1863	1583	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	1474		484			616
Travel Time (s)	33.5		11.0			14.0
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	86	256	201	83	267	181
Shared Lane Traffic (%)						
Lane Group Flow (vph)	342	0	201	83	267	181
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 49.6%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	9.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	74	220	173	71	230	156
Future Vol, veh/h	74	220	173	71	230	156
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	0	-	-	0	162	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	86	256	201	83	267	181

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	917	202	0	0	202	0
Stage 1	202	-	-	-	-	-
Stage 2	715	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	302	839	-	-	1370	-
Stage 1	832	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	243	838	-	-	1369	-
Mov Cap-2 Maneuver	243	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	390	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.4	0	4.9
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	518	1369	-
HCM Lane V/C Ratio	-	-	0.66	0.195	-
HCM Control Delay (s)	-	-	24.4	8.3	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	4.8	0.7	-

Approach		
Approach Direction	NB	
Median Present?	Yes	
Approach Delay(s)	3.0	
Level of Service	A	
Crosswalk		
Length (ft)	12	20
Lanes Crossed	1	1
Veh Vol Crossed	173	156
Ped Vol Crossed	0	0
Yield Rate(%)	0	0
Ped Platooning	No	No
Critical Headway (s)	6.43	8.71
Prob of Delayed X-ing	0.27	0.31
Prob of Blocked Lane	0.27	0.31
Delay for adq Gap	4.15	5.96
Avg Ped Delay (s)	1.10	1.87

Approach	
Approach Direction	SB
Median Present?	No
Approach Delay(s)	18.9
Level of Service	C
Crosswalk	
Length (ft)	44
Lanes Crossed	2
Veh Vol Crossed	329
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	15.57
Prob of Delayed X-ing	0.76
Prob of Blocked Lane	0.51
Delay for adq Gap	24.89
Avg Ped Delay (s)	18.89

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	33	33	186	43	46	178
Future Volume (vph)	33	33	186	43	46	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.932		0.975			
Flt Protected	0.976					0.990
Satd. Flow (prot)	1694	0	1816	0	0	1844
Flt Permitted	0.976					0.990
Satd. Flow (perm)	1694	0	1816	0	0	1844
Link Speed (mph)	30		40			40
Link Distance (ft)	681		2144			888
Travel Time (s)	15.5		36.5			15.1
Confl. Peds. (#/hr)				1	1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	38	38	211	49	52	202
Shared Lane Traffic (%)						
Lane Group Flow (vph)	76	0	260	0	0	254
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 38.2%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	33	33	186	43	46	178
Future Vol, veh/h	33	33	186	43	46	178
Conflicting Peds, #/hr	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	38	211	49	52	202

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	543	237	0	0	261	0
Stage 1	237	-	-	-	-	-
Stage 2	306	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	501	802	-	-	1303	-
Stage 1	802	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	478	801	-	-	1302	-
Mov Cap-2 Maneuver	478	-	-	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	713	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	1.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	599	1302	-
HCM Lane V/C Ratio	-	-	0.125	0.04	-
HCM Control Delay (s)	-	-	11.9	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-

Approach	
Approach Direction	NB
Median Present?	No
Approach Delay(s)	11.7
Level of Service	C

Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	364
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.71
Prob of Blocked Lane	0.46
Delay for adq Gap	16.59
Avg Ped Delay (s)	11.73

Approach	
Approach Direction	SB
Median Present?	No
Approach Delay(s)	11.7
Level of Service	C

Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	364
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.71
Prob of Blocked Lane	0.46
Delay for adq Gap	16.59
Avg Ped Delay (s)	11.73

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	52	19	43	58	51	24	157	36	42	137	19
Future Volume (vph)	11	52	19	43	58	51	24	157	36	42	137	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969			0.955			0.978			0.987	
Flt Protected		0.993			0.986			0.994			0.990	
Satd. Flow (prot)	0	1792	0	0	1754	0	0	1811	0	0	1820	0
Flt Permitted		0.993			0.986			0.994			0.990	
Satd. Flow (perm)	0	1792	0	0	1754	0	0	1811	0	0	1820	0
Link Speed (mph)		40			30			30			40	
Link Distance (ft)		1356			81			80			1149	
Travel Time (s)		23.1			1.8			1.8			19.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	12	58	21	48	65	57	27	176	40	47	154	21
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	91	0	0	170	0	0	243	0	0	222	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 40.1%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	52	19	43	58	51	24	157	36	42	137	19
Future Vol, veh/h	11	52	19	43	58	51	24	157	36	42	137	19
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	58	21	48	65	57	27	176	40	47	154	21
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	9.7	10.2	10.1
HCM LOS	A	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	13%	28%	21%
Vol Thru, %	72%	63%	38%	69%
Vol Right, %	17%	23%	34%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	217	82	152	198
LT Vol	24	11	43	42
Through Vol	157	52	58	137
RT Vol	36	19	51	19
Lane Flow Rate	244	92	171	222
Geometry Grp	1	1	1	1
Degree of Util (X)	0.325	0.132	0.238	0.302
Departure Headway (Hd)	4.795	5.171	5.022	4.879
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	744	685	707	730
Service Time	2.869	3.268	3.108	2.955
HCM Lane V/C Ratio	0.328	0.134	0.242	0.304
HCM Control Delay	10.2	9.1	9.7	10.1
HCM Lane LOS	B	A	A	B
HCM 95th-tile Q	1.4	0.5	0.9	1.3

Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	0	0	76	0	0	39
Future Volume (vph)	0	0	76	0	0	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	0	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	281		1277			751
Travel Time (s)	6.4		29.0			17.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	83	0	0	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	83	0	0	42
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 7.3%	ICU Level of Service A
Analysis Period (min) 15	

Approach	
Approach Direction	NW
Median Present?	No
Approach Delay(s)	2.7
Level of Service	A

Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	115
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.32
Prob of Blocked Lane	0.18
Delay for adq Gap	8.37
Avg Ped Delay (s)	2.69

Approach	
Approach Direction	SE
Median Present?	No
Approach Delay(s)	2.7
Level of Service	A

Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	115
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.32
Prob of Blocked Lane	0.18
Delay for adq Gap	8.37
Avg Ped Delay (s)	2.69

Wake Robin Inn
1: Millerton Road/Main Street & Sharon Road

Combined Saturday
Timing Plan: Saturday Peak Hour

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	56	204	177	86	194	183
Future Volume (vph)	56	204	177	86	194	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	162	
Storage Lanes	1	0		1	1	
Taper Length (ft)	25				115	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.894			0.850		
Flt Protected	0.989				0.950	
Satd. Flow (prot)	1647	0	1863	1583	1770	1863
Flt Permitted	0.989				0.950	
Satd. Flow (perm)	1647	0	1863	1583	1770	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	1474		484			616
Travel Time (s)	33.5		11.0			14.0
Confl. Peds. (#/hr)	1					
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	64	232	201	98	220	208
Shared Lane Traffic (%)						
Lane Group Flow (vph)	296	0	201	98	220	208
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 45.7%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	6.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	56	204	177	86	194	183
Future Vol, veh/h	56	204	177	86	194	183
Conflicting Peds, #/hr	1	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	Yield	-	None
Storage Length	0	-	-	0	162	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	232	201	98	220	208

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	850	201	0	0	201	0
Stage 1	201	-	-	-	-	-
Stage 2	649	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	331	840	-	-	1371	-
Stage 1	833	-	-	-	-	-
Stage 2	520	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	278	840	-	-	1371	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.3	0	4.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	585	1371	-
HCM Lane V/C Ratio	-	-	0.505	0.161	-
HCM Control Delay (s)	-	-	17.3	8.1	-
HCM Lane LOS	-	-	C	A	-
HCM 95th %tile Q(veh)	-	-	2.8	0.6	-

Approach		
Approach Direction	NB	
Median Present?	Yes	
Approach Delay(s)	3.4	
Level of Service	A	

Crosswalk		
Length (ft)	12	20
Lanes Crossed	1	1
Veh Vol Crossed	177	183
Ped Vol Crossed	0	0
Yield Rate(%)	0	0
Ped Platooning	No	No
Critical Headway (s)	6.43	8.71
Prob of Delayed X-ing	0.27	0.36
Prob of Blocked Lane	0.27	0.36
Delay for adq Gap	4.18	6.29
Avg Ped Delay (s)	1.13	2.25

Approach	
Approach Direction	SB
Median Present?	No
Approach Delay(s)	21.9
Level of Service	D

Crosswalk	
Length (ft)	44
Lanes Crossed	2
Veh Vol Crossed	360
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	15.57
Prob of Delayed X-ing	0.79
Prob of Blocked Lane	0.54
Delay for adq Gap	27.72
Avg Ped Delay (s)	21.88

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	44	44	188	55	54	201
Future Volume (vph)	44	44	188	55	54	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.932		0.970			
Flt Protected	0.976					0.990
Satd. Flow (prot)	1694	0	1807	0	0	1844
Flt Permitted	0.976					0.990
Satd. Flow (perm)	1694	0	1807	0	0	1844
Link Speed (mph)	30		40			40
Link Distance (ft)	681		2144			888
Travel Time (s)	15.5		36.5			15.1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	51	51	216	63	62	231
Shared Lane Traffic (%)						
Lane Group Flow (vph)	102	0	279	0	0	293
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 41.9%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	2.7					

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	44	44	188	55	54	201
Future Vol, veh/h	44	44	188	55	54	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	51	216	63	62	231

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	603	248	0	0	279	0
Stage 1	248	-	-	-	-	-
Stage 2	355	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	462	791	-	-	1284	-
Stage 1	793	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	437	791	-	-	1284	-
Mov Cap-2 Maneuver	437	-	-	-	-	-
Stage 1	793	-	-	-	-	-
Stage 2	671	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.8	0	1.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	563	1284	-
HCM Lane V/C Ratio	-	-	0.18	0.048	-
HCM Control Delay (s)	-	-	12.8	7.9	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

Approach	
Approach Direction	NB
Median Present?	No
Approach Delay(s)	13.0
Level of Service	C

Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	389
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.73
Prob of Blocked Lane	0.48
Delay for adq Gap	17.75
Avg Ped Delay (s)	12.97

Approach	
Approach Direction	SB
Median Present?	No
Approach Delay(s)	13.0
Level of Service	C

Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	389
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.73
Prob of Blocked Lane	0.48
Delay for adq Gap	17.75
Avg Ped Delay (s)	12.97

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	55	24	29	63	51	36	150	21	36	129	14
Future Volume (vph)	17	55	24	29	63	51	36	150	21	36	129	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.966			0.952			0.986			0.989	
Flt Protected		0.991			0.990			0.991			0.990	
Satd. Flow (prot)	0	1783	0	0	1756	0	0	1820	0	0	1824	0
Flt Permitted		0.991			0.990			0.991			0.990	
Satd. Flow (perm)	0	1783	0	0	1756	0	0	1820	0	0	1824	0
Link Speed (mph)		40			30			30			40	
Link Distance (ft)		1356			81			80			1149	
Travel Time (s)		23.1			1.8			1.8			19.6	
Confl. Peds. (#/hr)							1		2	2		1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	19	61	27	32	70	57	40	167	23	40	143	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	159	0	0	230	0	0	199	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 32.3% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	55	24	29	63	51	36	150	21	36	129	14
Future Vol, veh/h	17	55	24	29	63	51	36	150	21	36	129	14
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	61	27	32	70	57	40	167	23	40	143	16
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9	9.4	10	9.7
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	18%	20%	20%
Vol Thru, %	72%	57%	44%	72%
Vol Right, %	10%	25%	36%	8%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	207	96	143	179
LT Vol	36	17	29	36
Through Vol	150	55	63	129
RT Vol	21	24	51	14
Lane Flow Rate	230	107	159	199
Geometry Grp	1	1	1	1
Degree of Util (X)	0.307	0.15	0.218	0.269
Departure Headway (Hd)	4.812	5.06	4.929	4.868
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	741	702	721	732
Service Time	2.882	3.144	3.005	2.941
HCM Lane V/C Ratio	0.31	0.152	0.221	0.272
HCM Control Delay	10	9	9.4	9.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.3	0.5	0.8	1.1

Lane Group	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	0	0	44	0	0	47
Future Volume (vph)	0	0	44	0	0	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	0	1863	0	0	1863
Flt Permitted						
Satd. Flow (perm)	0	0	1863	0	0	1863
Link Speed (mph)	30		30			30
Link Distance (ft)	281		1277			751
Travel Time (s)	6.4		29.0			17.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	48	0	0	51
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	48	0	0	51
Sign Control	Stop		Free			Free

Intersection Summary		
Area Type: Other		
Control Type: Unsignalized		
Intersection Capacity Utilization 6.7%		ICU Level of Service A
Analysis Period (min) 15		

Approach	
Approach Direction	NW
Median Present?	No
Approach Delay(s)	2.1
Level of Service	A

Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	91
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.26
Prob of Blocked Lane	0.14
Delay for adq Gap	7.83
Avg Ped Delay (s)	2.07

Approach	
Approach Direction	SE
Median Present?	No
Approach Delay(s)	2.1
Level of Service	A

Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	91
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.26
Prob of Blocked Lane	0.14
Delay for adq Gap	7.83
Avg Ped Delay (s)	2.07

RE: Trip Generation Question--Banquet Hall

Sojka, Gary J <Gary.Sojka@ct.gov>

Fri 6/18/2021 11:42 AM

[redacted]

Fiona,

If you know the seating capacity you can use that as the independent variable. Then use a vehicle occupancy rate (VOC) of 2.5 and use 80% for the hours you stated below.

Commuter Peak – 4:00-5:00 PM
PM Peak hour of generator – 7:00 -8:00 PM
Sat – 12:00-1:00 PM

As an example if there are 500 seats then trip gen would be 500/2.5x.80 = 160 vph.

You can use the same directional distribution (in/out) as LUC 931 Quality Restaurant

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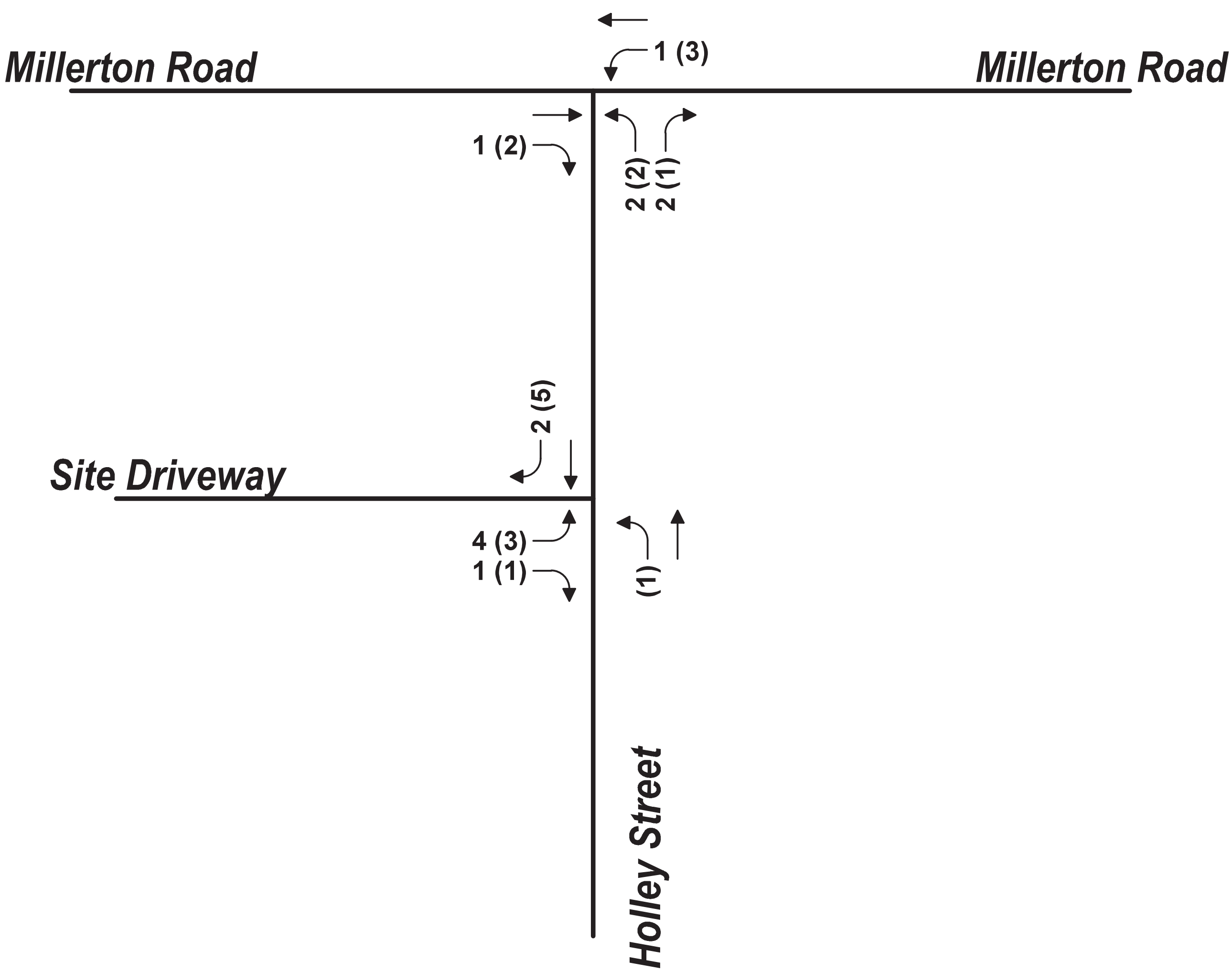

Weekday Morning Peak Hour
(Weekday Afternoon Peak Hour)

Not to Scale

Site-Generated Trips
Peak Hour Traffic Volumes
Proposed Apartment Building
11 Holley Street, Salisbury, CT

Figure 5

PARKING ANALYSIS

Wake Robin Inn Redevelopment Plan
Parking Analysis

4/28/2025

Scenario 1: No Event + Offseason

Item	# of People	Notes
Event Space	-	
Fast Casual Restaurant	32	80% Max Capacity
King / Double	22	29 Rooms x 1.5 People x 50% Occupancy
Double Double	18	12 Rooms x 3 People x 50% Occupancy
Suite	5	7 Rooms x 1.5 People x 50% Occupancy
Suite w/ alcove	6	4 Rooms x 3 People x 50% Occupancy
Loft Suite	2	1 Rooms x 4 People x 50% Occupancy
Cottage	12	4 Rooms x 6 People x 50% Occupancy
Restaurant + Bar	40	80 People x 50% Capacity
Spa	5	10 People x 50% Capacity
Employees	37	Spa (5), Pool (0), Hotel (12), Hotel F&B (20), Fast Casual Restaurant (0), Events (0)
TOTAL	**179**	
Less: Event + Hotel Overlap	-	*65% of event guests will be staying on property;*
Less: F&B + Hotel Overlap	*(33)*	*50% of hotel guests will be using F&B;*
Less: Spa + Hotel Overlap	*(4)*	*80% of spa guests will be staying on property;*
Adjusted Total w/ Capture Rate	***143***	
Total Parking Spaces Needed	***57***	*2.5 people per car*

Scenario 2: Event + Offseason

Item	# of People	Notes
Event Space	125	125 People
Fast Casual Restaurant	32	80% Max Capacity
King / Double	22	29 Rooms x 1.5 People x 50% Occupancy
Double Double	18	12 Rooms x 3 People x 50% Occupancy
Suite	5	7 Rooms x 1.5 People x 50% Occupancy
Suite w/ alcove	6	4 Rooms x 3 People x 50% Occupancy
Loft Suite	2	1 Rooms x 4 People x 50% Occupancy
Cottage	12	4 Rooms x 6 People x 50% Occupancy
Restaurant + Bar	40	80 People x 50% Capacity
Spa	5	10 People x 50% Capacity
Employees	57	Spa (5), Pool (0), Hotel (12), Hotel F&B (20), Fast Casual Restaurant (0), Events (20)
TOTAL	**324**	
Less: Event + Hotel Overlap	*(81)*	*65% of event guests will be staying on property;*
Less: F&B + Hotel Overlap	*(33)*	*50% of hotel guests will be using F&B;*
Less: Spa + Hotel Overlap	*(4)*	*80% of spa guests will be staying on property;*
Adjusted Total w/ Capture Rate	***206***	
Total Parking Spaces Needed	***83***	*2.5 people per car*

Scenario 3: No Event + Peak Season

Item	# of People	Notes
Event Space	-	
Fast Casual Restaurant	32	80% Max Capacity
King / Double	33	29 Rooms x 1.5 People x 75% Occupancy
Double Double	27	12 Rooms x 3 People x 75% Occupancy
Suite	8	7 Rooms x 1.5 People x 75% Occupancy
Suite w/ alcove	9	4 Rooms x 3 People x 75% Occupancy
Loft Suite	3	1 Rooms x 4 People x 75% Occupancy
Cottage	18	4 Rooms x 6 People x 75% Occupancy
Restaurant + Bar	96	120 People x 80% Capacity
Spa	8	10 People x 75% Capacity
Employees	50	Spa (5), Pool (2), Hotel (20), Hotel F&B (20), Fast Casual Restaurant (3), Events (0)
TOTAL	**283**	
Less: Event + Hotel Overlap	-	*65% of event guests will be staying on property;*
Less: F&B + Hotel Overlap	*(49)*	*50% of hotel guests will be using F&B;*
Less: Spa + Hotel Overlap	*(6)*	*80% of spa guests will be staying on property;*
Adjusted Total w/ Capture Rate	***228***	
Total Parking Spaces Needed	***91***	*2.5 people per car*

Scenario 4: Event + Peak Season

Item	# of People	Notes
Event Space	125	125 People
Fast Casual Restaurant	32	80% Max Capacity
King / Double	33	29 Rooms x 1.5 People x 75% Occupancy
Double Double	27	12 Rooms x 3 People x 75% Occupancy
Suite	8	7 Rooms x 1.5 People x 75% Occupancy
Suite w/ alcove	9	4 Rooms x 3 People x 75% Occupancy
Loft Suite	3	1 Rooms x 4 People x 75% Occupancy
Cottage	18	4 Rooms x 6 People x 75% Occupancy
Restaurant + Bar	96	120 People x 80% Capacity
Spa	8	10 People x 75% Capacity
Employees	70	Spa (5), Pool (2), Hotel (20), Hotel F&B (20), Fast Casual Restaurant (3), Events (20)
TOTAL	**428**	
Less: Event + Hotel Overlap	*(81)*	*65% of event guests will be staying on property;*
Less: F&B + Hotel Overlap	*(49)*	*50% of hotel guests will be using F&B;*
Less: Spa + Hotel Overlap	*(6)*	*80% of spa guests will be staying on property;*
Adjusted Total w/ Capture Rate	***292***	
Total Parking Spaces Needed	***117***	*2.5 people per car*

Scenario 5: Event + Peak Season (Fully Booked)

Item	# of People	Notes
Event Space	125	125 People
Fast Casual Restaurant	32	80% Max Capacity
King / Double	44	29 Rooms x 1.5 People x 100% Occupancy
Double Double	36	12 Rooms x 3 People x 100% Occupancy
Suite	11	7 Rooms x 1.5 People x 100% Occupancy
Suite w/ alcove	12	4 Rooms x 3 People x 100% Occupancy
Loft Suite	4	1 Rooms x 4 People x 100% Occupancy
Cottage	24	4 Rooms x 6 People x 100% Occupancy
Restaurant + Bar	96	120 People x 80% Capacity
Spa	10	10 People x 100% Capacity
Employees	70	Spa (5), Pool (2), Hotel (20), Hotel F&B (20), Fast Casual Restaurant (3), Events (20)
TOTAL	**463**	
Less: Event + Hotel Overlap	*(81)*	*65% of event guests will be staying on property;*
Less: F&B + Hotel Overlap	*(65)*	*50% of hotel guests will be using F&B;*
Less: Spa + Hotel Overlap	*(8)*	*80% of spa guests will be staying on property;*
Adjusted Total w/ Capture Rate	***309***	
Total Parking Spaces Needed	***124***	*2.5 people per car*

*****The scenarios and data presented above are based on a full day of operations and amenities, reflecting peak patronage over the course of the entire day. For instance, the Fast Casual Restaurant and Spa are closed during evening hours when a 125-person event may be taking place. The accompanying site plans incorporate parking in excess of what is required under the peak demand conditions outlined in Scenario 5.***

TREE STUDY + PRESERVATION REPORT

April 22, 2025

Aradev LLC
352 Atlantic Ave Unit 2
Brooklyn Ny 11217
Attn Steve Cohen

BARTLETT TREE EXPERTS
SCIENTIFIC TREE CARE SINCE 1907

Addendum to Wake Robin Inn Tree Report

To Whom It May Concern:

You contacted me in regard to an addendum to my November 2024 tree preservation report.

New plans (figure 2) dated April 18, 2025 from SLR were provided for review.

The primary changes and focus of this addendum are the cabin and spa areas.

The 4/25 plans show a reduced number and size of cabins, leading to an increased potential for tree retainment on the site with the recommended tree preservation measures.

The spa area (figure 1) has been adjusted to move the spa structure closer to the main hotel, increasing the space from the preserved forest canopy to the east.

There has been a cell tower (figure 5) installed on the property and a number of trees were removed by the tower company. These removals are not reflected in the November 2024 Bartlett Tree Report; however, they will be documented and field verified prior to the start of construction for the proposed hotel redevelopment.

If you have any questions about my observations or recommendations, please contact me.

Tim Armstrong
ASCA Registered Consulting Arborist #790
ISA Board Certified Master Arborist #NE-7132B
ISA Tree Risk Assessment Qualified
tim.armstrong@bartlett.com

Site images enclosed:

Limits of the Assignment

The tree assessment was performed from the ground for visual conditions. This tree inventory was not a tree risk assessment. As such, no trees were assessed for risk in accordance with industry standards, nor are there any tree risk ratings or risk mitigation recommendations provided within this report.

Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.

Illustrations, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.

Information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection. There is no warranty or guarantee, expressed or implied, that problems of deficiencies of the plans or property in question may not arise in the future.

There is no guarantee for the preservation of the trees contained in this report, however, the preservation plan is made with the best interest intended for the trees being preserved.

Plan Excerpts

Figure 1 4/25 plan Spa area.

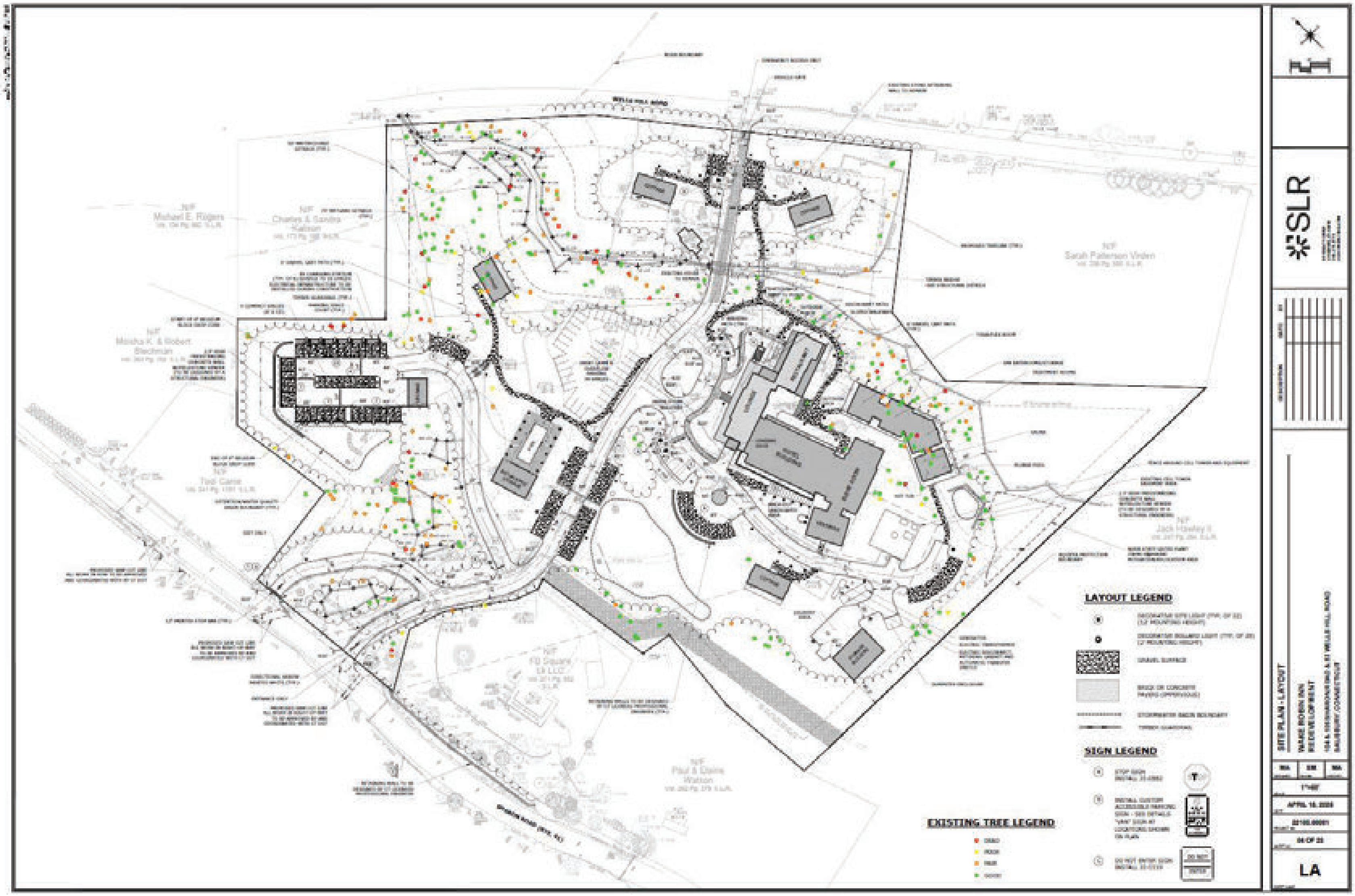

Figure 2: SLR plan dated 4/18/2025

Figure 3: Northern cottage area. In the 11/2025 plan there were three cottages in this space. The reduction of disturbance is expected to reduce impacts to the surrounding trees.

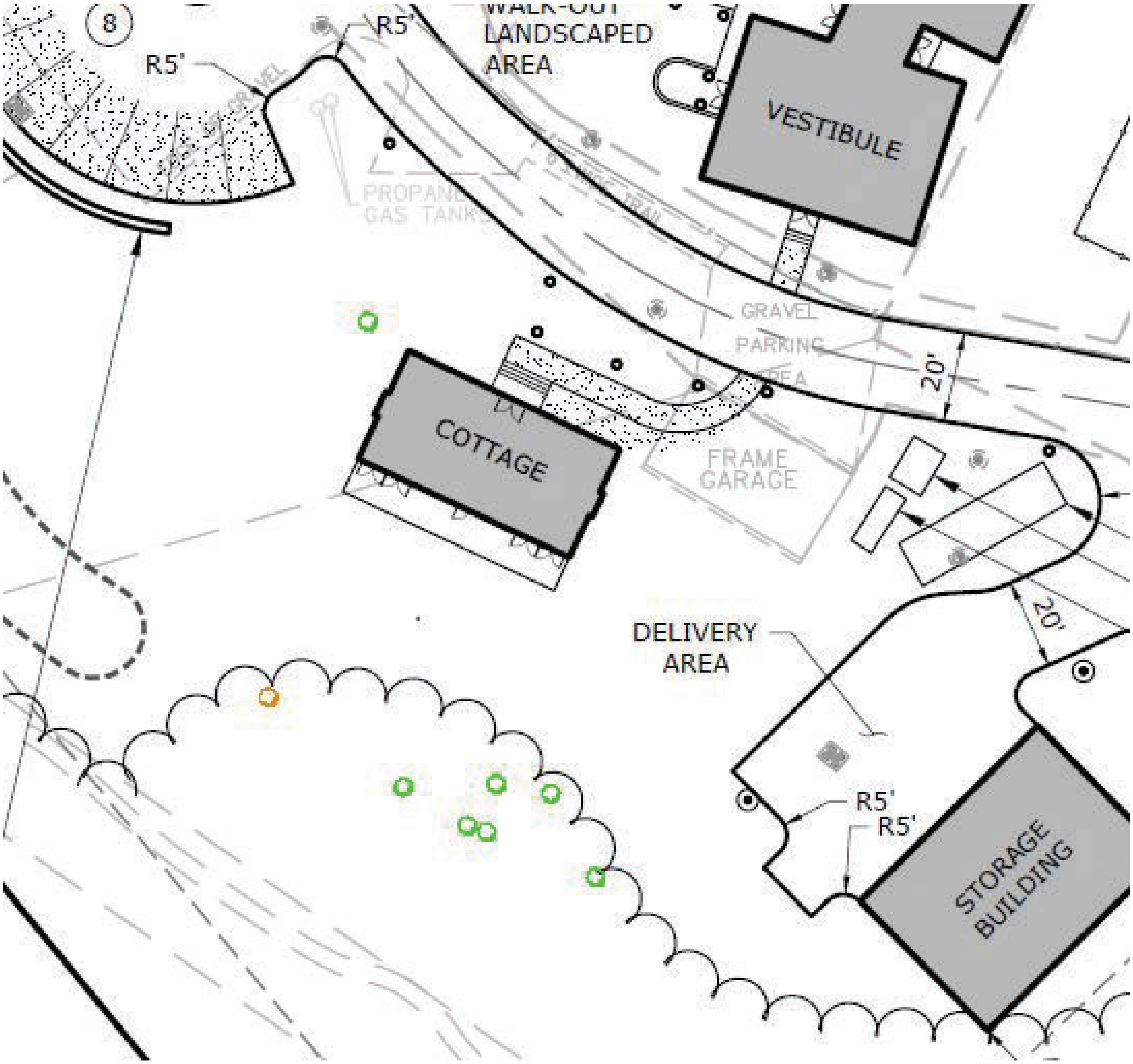

Figure 4: Mulched area adjacent to street trees

Figure 5: Pad of cell tower.

Wake Robin Inn
Lakeville, CT

Tree Preservation Report

PREPARED FOR:
Aradev LLC
352 Atlantic Ave, Unit 2
Brooklyn, NY 11217

PREPARED BY:

Tim Armstrong
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PROVIDED BY:

Alec Benoit
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BARTLETT TREE EXPERTS
SCIENTIFIC TREE CARE SINCE 1907

Submitted on November 25, 2024

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Summary

Bartlett Tree Experts was retained to evaluate trees at the Wake Robin Inn, located at 104 Sharon Rd, Lakeville, CT. Bartlett Tree Experts was also asked to prepare a Tree Preservation Report for the trees.

Eight hundred trees were evaluated on site for health and structural condition on September 30 – October 2, 2024. A design plan document was supplied by Aradev LLC.

To help reduce construction impacts to the trees if they are to be preserved, Tree Preservation Guidelines have been provided in this report.

Introduction

Aradev LLC will be planning the re-development of the wake Robin Inn located at 104 Sharon Rd, Lakeville, CT. Bartlett Tree Experts was asked to evaluate the trees and prepare a Tree Preservation Report.

Assignment

This report communicates the current condition and suitability for preservation of the trees to the client. The report is designed to provide the design team/construction contractors with the tree-related details they will need to prepare a Tree Preservation Plan and includes:

- observations of the health and structural condition of the trees,
- determination of potential for being retained through construction,
- evaluation of the potential impacts to trees, and
- guidelines for tree preservation throughout the development process

Limits of the Assignment

Trees were assessed from the ground for visual conditions. This tree inventory was not a tree risk assessment. As such, no trees were assessed for risk in accordance with industry standards, nor are there any tree risk ratings or risk mitigation recommendations provided within this report.

Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.

Illustrations, diagrams, graphs, and photographs in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.

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There is no guarantee for the preservation of the trees contained in this report, however, the preservation report is made with the best interest intended for the trees being preserved.

Methods

Trees were assessed on September 30 – October 2, 2024. The assessment was of eight hundred trees throughout the property. The provided plan for the project are provided in Appendix I.

1. Identifying the species of tree;
2. Measuring the trunk diameter at a point 54 inches above grade;
3. Evaluating the health and structural condition:

Good A healthy tree that may have a slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected;

Fair Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care;

Poor Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated;

Observations

The trees were located throughout the property surrounding the Wake Robin Inn. The predominant species are sugar maple and white pine with a variety of other tree species in lesser numbers.

Approximately half the trees were observed to be in good condition.
These findings may be summarized in the following table.

TABLE 1: TREE CONDITION AND ABUNDANCE

Scientific Name	Common Name	Status	Dead	Poor	Fair	Good	Total
Acer platanoides	Norway Maple	Invasive	2	1	7	9	19
Acer rubrum	Red Maple	Native			4	5	9
Acer saccharum	Sugar Maple	Native	5	15	54	182	256
Betula papyrifera	Paper Birch	Native	1		4	1	6
Carya cardiformis	Bitternut Hickory	Native			1	7	8
Carya ovata	Shargbark Hickory	Native				5	5
Carya tomentosa	Mockernut Hickory	Native				7	7
Fraxinus americana	White Ash	Native	46	24	8	5	83
Juglans nigra	Black Walnut	Native	1	2	3	9	15
Juniperus virginiana	Eastern Red Cedar	Native	1	1	1	5	8
Larix laricina	Eastern Larch	Native				2	2
Liriodendron tulipifera	Tulip Tree	Native			1	4	5
Malus sp	Crabapple	Native				1	1
Ostrya virginiana	Eastern Hophornbeam	Native				2	2
Picea abies	Norway Spruce	Non-native		1	2	2	5
Pinus resinosa	Red Pine	Native	1				1
Pinus rigida	Pitch Pine	Native	1				1
Pinus strobus	White Pine	Native	20	23	74	66	183
Populus deltoides	Eastern Cottonwood	Native			1		1
Populus grandidentata	Bigtooth Aspen	Native			3		3

Scientific Name	Common Name	Status	Dead	Poor	Fair	Good	Total
Populus tremuloides	Trembling Aspen	Native	1	1		8	10
Prunus pennsylvanica	Fire Cherry	Native			2	1	3
Prunus serotina	Black Cherry	Native		2	4	2	8
Quercus alba	White Oak	Native	1	1	3	18	23
Quercus prinus	Chestnut Oak	Native	1	2	3	1	7
Quercus rubra	Red Oak	Native	2	7	8	14	31
Robinia pseudoacacia	Black Locust	Invasive		6	9	4	19
Salix babylonica	White Willow	Native			1		1
Salix discolor	Pussywillow	Native			1	1	2
Tilia americana	Basswood	Native		2	10	13	25
Tsuga canadensis	Eastern Hemlock	Native	4	9	17	7	37
Ulmus americana	American Elm	Native	4		3	7	14
Total			**91**	**97**	**224**	**388**	**800**

*Red (Red) indicates Invasive species as determined by the Connecticut Invasive Plant Council (October 2018)

**Green (Green) Indicates Non-native Species as listed on 'Connecticut Native Tree and Shrub Availability List' by Connecticut Department of Energy and Environmental Protection Bureau of Natural Resources, and UCONN

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape.

Our goal is to identify trees that have the potential for long-term health, structural stability, and longevity. For trees growing in open fields, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue. Evaluation of suitability for preservation considers several factors:

- **Tree health**
Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.
- **Structural integrity**
Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely.
- **Species response**

There is a wide variation in the response of individual species to construction impacts and changes in the environment.

•**Tree age and longevity**

Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.

•**Species invasiveness**

Species that spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced.

Each tree was rated for suitability for preservation based upon its age, health, structural condition, and ability to safely coexist within a development environment. We consider trees with high suitability for preservation to be the best candidates for preservation. We do not recommend retention of trees with low suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

High These are trees with good health and structural stability that have the potential for longevity at the site. Also, a review of the site plans suggest that tree retention is possible with the current plans.

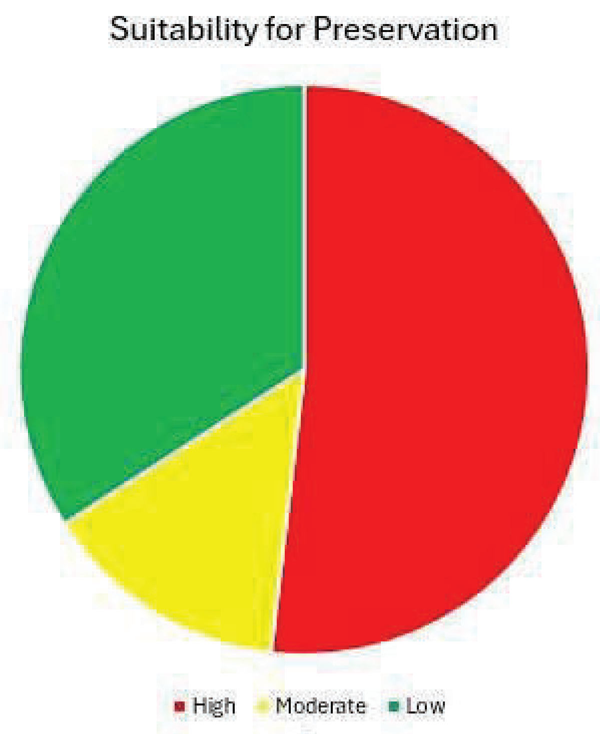
Moderate Trees in this category have fair health and/or structural defects that may be abated with treatment. These trees require more intense management and monitoring and may have shorter lifespans than those in the “high” category. Site plans may also need to be adjusted slightly in order to improve expected tree health and sustainability.

Low Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas.

It is important to emphasize that suitability for preservation values do not take proposed construction activities into account.

TABLE 2: TREE SUITABILITY FOR PRESERVATION

Suitability for Preservation	Count
High	415
Moderate	112
Low	273



Tree preservation is intended to not only foster tree survival during development, but also to promote maintenance of tree health and beauty into the future. Retained trees that are injured or damaged during construction or are insufficiently maintained afterward become a liability rather than an asset. How individual trees respond to disturbances will depend on the extent of excavation and grading, the care with which demolition is undertaken, and the construction methods employed. Coordinating any construction activity inside the Tree Protection Zone (TPZ) and Critical Root Zone (CRZ) can minimize these impacts. A Tree Protection Zone (TPZ) is a larger area around a tree in which construction activities are limited and should be observed by an arborist and a Critical Root Zone (CRZ) is a smaller area directly next to tree stem where no major construction activities are permitted or must be directly supervised by a consulting arborist.

Tree Preservation Guidelines

The following recommendations will reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

General Design Recommendations

1. Any plans involving the trees should be reviewed by the consulting arborist with regard to tree impacts. These include, but are not limited to, site plans, improvement plans, utility and drainage plans, grading plans, landscape and irrigation plans, and demolition plans.
2. No excavation or impacts to the Critical Root Zone shall be planned unless approved by the Consulting Arborist.

3. Irrigation systems must be designed so that no trenching severs roots larger than 1 inch in diameter will occur within the Tree Protection Zone.
4. **Tree Preservation Guidelines** prepared by the Consulting Arborist, which include specifications for tree protection during demolition and construction, should be included on all plans.
5. Any herbicides used must be safe for use around trees and labeled for that use.
6. Ensure adequate but not excessive water is supplied to trees; in most cases occasional irrigation will be required. Avoid directing runoff toward trees.

Tree Protection Zone

1. A Tree Protection Zone shall be identified for each tree to be preserved. Tree protections zone distances are listed above in the Tree Impacts section. TPZ shall be 1’ per inch DBH of each tree. TPZ’s may be combined where groups of trees are being protected.
   a. Tree protection fences shall be installed to encompass the Tree Protection Zone, or as much of the Tree Protection Zone as possible to complete construction activities. Fences shall be metal chain-link fencing a minimum of 6 feet high, supported by 2 inch x 6 foot steel posts installed 8 feet on center. For trees that are surrounded by paved surfaces, posts and fencing must be installed to protect tree pit areas. The fencing must not be movable in a way that bumping fencing may cause damage to the tree or tree pit area.
   b. Fences must be installed prior to beginning demolition and must remain until construction is complete.
   c. No grading, excavation, construction or storage or dumping of materials shall occur within the Tree Protection Zone.
   d. No underground services including utilities, sub-drains, water or sewer shall be placed in the Tree Protection Zone.

General Pre-demolition and Pre-construction Treatments and Recommendations

1. The demolition and construction superintendents shall meet with the Consulting Arborist before beginning work to review all work procedures, access routes, storage areas, and tree protection measures.
2. Fence all trees to be retained to completely enclose the Tree Protection Zone prior to demolition, grubbing or grading. Fences are to remain until all grading and construction is completed.
3. A site mobilization plan should be created, if not done so already, to communicate acceptable driving and operating areas for machinery. This plan should ensure that oversized vehicles do not operate in a way that may cause damage to tree canopies or impact tree protection fences.
4. Erosion control should be deployed in a fashion that does not negatively impact Critical Root Zones or Tree Protection Zones. Trenchless silt fence is preferred in order to reduce impacts to roots.

5. Prune trees to be preserved to remove dead branches 2 inches and larger in diameter, raise canopies and provide building clearance as needed for construction activities. No more than 20% of live tree canopies may be removed.
    a. All pruning shall be done by an ISA Certified Arborist® or ISA Certified Tree Worker® in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2019) and adhere to the most recent editions of the American National Standard Z133.1 Safety Requirements 2017 for Tree Care Operations and ANSI A300 (Part 1)- Pruning 2017.
    b. While in the tree (such as using an aerial lift) the arborist shall perform an aerial inspection to identify any defects, weak branch and trunk attachments and decay not visible from the ground. Any additional work needed to mitigate defects shall be reported to the property owner.
6. Soil samples may reveal nutrient deficiencies or excess. The findings of these soil samples will guide specific soil treatments that should be applied. The soil should be monitored during construction. Soil samples may be taken once per year and should continue until at least three years following the completion of construction.
7. Trees to be removed shall be felled so as to fall away from the Tree Protection Zone and avoid pulling and breaking of roots of trees to remain. If roots are entwined, the Consulting Arborist may require first severing the major woody root mass before extracting the trees, or grinding the stump below ground.

General Recommendations for Tree Protection during Construction

1. Any approved grading, construction, demolition or other work within the Tree Protection Zone should be monitored by the Consulting Arborist.
2. All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved. This includes all stages of construction, including but not limited to, curb removal, hardscape installation, and infrastructure installation. Driving heavy machinery within the Tree Protection Zone and Critical Root Zone is not permitted.
3. Tree protection devices are to remain until all site work has been completed within the work area. Fences or other protection devices may not be relocated or removed without permission of the Consulting Arborist.
4. Construction trailers, traffic and storage areas must remain outside the Tree Protection Zone at all times.
5. Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the Consulting Arborist. Roots should be cut with a saw to provide a flat and smooth cut. Removal of roots larger than 2 inches in diameter should be avoided.
6. If roots are 2 inches and greater in diameter are encountered during site work and must be cut to complete the construction, the Consulting Arborist must be consulted to evaluate effects on the health and stability of the tree and recommend treatment.
7. Prior to grading or trenching, trees may require root pruning outside the Tree Protection Zone**.** Any root pruning required for construction purposes shall receive the prior approval of, and be supervised by, the Consulting Arborist.

8. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.
9. No excess soil, chemicals, debris, equipment or other materials including liquids shall be dumped or stored within the Tree Protection Zone.
10. Any additional tree pruning needed for clearance during construction must be performed by an ISA Certified Arborist and not by construction personnel.

Specific Recommendations for Tree Protection of Trees Near Structures

Trees listed in Appendix III are in close proximity to planned construction activities and special care must be taken to provide for the best potential outcome. The table lists radial distances (ft) for both the CRZ and TPZ for these trees.

The structures near these trees are planned to be constructed on helical piles. Helical piles were chosen as they are less disruptive to tree roots vs conventional foundation construction. Helical piles allow for minimal disturbance within the TPZ/CRZ with proper site mobilization. Any excavation within the CRZ including the installation of helical piles shall be monitored by a consulting arborist. An Airspade™ shall be used to locate significant roots where helical piles ae placed in the CRZ of any tree.

The installation of trunk protection such as plywood boxes is recommended as well as installing aged wood chip mulch (6-12 inches on access paths) and ground protection matting or steel plates to reduce impacts to the root zones of these trees.

Methods of pedestrian path construction involving excavation should be avoided near preserved trees in favor of less disruptive methods such as the installation of geotextile fabric and permeable paving on the surface of the soil.

Maintenance of Impacted Trees

Preserved trees will experience a physical environment different from that of the pre-development conditions. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. Inspect trees annually and following major storms to identify conditions requiring treatment to manage risk associated with tree failure.

Our procedures included assessing trees for observable defects in structure. This is not to say that trees without significant defects will not fail. Failure of apparently defect-free trees does occur, especially during storm events. Wind forces, for example, can exceed the strength of defect-free wood causing branches and trunks to break. Wind forces coupled with rain can saturate soils, reducing their ability to hold roots, and blow over defect-free trees. Although we cannot predict all failures, identifying those trees with observable defects is a critical component of enhancing public safety.

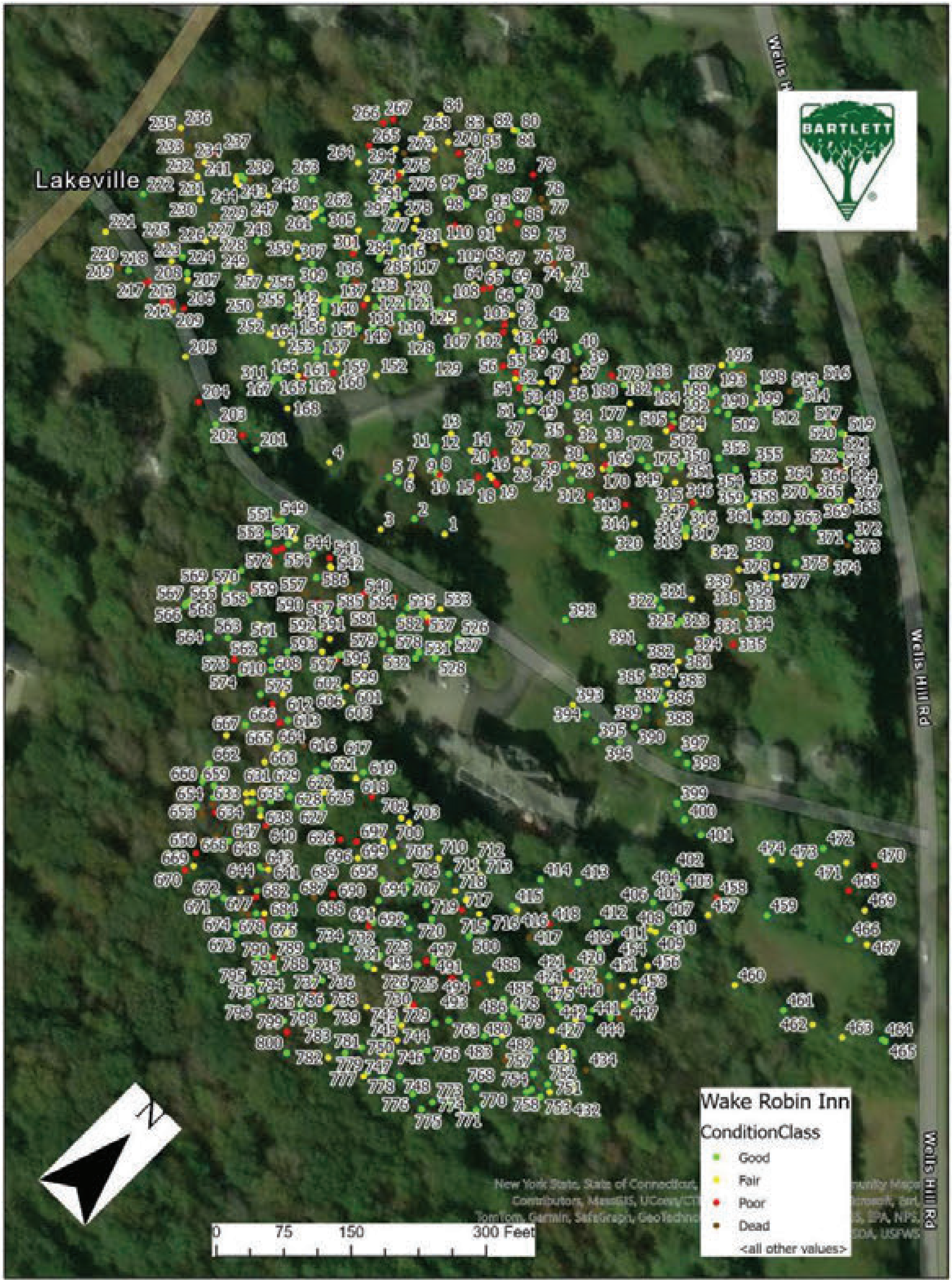
Furthermore, trees change over time. Our inspections represent the condition of the tree at the time of inspection. As trees age, the likelihood of failure of branches or entire trees increases. Annual tree inspections are recommended to identify changes to tree health and structure. In addition, trees should be inspected after storms of unusual severity to evaluate damage and structural changes. Initiating these inspections is the responsibility of the client and/or tree owner.

If you have any questions about my observations or recommendations, please contact me.

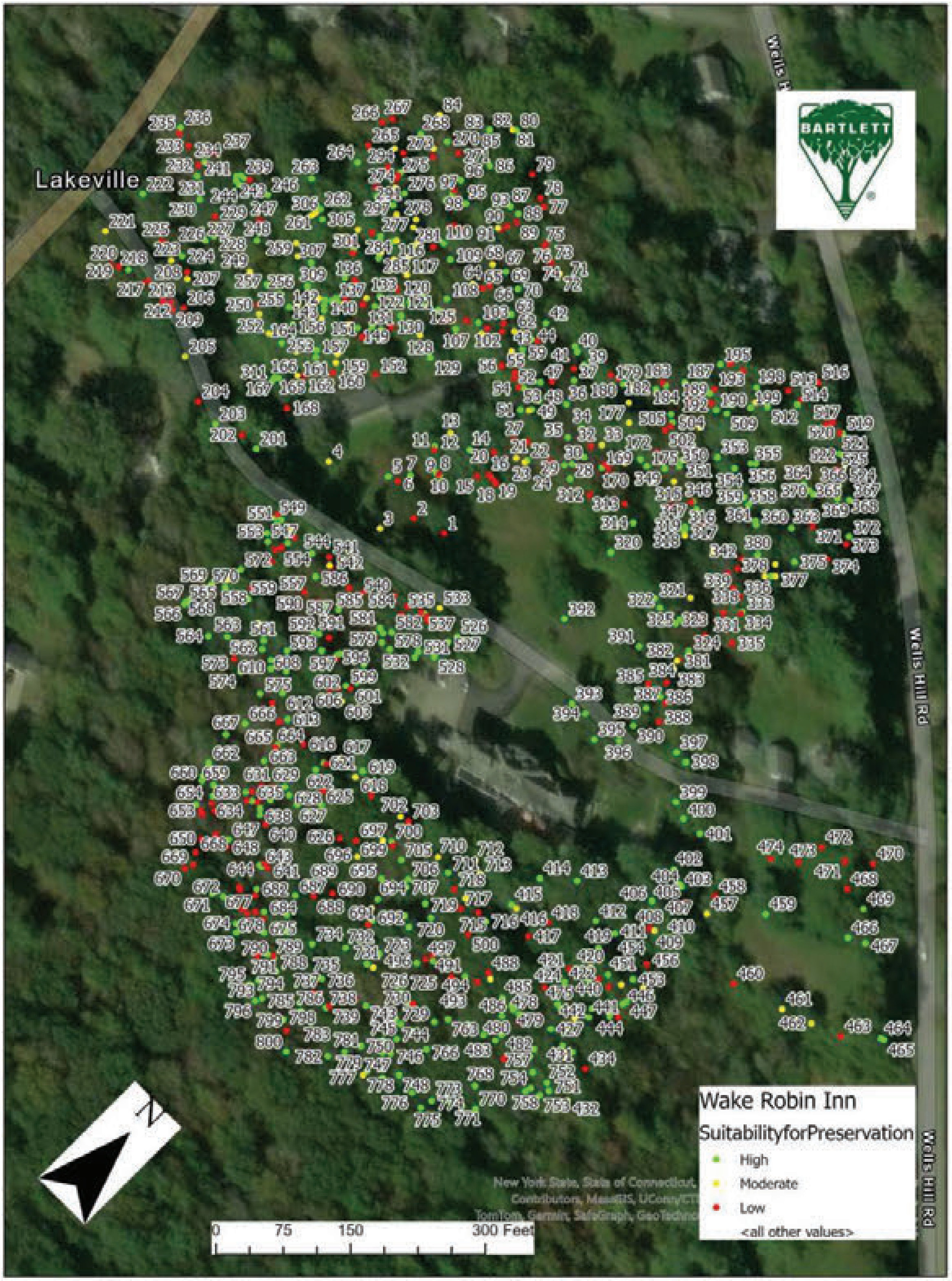
Tim Armstrong

Consulting Arborist
ASCA Registered Consulting Arborist #790
ASCA Tree and Plant Appraisal Qualified
ISA Board Certified Master Arborist #NE-7132B
Massachusetts Certified Arborist #2464
ISA Tree Risk Assessment Qualified

Appendix I –Maps and Provided Documents



Map 1. Condition map generated using the ARCGis. This map shows all trees included in this report and their assigned condition classes recorded during the site visit in September 2024.



Map 2. Suitability for preservation map generated using ARCGis. This map shows all trees included in this report and their assigned suitability for preservation rating recorded during the site visit in September 2024.

Appendix II – Tree Inventory Table

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
1	20	*Robinia pseudoacacia*	Fair	Low
2	18	*Acer platanoides*	Good	Low
3	22	*Juniperus virginiana*	Fair	Moderate
4	23	*Acer rubrum*	Fair	Moderate
5	12	*Acer saccharum*	Good	High
6	10	*Fraxinus americana*	Good	Low
7	13	*Acer saccharum*	Fair	High
8	12	*Acer saccharum*	Good	High
9	8	*Juglans nigra*	Fair	High
10	21	*Robinia pseudoacacia*	Poor	Low
11	11	*Robinia pseudoacacia*	Good	Low
12	13	*Malus sp*	Good	High
13	20	*Pinus strobus*	Fair	Moderate
14	8	*Acer saccharum*	Fair	High
15	31	*Robinia pseudoacacia*	Poor	Low
16	16	*Robinia pseudoacacia*	Fair	Low
17	17	*Robinia pseudoacacia*	Fair	Low
18	9	*Robinia pseudoacacia*	Poor	Low
19	17	*Robinia pseudoacacia*	Poor	Low
20	15	*Robinia pseudoacacia*	Poor	Low
21	26	*Pinus strobus*	Fair	Moderate
22	13	*Acer saccharum*	Good	High
23	16	*Pinus strobus*	Fair	Moderate
24	9	*Fraxinus americana*	Dead	Low
25	29	*Pinus strobus*	Poor	Low
26	11	*Robinia pseudoacacia*	Fair	Low
27	9	*Robinia pseudoacacia*	Fair	Low
28	9	*Acer saccharum*	Good	High
29	8	*Acer saccharum*	Good	High
30	12	*Acer saccharum*	Fair	High
31	12	*Pinus strobus*	Good	High
32	14	*Pinus strobus*	Dead	Low
33	12	*Pinus strobus*	Fair	Moderate
34	25	*Acer saccharum*	Fair	High
35	17	*Tilia americana*	Good	High
36	12	*Acer saccharum*	Good	High
37	9	*Acer saccharum*	Fair	High
38	12	*Ulmus americana*	Dead	Low
39	8	*Acer saccharum*	Good	High
40	17	*Tilia americana*	Good	High

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
41	16	*Pinus strobus*	Good	High
42	13	*Quercus rubra*	Good	High
43	8	*Pinus strobus*	Poor	Low
44	11	*Pinus strobus*	Good	High
45	14	*Pinus strobus*	Fair	Moderate
46	10	*Fraxinus americana*	Fair	Low
47	15	*Acer saccharum*	Fair	High
48	20	*Pinus strobus*	Good	High
49	23	*Pinus strobus*	Good	High
50	8	*Pinus strobus*	Fair	Moderate
51	10	*Pinus strobus*	Good	High
52	10	*Acer rubrum*	Good	High
53	9	*Pinus strobus*	Poor	Low
54	16	*Populus grandidentata*	Fair	Low
55	11	*Fraxinus americana*	Poor	Low
56	16	*Pinus strobus*	Poor	Low
57	14	*Acer platanoides*	Good	Low
58	11	*Pinus strobus*	Fair	Moderate
59	8	*Acer saccharum*	Good	High
60	14	*Fraxinus americana*	Poor	Low
61	12	*Pinus strobus*	Poor	Low
62	10	*Pinus strobus*	Fair	Moderate
63	14	*Acer saccharum*	Fair	High
64	18	*Pinus strobus*	Fair	Moderate
65	15	*Fraxinus americana*	Poor	Low
66	13	*Fraxinus americana*	Poor	Low
67	25	*Pinus strobus*	Poor	Low
68	12	*Pinus strobus*	Fair	Moderate
69	9	*Ulmus americana*	Good	High
70	9	*Acer saccharum*	Good	High
71	20	*Pinus strobus*	Fair	Moderate
72	12	*Pinus strobus*	Fair	Moderate
73	8	*Pinus strobus*	Poor	Low
74	13	*Pinus rigida*	Dead	Low
75	8	*Acer saccharum*	Dead	Low
76	17	*Pinus strobus*	Dead	Low
77	10	*Pinus resinosa*	Dead	Low
78	10	*Fraxinus americana*	Dead	Low
79	12	*Pinus strobus*	Poor	Low
80	25	*Juglans nigra*	Good	High
81	10	*Ulmus americana*	Fair	Moderate
82	12	*Acer saccharum*	Fair	High

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
83	12	*Acer saccharum*	Good	High
84	10	*Pinus strobus*	Fair	Moderate
85	12	*Acer saccharum*	Poor	Low
86	11	*Acer saccharum*	Good	High
87	22	*Juglans nigra*	Good	High
88	8	*Acer saccharum*	Good	High
89	10	*Fraxinus americana*	Poor	Low
90	12	*Pinus strobus*	Dead	Low
91	11	*Pinus strobus*	Dead	Low
92	17	*Pinus strobus*	Fair	Moderate
93	10	*Juglans nigra*	Good	High
94	11	*Fraxinus americana*	Dead	Low
95	24	*Acer saccharum*	Good	High
96	9	*Acer saccharum*	Good	High
97	12	*Acer saccharum*	Good	High
98	16	*Fraxinus americana*	Dead	Low
99	10	*Prunus serotina*	Poor	Low
100	16	*Pinus strobus*	Poor	Low
101	10	*Pinus strobus*	Fair	Moderate
102	10	*Pinus strobus*	Dead	Low
103	12	*Acer saccharum*	Good	High
104	10	*Fraxinus americana*	Good	Low
105	13	*Pinus strobus*	Fair	Moderate
106	9	*Fraxinus americana*	Fair	Low
107	15	*Acer saccharum*	Good	High
108	13	*Acer saccharum*	Good	High
109	15	*Acer saccharum*	Good	High
110	8	*Acer saccharum*	Fair	High
111	18	*Fraxinus americana*	Dead	Low
112	10	*Acer saccharum*	Poor	Low
113	10	*Acer saccharum*	Good	High
114	12	*Ulmus americana*	Good	High
115	12	*Pinus strobus*	Fair	Moderate
116	24	*Pinus strobus*	Good	High
117	25	*Pinus strobus*	Fair	Moderate
118	24	*Pinus strobus*	Fair	Moderate
119	16	*Pinus strobus*	Dead	Low
120	9	*Acer saccharum*	Good	High
121	10	*Acer saccharum*	Good	High
122	10	*Acer saccharum*	Good	High
123	11	*Prunus serotina*	Good	High
124	12	*Acer saccharum*	Good	High

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
125	9	*Acer saccharum*	Good	High
126	8	*Acer saccharum*	Good	High
127	10	*Ulmus americana*	Good	High
128	23	*Pinus strobus*	Fair	Moderate
129	18	*Pinus strobus*	Good	High
130	12	*Fraxinus americana*	Dead	Low
131	10	*Acer saccharum*	Good	High
132	15	*Pinus strobus*	Fair	Moderate
133	21	*Pinus strobus*	Good	High
134	19	*Pinus strobus*	Good	High
135	12	*Pinus strobus*	Poor	Low
136	8	*Pinus strobus*	Dead	Low
137	17	*Pinus strobus*	Good	High
138	9	*Ulmus americana*	Good	High
139	12	*Fraxinus americana*	Poor	Low
140	17	*Pinus strobus*	Good	High
141	15	*Pinus strobus*	Fair	Moderate
142	8	*Acer saccharum*	Good	High
143	18	*Pinus strobus*	Good	High
144	11	*Pinus strobus*	Good	High
145	10	*Pinus strobus*	Dead	Low
146	13	*Pinus strobus*	Fair	Moderate
147	14	*Pinus strobus*	Fair	Moderate
148	13	*Pinus strobus*	Poor	Low
149	10	*Acer saccharum*	Good	High
150	10	*Acer saccharum*	Good	High
151	8	*Ulmus americana*	Dead	Low
152	18	*Acer platanoides*	Fair	Low
153	20	*Pinus strobus*	Fair	Moderate
154	20	*Pinus strobus*	Fair	Moderate
155	22	*Pinus strobus*	Fair	Moderate
156	25	*Pinus strobus*	Good	High
157	16	*Acer saccharum*	Good	High
158	19	*Pinus strobus*	Fair	Moderate
159	18	*Pinus strobus*	Fair	Moderate
160	23	*Pinus strobus*	Poor	Low
161	9	*Acer saccharum*	Good	High
162	25	*Pinus strobus*	Poor	Low
163	20	*Pinus strobus*	Fair	Moderate
164	8	*Acer saccharum*	Good	High
165	26	*Pinus strobus*	Fair	Moderate
166	11	*Juglans nigra*	Good	High

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
167	17	*Pinus strobus*	Good	High
168	9	*Robinia pseudoacacia*	Fair	Low
169	10	*Acer saccharum*	Fair	High
170	11	*Fraxinus americana*	Good	Low
171	11	*Fraxinus americana*	Poor	Low
172	12	*Fraxinus americana*	Poor	Low
173	37	*Pinus strobus*	Fair	Moderate
174	11	*Acer saccharum*	Good	High
175	27	*Pinus strobus*	Good	High
176	28	*Pinus strobus*	Fair	Moderate
177	25	*Pinus strobus*	Fair	Moderate
178	24	*Pinus strobus*	Fair	Moderate
179	25	*Acer rubrum*	Good	High
180	9	*Pinus strobus*	Dead	Low
181	15	*Pinus strobus*	Poor	Low
182	20	*Pinus strobus*	Good	High
183	8	*Pinus strobus*	Dead	Low
184	12	*Pinus strobus*	Good	High
185	15	*Pinus strobus*	Good	High
186	18	*Pinus strobus*	Good	High
187	10	*Betula papyrifera*	Good	High
188	12	*Populus tremuloides*	Good	Low
189	8	*Populus tremuloides*	Good	Low
190	19	*Pinus strobus*	Good	High
191	10	*Pinus strobus*	Dead	Low
192	9	*Acer saccharum*	Good	High
193	9	*Populus tremuloides*	Good	Low
194	15	*Larix laricina*	Good	High
195	10	*Acer saccharum*	Fair	High
196	9	*Populus tremuloides*	Good	Low
197	8	*Populus tremuloides*	Dead	Low
198	17	*Acer saccharum*	Good	High
199	9	*Acer saccharum*	Good	High
200	15	*Acer saccharum*	Good	High
201	29	*Pinus strobus*	Good	High
202	15	*Juniperus virginiana*	Poor	Low
203	18	*Juniperus virginiana*	Good	High
204	25	*Picea abies*	Poor	Low
205	38	*Pinus strobus*	Fair	Moderate
206	26	*Fraxinus americana*	Poor	Low
207	26	*Acer rubrum*	Fair	Moderate
208	17	*Fraxinus americana*	Good	Low

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
209	10	*Tsuga canadensis*	Fair	Low
210	8	*Tsuga canadensis*	Poor	Low
211	10	*Tsuga canadensis*	Poor	Low
212	13	*Tsuga canadensis*	Poor	Low
213	13	*Tsuga canadensis*	Poor	Low
214	8	*Tsuga canadensis*	Dead	Low
215	10	*Tsuga canadensis*	Poor	Low
216	14	*Pinus strobus*	Poor	Low
217	8	*Tsuga canadensis*	Poor	Low
218	25	*Acer saccharum*	Good	High
219	16	*Fraxinus americana*	Dead	Low
220	25	*Tsuga canadensis*	Fair	Low
221	20	*Pinus strobus*	Fair	Moderate
222	28	*Acer rubrum*	Good	High
223	10	*Tilia americana*	Fair	Moderate
224	20	*Tilia americana*	Good	High
225	16	*Fraxinus americana*	Dead	Low
226	17	*Acer rubrum*	Good	High
227	8	*Acer saccharum*	Fair	High
228	8	*Acer saccharum*	Fair	High
229	10	*Fraxinus americana*	Dead	Low
230	12	*Acer saccharum*	Fair	High
231	14	*Acer saccharum*	Fair	High
232	12	*Fraxinus americana*	Dead	Low
233	20	*Fraxinus americana*	Dead	Low
234	9	*Acer saccharum*	Fair	High
235	21	*Fraxinus americana*	Dead	Low
236	11	*Acer saccharum*	Fair	High
237	13	*Tilia americana*	Good	High
238	15	*Acer saccharum*	Poor	Low
239	8	*Acer saccharum*	Good	High
240	9	*Acer saccharum*	Fair	High
241	9	*Acer saccharum*	Fair	High
242	11	*Acer saccharum*	Good	High
243	10	*Acer saccharum*	Fair	High
244	8	*Acer saccharum*	Fair	High
245	14	*Fraxinus americana*	Dead	Low
246	9	*Acer saccharum*	Fair	High
247	23	*Acer saccharum*	Dead	Low
248	26	*Quercus rubra*	Good	High
249	9	*Quercus rubra*	Fair	Moderate
250	14	*Fraxinus americana*	Dead	Low

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
251	9	*Tilia americana*	Fair	Moderate
252	20	*Pinus strobus*	Fair	Moderate
253	9	*Acer saccharum*	Fair	High
254	24	*Pinus strobus*	Fair	Moderate
255	14	*Acer saccharum*	Good	High
256	10	*Larix laricina*	Good	High
257	8	*Acer saccharum*	Fair	High
258	12	*Populus deltoides*	Fair	Low
259	17	*Pinus strobus*	Fair	Moderate
260	13	*Pinus strobus*	Fair	Moderate
261	9	*Acer rubrum*	Fair	Moderate
262	18	*Acer saccharum*	Good	High
263	22	*Quercus rubra*	Good	High
264	24	*Acer saccharum*	Fair	High
265	12	*Acer saccharum*	Poor	Low
266	25	*Acer saccharum*	Poor	Low
267	13	*Acer saccharum*	Poor	Low
268	9	*Acer saccharum*	Fair	High
269	10	*Ulmus americana*	Fair	Moderate
270	9	*Acer saccharum*	Fair	High
271	8	*Acer saccharum*	Poor	Low
272	12	*Fraxinus americana*	Dead	Low
273	19	*Fraxinus americana*	Dead	Low
274	10	*Acer saccharum*	Fair	High
275	10	*Acer saccharum*	Poor	Low
276	12	*Pinus strobus*	Good	High
277	14	*Pinus strobus*	Good	High
278	14	*Pinus strobus*	Fair	Moderate
279	14	*Pinus strobus*	Fair	Moderate
280	14	*Pinus strobus*	Fair	Moderate
281	22	*Pinus strobus*	Good	High
282	10	*Pinus strobus*	Fair	Moderate
283	13	*Pinus strobus*	Fair	Moderate
284	13	*Acer saccharum*	Good	High
285	14	*Pinus strobus*	Good	High
286	16	*Pinus strobus*	Fair	Moderate
287	21	*Pinus strobus*	Good	High
288	13	*Pinus strobus*	Good	High
289	14	*Ulmus americana*	Dead	Low
290	10	*Pinus strobus*	Fair	Moderate
291	25	*Pinus strobus*	Good	High
292	10	*Pinus strobus*	Fair	Moderate

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
293	14	*Fraxinus americana*	Dead	Low
294	16	*Fraxinus americana*	Dead	Low
295	8	*Ulmus americana*	Fair	Moderate
296	10	*Prunus serotina*	Fair	Low
297	11	*Ulmus americana*	Good	High
298	15	*Pinus strobus*	Fair	Moderate
299	14	*Pinus strobus*	Good	High
300	12	*Pinus strobus*	Fair	Moderate
301	8	*Prunus serotina*	Poor	Low
302	9	*Prunus serotina*	Fair	Low
303	10	*Pinus strobus*	Poor	Low
304	10	*Pinus strobus*	Fair	Moderate
305	16	*Pinus strobus*	Good	High
306	16	*Pinus strobus*	Fair	Moderate
307	15	*Acer saccharum*	Good	High
308	12	*Pinus strobus*	Fair	Moderate
309	11	*Acer saccharum*	Good	High
310	25	*Pinus strobus*	Good	High
311	11	*Quercus rubra*	Good	High
312	10	*Fraxinus americana*	Poor	Low
313	26	*Fraxinus americana*	Poor	Low
314	8	*Acer saccharum*	Fair	High
315	8	*Prunus serotina*	Fair	Low
316	9	*Pinus strobus*	Good	High
317	20	*Pinus strobus*	Good	High
318	18	*Pinus strobus*	Good	High
319	12	*Pinus strobus*	Fair	Moderate
320	36	*Juglans nigra*	Good	High
321	20	*Juglans nigra*	Good	High
322	22	*Pinus strobus*	Good	High
323	40	*Pinus strobus*	Good	High
324	20	*Acer saccharum*	Good	High
325	9	*Acer saccharum*	Good	High
326	14	*Pinus strobus*	Dead	Low
327	14	*Pinus strobus*	Dead	Low
328	13	*Tilia americana*	Fair	Moderate
329	22	*Fraxinus americana*	Dead	Low
330	12	*Acer platanoides*	Good	Low
331	12	*Fraxinus americana*	Dead	Low
332	26	*Pinus strobus*	Dead	Low
333	17	*Acer saccharum*	Good	High
334	9	*Acer saccharum*	Good	High

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
335	45	*Acer saccharum*	Poor	Low
336	14	*Pinus strobus*	Dead	Low
337	23	*Pinus strobus*	Dead	Low
338	14	*Carya tomentosa*	Good	High
339	10	*Fraxinus americana*	Dead	Low
340	16	*Pinus strobus*	Dead	Low
341	21	*Acer platanoides*	Fair	Low
342	25	*Acer platanoides*	Dead	Low
343	15	*Acer rubrum*	Fair	Moderate
344	16	*Fraxinus americana*	Fair	Low
345	17	*Acer saccharum*	Good	High
346	18	*Acer saccharum*	Good	High
347	27	*Acer saccharum*	Poor	Low
348	15	*Pinus strobus*	Fair	Moderate
349	10	*Acer saccharum*	Good	High
350	11	*Acer saccharum*	Good	High
351	11	*Acer saccharum*	Good	High
352	9	*Acer saccharum*	Good	High
353	12	*Juniperus virginiana*	Good	High
354	15	*Pinus strobus*	Good	High
355	20	*Pinus strobus*	Good	High
356	9	*Acer saccharum*	Good	High
357	20	*Pinus strobus*	Good	High
358	22	*Pinus strobus*	Good	High
359	9	*Acer saccharum*	Fair	High
360	10	*Acer saccharum*	Good	High
361	18	*Pinus strobus*	Good	High
362	12	*Fraxinus americana*	Dead	Low
363	22	*Pinus strobus*	Good	High
364	16	*Pinus strobus*	Good	High
365	16	*Acer saccharum*	Good	High
366	12	*Acer saccharum*	Good	High
367	13	*Acer saccharum*	Fair	High
368	13	*Acer saccharum*	Fair	High
369	11	*Acer saccharum*	Good	High
370	19	*Acer saccharum*	Good	High
371	8	*Acer platanoides*	Good	Low
372	15	*Acer saccharum*	Good	High
373	15	*Fraxinus americana*	Dead	Low
374	22	*Fraxinus americana*	Dead	Low
375	17	*Acer saccharum*	Good	High
376	21	*Pinus strobus*	Fair	Moderate

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
377	24	*Pinus strobus*	Fair	Moderate
378	12	*Acer saccharum*	Good	High
379	24	*Pinus strobus*	Fair	Moderate
380	14	*Acer saccharum*	Good	High
381	32	*Fraxinus americana*	Dead	Low
382	11	*Picea abies*	Fair	Moderate
383	11	*Picea abies*	Fair	Moderate
384	11	*Acer platanoides*	Fair	Low
385	13	*Fraxinus americana*	Dead	Low
386	23	*Pinus strobus*	Good	High
387	15	*Acer platanoides*	Fair	Low
388	17	*Betula papyrifera*	Dead	Low
389	31	*Picea abies*	Good	High
390	26	*Picea abies*	Good	High
391	13	*Tilia americana*	Good	High
392	26	*Carya cardiformis*	Good	High
393	10	*Juglans nigra*	Fair	High
394	10	*Carya cardiformis*	Good	High
395	15	*Juniperus virginiana*	Good	High
396	30	*Quercus rubra*	Good	High
397	14	*Tilia americana*	Good	High
398	14	*Juglans nigra*	Good	High
399	20	*Juniperus virginiana*	Good	High
400	21	*Juniperus virginiana*	Good	High
401	24	*Juglans nigra*	Good	High
402	13	*Quercus alba*	Good	High
403	16	*Tilia americana*	Good	High
404	12	*Ulmus americana*	Good	High
405	12	*Robinia pseudoacacia*	Good	Low
406	33	*Pinus strobus*	Good	High
407	20	*Pinus strobus*	Good	High
408	11	*Robinia pseudoacacia*	Fair	Low
409	17	*Betula papyrifera*	Fair	Moderate
410	26	*Pinus strobus*	Good	High
411	21	*Carya cardiformis*	Good	High
412	35	*Quercus alba*	Good	High
413	13	*Liriodendron tulipifera*	Good	High
414	22	*Acer rubrum*	Good	High
415	24	*Pinus strobus*	Good	High
416	12	*Pinus strobus*	Fair	Moderate
417	24	*Juglans nigra*	Dead	Low
418	29	*Quercus prinus*	Poor	Low

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
419	12	*Tilia americana*	Good	High
420	10	*Pinus strobus*	Fair	Moderate
421	25	*Quercus rubra*	Poor	Low
422	17	*Carya cardiformis*	Fair	High
423	8	*Pinus strobus*	Fair	Moderate
424	10	*Tsuga canadensis*	Good	Low
425	8	*Pinus strobus*	Poor	Low
426	24	*Quercus rubra*	Poor	Low
427	21	*Quercus alba*	Fair	High
428	10	*Acer saccharum*	Fair	High
429	13	*Tsuga canadensis*	Good	Low
430	25	*Quercus rubra*	Fair	Moderate
431	19	*Carya cardiformis*	Good	High
432	22	*Pinus strobus*	Fair	Moderate
433	9	*Tsuga canadensis*	Fair	Low
434	13	*Fraxinus americana*	Dead	Low
435	24	*Quercus alba*	Good	High
436	10	*Acer saccharum*	Good	High
437	14	*Tsuga canadensis*	Good	Low
438	13	*Pinus strobus*	Fair	Moderate
439	23	*Quercus rubra*	Fair	Moderate
440	12	*Pinus strobus*	Good	High
441	11	*Acer saccharum*	Good	High
442	22	*Liriodendron tulipifera*	Good	High
443	24	*Liriodendron tulipifera*	Good	High
444	9	*Acer saccharum*	Good	High
445	9	*Fraxinus americana*	Dead	Low
446	10	*Acer saccharum*	Fair	High
447	20	*Quercus alba*	Good	High
448	9	*Fraxinus americana*	Dead	Low
449	19	*Carya cardiformis*	Good	High
450	10	*Fraxinus americana*	Dead	Low
451	12	*Acer saccharum*	Good	High
452	10	*Tilia americana*	Fair	Moderate
453	8	*Acer saccharum*	Fair	High
454	10	*Carya cardiformis*	Good	High
455	9	*Betula papyrifera*	Fair	Moderate
456	9	*Prunus pennsylvanica*	Fair	Low
457	13	*Salix babylonica*	Fair	Moderate
458	13	*Juglans nigra*	Poor	Low
459	24	*Pinus strobus*	Good	High
460	11	*Populus grandidentata*	Fair	Low

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
461	11	*Salix discolor*	Good	Moderate
462	13	*Salix discolor*	Fair	Moderate
463	9	*Populus grandidentata*	Fair	Low
464	25	*Acer saccharum*	Good	High
465	20	*Acer saccharum*	Good	High
466	22	*Juglans nigra*	Good	High
467	13	*Acer saccharum*	Fair	High
468	8	*Robinia pseudoacacia*	Poor	Low
469	8	*Juglans nigra*	Fair	High
470	34	*Juglans nigra*	Poor	Low
471	20	*Fraxinus americana*	Fair	Low
472	18	*Fraxinus americana*	Good	Low
473	22	*Robinia pseudoacacia*	Fair	Low
474	22	*Robinia pseudoacacia*	Fair	Low
475	9	*Pinus strobus*	Good	High
476	15	*Pinus strobus*	Good	High
477	18	*Quercus prinus*	Dead	Low
478	25	*Quercus rubra*	Good	High
479	16	*Quercus prinus*	Good	High
480	8	*Acer saccharum*	Good	High
481	8	*Acer saccharum*	Good	High
482	10	*Acer saccharum*	Fair	High
483	8	*Acer saccharum*	Good	High
484	19	*Quercus rubra*	Fair	Moderate
485	8	*Pinus strobus*	Good	High
486	9	*Pinus strobus*	Good	High
487	8	*Pinus strobus*	Good	High
488	14	*Tsuga canadensis*	Fair	Low
489	29	*Quercus prinus*	Fair	Moderate
490	17	*Quercus prinus*	Poor	Low
491	12	*Acer saccharum*	Good	High
492	24	*Quercus rubra*	Poor	Low
493	9	*Acer saccharum*	Good	High
494	12	*Quercus alba*	Dead	Low
495	10	*Acer saccharum*	Good	High
496	10	*Acer saccharum*	Good	High
497	11	*Acer saccharum*	Poor	Low
498	8	*Quercus rubra*	Good	High
499	11	*Tsuga canadensis*	Good	Low
500	14	*Acer platanoides*	Good	Low
501	8	*Fraxinus americana*	Dead	Low
502	12	*Prunus serotina*	Fair	Low

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
503	13	*Populus tremuloides*	Poor	Low
504	16	*Acer saccharum*	Good	High
505	8	*Acer saccharum*	Good	High
506	12	*Pinus strobus*	Good	High
507	11	*Acer platanoides*	Fair	Low
508	16	*Tilia americana*	Fair	Moderate
509	16	*Acer saccharum*	Good	High
510	16	*Acer saccharum*	Good	High
511	35	*Pinus strobus*	Fair	Moderate
512	13	*Pinus strobus*	Good	High
513	9	*Ulmus americana*	Dead	Low
514	20	*Acer saccharum*	Good	High
515	8	*Acer platanoides*	Good	Low
516	12	*Robinia pseudoacacia*	Good	Low
517	15	*Acer platanoides*	Good	Low
518	12	*Fraxinus americana*	Dead	Low
519	12	*Acer saccharum*	Fair	High
520	11	*Robinia pseudoacacia*	Good	Low
521	12	*Acer saccharum*	Good	High
522	12	*Acer saccharum*	Good	High
523	39	*Pinus strobus*	Poor	Low
524	15	*Pinus strobus*	Fair	Moderate
525	16	*Pinus strobus*	Poor	Low
526	20	*Quercus rubra*	Good	High
527	12	*Acer saccharum*	Good	High
528	8	*Ostrya virginiana*	Good	High
529	15	*Tilia americana*	Fair	Moderate
530	16	*Populus tremuloides*	Good	Low
531	19	*Quercus rubra*	Good	High
532	10	*Acer saccharum*	Good	High
533	33	*Pinus strobus*	Fair	Moderate
534	17	*Fraxinus americana*	Fair	Low
535	20	*Populus tremuloides*	Good	Low
536	12	*Fraxinus americana*	Poor	Low
537	22	*Acer saccharum*	Good	High
538	19	*Populus tremuloides*	Good	Low
539	18	*Populus tremuloides*	Good	Low
540	16	*Pinus strobus*	Poor	Low
541	12	*Acer platanoides*	Poor	Low
542	8	*Acer platanoides*	Fair	Low
543	29	*Pinus strobus*	Fair	Moderate
544	11	*Carya ovata*	Good	High

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
545	10	*Acer platanoides*	Fair	Low
546	18	*Tilia americana*	Fair	Moderate
547	33	*Pinus strobus*	Good	High
548	12	*Fraxinus americana*	Dead	Low
549	9	*Acer saccharum*	Good	High
550	8	*Acer saccharum*	Good	High
551	12	*Acer saccharum*	Good	High
552	11	*Prunus serotina*	Good	High
553	11	*Acer saccharum*	Good	High
554	8	*Fraxinus americana*	Poor	Low
555	17	*Tilia americana*	Poor	Low
556	18	*Fraxinus americana*	Dead	Low
557	18	*Ulmus americana*	Good	High
558	24	*Fraxinus americana*	Poor	Low
559	12	*Tilia americana*	Good	High
560	28	*Pinus strobus*	Fair	Moderate
561	9	*Acer saccharum*	Good	High
562	10	*Acer saccharum*	Good	High
563	13	*Acer saccharum*	Good	High
564	8	*Acer saccharum*	Good	High
565	19	*Acer saccharum*	Good	High
566	8	*Acer saccharum*	Good	High
567	15	*Acer saccharum*	Good	High
568	9	*Acer saccharum*	Good	High
569	17	*Tilia americana*	Good	High
570	8	*Acer saccharum*	Good	High
571	25	*Tilia americana*	Fair	Moderate
572	15	*Acer saccharum*	Good	High
573	11	*Fraxinus americana*	Poor	Low
574	28	*Carya tomentosa*	Good	High
575	14	*Acer saccharum*	Good	High
576	13	*Acer saccharum*	Poor	Low
577	14	*Quercus rubra*	Good	High
578	10	*Acer saccharum*	Good	High
579	12	*Acer saccharum*	Good	High
580	11	*Acer saccharum*	Good	High
581	11	*Acer saccharum*	Good	High
582	15	*Acer saccharum*	Good	High
583	12	*Acer saccharum*	Good	High
584	30	*Pinus strobus*	Poor	Low
585	22	*Fraxinus americana*	Dead	Low
586	18	*Liriodendron tulipifera*	Good	High

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
587	28	*Acer saccharum*	Good	High
588	11	*Acer saccharum*	Good	High
589	15	*Fraxinus americana*	Poor	Low
590	11	*Fraxinus americana*	Dead	Low
591	13	*Acer saccharum*	Good	High
592	13	*Acer saccharum*	Good	High
593	10	*Acer saccharum*	Fair	High
594	23	*Acer saccharum*	Fair	High
595	13	*Tsuga canadensis*	Poor	Low
596	11	*Acer saccharum*	Good	High
597	10	*Ostrya virginiana*	Good	High
598	11	*Tsuga canadensis*	Fair	Low
599	15	*Acer saccharum*	Fair	High
600	14	*Acer saccharum*	Good	High
601	13	*Fraxinus americana*	Dead	Low
602	12	*Acer saccharum*	Fair	High
603	13	*Tilia americana*	Fair	Moderate
604	47	*Pinus strobus*	Fair	Moderate
605	9	*Prunus pennsylvanica*	Good	Low
606	12	*Fraxinus americana*	Dead	Low
607	34	*Pinus strobus*	Poor	Low
608	12	*Acer saccharum*	Good	High
609	9	*Acer saccharum*	Good	High
610	19	*Carya tomentosa*	Good	High
611	11	*Acer saccharum*	Good	High
612	16	*Quercus alba*	Fair	High
613	14	*Acer saccharum*	Good	High
614	25	*Tilia americana*	Poor	Low
615	11	*Acer platanoides*	Good	Low
616	19	*Acer platanoides*	Dead	Low
617	13	*Betula papyrifera*	Fair	Moderate
618	10	*Betula papyrifera*	Fair	Moderate
619	9	*Tilia americana*	Good	High
620	19	*Acer platanoides*	Good	Low
621	14	*Acer saccharum*	Good	High
622	19	*Acer saccharum*	Good	High
623	13	*Tsuga canadensis*	Fair	Low
624	13	*Tsuga canadensis*	Fair	Low
625	23	*Carya ovata*	Good	High
626	33	*Quercus rubra*	Poor	Low
627	10	*Acer saccharum*	Good	High
628	11	*Tilia americana*	Good	High

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
629	16	*Acer saccharum*	Good	High
630	14	*Fraxinus americana*	Dead	Low
631	15	*Acer saccharum*	Dead	Low
632	12	*Tsuga canadensis*	Fair	Low
633	17	*Quercus alba*	Fair	High
634	13	*Tsuga canadensis*	Fair	Low
635	13	*Quercus alba*	Good	High
636	22	*Pinus strobus*	Dead	Low
637	9	*Acer saccharum*	Good	High
638	9	*Acer saccharum*	Good	High
639	12	*Acer saccharum*	Fair	High
640	13	*Fraxinus americana*	Poor	Low
641	27	*Fraxinus americana*	Fair	Low
642	15	*Fraxinus americana*	Dead	Low
643	13	*Acer saccharum*	Good	High
644	9	*Acer saccharum*	Good	High
645	13	*Fraxinus americana*	Dead	Low
646	12	*Fraxinus americana*	Dead	Low
647	25	*Acer saccharum*	Good	High
648	22	*Fraxinus americana*	Dead	Low
649	8	*Acer saccharum*	Good	High
650	8	*Acer saccharum*	Dead	Low
651	10	*Tsuga canadensis*	Dead	Low
652	9	*Acer saccharum*	Dead	Low
653	12	*Fraxinus americana*	Dead	Low
654	11	*Acer saccharum*	Good	High
655	9	*Fraxinus americana*	Dead	Low
656	9	*Fraxinus americana*	Poor	Low
657	16	*Acer saccharum*	Good	High
658	11	*Tsuga canadensis*	Fair	Low
659	12	*Tilia americana*	Good	High
660	15	*Acer saccharum*	Good	High
661	11	*Acer saccharum*	Good	High
662	14	*Acer saccharum*	Good	High
663	22	*Acer saccharum*	Fair	High
664	10	*Tsuga canadensis*	Fair	Low
665	13	*Acer saccharum*	Good	High
666	14	*Acer saccharum*	Good	High
667	16	*Acer saccharum*	Fair	High
668	14	*Fraxinus americana*	Poor	Low
669	16	*Tsuga canadensis*	Fair	Low
670	13	*Fraxinus americana*	Poor	Low

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
671	20	*Carya tomentosa*	Good	High
672	9	*Carya ovata*	Good	High
673	18	*Carya ovata*	Good	High
674	12	*Acer saccharum*	Good	High
675	8	*Acer saccharum*	Good	High
676	8	*Fraxinus americana*	Poor	Low
677	16	*Tsuga canadensis*	Good	Low
678	8	*Tsuga canadensis*	Dead	Low
679	33	*Tsuga canadensis*	Dead	Low
680	15	*Tsuga canadensis*	Fair	Low
681	12	*Juniperus virginiana*	Dead	Low
682	13	*Acer saccharum*	Good	High
683	9	*Fraxinus americana*	Poor	Low
684	8	*Acer saccharum*	Fair	High
685	13	*Acer saccharum*	Fair	High
686	13	*Acer saccharum*	Good	High
687	15	*Acer saccharum*	Good	High
688	10	*Fraxinus americana*	Dead	Low
689	12	*Pinus strobus*	Fair	Moderate
690	32	*Quercus rubra*	Poor	Low
691	24	*Quercus rubra*	Poor	Low
692	8	*Acer saccharum*	Good	High
693	20	*Quercus prinus*	Fair	Moderate
694	16	*Acer saccharum*	Good	High
695	12	*Quercus alba*	Good	High
696	31	*Quercus rubra*	Fair	Moderate
697	19	*Acer saccharum*	Poor	Low
698	29	*Quercus rubra*	Fair	Moderate
699	16	*Tsuga canadensis*	Fair	Low
700	8	*Acer saccharum*	Good	High
701	35	*Pinus strobus*	Poor	Low
702	22	*Pinus strobus*	Fair	Moderate
703	12	*Fraxinus americana*	Fair	Low
704	17	*Tsuga canadensis*	Fair	Low
705	28	*Quercus rubra*	Good	High
706	12	*Acer saccharum*	Good	High
707	10	*Acer saccharum*	Good	High
708	30	*Pinus strobus*	Dead	Low
709	10	*Acer saccharum*	Good	High
710	16	*Pinus strobus*	Fair	Moderate
711	21	*Pinus strobus*	Good	High
712	16	*Pinus strobus*	Fair	Moderate

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
713	18	*Tilia americana*	Fair	Moderate
714	17	*Quercus prinus*	Fair	Moderate
715	8	*Fraxinus americana*	Fair	Low
716	12	*Pinus strobus*	Good	High
717	16	*Tsuga canadensis*	Poor	Low
718	12	*Prunus pennsylvanica*	Fair	Low
719	12	*Acer saccharum*	Good	High
720	14	*Pinus strobus*	Good	High
721	17	*Pinus strobus*	Good	High
722	10	*Acer saccharum*	Good	High
723	11	*Acer saccharum*	Good	High
724	30	*Quercus alba*	Good	High
725	9	*Acer saccharum*	Good	High
726	9	*Acer saccharum*	Good	High
727	8	*Acer saccharum*	Fair	High
728	11	*Fraxinus americana*	Poor	Low
729	12	*Acer saccharum*	Good	High
730	8	*Acer saccharum*	Fair	High
731	9	*Acer saccharum*	Good	High
732	11	*Acer saccharum*	Good	High
733	35	*Quercus rubra*	Fair	Moderate
734	30	*Quercus rubra*	Good	High
735	25	*Quercus rubra*	Good	High
736	20	*Pinus strobus*	Good	High
737	8	*Tsuga canadensis*	Poor	Low
738	33	*Quercus rubra*	Good	High
739	18	*Tsuga canadensis*	Fair	Low
740	15	*Quercus alba*	Poor	Low
741	13	*Acer saccharum*	Fair	High
742	11	*Acer saccharum*	Good	High
743	11	*Acer saccharum*	Fair	High
744	9	*Acer saccharum*	Fair	High
745	13	*Acer saccharum*	Good	High
746	8	*Acer saccharum*	Good	High
747	8	*Acer saccharum*	Fair	High
748	13	*Carya tomentosa*	Good	High
749	20	*Quercus alba*	Good	High
750	10	*Acer saccharum*	Good	High
751	30	*Liriodendron tulipifera*	Fair	High
752	23	*Quercus alba*	Good	High
753	10	*Acer saccharum*	Good	High
754	26	*Quercus alba*	Good	High

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
755	21	*Quercus alba*	Good	High
756	9	*Acer saccharum*	Good	High
757	9	*Acer saccharum*	Good	High
758	24	*Quercus alba*	Good	High
759	19	*Quercus rubra*	Dead	Low
760	21	*Quercus alba*	Good	High
761	9	*Acer saccharum*	Good	High
762	20	*Quercus rubra*	Dead	Low
763	9	*Acer saccharum*	Good	High
764	24	*Quercus rubra*	Poor	Low
765	16	*Acer saccharum*	Good	High
766	19	*Quercus alba*	Good	High
767	10	*Acer saccharum*	Good	High
768	22	*Quercus alba*	Good	High
769	20	*Quercus alba*	Good	High
770	11	*Acer saccharum*	Good	High
771	25	*Quercus alba*	Good	High
772	10	*Tsuga canadensis*	Good	Low
773	8	*Carya cardiformis*	Good	High
774	8	*Acer saccharum*	Good	High
775	25	*Pinus strobus*	Good	High
776	9	*Acer saccharum*	Good	High
777	8	*Acer saccharum*	Good	High
778	28	*Quercus rubra*	Fair	Moderate
779	8	*Acer saccharum*	Good	High
780	10	*Pinus strobus*	Dead	Low
781	8	*Acer saccharum*	Good	High
782	40	*Acer saccharum*	Fair	High
783	9	*Acer saccharum*	Good	High
784	8	*Acer saccharum*	Good	High
785	13	*Acer saccharum*	Good	High
786	24	*Acer saccharum*	Poor	Low
787	10	*Tsuga canadensis*	Fair	Low
788	17	*Acer saccharum*	Good	High
789	11	*Acer saccharum*	Good	High
790	16	*Fraxinus americana*	Poor	Low
791	8	*Acer saccharum*	Good	High
792	24	*Tsuga canadensis*	Good	Low
793	21	*Carya tomentosa*	Good	High
794	16	*Carya tomentosa*	Good	High
795	8	*Acer saccharum*	Good	High
796	21	*Carya ovata*	Good	High

Tree Id	DBH	Scientific Name	Condition Class	Suitability for Preservation
797	22	*Quercus alba*	Good	High
798	10	*Acer saccharum*	Good	High
799	11	*Acer saccharum*	Poor	Low
800	15	*Acer saccharum*	Good	High

Appendix III Specific Tree Protection Zone/Critical Root Zone Table

Tree ID	Common Name	Condition Class	Suitability For Preservation	Dbh	CRZ (ft)	TPZ ft)
14	Maple-Sugar	Fair	High	8	3.3	8
173	Pine-Eastern White	Fair	Moderate	37	15.4	37
175	Pine-Eastern White	Good	High	27	11.3	27
178	Pine-Eastern White	Fair	Moderate	24	10.0	24
179	Maple-Red	Good	High	25	10.4	25
181	Pine-Eastern White	Poor	Low	15	6.3	15
182	Pine-Eastern White	Good	High	20	8.3	20
314	Maple-Sugar	Fair	High	8	3.3	8
315	Cherry-Black	Fair	Low	8	3.3	8
348	Pine-Eastern White	Fair	Moderate	15	6.3	15
349	Maple-Sugar	Good	High	10	4.2	10
350	Maple-Sugar	Good	High	11	4.6	11
351	Maple-Sugar	Good	High	11	4.6	11
392	Hickory-Bitternut	Good	High	26	10.8	26
414	Maple-Red	Good	High	22	9.2	22
415	Pine-Eastern White	Good	High	24	10.0	24
416	Pine-Eastern White	Fair	Moderate	12	5.0	12
419	Linden-American	Good	High	12	5.0	12
420	Pine-Eastern White	Fair	Moderate	10	4.2	10
422	Hickory-Bitternut	Fair	High	17	7.1	17
423	Pine-Eastern White	Fair	Moderate	8	3.3	8
428	Maple-Sugar	Fair	High	10	4.2	10
429	Hemlock-Canadian	Good	Low	13	5.4	13
430	Oak-Northern Red	Fair	Moderate	25	10.4	25
431	Hickory-Bitternut	Good	High	19	7.9	19
437	Hemlock-Canadian	Good	Low	14	5.8	14
440	Pine-Eastern White	Good	High	12	5.0	12
449	Hickory-Bitternut	Good	High	19	7.9	19
475	Pine-Eastern White	Good	High	9	3.8	9
476	Pine-Eastern White	Good	High	15	6.3	15
477	Oak-Chestnut	Dead	Low	18	7.5	18
478	Oak-Northern Red	Good	High	25	10.4	25
479	Oak-Chestnut	Good	High	16	6.7	16
480	Maple-Sugar	Good	High	8	3.3	8
481	Maple-Sugar	Good	High	8	3.3	8
482	Maple-Sugar	Fair	High	10	4.2	10
483	Maple-Sugar	Good	High	8	3.3	8
484	Oak-Northern Red	Fair	Moderate	19	7.9	19
485	Pine-Eastern White	Good	High	8	3.3	8
486	Pine-Eastern White	Good	High	9	3.8	9
487	Pine-Eastern White	Good	High	8	3.3	8

Tree ID	Common Name	Condition Class	Suitability For Preservation	Dbh	CRZ (ft)	TPZ ft)
502	Cherry-Black	Fair	Low	12	5.0	12
503	Poplar-Aspen	Poor	Low	13	5.4	13
504	Maple-Sugar	Good	High	16	6.7	16
505	Maple-Sugar	Good	High	8	3.3	8
526	Oak-Northern Red	Good	High	20	8.3	20
527	Maple-Sugar	Good	High	12	5.0	12
752	Oak-White	Good	High	23	9.6	23
754	Oak-White	Good	High	26	10.8	26
755	Oak-White	Good	High	21	8.8	21
758	Oak-White	Good	High	24	10.0	24
760	Oak-White	Good	High	21	8.8	21
768	Oak-White	Good	High	22	9.2	22
769	Oak-White	Good	High	20	8.3	20
770	Maple-Sugar	Good	High	11	4.6	11
773	Hickory-Bitternut	Good	High	8	3.3	8

Maps and Plan Excerpts

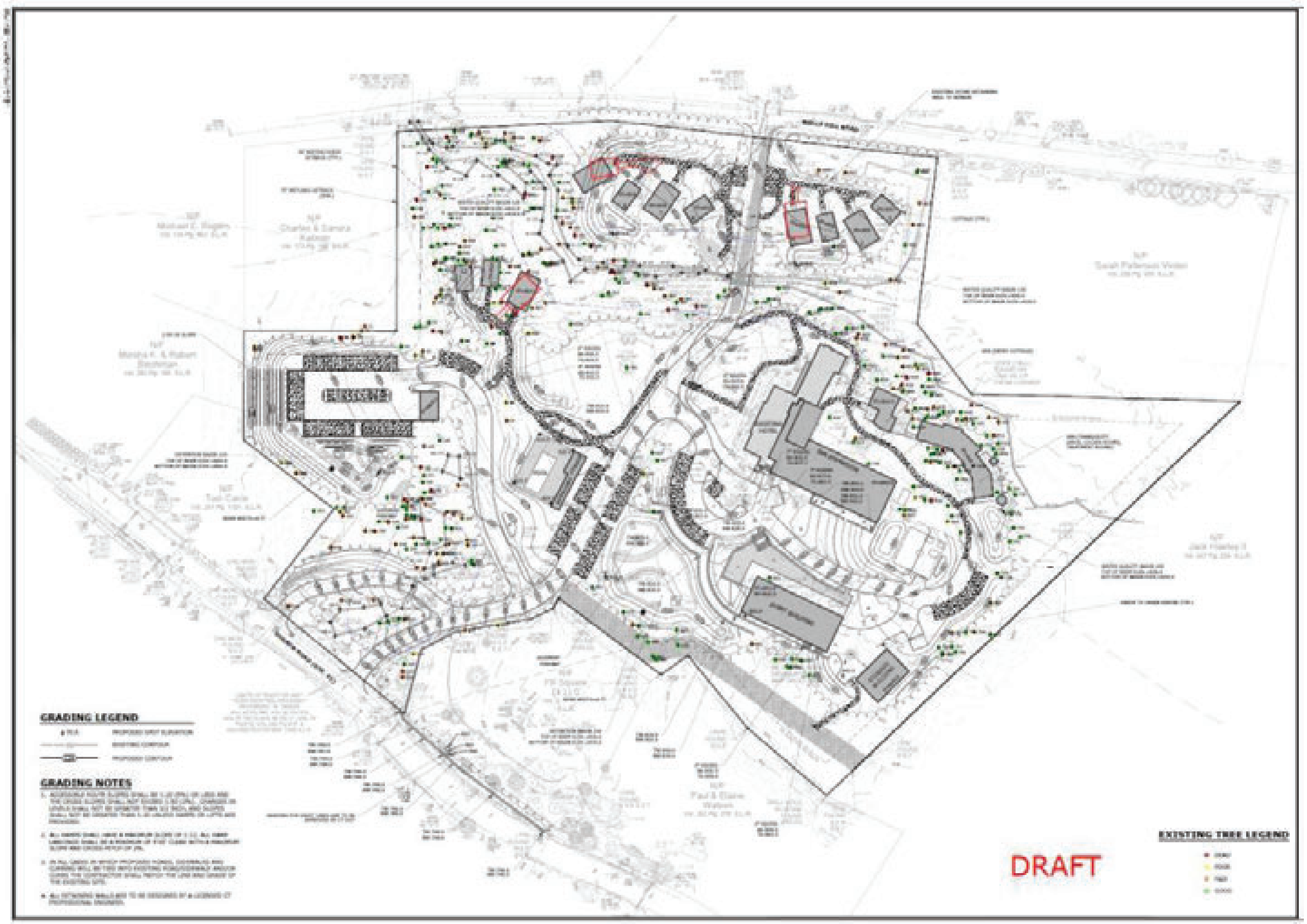


Image 1 of provided plan.

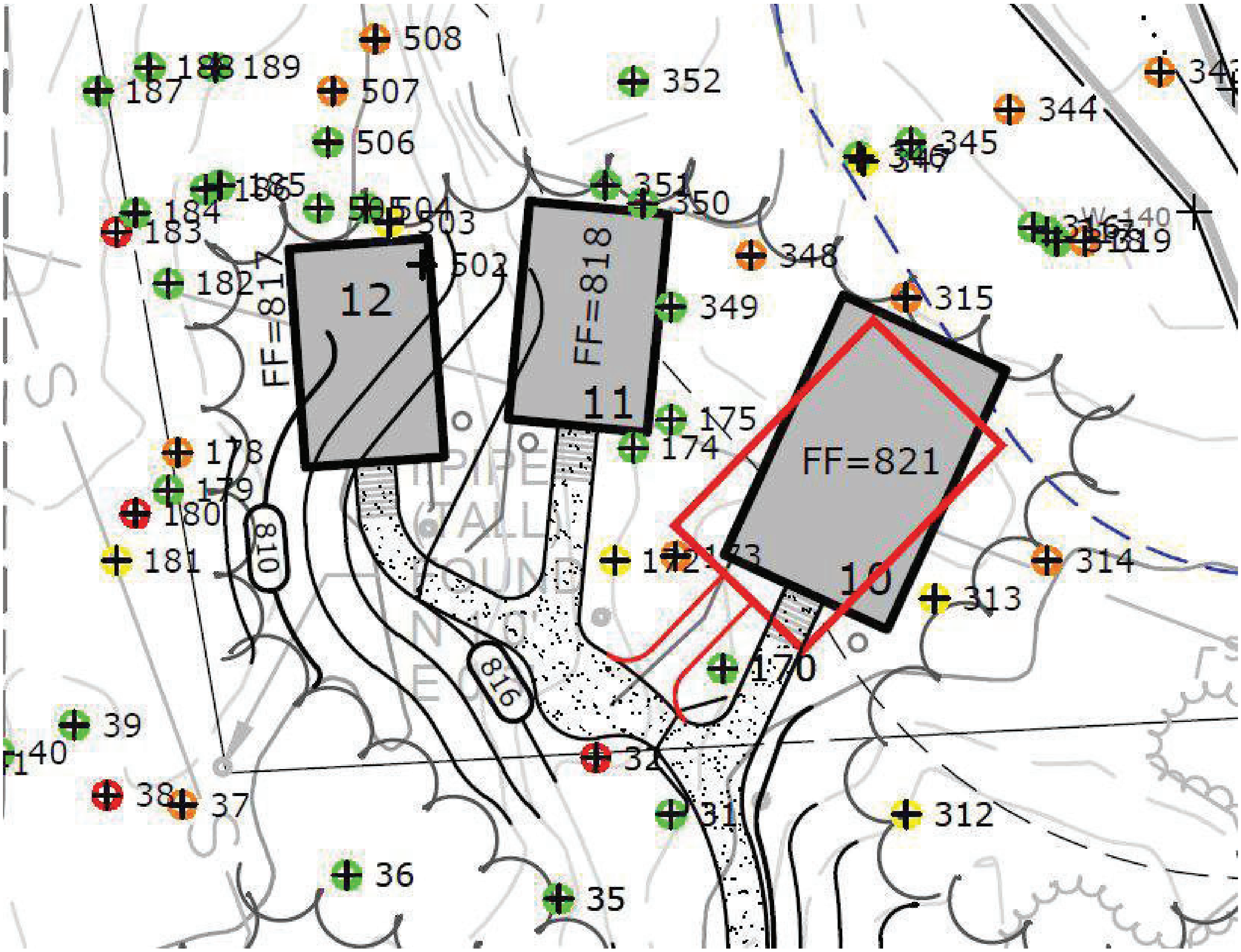


Image 2 of trees around cabins 10-12. The exact placement of these structures and their supporting helical piles may be slightly altered to allow for preservation of surrounding trees. Construction activities for these structures will be deliberately designed to encourage tree health including but not limited to: the installation of trunk protection when working near trees, installation of wood chip and protective matting to prevent soil compaction, and use of an Airspade™ to identify presence of significant roots where helical piles are installed.

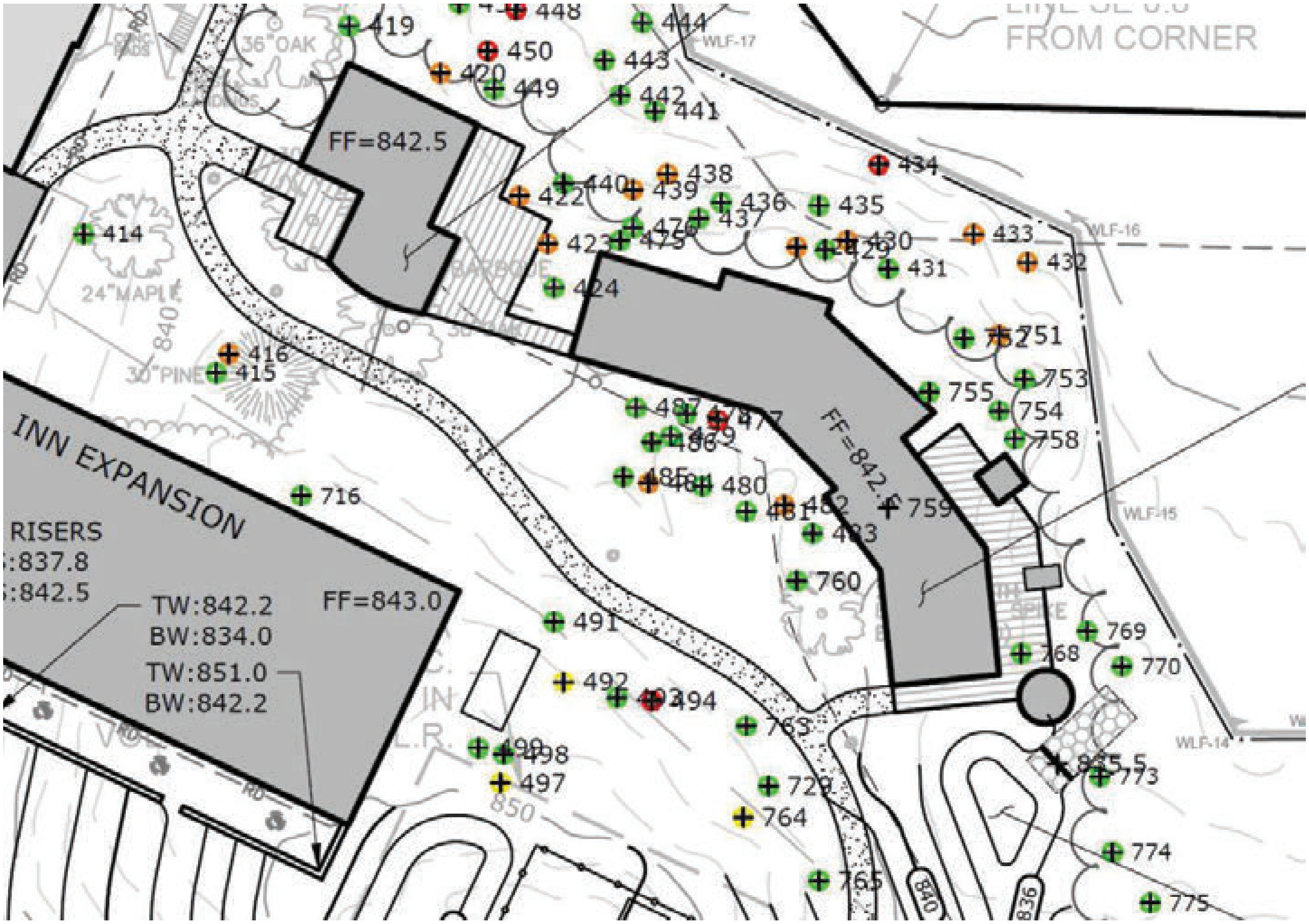


Image 3 of area surrounding West building. A deliberate access or mobilization plan will be required here to limit the disturbance to surrounding trees along with the installation of trunk protection where working in close proximity to remaining trees. As with the trees surrounding the cabins, care must be taken to limit root impacts with the installation of a fence at the limits of construction and to protect the soil from excessive compaction.

SOUND STUDY

April 29, 2025

Aradev LLC
Attn: Messrs. Steven Cohen and Jonathan Marrale
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

Direct: 917.575.6081
e-Mail: jonathanmarrale@gmail.com
scohen087@gmail.com

Subject: Wake Robin Inn, Salisbury, CT
Sound Analysis

Dear Messrs. Cohen and Marrale,

Wake Robin Inn, 104 & 106 Sharon Road and 53 Wells Hill Road, Salisbury, Connecticut is an existing hotel and event venue hosting outdoor and tented weddings and other receptions. A redevelopment plan has been proposed that adds guestrooms, a spa building, an outdoor pool and cabana; new service facilities; and a new event space with food, beverages, and entertainment which promotes indoor events.

Executive Summary

This report summarizes our acoustical study for the redevelopment of the Wake Robin Inn, Salisbury, Connecticut. The study includes:

- A review of the State of Connecticut Title 22a-69 Noise Control regulation
- A review of the Zoning Regulations of the Town of Salisbury as they relate to Article VIII §803 Standards for Special Permits applicable to this project
- Sound monitoring to evaluate the existing ambient sound levels at Wake Robin Inn property lines nearest surrounding residences and to set a baseline for recommending design goals for music sound at property line locations, and reference sound measurements conducted to characterize car door slam, start, and horn sound levels, and waste collection sound levels.
- Estimates of future Wake Robin Inn sound levels at representative property line locations closest to nearby residences for all sound sources

Computer modeling complying with ISO 9613-2 (2024) for all Wake Robin Inn sound sources has determined that sound at all study locations will be within the limits set by the State of Connecticut Noise Control Regulation. Additionally, though the Noise Control Regulation permits a music level of 40 dBA at night at residential property lines, a voluntary lower design goal for music sound of 32 dBA has been recommended to minimize any chance of adversely impacting nearest residences. Through computer modeling, it has been determined that music sound will also generally fall under our recommended design goal at nearest residential property lines, and considerably below the music design goal at nearest residences.

Accordingly, we conclude that sound produced by activities and equipment of the redeveloped Wake Robin Inn will comply with the State of Connecticut Noise Control Regulation. Moreover, Wake Robin Inn activities and equipment sound will "…*not create a nuisance to neighboring properties*…" as prohibited by the Salisbury Planning and Zoning Commission Special Permit Use Section 803.2.

Introduction

To address Salisbury Planning and Zoning Commission (PZC) and community concerns, this report provides the following:

- A summary of applicable Town and State limits on sound.
- Evaluation of existing ambient sound levels at Wake Robin Inn through measurements at property lines near adjacent residences. Measurement locations are shown in Figure 1. Sound measurement data are presented in Appendix A. During measurements, the Inn was closed for the season so that levels measured are without Wake Robin Inn operations.
- A Cadna/A computer model to evaluate sound levels at nearby residences produced by Wake Robin Inn activity and equipment sound levels. Sound sources include transmitted event space music, auto parking transient sounds, pool activity, building mechanical equipment, and waste handling.

Applicable Sound Limits

State of Connecticut

Regulations of Connecticut State Agencies, Department of Environmental Protection, Sections §§ 22a-69-1—22a-69-7.4 Noise Control defines terms used in the Code, defines specific sound source types to which to Code applies or from which they are excluded, and sets specific limits based on emitter and receptor land use classification (SLUCONN, Standard Land Use Classification Manual of Connecticut).

Accordingly, the hotel site and surrounding residential parcels are defined as SLUCONN Class A sites. The Wake Robin Inn, as a hotel land use emitter must not permit sound levels at its property lines common with residential uses to exceed 55 dBA during the day and 45 dBA at night (Sec. 22a-69-3.5(c) Noise zone standards). Day is defined as 7:00 AM to 10:00 PM, and night the complimentary hours 10:00 PM to 7:00 AM.

In addition, impulse noise (intermittent sound enduring for 1 second or less) is limited to a level not exceeding 80 dBA at night transmitted to a Class A land use. Continuous sound with one or more audible discrete tones transmitted into another noise zone must not exceed the otherwise applicable limit reduced by 5 dB (Sec. 22a-69-3.3). In this case, tonal sound transmitted from the Wake Robin Inn Class A site into any adjacent Class A land use must not exceed 50 dBA during the day and 40 dBA at night. As we interpret the Regulation, sound with audible discrete tones would include music.

Town of Salisbury, Connecticut

It is our understanding that the Town of Salisbury does not have a noise ordinance setting specific, measurable limits on sound. However, the Planning and Zoning Commission Regulations dated May 20, 2024, Special Permit Uses section 803.2 Relation of Buildings to Environment states:

> The size and intensity, as well as the design, of the proposed project or development shall be related harmoniously to the terrain and to the use, scale, and siting of existing buildings in the vicinity of the site. The use shall not create a nuisance to neighboring properties, whether by noise, air, or water pollution; offensive odors, dust, smoke, vibrations, lighting, or other effects.

The requirement to be "…*related harmoniously to the terrain and to the use, scale, and siting of the existing buildings in the vicinity of the site*" and the requirement that the "…*use shall not create a nuisance to neighboring properties*…" requires consideration of potential impacts of sound at levels possibly lower than otherwise limited by code, either Town, State, or otherwise.

Sound Monitoring

Community response to a new sound in the environment is most closely related to the amount by which the new sound exceeds the existing ambient sound or baseline sound level. For this report, ambient sound levels have been measured continuously in hourly increments over a 7-day period at eight locations identified as SM1-SM8 in Figure 1. Sound level monitoring began on Thursday, February 27 and concluded on Wednesday, March 5, 2025. A discussion of sound monitoring is included in Appendix A of this report and includes sound measurement equipment photos in Figure A-1.

Figure 1. Sound monitoring locations— Thursday, February 27 to Wednesday, March 5, 2025
Wake Robin Inn, Salisbury, CT

Appendix A Figures A-2 through A-9 present hourly energy average sound levels and weather data graphically. Table 1 below (and in Appendix A Table A-1) lists the lowest hourly energy average sound levels measured at SM1-SM8 over the 7-day period between the hours of 5:00 PM and midnight when the hotel would be at its busiest during weddings and other similar functions that include event building music. Among the Wake Robin Inn sounds, the community is expected to be most sensitive to music sound. For Wake Robin Inn music sound, we have designated a design goal of 32 dBA at nearest residences. The music sound design goal is lower than the CT DEP Sec. 22a-69-3.3 implied nighttime limit of 40 dBA for tonal sound, i.e. a Class A emitter to a Class A receptor of 45 dBA at night minus 5 dB to account for tonality. Similarly, we have applied a 5 dBA reduction to the baseline sound level defined as the lowest hourly energy average sound level of 37dBA measured at SM3, thus leading to a Wake Robin Inn music sound goal of 32 dBA. For other Wake Robin Inn sounds, mostly of a broadband nature with minimal tonality, the CT DEP Sec. 22a-69-3.5(c) limits have been used, i.e., 55 dBA during the day and 45 dBA at night.

Sound Monitoring Location	Lowest $LA_{eq,1\text{-}hr}$ (dBA)	Design Goal for Music: Lowest measured $LA_{eq,1\text{-}hr}$ minus 5 dB
SM1	43	32
SM2	42	
SM3	37	
SM4	40	
SM5	41	
SM6	54	
SM7	41	
SM8	41	

Table 1. Summary of lowest measured hourly A-weighted energy average sound levels during busiest event hours 5:00 PM to midnight Wake Robin Inn, Salisbury, CT (Same as Table A-1 of Appendix A)

Modeling of Hotel Activity Sound

Sound produced by Wake Robin Inn equipment and activities have been estimated using a computer model of sound propagation from sources to representative study locations. Modeling of facility sound was completed using Cadna/A (Datakustik GmbH, Version 2021 MR1, 32-bit). Cadna/A is a computer program that implements the sound propagation loss techniques of ISO 9613-1 and ISO 9613-2 (2024) to estimate source sound levels at receptor locations. The Cadna/A model accounts for reductions in sound pressure levels associated with propagation distance, shielding by intervening structures and topography, and absorption of sound by the atmosphere and porous surfaces.

The locations of study receptor locations, and sound source activities and equipment are shown in Figure 2. The Cadna/A model requires sound power levels for all sources modeled. Octave band sound power levels are provided in Appendix B Table B-1. Sound power level quantifies the amount of sound energy produced by a source and is expressed in decibels referenced to 1 picoWatt (pW or 10^{-12} watts).

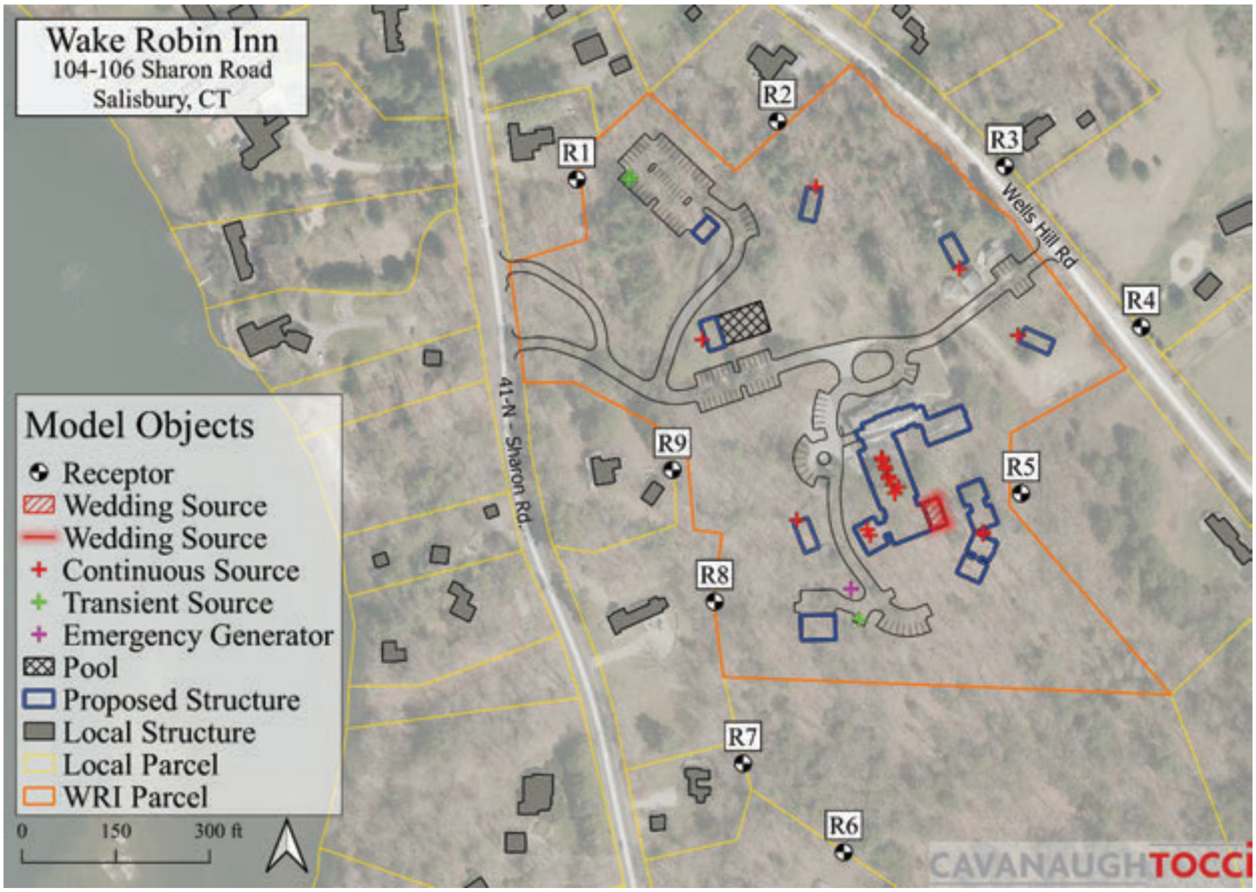


Figure 2. Receptor and sound source locations used in Cadna/A computer sound propagation loss modeling Wake Robin Inn, Salisbury, CT

Sources studied are listed in Table 2 and include car ignition, door slams, and horn as measured on-site on February 26, 2025, as were impact sounds during dumpster servicing on the same day. Table 2 also presents the Cadna-determined estimated sound levels at receptor locations R1-R9 produced by each sound source. In all cases, the estimated sound levels at receptor locations R1-R9 are below the state limit, or in the case of music sound transmitted from the event space, are below our recommended design goal based on existing ambient sound levels between 5:00 PM to midnight. Pool sound is based on a typical hotel pool from Cavanaugh Tocci files. HVAC equipment sound levels in Appendix B Table B-1 are from manufacturer literature based on sizes and units currently being considered by the Mechanical Engineer.

Music sound within the event space has been assumed to be 95 dBA. Music sound transmitted to the outside will be through the glazing in the event space extension separated from the event space by interior doors. However, the music level in event space extension will likely be about 5 dBA lower than the 95 dBA used in our modeling, thus leading to an overestimate in Table 2 of music sound levels at receptor locations.

The event space walls are a wood frame and gypsum wall assembly clad on the outside with a 2" thick brick finish. Appendix B Figure B-1a contains a wall section and sound transmission loss estimate determined using INSUL, a computer program used to estimate the sound transmission loss of building assemblies. As noted in Figure B-1a, the estimated sound transmission class (STC) rating is 57.

The event space has an extension to have glazed roof and walls using Secco Sistemi S.p.A.OS2 double glazed windows comprised of the following:

- 5 mm glass
- 16 mm Argon filled space
- 8.5 mm laminated glass (4 mm glass bonded to 0.5 mm PVB interlayer bonded to 4 mm glass)

Appendix B Figure B-1b includes a window section sketch and Istituto Giordano test report No. 258778/4480/CPD dated 11/08/2009 result indicating an R_w of 42 dB as per ISO 140-3:2006 and ISO 717-1:2007. R_w rating is similar to the sound transmission class (STC) rating more commonly used in the United States.

Source	Sound Source Type	R1	R2	R3	R4	R5	R6	R7	R8	R9	State of CT Limit (dBA)	Design Goal (dBA)
Car Ignition	Continuous	42	29	20	16	0	12	15	22	26	45	Same as CT DEP Limit
Car Door	Impulse	45	32	24	21	12	18	20	28	31	80*	
Car Horn	Impulse	74	60	52	48	30	44	47	54	58	75**	
Dumpster	Impulse	11	16	2	18	11	29	29	22	24	80*	
Pool	Continuous	19	15	10	13	3	6	11	20	24	55	
HVAC Equipment	Continuous	37	35	35	39	43	40	39	45	43	45	
Emergency Generator	Continuous	25	29	16	21	26	37	29	42	38	55****	
Event Space Music	Tonal (Music)	1	4	11	20	24	14	14	13	6	40**	32***

*Impulse noise–Noise of short duration (generally one second or less) with abrupt onset and rapid decay (CT DEP Sec. 22a-69-1.2(k)).

**Tonal noise–Noise with one or more discrete tones shall be considered excessive when a level of 5 dBA below the levels specified in CT DEP Sec. 22a-69-3.3 is exceeded.

***A 5 dBA reduction has been applied to the baseline defined as the lowest hourly energy average sound level of 37 dBA measured at SM3 leading to a Wake Robin Inn music sound goal of 32 dBA.

****Maintenance-operated for 1 hour once a week during weekdays 9:00 AM to 4:00 PM

Table 2. Estimated sound levels at study locations R1-R9
Wake Robin Inn, Salisbury, CT

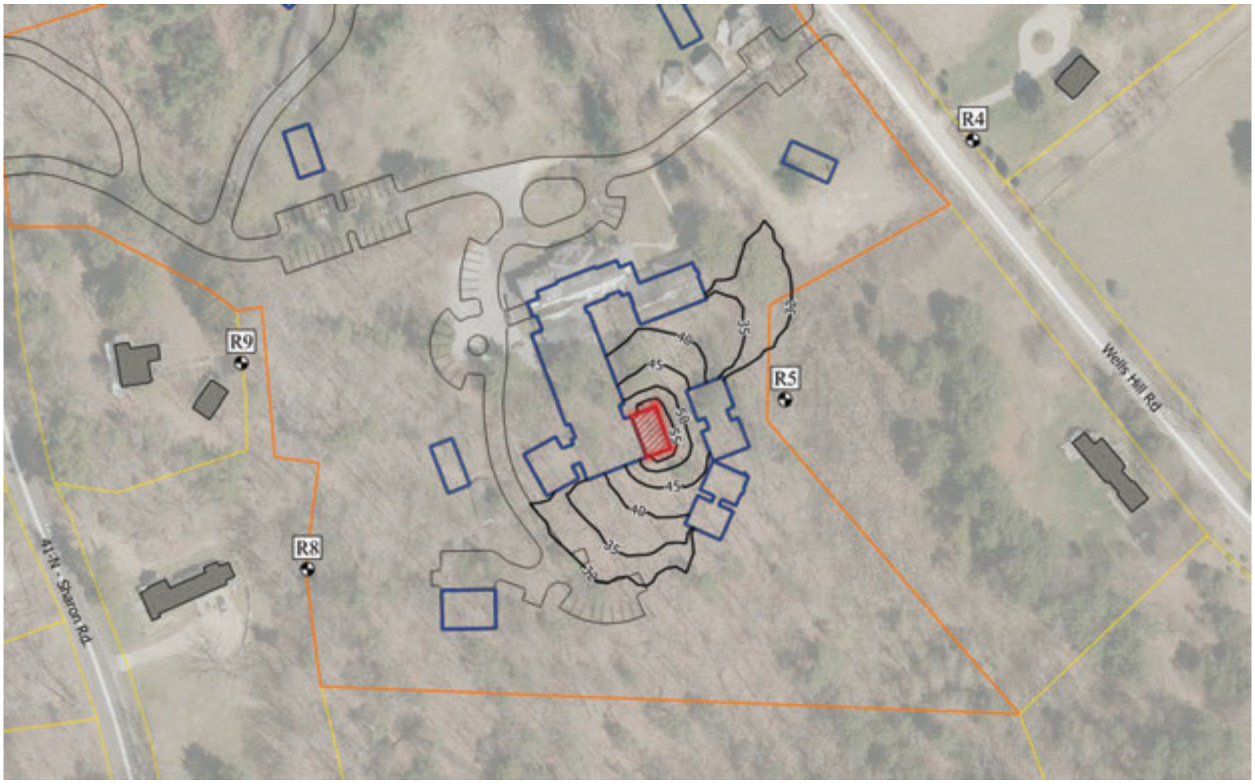


Figure 3. Event space music sound transmitted outdoors
Wake Robin Inn, Salisbury, CT

Owing to community concern for music transmitted from the event space, a sound contour image has been provided in Figure 3 showing the 32 dBA contour generally falling within the Wake Robin Inn property and far from any existing residence.

Transient impulse sound produced by automobiles has been modeled in its worst-case condition, i.e., the closest parking space to receptor property line location R1. Most such events in the same parking lot would produce much lower sound levels. Waste hauling impacts will be minimally audible and would occur once or twice a week depending on Hotel needs. Pool voice sound will be seldom audible at nearest receptors. Voice sound in the courtyard on the east side of the hotel is estimated to be 35 dBA at the nearest property line for a crowd of 150 persons in casual conversation. Unamplified voice sound is excluded from the Connecticut Noise Control Regulations (Sec. 22a-69-1.7(b)). Building HVAC sound levels reported in Table 2 conservatively assume that all units are operating simultaneously leading to an overestimate of HVAC sound levels as such a condition is highly unlikely.

Conclusions

Applicable code limits of the State of Connecticut have been compared with estimated sound levels anticipated to occur at nearest residential property line locations during normal Wake Robin Inn operations and events. The Connecticut Title 22 noise limits have been applied in evaluating sound produced by all sources studied, except for event space music sound, where a lower design goal has been recommended.

The design goal for event space music sound has been based on the lowest measured hourly energy average sound level occurring at the quietest monitoring location during the period from 5:00 PM to midnight when wedding and similar receptions would normally have indoor event music. For Wake Robin Inn music sound, we have designated a design goal of 32 dBA at nearest residences. This design goal is the lowest measured hourly energy average sound level of 37 dBA (the baseline) minus 5 dBA. This is lower than the CT DEP nighttime limit of 40 dBA and has been recommended to account for community sensitivity to music sound in the environment. Hence, we conclude that as required by the Salisbury Planning and Zoning Commission Special Permit Use section 803.2 Relation of Buildings to Environment, sound produced by the proposed Wake Robin Inn redevelopment will not "…*not create a nuisance to neighboring properties*…"

* * *

Please let us know if you wish to discuss this report or its conclusion. My CV is included with this report in Appendix C. Thank you.

Sincerely,
CAVANAUGH TOCCI

Gregory C. Tocci, *Sr. Principal Consultant*

25007 Wrobin 1j

Appendix A

Sound Monitoring

Sound Monitoring

Community response to a new sound in the environment is most closely related to the amount by which the new sound exceeds the existing ambient sound or baseline sound level. For this report, ambient sound levels have been measured continuously in hourly increments over a 7-day period at eight locations identified as SM1-SM8 in Figure 1. Sound level monitoring began on Thursday, February 27 and concluded on Wednesday, March 5, 2025. The Rion NL-52 meters used to monitor sound levels were calibrated before use, tripod mounted and installed with windscreens. These instruments and their use conform to IEC 61672 for Class 1 precision sound measurement instrumentation. Meters recorded sound level data onto flash cards that were downloaded into a PC. In Figure A-1, photo (a) is an installed sound monitor that operated for 7 days, (b) is a Bruel & Kjaer 2250 sound level meter tripod mounted and fitted with a wind screen measuring car door slam, horn, and engine start, and (c) is the same meter used to measure dumpster lid slam impact sound.

(a) (b) (c)

Figure A-1. Installed 7-day sound monitor (a), sound measurement of car door slam, horn, and engine start (b), dumpster lid slam impact sound measurement (c)
Wake Robin Inn, Salisbury, CT

7-day sound monitors were programmed to measure several hourly A-weighted sound level descriptors including the hourly energy average sound level ($LA_{eq,1\text{-}hr}$). Measured hourly energy average sound levels at SM1-SM8 are shown in Figures A-2 through A-9 of this appendix. As with most acoustic environments, sound levels are generally higher during the day than during the night. Weather data have been shown alongside sound monitoring data to identify any occasions when weather conditions might have influenced sound levels. Weather data have been obtained from the National Weather Service's (NWS) Automated Surface Observing Systems (ASOS) program for station BDL[1] at Hartford/Bradley International Airport.

[1] https://mesonet.agron.iastate.edu/request/download.phtml?network=RI_ASOS for Station BDL at Hartford/Bradley International Airport, Hartford, CT.

Table A-1 lists the lowest hourly energy average sound levels measured at SM1-SM8 over the 7-day period between the hours of 5:00 PM and midnight when the hotel would be at its busiest during weddings and other similar functions that include event building music. Among the Wake Robin Inn sounds, the community is expected to be most sensitive to music sound. For Wake Robin Inn music sound, we have defined a design goal of 32 dBA at nearest residences. The design goal is lower than the CT DEP Sec. 22a-69-3.3 implied nighttime limit of 40 dBA for tonal sound, i.e. a Class A emitter to a Class A receptor of 45 dBA at night minus 5 dB. Similarly, we have applied a 5 dBA reduction to the lowest hourly energy average sound level of 37 dBA measured at SM3 leading to a Wake Robin Inn music sound goal of 32 dBA.

Sound Monitoring Location	Lowest $LA_{eq,1\text{-}hr}$ (dBA)	Design Goal for Music: Lowest measured $LA_{eq,1\text{-}hr}$ minus 5 dB
SM1	43	32
SM2	42	
SM3	37	
SM4	40	
SM5	41	
SM6	54	
SM7	41	
SM8	41	

Table A-1. Summary of lowest measured hourly A-weighted energy average sound levels during busiest event hours 5:00 PM to Midnight Wake Robin Inn, Salisbury, CT

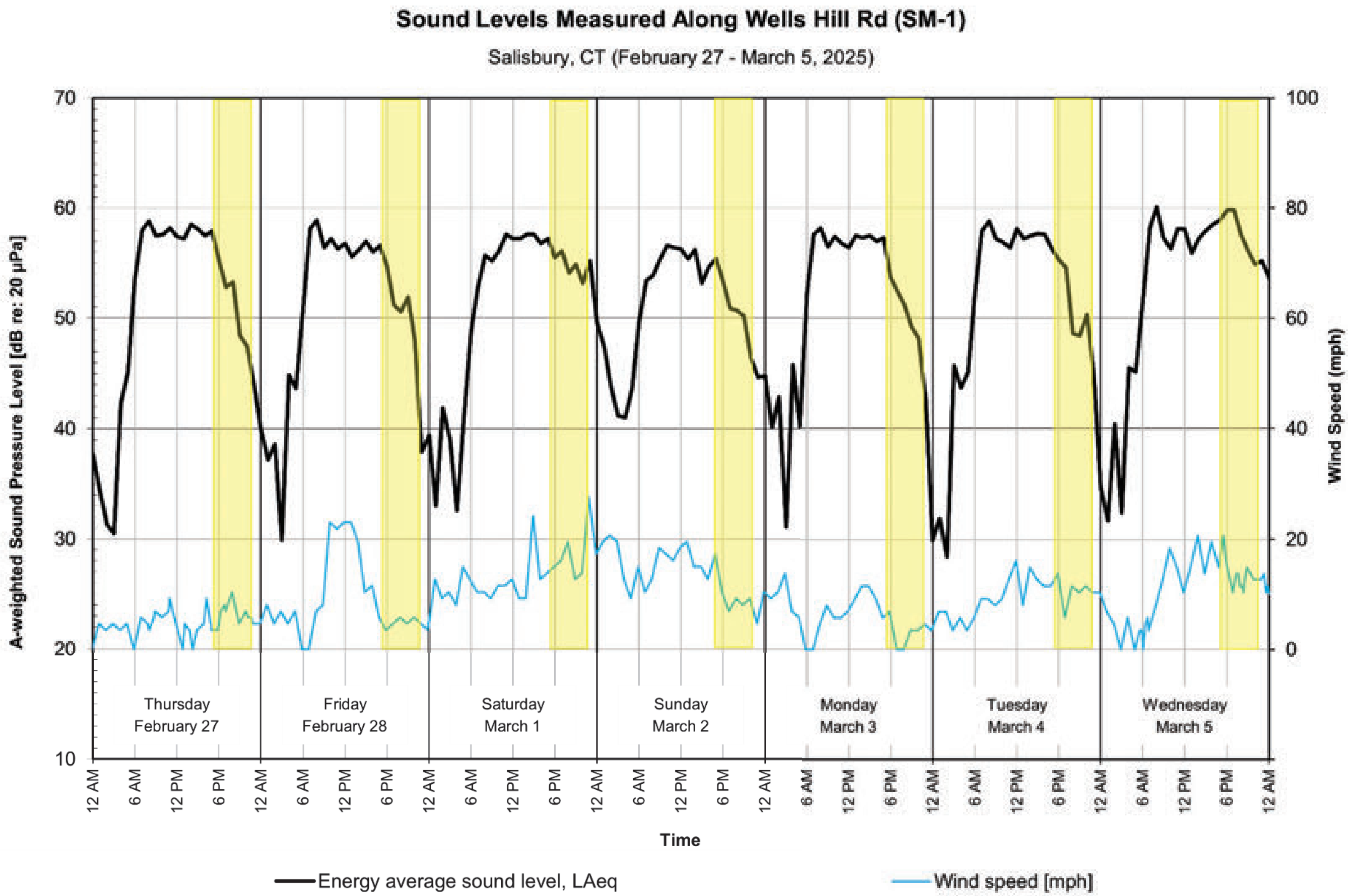


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Figure A-2. Measured sound levels at SM1—Thursday, February 27 to Wednesday, March 5, 2025
Yellow shading highlights anticipated hours of event space music from 5:00 PM to Midnight
Wake Robin Inn, Salisbury, CT

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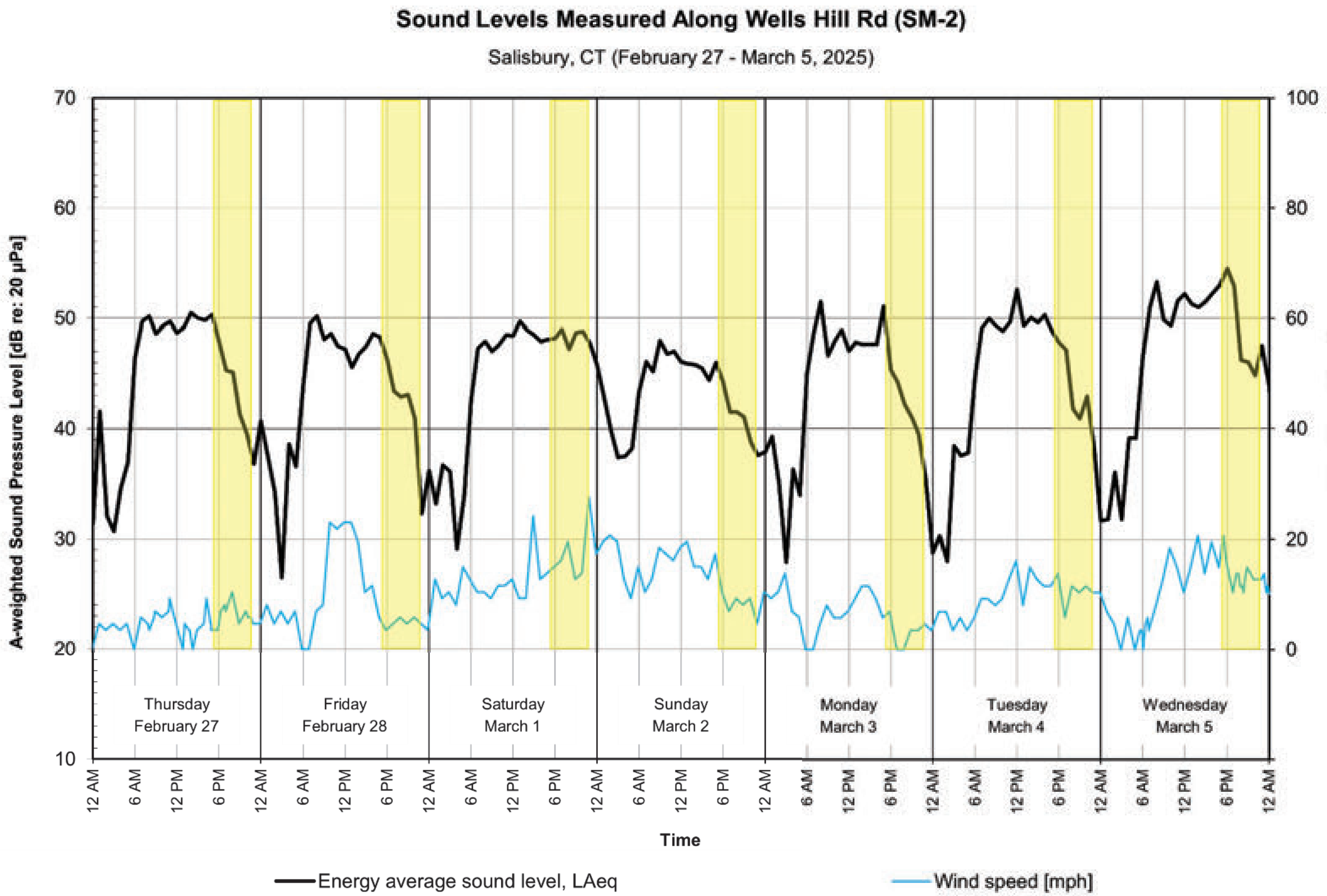


Figure A-3. Measured sound levels at SM2—Thursday, February 27 to Wednesday, March 5, 2025
Yellow shading highlights anticipated hours of event space music from 5:00 PM to Midnight
Wake Robin Inn, Salisbury, CT

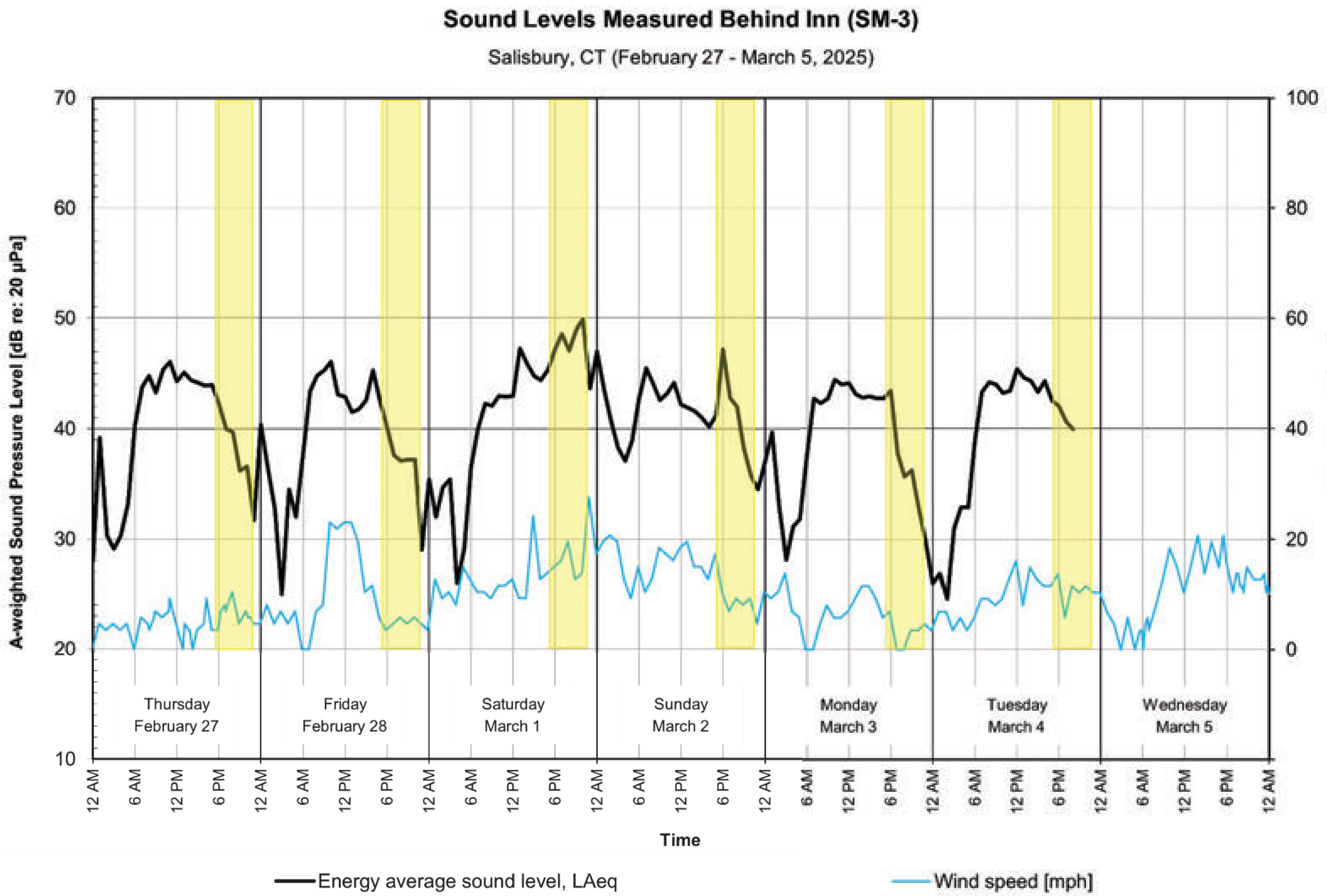


Figure A-4. Measured sound levels at SM3—Thursday, February 27 to Wednesday, March 5, 2025
Yellow shading highlights anticipated hours of event space music from 5:00 PM to Midnight
Wake Robin Inn, Salisbury, CT

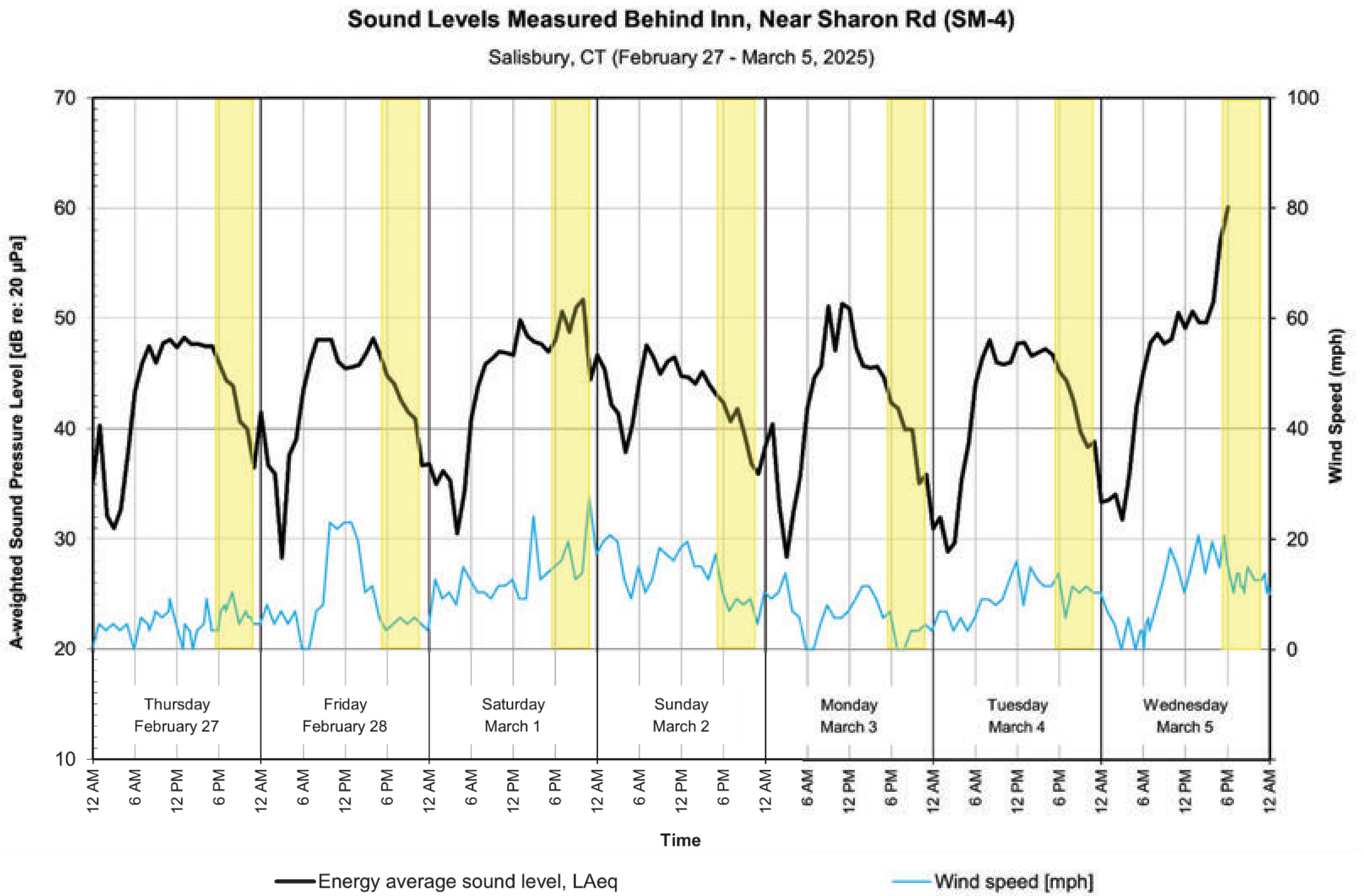
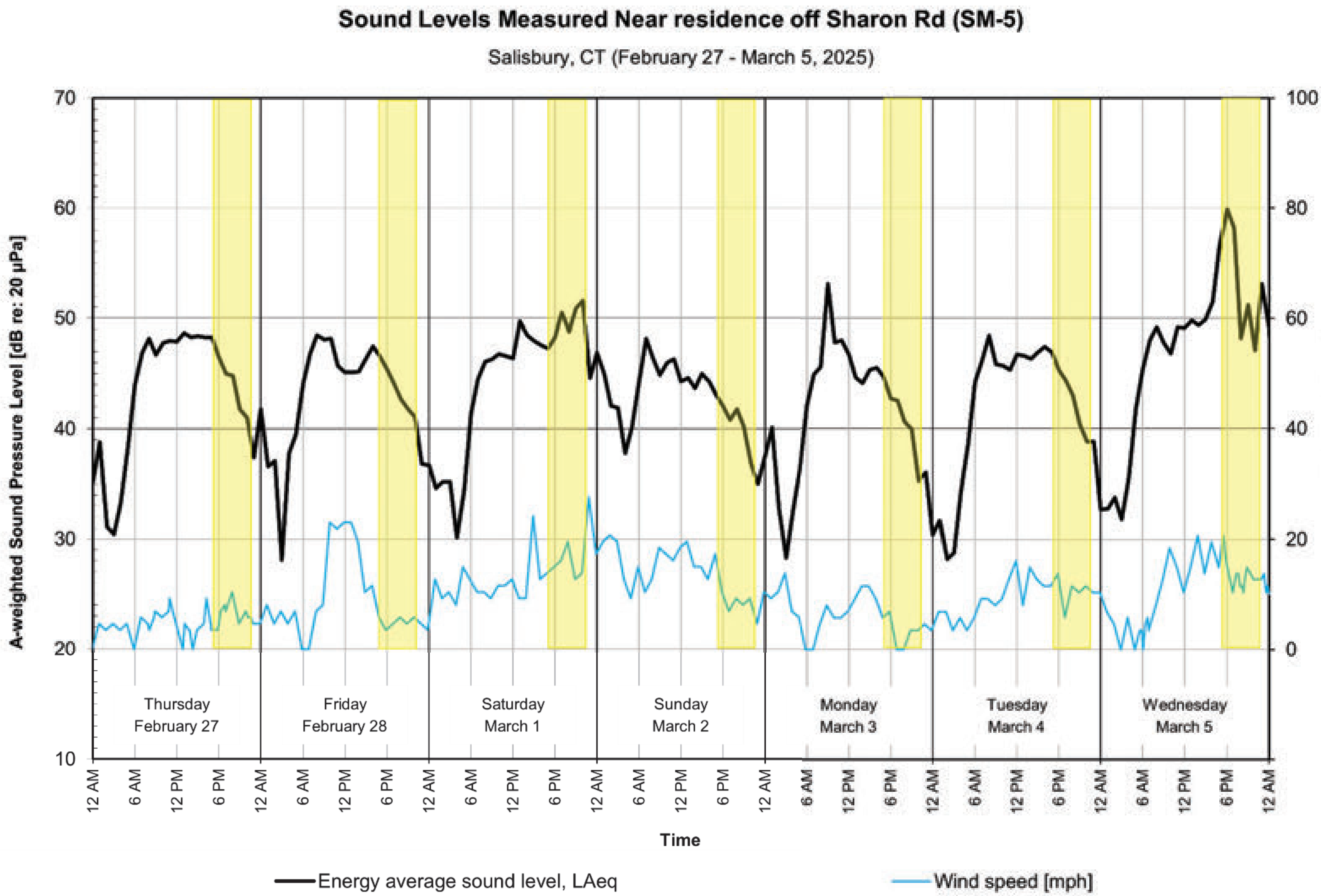
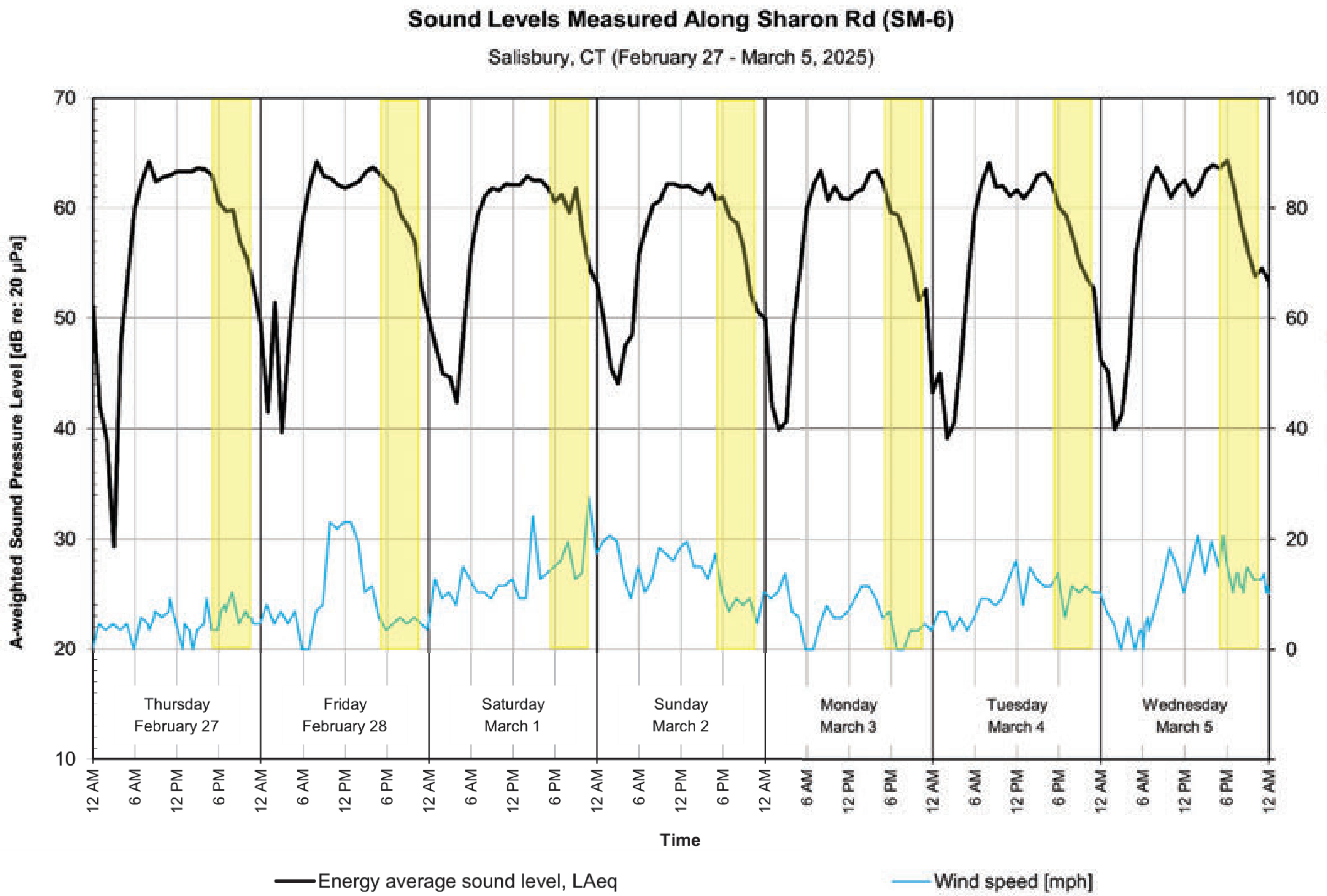


Figure A-5. Measured sound levels at SM4—Thursday, February 27 to Wednesday, March 5, 2025
Yellow shading highlights anticipated hours of event space music from 5:00 PM to Midnight
Wake Robin Inn, Salisbury, CT



S11

Figure A-6. Measured sound levels at SM5—Thursday, February 27 to Wednesday, March 5, 2025
Yellow shading highlights anticipated hours of event space music from 5:00 PM to Midnight
Wake Robin Inn, Salisbury, CT



512

Figure A-7. Measured sound levels at SM6—Thursday, February 27 to Wednesday, March 5, 2025
Yellow shading highlights anticipated hours of event space music from 5:00 PM to Midnight
Wake Robin Inn, Salisbury, CT

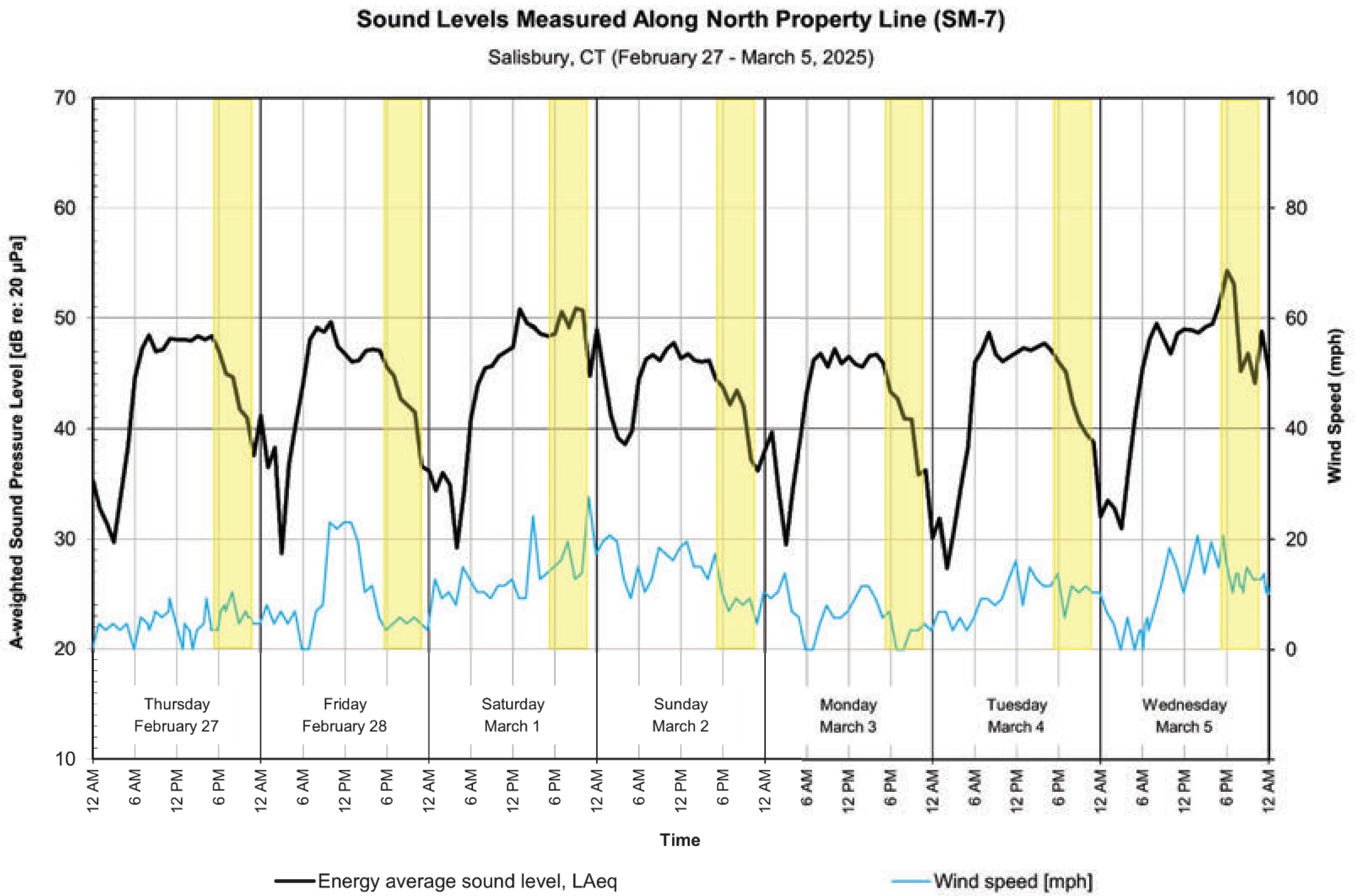


Figure A-8. Measured sound levels at SM7—Thursday, February 27 to Wednesday, March 5, 2025
Yellow shading highlights anticipated hours of event space music from 5:00 PM to Midnight
Wake Robin Inn, Salisbury, CT

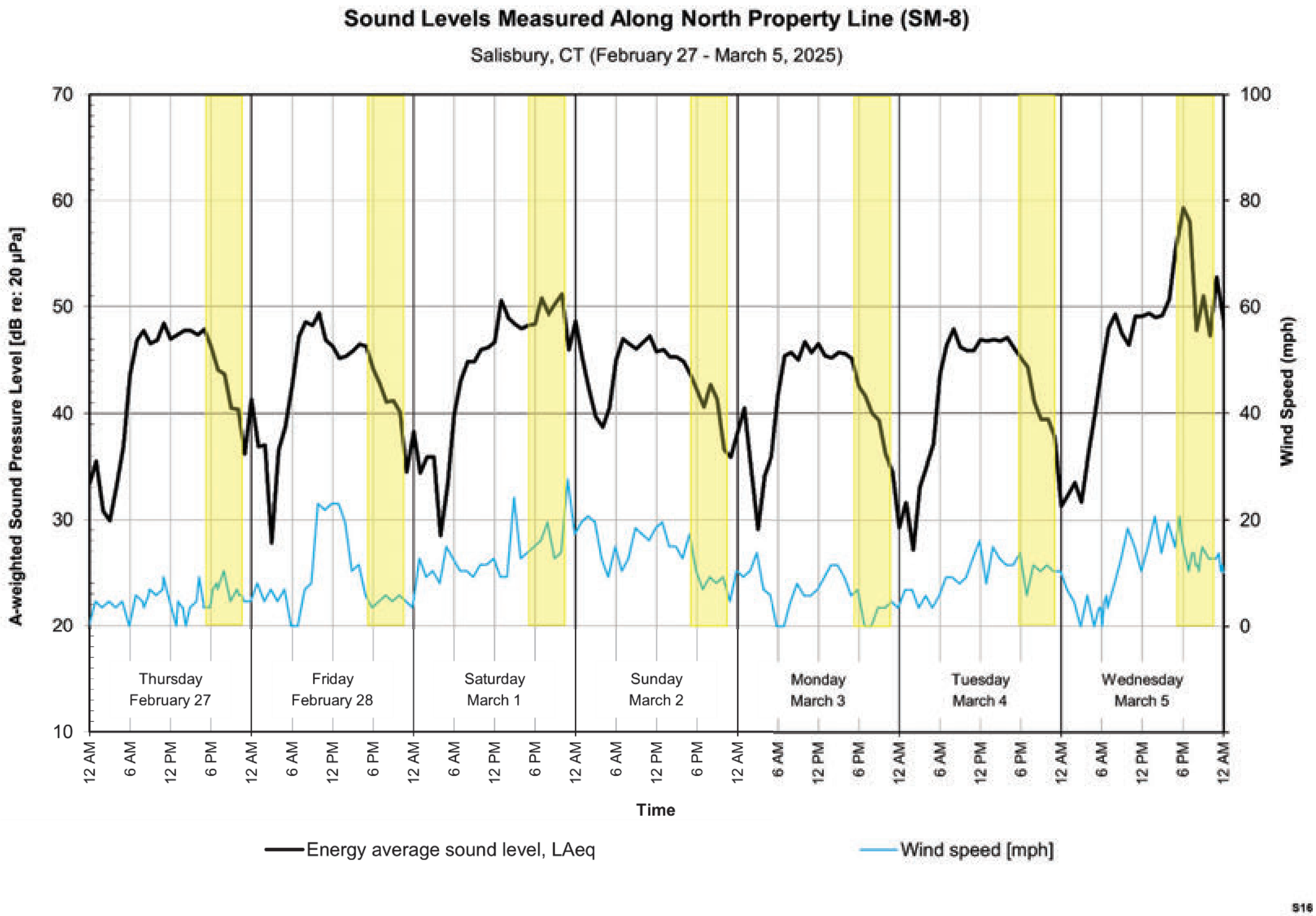


Figure A-9. Measured sound levels at SM8—Thursday, February 27 to Wednesday, March 5, 2025
Yellow shading highlights anticipated hours of event space music from 5:00 PM to Midnight
Wake Robin Inn, Salisbury, CT

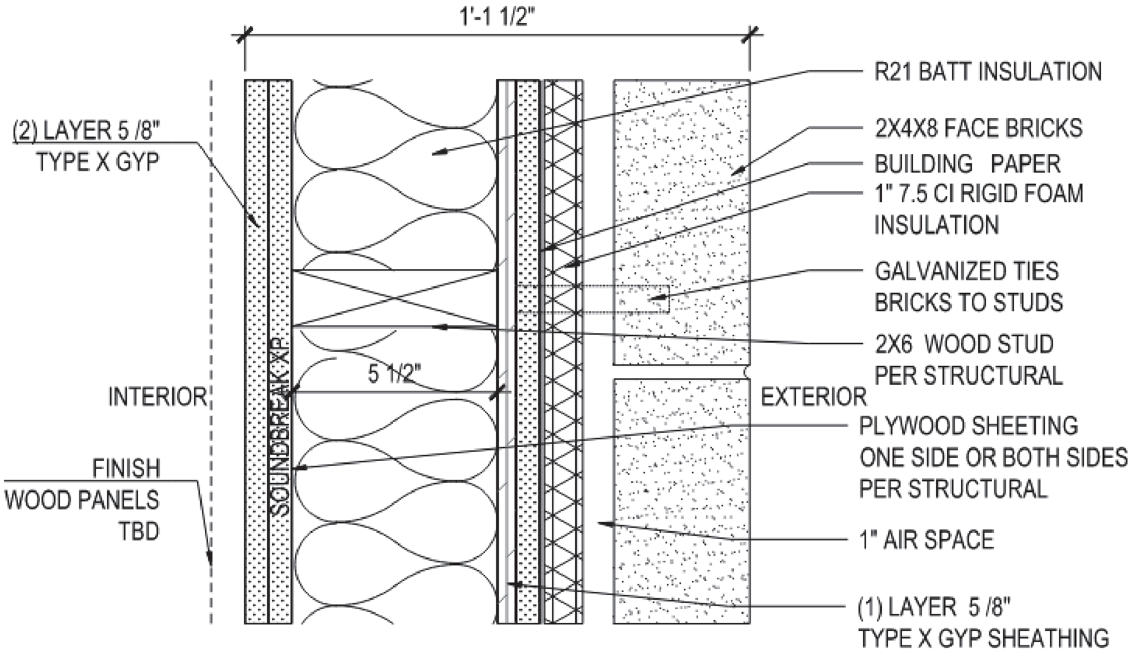
Appendix B

Computer Modeling

Activity/Equipment Source	32	63	125	250	500	1000	2000	4000	8000	A	Description
Car Ignition	71	74	69	73	73	71	72	70	65	83	Measured 2022.02.26 at Wake Robin Inn
Car Door Close	101	97	86	77	76	74	70	62	56	86	Measured 2022.02.26 at Wake Robin Inn
Car Horn	77	76	68	66	101	103	105	94	94	114	Measured 2022.02.26 at Wake Robin Inn
Dumpster	95	100	90	89	89	95	96	93	90	106	Measured 2022.02.26 at Wake Robin Inn
Garbage Truck	95	92	92	82	87	90	89	81	74	99	Measured 2022.02.26 at Wake Robin Inn
Music Glazing Transmitted*		61	61	48	42	35	35	24		54	Cavanaugh Tocci files
Kitchen Hood Exhaust Fan 1		78	81	84	74	71	68	65	62	79	Greenheck from Mechanical Engineer
Make-up Air Unit		80	70	75	73	75	78	77	71	83	Trane from Mechanical Engineer
Rooftop Unit_5_ton		84	84	82	80	77	73	69	67	82	Trane from Mechanical Engineer
Rooftop Unit _20_ ton		94	90	92	91	88	84	81	75	93	Trane from Mechanical Engineer
Rooftop Unit _12_ ton		89	89	81	89	86	82	79	73	91	Trane from Mechanical Engineer
Heat Pump_20_ ton		100	95	95	95	95	93	83	75	99	Mitsubishi
Heat Pump _16_ ton		93	93	91	89	89	86	77	69	93	Mitsubishi
Heat Pump _8_ ton		91	90	88	16	86	83	74	66	89	Mitsubishi
Emergency Generator	25	82	92	97	94	89	84	77	73	95	Kohler
Hotel Pool*	58	55	48	44	41	40	37	34	23	45	Cavanaugh Tocci files

*Sound power level per square foot

Table B-1. Sound power levels used in Cadna/A computer sound propagation loss modeling
Wake Robin Inn, Salisbury, CT



freq.(Hz)	TL(dB)	TL(dB)
50	29	
63	24	24
80	22	
100	31	
125	37	34
160	41	
200	44	
250	48	47
315	50	
400	51	
500	48	51
630	57	
800	59	
1000	61	60
1250	62	
1600	63	
2000	63	63
2500	63	
3150	70	
4000	72	71
5000	73	

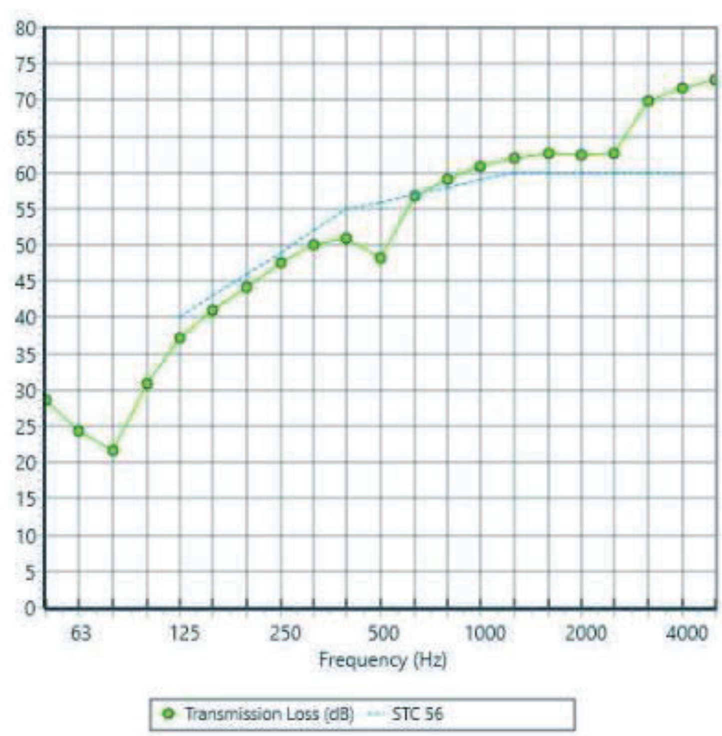
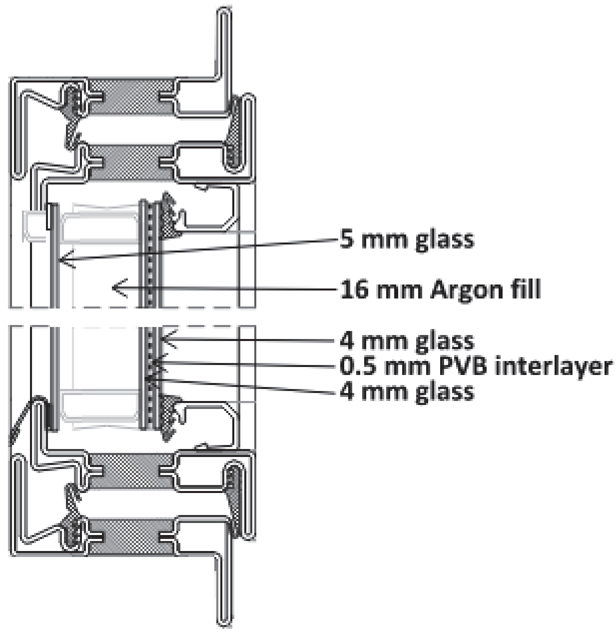


Figure B-1a. Event space exterior wall detail and sound transmission loss
Wake Robin Inn, Salisbury, CT



Specimen net measuring area:

1,88 m^2

Source room volume:

57,0 m^3

Receiving room volume:

68,2 m^3

Test result*:

Single-number rating at 500 Hz in the frequency range 100 Hz to 3 150 Hz:

R_w = 42 dB**

Adaptation terms:

C = -2 dB
C_{tr} = -6 dB

(*) Evaluation based on laboratory measurement results obtained by an engineering method.

(**) Single-number quantity of sound reduction index measured in steps of 0,1 dB:
42,4 dB

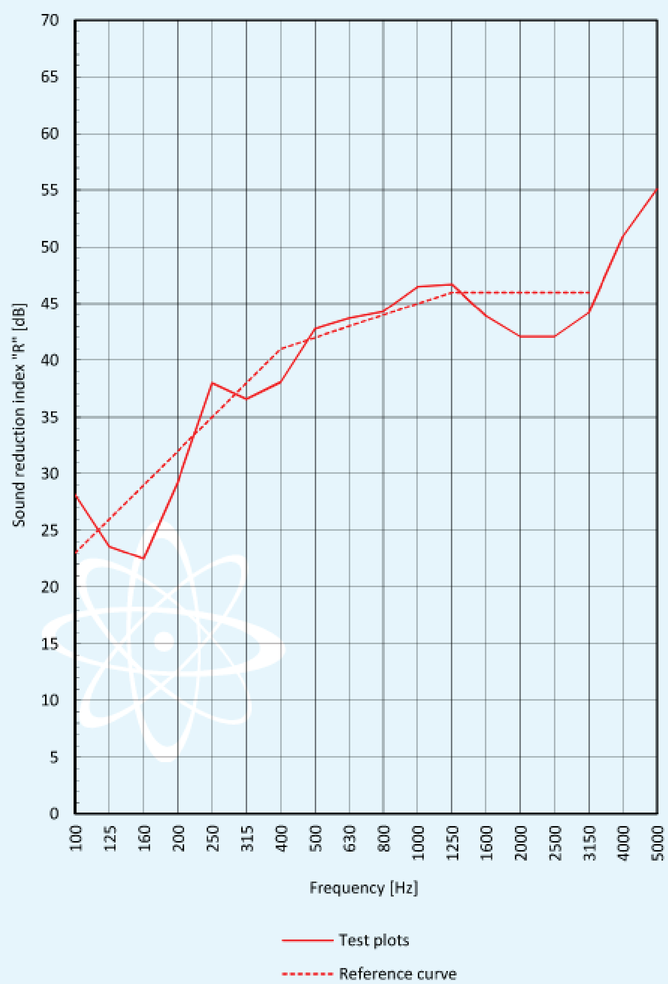


Figure B-1b. Event space extension glazing sound transmission loss
Wake Robin Inn, Salisbury, CT

Appendix C

Curriculum Vitae
Gregory C. Tocci, *Sr. Principal Consultant*
Cavanaugh Tocci
Sudbury, Massachusetts

Gregory C. Tocci

SENIOR PRINCIPAL CONSULTANT

As co-founder with William J. Cavanaugh, Greg Tocci served as President of CAVANAUGH TOCCI ASSOCIATES, INC., through January 2014. He continues to be responsible for the technical and business activities of the many projects for which he serves as Principal-in-Charge. Among types of projects managed by Greg are speech privacy and intelligibility studies; mechanical system noise and vibration control studies; environmental noise impact assessments for residential, commercial, and industrial developments; engineering noise abatement programs; and many types of special noise and vibration studies for building and manufacturing industries.

EDUCATION

Tufts University, Bachelors of Science, 1970
Massachusetts Institute of Technology, Masters of Science, 1973

REGISTRATION

Registered Professional Engineer in Massachusetts (PE 28998) and Rhode Island (PE 6478)

EXPERIENCE

- FEDERAL EXPRESS GROUND, MOON TOWNSHIP, PA

  Directed a team at CTA evaluating the suitability of 100+ sites for FedEx Ground parcel handling facilities throughout the U.S. Work involved environmental sound monitoring, criteria development, computer modeling of sound propagation, sound barrier design, site orientation to control sound, and presentation to town boards.

- IMRIS INC., MINNETONKA, MN

  Designed elastomeric vibration isolation systems for IMRIS track mounted MRIs in image-guided surgical therapy suites located in sensitive building areas. Services included assistance to laboratories testing elastomeric isolator stiffness for compliance with the design specification.

- BRIGHAM & WOMEN'S HOSPITAL, NICU EXPANSION, BOSTON, MA

  Recommended MEP sound and vibration controls, and partition sound isolation designs for expansion of an existing NICU to remain in operation during construction. Provided assistance in controlling construction sound and vibration impacts on mothers and infants, and supervised the design and installation of a sound monitoring system to provide real-time alerts to key personnel in the construction project.

- HIGH LINER FOODS, PORTSMOUTH, NH

  Conducted monitoring and analysis of environmental sound produced by a variety of equipment and systems for compliance with sound level limits in Portsmouth, NH and in Danvers and Peabody, MA. Equipment included cooling towers and air pollution remediation equipment.

- RESIDENCE INN, ORANGEBURG, NY

  Supervised sound monitoring and provided building envelope sound isolation recommendations for a hotel under construction and situated approximate 60 feet from a frequently used freight rail line. Recommendations included window, HVAC system, and roof eave sound isolation improvements.

PROFESSONAL AFFILIATIONS

Past President (1986-1988) and Past Board Member, National Council of Acoustical Consultants
Fellow (1988), Acoustical Society of America
Fellow (2010), Board Certified Member (1982), Institute for Noise Control Engineering
Past President (2000), and Past VP Board Certification, Institute for Noise Control Engineering
Past Co-chair, ANSI S12 Working Group 44 for Speech Privacy
Member, ANSI S12 Working Group 18 for S12.2 Room Criteria

ADJUNCT FACULTY POSITIONS

New England School of Art and Design, Architectural Acoustics | 1979 – 1989
Harvard School of Public Health, Industrial Noise Control | 1988 – 1992
Cornell University, College of Architecture, Arch 361 Architectural Acoustics | Fall 2003

PUBLICATIONS

Carballeira, Andrew; Tocci, Gregory C., *et al*, “A collaborative approach to low-frequency noise mitigation,” Noise-Con Proceedings, June 10-12, 2024, New Orleans, LA

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Monsanto Acoustical Glazing Design Guide, Monsanto Polymer and Chemical Co., St. Louis, MO, 1986.

Tocci, Gregory C., Foulkes, Timothy J., and Wright, Randolph E.; "Glazing Sound Transmission Loss Studies," Paper O7, 111th Meeting of the Acoustical Society of America, Cleveland, OH, May 14, 1986.

Tocci, Gregory C., Sturz, Douglas H.; "Acoustic Performance of a 'Re-entrant' Axial Fan Intake Silencer," Noise-Con '83 Proceedings, Cambridge, MA.

Tocci, Gregory C., Marcus, Edward N.; "A Parametric Evaluation of Wind Turbine Noise," INTERNOISE 82 Proceedings, San Francisco, CA.

Tocci, Gregory C., Pickett, William H.; "Practical Applications of Outdoor Noise Control Barriers," Sound and Vibration, Volume 13, Number 6, June 1978 (Selected for the Vibraphonic Award for Best Paper published in Sound and Vibration in 1978 by the Delaware Chapter of the Acoustical Society of America.)

Fredberg, Jeffrey and Tocci, Gregory C.; "Paper Cutting Noise: Source Identification Techniques in Newspaper Folding Machines, INTERNOISE '74 Proceedings, Washington, D. C.

Tocci, Gregory C., Fredberg, Jeffrey; and Senapati, Nagabhusan; "Measurement and analysis of noise radiation from a slab on steel beam rapid transit structure," INTERNOISE '74 Proceedings, Washington, D. C.

Roylance, David; Wilde, Anthony; and Tocci, Gregory C.; "Ballistic Impact of Textile Structures," Textile Research Journal, volume 42, Number 1, January 1973.

TESTIMONY

Massachusetts Superior Court, Dukes County, Lynn Allegaert, Trustee, *et al*. v. Harborview Hotel Owner LLC and Town of Edgartown *et al*, Civil Action No. 1974CV00021.

Massachusetts Superior Court, Berkshire County, Shemshack LLC v. Catamount Development Corporation *et al*, Civil Action 14-338.

Hartford, CT Superior Court, Colleen Bielitz *et al* v. Wex-Tuck Realty, LLC *et al*, Order 080812, August 27, 2015.

Land Court, Suffolk Superior Court, Oscar T. Brookins & Kathryn J. Brookins v. Boston Zoning Commission *et al*, 2015.

NH Site Evaluation Committee, Antrim Wind Energy, LLC, Docket 2012-01, Application for RSA 162-H Certification, Attorney General of New Hampshire

NH Site Evaluation Committee, Groton Wind LLC, Docket 2010-01, Application for RSA 162-H Certification, Attorney General of New Hampshire

VT Act 250 Case 3W1049 – Environmental Board, Frog City Gravel, Plymouth, Vermont, Hawk Mountain Resort/Salt Ash Owners Association, Plymouth, VT

VT Act 250 Case 2W0813-3 (Revised) – Environmental Board, Bemis Quarry Expansion, Vernon, Vermont, Cersosimo Industries, Inc., Brattleboro, VT

VT Act 250 Case 9A0107-2 - Environmental Board, Middlebury Quarry Extension, Middlebury, VT, OMYA, Inc., Middlebury, VT

Superior Court, Goldman v. Massachusetts Bay Transportation Authority, Low frequency noise impact of idling locomotives

Workmen's Compensation Court, Koutrobis v. Demakes Enterprises, Hearing loss compensation in food processing plant

Spaulding Rehabilitation Hospital v. Commonwealth of Massachusetts, CA/T construction noise impact on SRH

Neighbors v. Gilbane, Chiller noise at office building in Middleton, RI

HEALTH CARE PROJECTS

Among the most intricate of projects are large hospitals. Greg's experience serving as Principal-in-Charge for hospital acoustical design include:

- BRIGHAM & WOMEN'S HOSPITAL, NICU EXPANSION, BOSTON, MA

  Recommended MEP sound and vibration controls, and partition sound isolation for an expansion of an existing NICU to remain in operation during construction. Greg also provided means and methods for controlling construction sound and vibration impacts on mothers and infants, and developed a sound monitoring system providing alerts to key players when sound levels exceeded various thresholds.

- THE VALLEY HOSPITAL, FACILITY EXPANSION, RIDGEWOOD, NJ

  This was a general facility expansion design for a regional medical center in a single-family residential area. Greg developed recommendations for the control of MEP sound, speech privacy, control of outdoor building mechanical and process equipment sound, and for the control of mechanical equipment vibration transmission within the building.

- ANNA JAQUES HOSPITAL, ER EXPANSION, NEWBURYPORT, MA

  This is a small community hospital expansion adding cooling equipment, relocating the oxygen delivery site, and changing ambulance entry area to reduce sound transmitted to nearest residences. Work included sound monitoring, noise controls for outdoor and indoor equipment, and presentation of recommendations to the approving Town board.

- BRIGHAM & WOMEN'S HOSPITAL, SHAPIRO CARDIOVASCULAR CENTER, BOSTON, MA

  All aspects of acoustical design were required from permitting through construction administration of this large, comprehensive cardiovascular center of a major urban hospital. Work included the design of an elastomeric vibration isolation system for an IMRIS image guided surgical therapy suite located near other sensitive spaces.

REPRESENTATIVE PROJECT CATEGORIES

- HEALTH CARE
  Yale University MR/OR, New Haven, CT
  Brigham & Women's Hospital, NICU Expansion, Boston, MA
  The Valley Hospital, Facility Expansion, Ridgewood, NJ
  Anna Jaques Hospital, ER Expansion, Newburyport, MA
  Brigham & Women's Hospital, Shapiro Cardiovascular Center, Boston, MA
- CONSTRUCTION NOISE
  Olmstead Cistern Removal, Brookline, MA
  Woburn 38 Development, Woburn, MA
  South Station Expansion Impact on 245 Summer Street, Boston, MA
  South Shore Plaza Retail Store Nighttime Construction, Braintree, MA
- DORMITORIES
  Grand Marc Dormitory, Northeastern University, Boston, MA
  UMass Lowell Student Residence, Lowell, MA
  Student Housing I and II, Boston University, Boston, MA
- HOTELS
  170 Charles Street, Boston, MA
  Intercontinental Hotel and Residences, Boston, MA
  Seaport Hotel Refit, Boston, MA
  Residence Inn, Orangeburg, NY
  Cedar Rapids Lodge and Suites, Cedar Rapids, IA
- ASPHALT AND QUARRYING
  TMC Leasing, Littleton, MA
  Frog City Litigation, Plymouth, VT
  Paulini Loam, Framingham, MA
  Century Acquisition Concrete Plant, Sheffield, MA
  Newport Materials, Westford, MA
- INDUSTRIAL
  Chiller Replacement, Pratt & Whitney, East Hartford, CT
  New England Sheets, Devens, MA
  Evergreen Solar, Devens, MA
  Intel Corporation, Hudson, MA
  High Liner Foods, Portsmouth, NH and Danvers and Peabody, MA
- PARMACEUTICAL
  Idenix Pharmaceuticals, Cambridge, MA
  Longwood Center, Boston, MA
  100 College Street, New Haven, CT
  Charles River Laboratories, Shrewsbury, MA
  100 Binney Street, Cambridge, MA
  Sterling Chemistry Laboratory, Yale University, New Haven, CT

LETTER FROM TRASH COMPANY

Welsh Sanitation Service
P.O. Box 1209, Hopewell Junction, New York 12533-1209
845-877-9354 800-522-7235
Fax 845-227-7734

April 17, 2025

Via Email: scohen087@gmail.com

Wake Robin Inn
104 Sharon Rd.
Lakeville, CT 06039

To Whom It May Concern:

We have been servicing the above location since 2009. It has always been agreed upon that we would service this location between the hours of 9:00 am and 3:00 pm. We have never had complaints in regard to noise in the past.

We are a local family-owned and operated business and take great pride in providing quality service to all of our customers. Should you require any additional information, please do not hesitate to contact me.

Sincerely,

Keith Monty

Keith Monty
Territory Sales Mgr.

KM:eg

LETTER FROM FIRE MARSHAL

JOHN DESHAZO
FIRE MARSHAL

Telephone: 860-435-5196
Fax: 860-435-5172
Email: firemarshal@salisburyct.us

TOWN OF SALISBURY
CONNECTICUT

Town Hall
P.O. Box 548
27 Main Street
Salisbury, Connecticut 06068

17 April 2025

To whom it may concern,

On 11 April 2025, Deputy Fire Marshal Tim Baldwin and I met with Mark Arigoni of SLR Consulting to discuss the proposed general plans for the arrangement of buildings and vehicle roadways on the property of the Wake Robin Inn at 106 Sharon Road, Salisbury, CT. This discussion covered roadway size, fire department apparatus access, parking areas, water supply for fire department operations, proposed general uses of the buildings, and other items that all relate to the considerations the Fire Marshal's Office has regarding conformance to the CT State Fire Safety Code. We found everything we discussed regarding these plans to broadly meet the intent of the Code.

As the project moves forward, all further, specific plans for construction and renovation will be subject to plan review and approval by our office through the standard permit approval process for the Town of Salisbury.

Respectfully,

John D. DeShazo

Fire Marshal

Town of Salisbury, CT

BUILDING HEIGHT + ROOF COMPLIANCE ANALYSIS

MEMORANDUM

CLIENT NAME: Aradev
PROJECT NAME: Wake Robin Inn
PROJECT NO.: ARA-24021
DATE: April 25, 2025
SUBJECT: Building Height Analysis
REPORTED BY: Tim Widman, AIA

The Wake Robin Inn Redevelopment Project has been carefully designed to ensure full compliance with applicable zoning regulations governing building height. As demonstrated in the materials below, each of the proposed and renovated structures on the property, including the main Inn building, guest cabins, event pavilion, spa, and accessory buildings, have been reviewed in detail to confirm that their heights do not exceed the maximum allowable limits established by the Salisbury Zoning Regulations.

EDM Studio conducted a comprehensive height analysis utilizing surveyed existing grades and proposed finished grades to calculate building heights in accordance with the Town's regulatory definitions. These calculations, illustrated in the below documentation, confirm that all structures are within the permissible height envelope, even where the site's natural topography varies or an existing non-conforming structure is in place. This approach reflects the applicant's commitment to responsible site design and regulatory compliance, while ensuring that the scale and massing of the development remain compatible with the surrounding landscape and residential character of the area.

BUILDING HEIGHT REGULATIONS

Per the Salisbury Zoning Regulations, section 309.2 Maximum Building Height for a Principal Building, the maximum building height shall be as follows:

- Thirty-five (35) feet for a gable, hip, or gambrel roofed building
- Thirty (30) feet for flat, mansard, or any other type of roof

The height is measured from the average grade plane at the base of the building (based on grade taken every 5 feet along the building's perimeter). For a gable, hip, or gambrel roof, the measurement is to the mid-point between the eave and the peak of the roof. For any other roof type, the measurement is to the highest point.

EXISTING WAKE ROBIN INN BUILDING

The existing Wake Robin Inn is a non-conforming building as defined by Section 500.1 as the existing height exceeds 35 feet above the average-grade plane. As stated in Section 500.2, Continuance of a Non-Conforming Situation, these regulations do not prohibit the continuance of a non-conforming situation. Due to the building non-conformity, the building is subject to Section 503 which limits the modifications to the building. Pursuant to Section 503.2 "[no] non-conforming building…shall be altered, enlarged or extended in any way that increases the areas or space, including vertical enlargement, *of that portion of the building or structure that is non-conforming*….[Vertical enlargement] is defined as enlargement or expansion either upward or downward."

In the case of the Wake Robin Inn, the non-conformity pertains to the building height. As such, all proposed extensions to the main inn building have been carefully designed to conform to the height requirements applicable to principal buildings, as outlined in Section 309.2. This section permits a maximum building height of 35 feet, measured from the average grade plane to the midpoint of the roof where a gable, gambrel, or hip roof design is utilized.

COTTAGE

The cottages have gabled roofs. The cottages are 4’ above the grade at their greatest elevation difference at each of the different locations. The proposed cottages are 21’-0 5/8" above the finished floor elevation (830, 820.5, 841). Based on preliminary grading, the heights of the cottages comply.

COTTAGE ELEVATION FRONT

POOL HOUSE

The pool house has a gabled roof. The height of the proposed pool house is 13’-6” from finished floor elevation (841.4). Based on the above, the building complies.

POOL HOUSE ELEVATION EAST

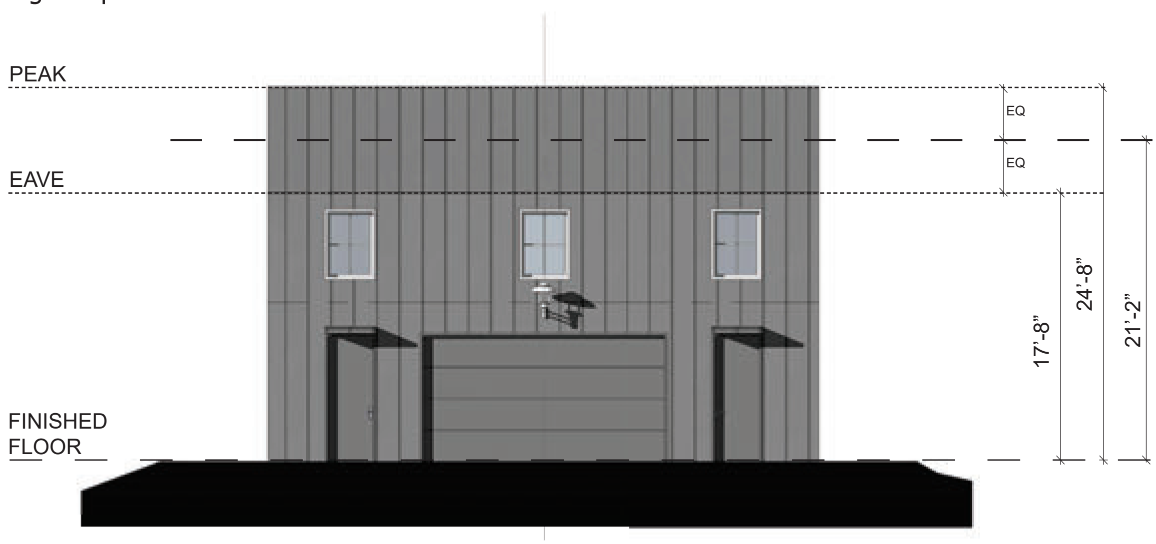
STORAGE 1

Storage building 1 has a gabled roof. The storage building is at most 6’ above or below the grade at its greatest elevation difference. The height of the proposed storage building is 21’-2” from finished floor elevation (843.0). Based on the above, the building complies.

STORAGE 1 ELEVATION FRONT

STORAGE 2

Storage building 2 has a gabled roof. The storage building is at most 4’ above the grade at its greatest elevation difference. The height of the proposed storage building is 21’-2” from finished floor elevation (809.0). Based on the above, the building complies.



STORAGE 2 ELEVATION FRONT

SPA

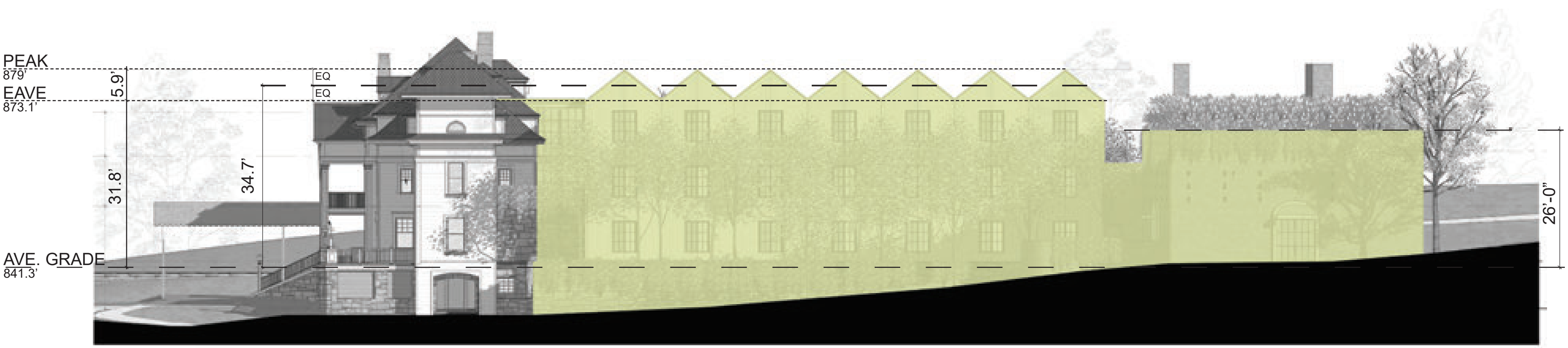
The height of the proposed spa building is measured to be 17.6’ above average grade of (841.4’). Based on the above, the building complies.

EXISTING INN ADDITION AND EVENT HALL (HIGHLIGHTED IN GREEN)

The height of the proposed addition is measured to be 34’ 9 ½” above the average grade (842’).

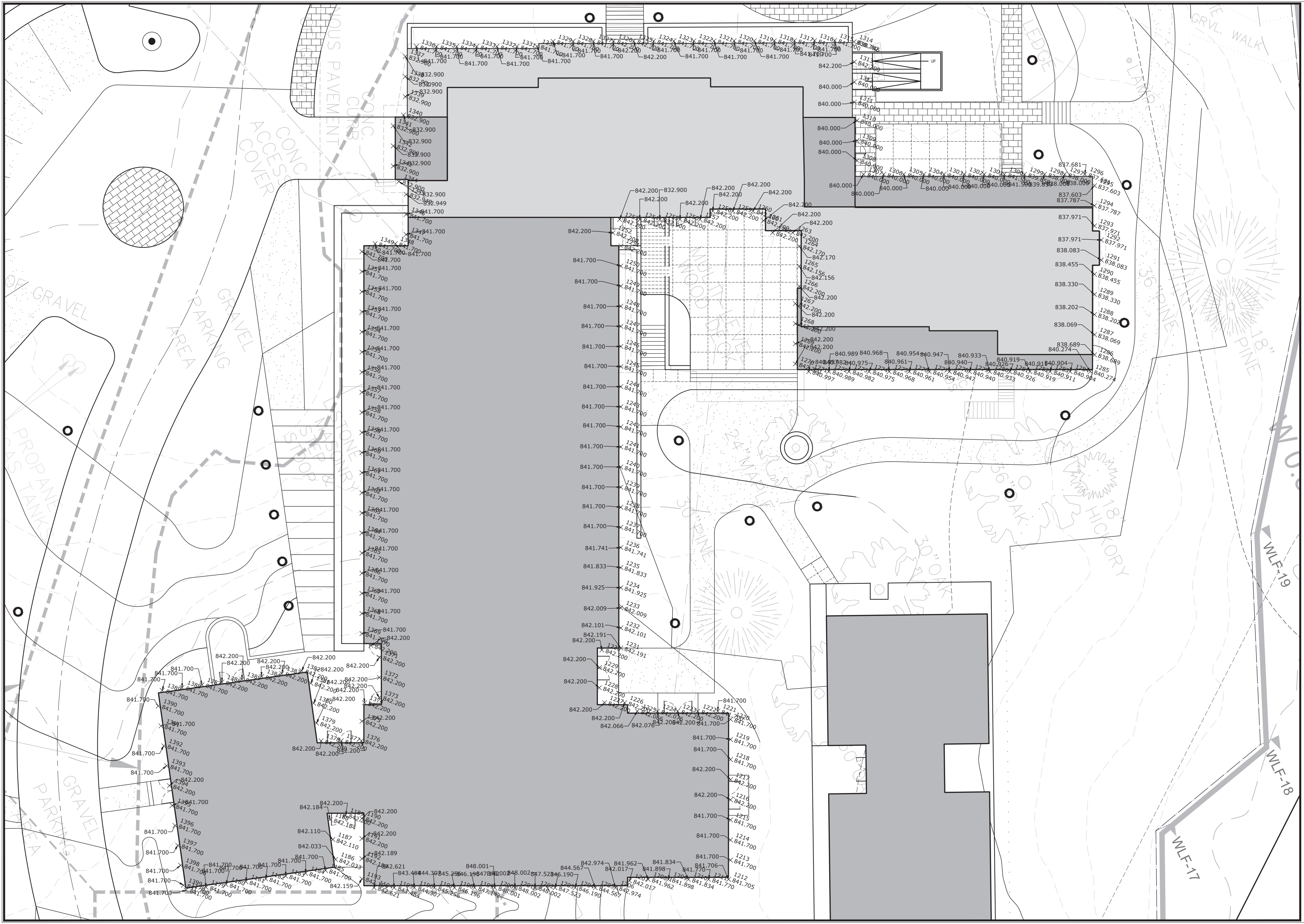
The height of the proposed event hall is measured at 26’ 0” above the average grade (842’).

SPA ELEVATION EAST



EXISTING INN ADDITION AND EVENT HALL ELEVATION WEST

All diagrams (NTS) derived from drawings by Marcello Pozzi Architects.



BUILDING ELEVATION GRAPHIC - HOTEL

WAKE ROBIN INN REDEVELOPMENT

104 & 106 SHARON ROAD & 53 WELLS HILL ROAD
SALISBURY, CONNECTICUT

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY

JH	JH	TR
DESIGNED	DRAWN	CHECKED

SCALE: 1"=10'

DATE: APRIL 23, 2025

PROJECT NO.: 22100.00001

SHEET NO.: 1 OF 1

SHEET NAME: BE-1

SUSTAINABILITY NARRATIVE

MEMORANDUM

CLIENT NAME: Aradev
PROJECT NAME: Wake Robin Inn
PROJECT NO.: ARA-24021
DATE: April 17, 2025
SUBJECT: Energy and Sustainability
REPORTED BY: Tim Widman, AIA

The Wake Robin Inn Redevelopment Project has been thoughtfully designed to incorporate a wide range of strategies that prioritize energy conservation and environmental sustainability. Aradev is firmly committed to sustainable design and consistently maintains high standards of environmental stewardship across all of its projects. The project will implement a design standard of advanced sustainability measures that exceed typical building code requirements. The design approach is comprehensive and site-sensitive, emphasizing the appropriate siting and scale of buildings, alignment with local architectural character, energy efficiency, and the use of environmentally responsible materials that support occupant health. During construction, Aradev will collaborate with the construction manager to reduce waste and maximize recycling. Once operational, the property will actively monitor energy usage, minimize chemical use, and maintain practices that promote guest health and environmental quality.

Overall, the redevelopment aims to reduce its ecological impact while enhancing the sustainability and integrity of the built environment. A summary of relevant design and construction features is provided below.

- Envelope improvements:
  - Continuous slab insulation, minimum R-20 for the Group R building with a minimum of R-15 at the pool house and event hall.
  - Continuous rigid exterior wall insulation combined with high performance batt insulation within cavity walls. Minimum value of R-13 + R-7.5ci for above grade walls with a below grade value of R-10ci. Proposed wall section composes R-28 in wall cavity and R-7.5ci.
  - Roof insulation has a minimum R-49 rating.
  - Enhanced Envelope may be considered for new construction (spa, pool house, cottages) which would entail improving the envelope UA 15% beyond code minimums.
  - Windows, minimum performance value U-0.36 for fixed and U-0.45 for operable. Triple glazed windows are being considered where sound isolation is a concern, which will improve thermal performance.
- Mechanical, Electrical, and Plumbing Systems:
  - High efficiency mechanical equipment (VRF).
  - All refrigerants being used will meet EPA requirements.
  - Remove and replace lighting with LED fixtures. Fixtures in new construction (including additions) to be LED.
  - Lighting controls to improve energy efficiency.
  - Low flow indoor water fixtures including toilets, and faucets.
  - The project will engage a third-party commissioning agent to carry out a comprehensive commissioning process for the heating, cooling, hot water, and ventilation systems, ensuring that all equipment is installed correctly and operating efficiently in accordance with design specifications.

- Sustainable initiatives:
    - The event space will utilize a green roof system, which will help with air quality and runoff as well as shield rooftop equipment.
    - Development will work to minimize the removal of mature trees.
    - New trees will be planted to help shield new structures and sequester carbon.
    - Wood and composite materials will be selected to reduce and/or eliminate formaldehyde as much as possible.
    - The site will primarily be non-smoking, with smoking permitted in designated areas only.
    - Low VOC products will be prioritized for: paints, sealants, and flooring materials.
    - EV charging stations
    - Source and highlight local materials (ie. wood)
    - Use local contractors who know the nature and environment of NW Connecticut

It is also anticipated that a third-party consultant will be on board to collaborate with the design team, offer suggestions regarding maximizing incentives for energy savings as well as ensuring proper techniques and detailing of exterior envelopes. Additionally, the same consultant will offer similar suggestions in terms of exterior sealing details to properly achieve the end result of a environmentally tight atmosphere building with mechanical means of ventilation.

Once open, the hotel will incorporate sustainable products throughout the property and its amenities, including toiletries, utensils, recyclable plates, and similar items, with a strong emphasis on the use of reusable materials.

Upon completion, the hotel will provide clearly marked containers for both waste and recycling throughout the property. In addition, the food and beverage areas will implement composting practices for applicable food scraps and organic waste, further supporting the projects sustainability goals.

CONSISTENCY WITH POCD

Technical Memorandum

To:	Planning and Zoning Commission	**From:**	Vincent C. McDermott, FASLA, AICP, Senior Principal
Company:	Town of Salisbury, Connecticut		**SLR International Corporation**
cc:		**Date:**	April 29, 2025
		Project No.	141.22100.00001

RE: Consistency with “Sustainable Salisbury” and Community Development Objectives Wake Robin Inn Redevelopment Project Salisbury, Connecticut

Consistency with 2024 Plan of Conservation and Development

The Wake Robin Inn Redevelopment Project (the Project) represents a thoughtful and forward-looking investment in one of Salisbury’s most historically significant hospitality sites. As described in the following analysis, this initiative aligns closely with the “Sustainable Salisbury, 2024 Plan of Conservation and Development” (POCD), and with other widely accepted community development principles with overall benefits to the Town of Salisbury (Town). The POCD addresses a number of planning issues and offers specific strategies to address those issues. This analysis will focus on those strategies applicable to the Wake Robin Inn Redevelopment.

- **POCD Chapter 5, Infrastructure**

The POCD notes that the strategies related to infrastructure are consistent with those expressed in the Connecticut Office of Policy and Management’s plan, namely to *“(p)romote the continued use or adaptive reuse of existing facilities, particularly those with historical and/or cultural significance, and support the redevelopment of former brownfields and other underutilized or abandoned facilities at a scale and density appropriate for the surrounding area” (*Salisbury POCD pg. 55). The Wake Robin Inn Redevelopment Project is an example of continuing and enhancing the use of an existing historical facility to strategically promote smart planning and design. In addition, the application and its supporting documents demonstrate conformity and applicability to the following of the Town of Salisbury’s strategies:

***#4**: Prioritize managing stormwater runoff from all roads that abut wetlands or watercourses to eliminate pollution. Sediment from unimproved roads threatens adjacent wetlands and watercourses.*

***#10**: Establish rain gardens in localized low spots that are deemed unusable due to extended periods of wet and damp conditions.*

***#29**: In order to maximize efficiency and minimize stormwater impacts consideration should be given to: paving and striping parking lots, and installing appropriate measures to detain, treat, and infiltrate parking lot runoff.*

***#46**: Continue to reduce infiltration (I/I) into the sewer system to avoid overwhelming the wastewater treatment plant during high precipitation events.*

***#47**: Ensure that there is adequate capacity to sustain potential sewer use by existing residences resulting from year-round occupancy and/or increasing the number of bedrooms, especially in new accessory dwellings.*

Through its integrated stormwater management approach to reduce pollution from runoff, including the use of rain gardens, thoughtfully designed detention basins, and limited impervious parking areas, the project advances the infrastructure goals identified in the 2024 POCD. Additionally, the application directly addresses municipal water and sewer capacity, demonstrating adequate service availability within the existing mains along Sharon Road and Wells Hill Road as well as sufficient capacity at the Town's wastewater treatment facility.

- **Chapter 7, Natural Resources**

Given that Salisbury is located in the most topographical and ecological diverse area of Connecticut, the POCD and the existing land use regulations are designed to make sure that everyone is doing their part to protect the landscape. The mountains, valleys, and wetlands all contribute significantly to Salisbury's sense of place and attract many seasonal visitors. The Wake Robin Inn Redevelopment Project will attract visitors and allow them to enjoy what Salisbury and the greater Northwest Connecticut region have to offer.

The preservation of its natural resources being the second most important issue of the residents of Salisbury, the POCD enumerates a broad array of strategies of which the following are pertinent to the project:

#21: *Protect wetlands by an ecologically informed and rigorous development review process. Avoidance is the best form of mitigation. Techniques such as Low Impact Development (LID) should become the site standard for new development applications. If unable to comply with the LID standard, the applicant must produce written findings describing why LID techniques cannot be used.*

#25: *Require applicants to provide more detailed surveys/assessments of natural resources and provide mitigation where necessary. Consult staff or third-party reviewers to assess the completeness of these surveys, especially in the case of vernal pools and other sensitive habitats or resources.*

#30: *Continue to require and enforce that all stormwater be detained on development sites and not be diverted onto roads, neighboring properties, or into waterways.*

The proposed Project directly advances the Town's commitment to protecting Salisbury's diverse natural resources as outlined in the Natural Resource Strategies. By incorporating low-impact development techniques, prioritizing ecological sensitivity in both design and construction, and aligning with best practices for stormwater management and habitat preservation, the project not only minimizes its environmental footprint but actively contributes to the stewardship of the region's unique landscape. The proposed development reflects a thoughtful balance between economic revitalization and environmental responsibility, ensuring that Salisbury's natural character remains protected. The applicant and its team have carefully designed the project and its elements to be minimally intrusive and damaging to the landscape, ecological issues, and overall evolution of the natural systems. With the use of native planting species, repurposing existing structures where feasible, sustainable building products, implementation of natural rain gardens, and many other aspects, the proposed project is helping create a better natural environment. One of the main principles of the proposed design is to keep the grounds and experience as natural as possible, thus directly involving the guests into Salisbury's nature.

Community Development Objectives

In addition to being consistent with the specific strategies related to infrastructure and natural resources, the following highlights demonstrate the various ways in which the Wake Robin Inn Redevelopment supports and advances the following overarching community development objectives.

- **Economic Development, Vibrancy, and Long-Term Value**

The proposed redevelopment of the Wake Robin Inn will advance Salisbury's economic development by revitalizing a historic hospitality site with expanded lodging, dining, and event offerings. The project will support year-round tourism, stimulate local commerce, and generate new employment opportunities. By renovating an established commercial use within an existing footprint, the proposal aligns with the POCD's emphasis on supporting sustainable, infrastructure-efficient economic growth. The Inn will strengthen the Town's role as a cultural and recreational destination. Long term, it will serve as a unique and enduring community asset.

- **Historic Preservation and Community Character**

The Project is intentionally designed to preserve and restore the historic architecture and legacy of the original building while integrating modern amenities and functionality. This approach directly reflects community development objectives of supporting the adaptive reuse of culturally significant structures. The proposal ensures continuity of scale and material character, reinforcing the visual identity of the surrounding neighborhood. By retaining the site's integrity, the project contributes meaningfully to the preservation of Salisbury's historic fabric. The redevelopment exemplifies the Town's long-standing commitment to respectful, context-sensitive preservation.

- **Sustainability and Environmental Protection**

This Project embraces sustainable development principles by proposing the adaptive reuse of an existing site, avoiding the environmental impacts associated with new greenfield construction. The design incorporates energy-efficient systems, environmentally responsible materials, and an integrated stormwater management strategy. These measures directly support the Town's goals for environmental stewardship and climate resilience as outlined in the POCD. By leveraging existing infrastructure and reducing land disturbance, the proposal minimizes ecological impact while enhancing site functionality. The project demonstrates a long-term commitment to sustainability and resource conservation.

- **Community Services, Amenities, and Tourism**

The Project will introduce a high-quality lodging and event venue that expands the range of amenities available to both residents and visitors. The facility will provide flexible indoor and outdoor gathering spaces suitable for weddings, retreats, and community programming, thereby addressing current service gaps. Designed at an appropriate scale for its residential setting, the Project reinforces Salisbury's identity as a vibrant and welcoming destination. Its walkable location, shared public spaces, and event capacity will encourage community interaction and engagement. The proposal aligns with the POCD's vision for enhancing community life while preserving the character of the Town.

- **Accessibility and Infrastructure**

Proposed improvements to site access include upgraded parking, Americans with Disabilities Act (ADA)-compliant entrances, pedestrian pathways, and future integration with a potential sidewalk network to Lakeville village. These enhancements support the POCD's goals of improving local mobility, pedestrian safety, and accessibility for residents and guests. Circulation has been carefully designed to reduce traffic impacts while improving connectivity throughout the site. As such, it represents a fiscally responsible and community-oriented redevelopment effort.

- **Cultural and Arts Integration**

The Inn's redevelopment will incorporate spaces specifically designed to host public cultural events, including art exhibitions, musical performances, and lectures that will promote Salisbury's identity as a center for creativity and cultural engagement. By activating an iconic building with community-facing programming, the project supports both tourism and civic life.

These activities will be open to residents and visitors alike, creating opportunities for meaningful public participation. The integration of cultural programming into a historic setting enhances the Inn's role as a community anchor.

Conclusion

The Wake Robin Inn Redevelopment Project embodies the fundamental principles articulated in the Town of Salisbury's 2024 Plan of Conservation and Development and represents a measured and strategic reinvestment in a historically developed property. The proposed improvements advance a range of municipal planning objectives, including the adaptive reuse of historically significant structures, the promotion of infrastructure-efficient growth, the protection of natural resources through low-impact development practices, and the enhancement of year-round economic and cultural activity. By thoughtfully integrating modern building standards with the site's historic character and surrounding residential context, the Project ensures long-term compatibility with the Town's development goals. Moreover, the application reflects a comprehensive and coordinated effort to uphold the regulatory intent of the POCD while fostering a resilient, vibrant, and sustainable future for the community. In its totality, the proposed redevelopment offers a unique opportunity to reinforce Salisbury's identity, enhance local amenities, and preserve the Town's environmental and cultural heritage for generations to come.

141.22100.00001.a2925.memo

SOIL & EROSION CONTROL ESTIMATE

Wake Robin Inn Erosion Control Cost 04-29-2025, 104 & 106 Sharon Rd/53 Wells Hill Rd Salisbury, CT						
Item#	Description	Labor/Equip	Per	Material	Quantity	Total Cost
1	Silt Fence	$ 5	LF	-	4625	$ 23,125
2	Straw Wattle	$ 8	LF	-	4200	$ 33,600
3	Swales + Stone	$ 20	LF	-	540	$ 10,800
4	Temp Sediment Traps	$ 10	CY	-	1000	$ 10,000
5	Track Pads	$ 2,000	Ea.	-	2	$ 4,000
6	Inlet Protection	$ 150	Ea.		25	$ 3,750
7	Hydroseed	$ 0.33	SF		28000	$ 9,240
8	Erosion Control Blanket	$ 0.45	SF		14420	$ 6,489
						$ 101,004

Maintenance @ 10%, $10,100.40

Subtotal $111,104.40

Inflation @10%, $11,110.44

Total $122,214.84

WPCA CAPACITY ANALYSIS

Wake Robin Inn - 104 & 106 Sharon Road, Salisbury, Connecticut

Downstream Capacity Analysis – Sanitary Sewer

ARADEV, LLC

352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

Prepared by:

SLR International Corporation

99 Realty Drive, Cheshire, Connecticut, 06410

SLR Project No.: 141.21278.00001
Client Ref. No.: 22100

April 28, 2025

STATE OF CONNECTICUT
THOMAS A. KNOWLTON
28944
LICENSED
PROFESSIONAL ENGINEER

Thomas Knowlton
4-28-25

Making Sustainability Happen

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Appendices

Appendix A **Proposed Site Plan**
Appendix B **Sewer Collection System Map**
Appendix C **Flow Monitoring Report by EST Associates**
Appendix D **Downstream Capacity Analysis**

Acronyms and Abbreviations

CTDEEP	Connecticut Department of Energy & Environmental Protection
CTDPH	Connecticut Department of Public Health
EST	EST Associates, Inc.
FEMA	Federal Emergency Management Agency
GAL	Gallon
GPM	Gallons Per Minute
HP	Horsepower
I/I	Inflow and Infiltration
RII	Rainwater Induced Infiltration
SLR	SLR International Corporation
SMH	Sanitary Manhole

1.0 Introduction

Aradev, LLC (“the Client”) is planning the redevelopment of the Wake Robin Inn, located at 104 and 106 Sharon Road in Salisbury, Connecticut, into a boutique hotel with an event space, restaurant, bar, pool, and spa. On behalf of Aradev, SLR International Corporation (SLR) has prepared the following downstream capacity analysis of the sanitary sewer collection system for Wake Robin Inn. SLR obtained available sewer mapping from the Town’s Consultant, Tighe & Bond. SLR hired a metering consultant to perform sewer flow metering at three locations between the Wake Robin Inn and the wastewater treatment plant located at 50 Walton Street, Lakeville.

2.0 Project Overview

Aradev is planning the redevelopment of the Wake Robin Inn into a boutique hotel that will serve both the local Salisbury and greater areas. The project will include the restoration and expansion of the main inn building, four cottages spread throughout the property, an outdoor seasonal pool, a spa, and event space attached to the main inn building to hold 125-person gatherings. A food and beverage program will be spread across the buildings to serve both patrons of the property and local community members.

2.1 Inn and Addition

The existing Main Inn will have 14 guest rooms, and a new addition will provide 39 guest rooms for a total of 53 guest rooms in the Inn.

2.2 Cottages

Four stand-alone two-bedroom cottages will be added on the property.

2.3 Event Space

The event space can be rented out any day of the week, and most events will take place on weekends/holidays with occasional afternoon or midday events on the weekends (trade shows, art fairs, or corporate events as examples). Events within the event space that occur on Monday, Tuesday, Wednesday, or Thursday will be allowed between the hours of 9 a.m. and 10 p.m. Events within the event space that occur on Friday, Saturday, Sunday, or any Holiday will be allowed between the hours of 9 a.m. and 12 a.m. (midnight).

Capacity: The event space will have a capacity limit of 125 guests, whether seated or standing. The venue may be reserved for private events by both hotel guests and members of the public. In addition, Aradev anticipates utilizing the event space to host a range of community-oriented and public events, including but not limited to trade shows, art exhibitions, philanthropic gatherings, and town hall meetings.

2.4 Restaurant and Bar

The three-meal restaurant inside the hotel will be open daily at 7 a.m. and conclude service in accordance with the proposed hours of operation.

Capacity: Anticipated interior usage at one time will be between 40 to 80 persons and exterior usage at 40 to 80 persons.

2.5 Pool

The seasonal pool will feature lounge chairs, umbrellas, and tables for hotel guests only. Guests will be able to order drinks and lite bites at the pool which will be serviced from the main inn building. The hours of operation will be 9 a.m. to 8 p.m. daily.

Capacity: An estimated occupancy of 40 to 50 people, with a total of 100 persons per day.

2.6 Spa

The spa will contain a tranquility/reading room, 4 to 5 treatment rooms, women's lockers, men's lockers, hot and cold plunges, a sauna, and a yoga studio. The hours of operation will be 7 a.m. to 7 p.m. daily. The spa is open to the public via advanced reservations for treatments only. Hotel guests receive priority in booking treatments and are allowed to purchase day passes (maximum 2 hours of use) with no more than 5 day passes in use at a time (depending on the capacity of treatments booked).

Capacity: The spa can accommodate 10 to 12 guests at a time, potentially up to 50 guests each day, allocated 10-gallons per person to accommodate plunge pool showering, for a total consumption rate of 500-gallons per day. Connecticut Public Health Code recommends using 100 gpd per pedicure chair/spa (5-gallon maximum basin) each for four treatment rooms for a total of 400 gpd. Connecticut Public Health Code recommends using 20 gpd per employee, so six employees will have a total of 120 gpd. This results in a total estimated spa discharge of 1,020 gpd.

3.0 Site Description

The approximately 13.4-acre subject site located at 104 and 106 Sharon Road has frontage on both Sharon Road and Wells Hill Road. Two of the cottages will discharge by gravity to the Town's 8" gravity collection system on Wells Hill Road. The rest of the property will discharge by gravity to the Town's 10" gravity collection system on Sharon Road. One of the cottages and the Spa building will each have a sewage grinder pump and force main to discharge into the new onsite 8" gravity collection system, which will also serve all the other buildings onsite. The two restaurants and bar will be served by two 3,000-gallon grease interceptor tanks. The proposed site plan is included in Appendix A.

4.0 Sanitary Sewer Flow Estimate

Unit flow rates are taken from the "Connecticut Public Health Code On-Site Sewage Disposal Regulations and Technical Standards for Subsurface Sewage Disposal Systems" (January 2024) Section IV, Table 4. Although the proposed development will be connected to municipal sewer and not have an onsite subsurface sewage disposal system, this more conservative flow estimation method is being used for ease of review and approval. Table 1 provides a summary of proposed sewer flows.

Table 1 – Proposed Average Daily Sanitary Sewer Flows

Source	Unit	Quantity	Flow/Unit (gpd)	AVG Daily Flow (gpd)
Main Hotel + Extension				
Restaurant	Seat (1)	120	45	5,400
Bar	Seat (2)	40	22.5	900
Total Guest Rooms	Bedroom (3)	53	100	5,300
Cottages	Bedroom (3)	8	100	800
Laundry Facilities	Washing machines (4)	4	400	1,600
Spa	Day	1	1,020	1,020
Event Space + Fast Casual				
Event Space	Persons (5)	125	30	3,750
Fast Casual Restaurant	Meals per day (6)	100	5	500
Pool + Pool House	Bather (7)	50	10	500
				Total Flow (gpd): 19,770

Notes:

1- Seat flow/unit factor from Table 4 of the Connecticut Department of Public Health (CTDPH) standard for “Restaurant (Public toilets provided), per seat” increased 50% for 3 meals served per day
2- Seat flow/unit factor from Table 4 of the CTDPH standard for “Bar/Cocktail Lounge (no meals), per seat” increased 50% for meals served
3- Bedroom flow/unit factor from Table 4 of the CTDPH standard for “Motel (transient, with kitchenette but no laundry facilities), per room”
4- Washing machine flow/unit factor from Table 4 of the CTDPH standard for “Laundromat (non-Connecticut Department of Energy & Environmental Protection [CTDEEP] regulated), per machine”
5- Calculation assumes meals served in Event Space; flow/unit factor from Table 4 of the CTDPH standard for “Restaurant (Public toilets provided), per seat”
6- Meal per day flow/unit factor from Table 4 of the CTDPH standard for “Take-out food service, per meal served”
7- Bather flow/unit factor from Table 4 of the CTDPH standard for “Swimming pool, per bather”

4.1 Pool Drainage

The proposed development will include an inground pool (outdoors so it will be used seasonally) and indoor hot tub and cold plunge pool. Each of these pools and hot tub require draining and refilling periodically. The draining will be discharged into the sanitary sewer system. However, the filter cartridges do not require backwash discharge to the sewer system. They are further described as follows:

4.1.1 Inground Pool

- 50'L x 20'W x 5'D = 37,400 gallons
- Salt water
- Only in use from May – October
- 30 gallons per minute (GPM) (2" diameter drain line – via gravity) 21 hours to drain or
  60 GPM (2" diameter drain line – via 0.5 HP pump) 10.5 hours to drain
- Drained and refilled once a year

4.1.2 Hot Tub

- 3.5' Radius x 3'D = 860 gallons
- Open year round
- 16.5 GPM (1.5" diameter drain line – via gravity) 52 minutes to drain or
  33 GPM (1.5" diameter drain line – via 0.5 HP pump) 26 minutes to drain
- Drained and refilled once a month

4.1.3 Cold Plunge Pool

- 31'L x 6'W x 4.5'D = 6,260 gallons
- Open year-round
- 30 GPM (2" diameter drain line – via gravity) 3.5 hours to drain or
  60 GPM (2" diameter drain line – via 0.5 HP pump) 1.75 hours (105 minutes) to drain
- Drained and refilled twice a year

These two pools and hot tub shall be scheduled to drain one at a time. The maximum pumped discharge for any one pool is 60 gpm or 30 gpm by gravity flow. The draining could also be scheduled to occur during sewer off-peak time. Peak sewer flow generally occurs between 7:00 and 9:00 a.m. Monday through Saturday and between noon and 1:00 p.m. on Sunday.

5.0 Sanitary Sewer Flow Metering

The Town requested the applicant perform sanitary sewer flow metering to determine the flow in the existing collection system. The Town was concerned that they have elevated levels of inflow and infiltration (I/I). Inflow is the direct discharge of stormwater into the sanitary sewer system and infiltration is the direct discharge of groundwater into the collection system via cracks in pipes or manholes. SLR contracted with EST Associates, Inc. located in Needham, Massachusetts to provide and install temporary flow meters in the sanitary sewer main downstream of the Wake Robin Inn. SLR coordinated with the Town and Tighe & Bond to select three meter locations: Meter #1 was installed in manhole SMH-2 at Walton Road (easement) near the wastewater treatment plant, Meter #2 in manhole SMH-6 at 10 Farnum Road (Harrington Building Supply), and Meter #3 in manhole SMH-M6 at 41 Montgomery Road. A collection system map provided by the Town with manhole numbers is included in Appendix B. The path of sewer discharge from the Wake Robin Inn to the wastewater treatment plant is indicated with a red line over the sewer main as shown on the collection system map. This is the portion of the Town's collection system that was analyzed for downstream capacity in order to accommodate the proposed development.

A temporary rain gauge was installed near the wastewater treatment plant to record rainfall measurements in 15-minute increments. The three meters and rain gauge were installed on March 24, 2025 and removed on April 9, 2025.

A copy of EST's Flow Monitoring Report is included in Appendix C. Table 2 summarizes the average daily flow, peak flow, and associated peaking factor for each of the three meters.

Table 2 - Summary of Flow Meter Data

Meter Number	Manhole Number	Average Flow (gpm)	Peak Flow (gpm)	Peaking Factor
1	SMH-2	207.4	413.3	2.0
2	SMH-6	104.0	267.1	2.6
3	SMH-M6	84.1	224.2	2.7

Source: EST Associates, Inc.

SLR performed a downstream capacity analysis of each of the pipe segments between the Wake Robin Inn and the wastewater treatment plant. SLR's survey department surveyed the locations and invert elevations of all the manholes except one invert (SMH-M5 on Sharon Road), which could not be opened. Utilizing the pipe diameter, pipe material, invert elevations and lengths of each pipe segment, SLR used Manning's Equation to calculate the estimated flow capacity of each pipe. The peak meter flows for each meter were used in the upstream segments of sewer main between each meter. The peak flow rate at Meter #3 picked up flows from both Sharon Road (including the Hotchkiss School) and Wells Hill Road. Therefore, the peak metered flow could not be used for the analysis on Wells Hill Road so the existing peak flow on Wells Hill Road was estimated using a house count of 12 houses with an average daily flow of 450 gpd/house and a peaking factor.

A peaking factor of 3.0 was applied to the estimated average daily flow of the proposed development (19,770 gpd) to estimate a peak flow of 41 gpm. This flow rate along with the peak gravity pool drainage flow rate of 30 gpm was added to the existing peak flows to perform the capacity analysis. Appendix D contains the results of the downstream capacity analysis. Each pipe segment is projected to be flowing less than 90% of the total pipe capacity, which is a Town requirement.

6.0 Rainfall Data and Infiltration

Measurable rainfall was recorded on 12 of the 15 days the meters were installed. The highest single rainfall event was 0.46" in 3 hours (March 31, 2025 to April 1, 2025); the second was 0.41" over 23 hours (April 5, 2025 to April 6, 2025). There was no observed immediate spike in metered flows following these rainfall events, which would be indicative of inflow. The spike observed on April 1, 2025 following the rain event coincided with the normal peak morning flow around 9 a.m. The spike on Sunday (April 6, 2025) occurred with the normal peak flow at around 1:00 p.m. as occurred on the previous Sunday. There may have been a slight increase due to infiltration, but negligible. The highest flow recorded at Meter #1 didn't occur during either of these rain events. The flow came back to near dry weather flows within hours of each rain event. There was no prolonged increase in flow over a day or two that would be indicative of excessive rainwater induced infiltration (RII).

To estimate infiltration, data from the 3 consecutive dry days (March 26, 2025 to March 28, 2025) during the night hours of 2:00 to 6:00 a.m. were analyzed, which is indicative of infiltration in areas that do not have nighttime industrial or commercial flows like Salisbury.

- Meter #1 averaged 156 gpm flow during this time period over 3 days. Immediately following the two rain events, the flow increased to 183 gpm on April 1, 2025 and 177 on April 7, 2025. The difference is contributed to RII, which was minimal. However, Meter #1 had an average flow rate of 207 gpm over the 2-week metering period, so the infiltration amount of 156 gpm is about 75% of the flow going to the plant.

- Meter #2 had a nighttime average of 66 gpm on dry days (March 26, 2025 to March 28, 2025) and an average of 76 gpm on April 1, 2025 and April 7, 2025 following the rain events. Again, not much RII.

- Meter #3 had a nighttime average of 43 gpm on dry days (March 26, 2025 to March 28, 2025) and an average of 49 gpm on April 1, 2025 and 46 gpm on April 7, 2025 following the rain events. Again, not much RII.

- Most of the infiltration and RII is manifesting at Meter #1, which is to be expected since most of the town's collection system comes in just upstream of where Meter #1 was placed.

7.0 Conclusion

The downstream capacity analysis illustrates that there is a high percentage of infiltration flow in the existing sewer collection system. However, the RII was minimal and the inflow was negligible during the two storms observed during the metering period. The downstream capacity analysis shows that with the added development flows each pipe segment stays below the 90% capacity threshold required by the Town. Therefore, it appears that there is sufficient capacity to allow the proposed development at the Wake Robin Inn to connect to the Town's sanitary sewer collection system. A single pool draining by gravity at 30 gpm can also be accommodated, but the Town could choose to require the applicant to discharge during off-peak periods during the day or night.

If you have any questions regarding this report, please do not hesitate to contact the undersigned at (203) 271-1773.
Regards,

SLR International Corporation

Thomas A. Knowlton, PE
Principal Water & Wastewater Engineer
tknowlton@slrconsulting.com

141.22100.00001.a2525.rpt

Appendix A Proposed Site Plan

Wake Robin Inn - 104 & 106 Sharon Road, Salisbury, Connecticut

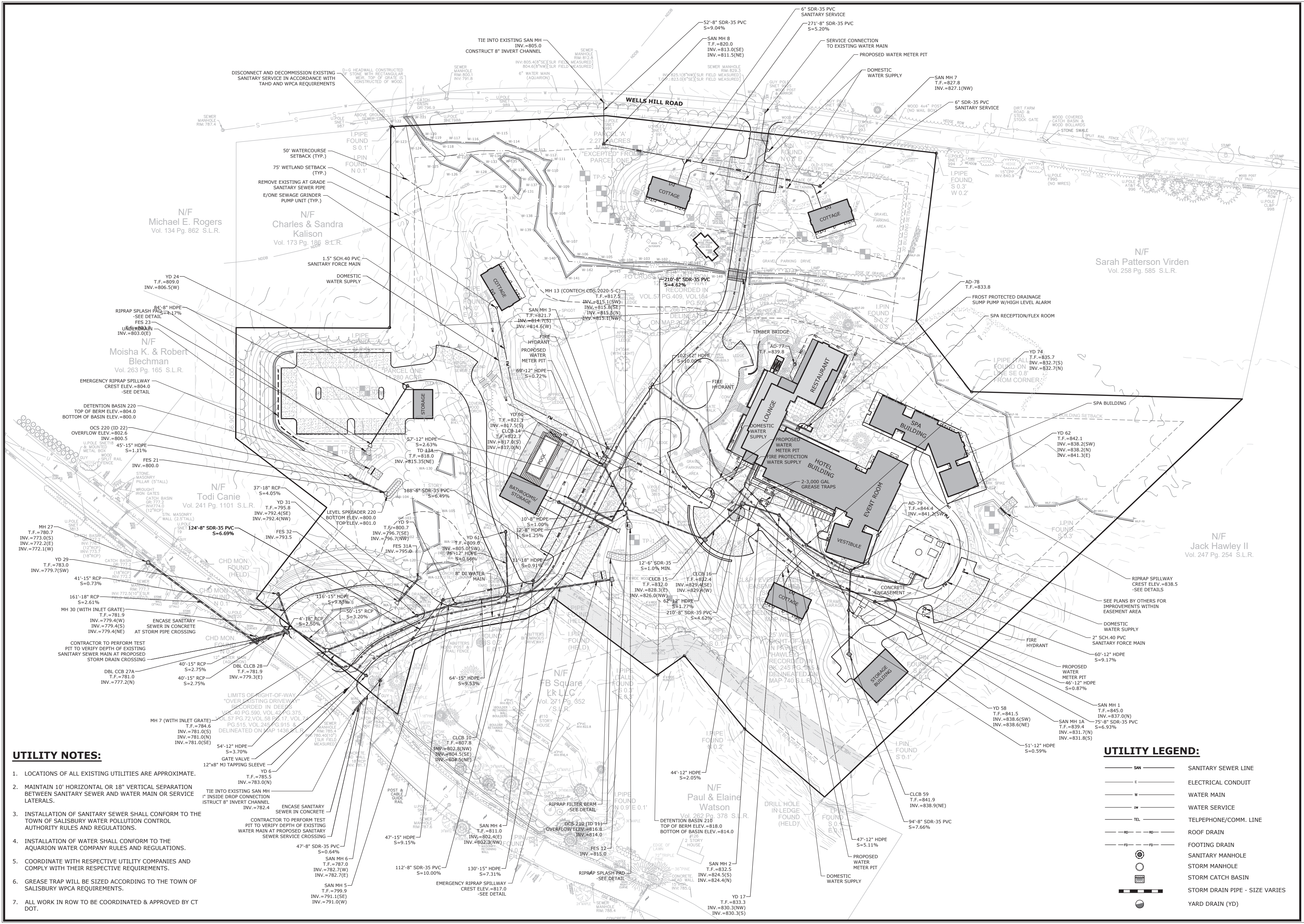
Downstream Capacity Analysis – Sanitary Sewer

ARADEV, LLC

SLR Project No.: 141.21278.00001
Client Ref. No.: 22100

April 28, 2025

SLR



UTILITY NOTES:

1. LOCATIONS OF ALL EXISTING UTILITIES ARE APPROXIMATE.
2. MAINTAIN 10' HORIZONTAL OR 18" VERTICAL SEPARATION BETWEEN SANITARY SEWER AND WATER MAIN OR SERVICE LATERALS.
3. INSTALLATION OF SANITARY SEWER SHALL CONFORM TO THE TOWN OF SALISBURY WATER POLLUTION CONTROL AUTHORITY RULES AND REGULATIONS.
4. INSTALLATION OF WATER SHALL CONFORM TO THE AQUARION WATER COMPANY RULES AND REGULATIONS.
5. COORDINATE WITH RESPECTIVE UTILITY COMPANIES AND COMPLY WITH THEIR RESPECTIVE REQUIREMENTS.
6. GREASE TRAP WILL BE SIZED ACCORDING TO THE TOWN OF SALISBURY WPCA REQUIREMENTS.
7. ALL WORK IN ROW TO BE COORDINATED & APPROVED BY CT DOT.

UTILITY LEGEND:

- SANITARY SEWER LINE
- ELECTRICAL CONDUIT
- WATER MAIN
- WATER SERVICE
- TELPEPHONE/COMM. LINE
- ROOF DRAIN
- FOOTING DRAIN
- SANITARY MANHOLE
- STORM MANHOLE
- STORM CATCH BASIN
- STORM DRAIN PIPE - SIZE VARIES
- YARD DRAIN (YD)

0' 25' 50'
0 1/2" 1"

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY

SITE PLAN - UTILITIES

WAKE ROBIN INN REDEVELOPMENT

104 & 106 SHARON ROAD & 53 WELLS HILL ROAD
SALISBURY, CONNECTICUT

SM	SM	TR
DESIGNED	DRAWN	CHECKED

SCALE: 1"=50'

DATE: APRIL 18, 2025

PROJECT NO. 22100.00001

SHEET NO. 07 OF 23

SHEET NAME: UT

Appendix B Sewer Collection System Map

Wake Robin Inn - 104 & 106 Sharon Road, Salisbury, Connecticut

Downstream Capacity Analysis – Sanitary Sewer

ARADEV, LLC

SLR Project No.: 141.21278.00001
Client Ref. No.: 22100

April 28, 2025

EXISTING COLLECTION SYSTEM

LEGEND

Sewer Manhole

Sewer Main

LOCUS MAP

N

0 125 250 500

Feet

1:6,000

NOTES

Sewer Rehabilitation Project
Town of Salisbury, CT

Appendix C – Map of Existing Collection System

May, 2017

Tighe&Bond
Engineers | Environmental Specialists

Path: G:\GIS\CT\SalisburyCT\avproj\SalisburyExisting.mxd

S-1891

Appendix C Flow Monitoring Report by EST Associates

Wake Robin Inn - 104 & 106 Sharon Road, Salisbury, Connecticut

Downstream Capacity Analysis – Sanitary Sewer

ARADEV, LLC

SLR Project No.: 141.21278.00001
Client Ref. No.: 22100

April 28, 2025

EST Associates, Inc.

Flow Monitoring Report

March - April 2025

Prepared For:

SLR Consulting

Services Performed In:

Salisbury, CT

Prepared by:

EST Associates Inc.
124 Crescent Road, Needham, MA 02494 Tel: (781) 455-0003
ESTAssociates.com

Meter 1 - Salisbury, CT

Outside View

Downhole View

Downstream View

Upstream View

124 Crescent Road, Needham, MA 02494
tel: 781-455-0003 fax: 781-455-8336

EST Associates, Inc.

Environmental Monitoring
Pipeline Services
Operations Maintenance

SITE INVESTIGATION FORM

Client: SLR Consulting

Meter ID: **Meter 1**

Location: Salisbury, CT

Address: Walton Street

INSTALL DATA

Date: 3/24/2025

Time: 11:45 AM

GPS Coordinates: 41.9668405, -73.4327644

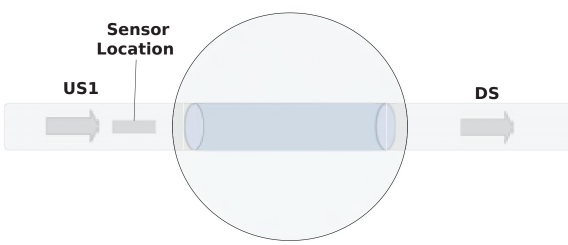
Sensor Location: US1

Installed By: MK/TA

LINE DESCRIPTIONS

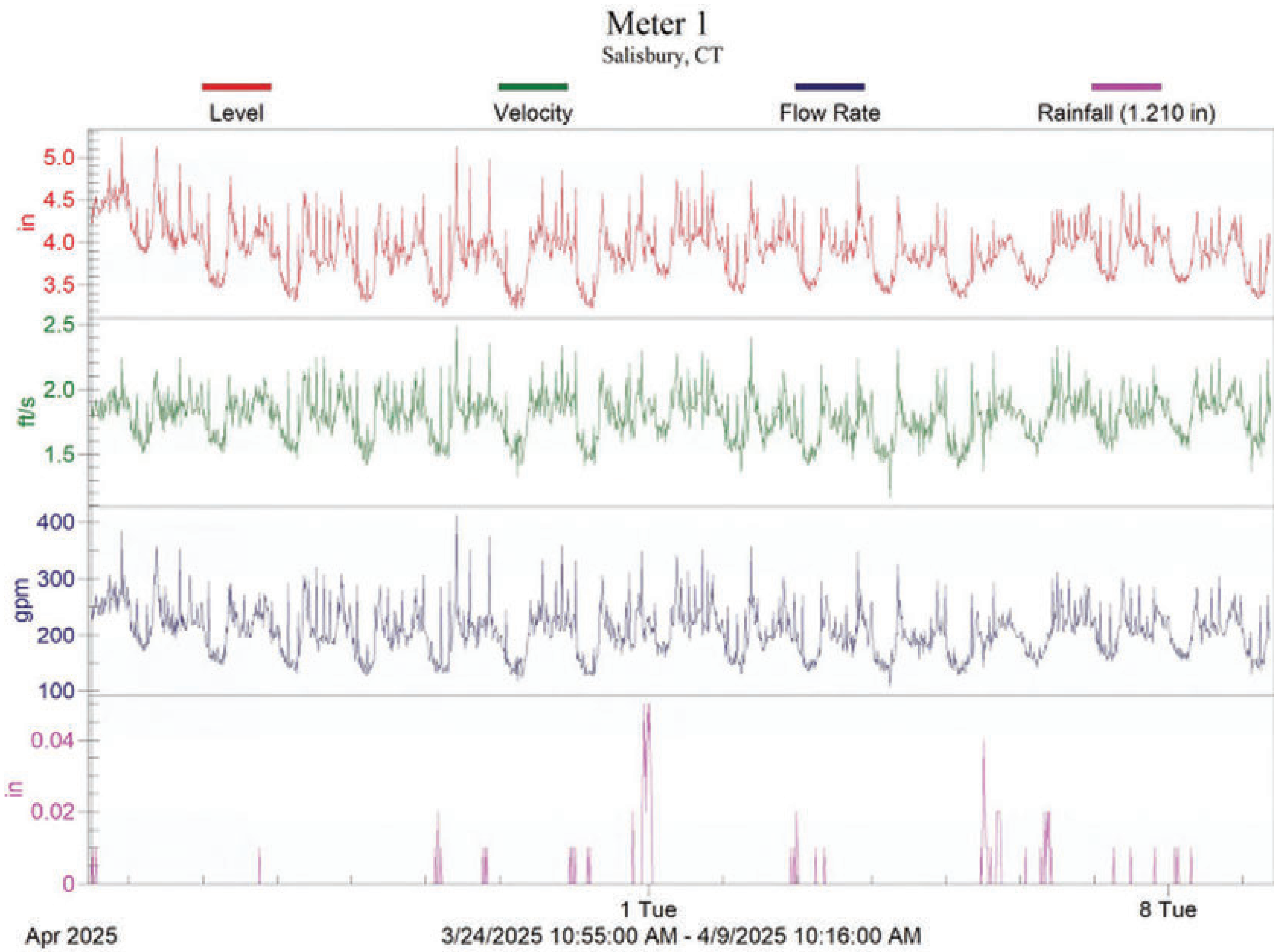
	Size *(in)*	Pipe Material	Debris *(in)*	Shape	Depth *(ft, in)*
DS	15"	VCP	0"	CIR	5'
US1	15"	VCP	0"	CIR	4'11"

PLAN VIEW



PROFILE VIEW

124 Crescent Road, Needham, MA 02494 • Tel (781) 455-0003 Fax (781) 455-8336
www.estassociates.com


Meter 1
Salisbury, CT
Level
Velocity
Flow Rate
Rainfall (1.210 in)
5.0
4.5
4.0
3.5
in
2.5
2.0
1.5
ft/s
400
300
200
100
gpm
0.04
0.02
0
in
1 Tue
8 Tue
Apr 2025
3/24/2025 10:55:00 AM - 4/9/2025 10:16:00 AM

EST Associates, Inc.

Meter 1, Salisbury, CT

Daily Flow Rate Table

Date/Time (m/d/yyyy)	Average Flow Rate (gpm)	Minimum Flow Rate (gpm)	Time of Minimum Flow Rate (h:mm)	Maximum Flow Rate (gpm)	Time of Maximum Flow Rate (h:mm)	Total Flow (gal)
3/24/2025	264.4	226.5	12:15 PM	383.5	9:45 PM	380,783.6
3/25/2025	229.5	170.0	5:00 AM	356.8	9:00 AM	330,421.6
3/26/2025	211.1	146.0	6:00 AM	295.3	1:45 AM	303,969.4
3/27/2025	205.9	133.2	6:30 AM	321.5	12:30 PM	296,552.7
3/28/2025	201.6	127.2	4:45 AM	307.3	11:15 PM	290,368.9
3/29/2025	202.0	132.7	7:15 AM	413.3	10:00 AM	290,873.2
3/30/2025	201.8	117.1	5:45 AM	358.2	8:00 PM	290,636.3
3/31/2025	197.9	126.9	3:15 AM	348.2	9:45 PM	284,959.6
4/1/2025	226.0	160.3	5:15 AM	350.8	5:15 PM	325,511.3
4/2/2025	202.7	130.9	5:45 AM	356.6	9:00 AM	291,930.0
4/3/2025	198.8	135.8	3:30 AM	349.4	7:30 PM	286,200.1
4/4/2025	188.8	108.8	6:00 AM	325.4	8:30 AM	271,890.9
4/5/2025	188.9	128.5	4:00 AM	294.9	3:30 PM	272,067.6
4/6/2025	209.9	141.6	5:30 AM	312.3	12:00 PM	302,217.2
4/7/2025	211.1	152.6	5:45 AM	302.3	9:15 AM	304,009.1
4/8/2025	210.4	154.3	6:30 AM	304.1	4:15 PM	302,944.7
4/9/2025	174.5	130.4	2:45 AM	272.3	8:00 AM	251,259.3
Flow Total (gal)	**Average Flow Rate Total (gpm)**	**Minimum Flow Rate (gpm)**	**Time of Minimum Flow Rate (m/d/yyyy h:mm)**	**Maximum Flow Rate (gpm)**	**Time of Maximum Flow Rate (m/d/yyyy h:mm)**	**Average Total Flow (gal)**
5,076,596	207.4	108.8	4/4/2025 6:00	413.3	3/29/2025 10:00	298,623.3

EST Associates, Inc.

Pipeline Services
Sampling Monitoring
Operations Maintenance

CALIBRATION & DATA COLLECTION

Client: SLR Consulting **Meter ID:** SMH-2 Salisbury, CT

Address: Walton Rd. Easement

SERVICES PERFORMED

Date: 3-24-25 **Technicians:** MK/TA

Time: 1145 **Meter Serial Number:** EST 241

- [ ] Sensor Cleaning
- [ ] Calibration Check
- [ ] Data Download
- [x] Other: Meter Install

Data Downloaded: [x] Yes [ ] No

[ ] By Modem on:

[ ] To Laptop Serial Number: #MK

Battery Replacement: [ ] Yes [x] No

Existing voltage: 12.5 New voltage:

Dessicant Status: Good

Replaced: [ ] Yes [x] No

METER READINGS

Levels: Meter: 4.17 *(in.)* Actual: 4.17 *(in.)*

Recalibrated: [ ] Yes [x] No

Sensor Type: [x] Area Velocity [ ] Ultrasonic [ ] Laser

Velocity: Meter: 1.891 *(ft/s)* Actual: 1.9 *(ft/s)*

NOTES

Notes:

EST Associates, Inc.

Pipeline Services
Sampling Monitoring
Operations Maintenance

CALIBRATION & DATA COLLECTION

Client: SLR Consulting **Meter ID:** SMH-2

Address: Walton Rd. Easement

SERVICES PERFORMED

Date: 3-31-25 **Technicians:** MK/TA

Time: 1156 **Meter Serial Number:** EST 294

- [x] Sensor Cleaning
- [x] Calibration Check
- [x] Data Download
- [ ] Other:

Data Downloaded: [x] Yes [ ] No

[ ] By Modem on:

[x] To Laptop Serial Number: # MK

Battery Replacement: [ ] Yes [x] No

Existing voltage: 12.3 New voltage:

Dessicant Status: Good

Replaced: [ ] Yes [x] No

METER READINGS

Levels: Meter: 3.779 *(in.)* Actual: 3.75 *(in.)*

Recalibrated: [ ] Yes [x] No

Sensor Type: [x] Area Velocity [ ] Ultrasonic [ ] Laser

Velocity: Meter: 1.780 *(ft/s)* Actual: 1.8 *(ft/s)*

NOTES

Notes:

EST
Associates, Inc.

Pipeline Services
Sampling Monitoring
Operations Maintenance

CALIBRATION & DATA COLLECTION

Client: SLR Consulting **Meter ID:** SMH-2

Address: Walton Rd

SERVICES PERFORMED

Date: 4/9/25 **Technicians:** JC/TA

Time: 08:57 **Meter Serial Number:** EST-294

- [x] Sensor Cleaning
- [x] Calibration Check
- [x] Data Download
- [x] Other: Meter Removal

Data Downloaded: [x] Yes [ ] No

[ ] By Modem on: ______

[x] To Laptop Serial Number: JR

Battery Replacement: [ ] Yes [x] No

Existing voltage: 12.0 New voltage: ______

Dessicant Status: Good

Replaced: [ ] Yes [x] No

METER READINGS

Levels: Meter: 4.04 (in.) Actual: 4.0 (in.)

Recalibrated: [ ] Yes [ ] No

Sensor Type: [x] Area Velocity [ ] Ultrasonic [ ] Laser

Velocity: Meter: 2.05 (ft/s) Actual: 2.05 (ft/s)

NOTES

Notes: ______

Meter 2 - Salisbury, CT

Outside View

Downhole View

Downstream View

US1 View

US2 View

124 Crescent Road, Needham, MA 02494
tel: 781-455-0003 fax: 781-455-8336

Environmental Monitoring
Pipeline Services
Operations Maintenance

SITE INVESTIGATION FORM

Client: SLR Consulting

Meter ID: **Meter 2**

Location: Salisbury, CT

Address: Farnum Street

INSTALL DATA

Date: 3/24/2025

Time: 11:00 AM

GPS Coordinates: 41.9648447, -73.4360581

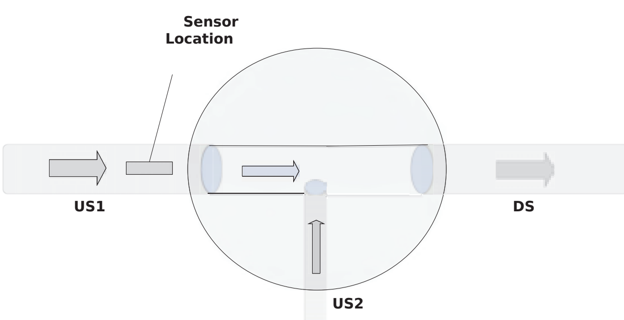
Sensor Location: US1

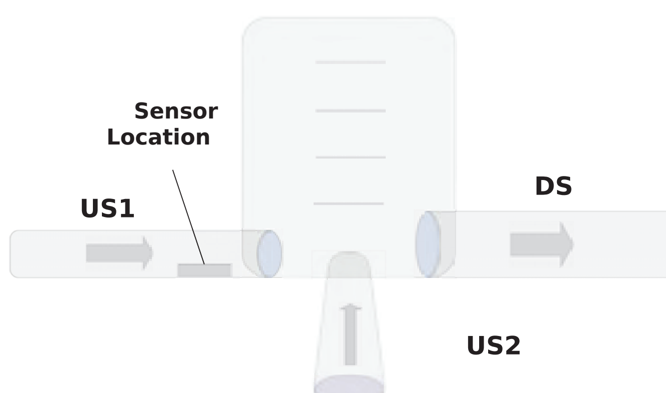
Installed By: MK/TA

LINE DESCRIPTIONS

	Size *(in)*	Pipe Material	Debris *(in)*	Shape	Depth *(ft, in)*
DS	12'	Cast Iron	0"	CIR	8'3"
US1	12'	Cast Iron	0"	CIR	8'2"
US2	6"	PVC	0"	CIR	6'7"

PLAN VIEW PROFILE VIEW





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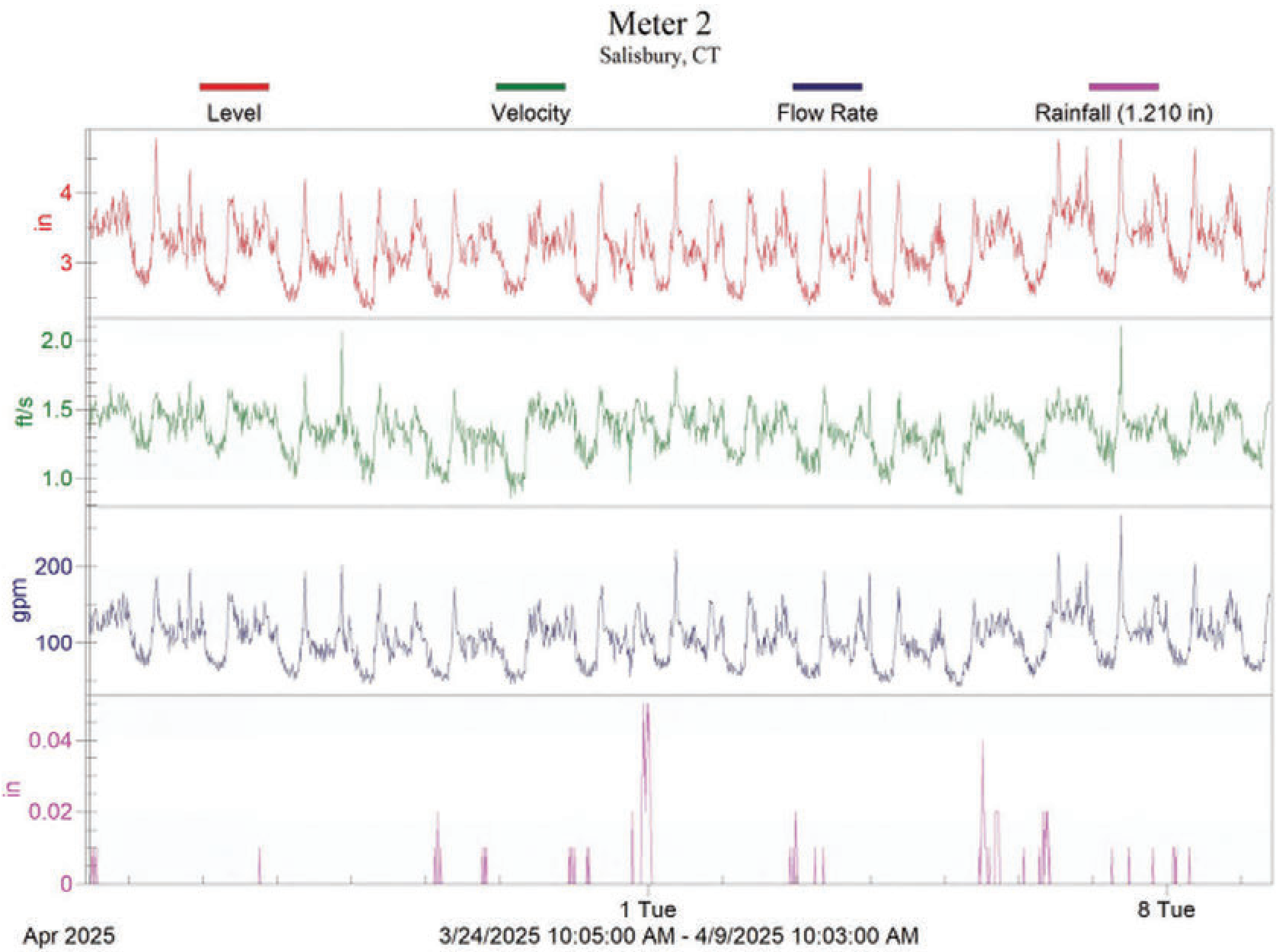
www.estassociates.com



Meter 2
Salisbury, CT
Level
Velocity
Flow Rate
Rainfall (1.210 in)
in
4
3
ft/s
2.0
1.5
1.0
gpm
200
100
in
0.04
0.02
0
1 Tue
8 Tue
Apr 2025
3/24/2025 10:05:00 AM - 4/9/2025 10:03:00 AM

EST
Associates, Inc.

Meter 2, Salisbury, CT

Daily Flow Rate Table

Date/Time (m/d/yyyy)	Average Flow Rate (gpm)	Minimum Flow Rate (gpm)	Time of Minimum Flow Rate (h:mm)	Maximum Flow Rate (gpm)	Time of Maximum Flow Rate (h:mm)	Total Flow (gal)
3/24/2025	134.1	98.7	11:15 AM	166.9	10:15 PM	193,082.9
3/25/2025	112.9	69.6	5:00 AM	196.9	7:45 PM	162,582.3
3/26/2025	110.4	64.3	5:00 AM	166.1	8:15 AM	159,038.4
3/27/2025	94.3	51.2	5:30 AM	202.0	9:00 PM	135,720.4
3/28/2025	94.5	46.3	6:15 AM	177.8	9:15 AM	136,137.5
3/29/2025	91.8	50.2	5:45 AM	173.0	9:30 AM	132,125.9
3/30/2025	100.6	46.6	3:45 AM	157.9	1:00 PM	144,896.7
3/31/2025	100.4	55.2	5:45 AM	176.9	9:00 AM	144,545.2
4/1/2025	107.2	65.0	4:00 AM	221.5	9:00 AM	154,313.2
4/2/2025	102.3	57.4	6:00 AM	168.5	8:30 AM	147,279.2
4/3/2025	95.4	52.9	4:15 AM	193.8	9:00 AM	137,347.9
4/4/2025	87.9	47.7	3:45 AM	173.6	9:00 AM	126,607.4
4/5/2025	98.5	43.3	4:00 AM	157.8	9:30 AM	141,903.8
4/6/2025	120.1	54.9	4:45 AM	218.1	12:45 PM	173,002.6
4/7/2025	115.0	65.4	4:15 AM	267.1	9:15 AM	165,599.6
4/8/2025	113.8	67.2	3:45 AM	204.2	9:00 AM	163,844.5
4/9/2025	88.5	62.1	4:15 AM	165.3	9:00 AM	127,505.9
Flow Total (gal)	**Average Flow Rate Total (gpm)**	**Minimum Flow Rate (gpm)**	**Time of Minimum Flow Rate (m/d/yyyy h:mm)**	**Maximum Flow Rate (gpm)**	**Time of Maximum Flow Rate (m/d/yyyy h:mm)**	**Average Total Flow (gal)**
2,545,533	104.0	43.3	4/5/2025 4:00	267.1	4/7/2025 9:15	149,737.3

EST
Associates, Inc.

Pipeline Services
Sampling Monitoring
Operations Maintenance

CALIBRATION & DATA COLLECTION

Client: SLR Consulting **Meter ID:** SMH-6 Salisbury, CT

Address: 10 Farnum Rd (Harrington Building Supply)

SERVICES PERFORMED

Date: 3-24-25 **Technicians:** mk/ZA

Time: 1115 **Meter Serial Number:** EST 253

☐ Sensor Cleaning ☐ Calibration Check

☐ Data Download ☑ Other: Meter Install

Data Downloaded: ☑ Yes ☐ No

☐ By Modem on:

☑ To Laptop Serial Number: # mk

Battery Replacement: ☐ Yes ☑ No

Existing voltage: 12.4 New voltage:

Dessicant Status: Good

Replaced: ☐ Yes ☑ No

METER READINGS

Levels: Meter: 3.5 *(in.)* Actual: 3.5 *(in.)*

Recalibrated: ☐ Yes ☑ No

Sensor Type: ☑ Area Velocity ☐ Ultrasonic ☐ Laser

Velocity: Meter: 1.445 *(ft/s)* Actual: 1.5 *(ft/s)*

NOTES

Notes:

EST
Associates, Inc.

Pipeline Services
Sampling Monitoring
Operations Maintenance

CALIBRATION & DATA COLLECTION

Client: SLR Consulting **Meter ID:** SMH-6

Address: 10 Farnum Rd.

SERVICES PERFORMED

Date: 3-31-25 **Technicians:** MK/TA

Time: 1116 **Meter Serial Number:** EST 253

☑ Sensor Cleaning ☑ Calibration Check

☑ Data Download ☐ Other:

Data Downloaded: ☑ Yes ☐ No

☐ By Modem on:

☑ To Laptop Serial Number: #MK

Battery Replacement: ☐ Yes ☑ No

Existing voltage: 12.6 New voltage:

Dessicant Status: Good

Replaced: ☐ Yes ☑ No

METER READINGS

Levels: Meter: 3.265 *(in.)* Actual: 3.25 *(in.)*

Recalibrated: ☐ Yes ☐ No

Sensor Type: ☐ Area Velocity ☐ Ultrasonic ☐ Laser

Velocity: Meter: 1.439 *(ft/s)* Actual: 1.4 *(ft/s)*

NOTES

Notes:

EST
Associates, Inc.

Pipeline Services
Sampling Monitoring
Operations Maintenance

CALIBRATION & DATA COLLECTION

Client: SLR Consulting **Meter ID:** SMH-6

Address: 10 Farnum Rd

SERVICES PERFORMED

Date: 6/9/25 **Technicians:** JC/TA

Time: 0918 **Meter Serial Number:** EST-25J

- [x] Sensor Cleaning
- [x] Calibration Check
- [x] Data Download
- [x] Other: Meter Removal

Data Downloaded: [x] Yes [ ] No
[ ] By Modem on: ______
[x] To Laptop Serial Number: JR

Battery Replacement: [ ] Yes [x] No
Existing voltage: 11.1 New voltage: ______

Dessicant Status: Good
Replaced: [ ] Yes [x] No

METER READINGS

Levels: Meter: 4.14 (in.) Actual: 4.00 (in.)
Recalibrated: [ ] Yes [ ] No

Sensor Type: [x] Area Velocity [ ] Ultrasonic [ ] Laser

Velocity: Meter: 1.55 (ft/s) Actual: 1.59 (ft/s)

NOTES

Notes:

EST Associates, Inc.

Meter 3 - Salisbury, CT

Outside View

Downhole View

Downstream View

Upstream View

124 Crescent Road, Needham, MA 02494
tel: 781-455-0003 fax: 781-455-8336

SITE INVESTIGATION FORM

Client: SLR Consulting

Meter ID: **Meter 3**

Location: Fairfield, CT

Address: Montgomery Street

INSTALL DATA

Date: 3/24/2025

Time: 10:30 AM

GPS Coordinates: 41.962330, -73.4390414

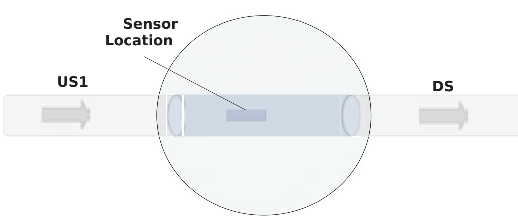
Sensor Location: US1

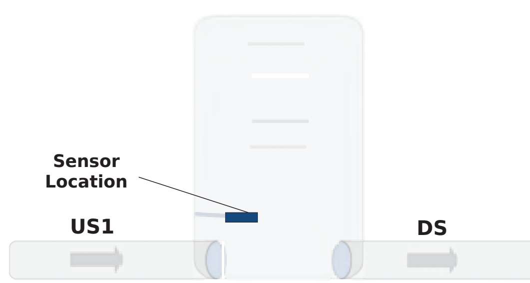
Installed By: MK/TA

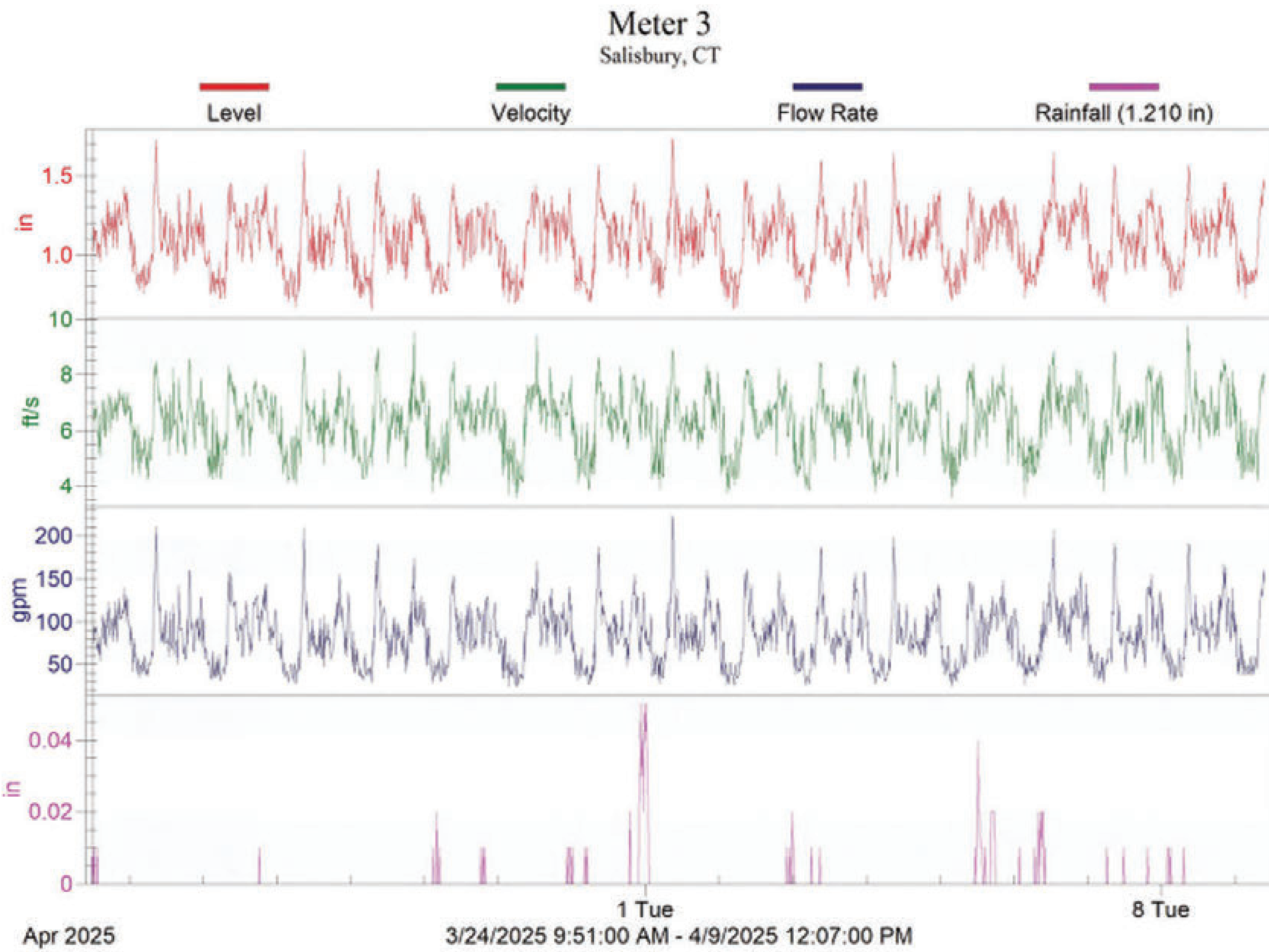
LINE DESCRIPTIONS

	Size *(in)*	Pipe Material	Debris *(in)*	Shape	Depth *(ft, in)*
DS	8"	VCP	0"	CIR	8'3"
US1	8"	VCP	0"	CIR	8'5"

PLAN VIEW | VIEW






Meter 3
Salisbury, CT
Level
Velocity
Flow Rate
Rainfall (1.210 in)
in
1.5
1.0
10
ft/s
8
6
4
gpm
200
150
100
50
in
0.04
0.02
0
1 Tue
8 Tue
Apr 2025
3/24/2025 9:51:00 AM - 4/9/2025 12:07:00 PM

EST Associates, Inc.

Meter 3, Salisbury, CT

Daily Flow Rate Table

Date/Time (m/d/yyyy)	Average Flow Rate (gpm)	Minimum Flow Rate (gpm)	Time of Minimum Flow Rate (h:mm)	Maximum Flow Rate (gpm)	Time of Maximum Flow Rate (h:mm)	Total Flow (gal)
3/24/2025	96.0	53.8	2:30 PM	140.1	10:15 PM	138,204.5
3/25/2025	82.7	34.1	3:15 AM	210.9	8:45 AM	119,105.9
3/26/2025	87.0	31.6	5:45 AM	157.4	8:15 AM	125,231.8
3/27/2025	78.2	27.0	6:00 AM	209.4	8:45 AM	112,633.7
3/28/2025	82.2	28.7	7:00 AM	189.4	9:00 AM	118,416.2
3/29/2025	82.1	28.0	2:45 AM	153.9	9:30 AM	118,276.7
3/30/2025	85.0	24.5	3:30 AM	169.7	12:45 PM	122,354.3
3/31/2025	84.1	27.0	5:30 AM	187.1	8:45 AM	121,041.4
4/1/2025	87.8	27.5	4:45 AM	224.2	8:45 AM	126,478.2
4/2/2025	82.8	25.4	5:00 AM	161.3	9:00 AM	119,294.9
4/3/2025	83.1	25.9	4:15 AM	187.0	9:15 AM	119,708.4
4/4/2025	80.2	26.0	2:45 AM	198.2	8:45 AM	115,492.4
4/5/2025	82.7	24.7	3:45 AM	148.0	8:30 PM	119,113.4
4/6/2025	92.5	25.4	3:30 AM	207.0	1:00 PM	133,213.9
4/7/2025	83.5	28.7	5:15 AM	191.1	8:45 AM	120,278.6
4/8/2025	89.6	31.4	4:00 AM	190.8	8:45 AM	129,054.0
4/9/2025	69.6	36.9	2:45 AM	159.9	9:15 AM	100,183.8
Flow Total (gal)	**Average Flow Rate Total (gpm)**	**Minimum Flow Rate (gpm)**	**Time of Minimum Flow Rate (m/d/yyyy h:mm)**	**Maximum Flow Rate (gpm)**	**Time of Maximum Flow Rate (m/d/yyyy h:mm)**	**Average Total Flow (gal)**
2,058,082	84.1	24.5	3/30/2025 3:30	224.2	4/1/2025 8:45	121,063.7

EST Associates, Inc.

Pipeline Services
Sampling Monitoring
Operations Maintenance

CALIBRATION & DATA COLLECTION

Client: SLR Consulting **Meter ID:** SMH-MH Salisbury, CT

Address: 41 Montgomery St.

SERVICES PERFORMED

Date: 3-24-25 **Technicians:** MK / TA

Time: 0945 **Meter Serial Number:** ______

- [ ] Sensor Cleaning
- [ ] Calibration Check
- [ ] Data Download
- [x] Other: Meter Install

Data Downloaded: [x] Yes [ ] No

[ ] By Modem on: ______

[x] To Laptop Serial Number: #1 MK

Battery Replacement: [ ] Yes [x] No

Existing voltage: 11.0 New voltage: ______

Dessicant Status: Good

Replaced: [ ] Yes [x] No

METER READINGS

Levels: Meter: 1.164 *(in.)* Actual: 1.17 *(in.)*

Recalibrated: [ ] Yes [x] No

Sensor Type: [ ] Area Velocity [ ] Ultrasonic [x] Laser

Velocity: Meter: 6.615 *(ft/s)* Actual: 6.6 *(ft/s)*

NOTES

Notes: ______

EST Associates, Inc.

Pipeline Services
Sampling Monitoring
Operations Maintenance

CALIBRATION & DATA COLLECTION

Client: SLR Consulting **Meter ID:** SMH - ML

Address: 41 Montgomery St.

SERVICES PERFORMED

Date: 3-31-25 **Technicians:** MK/TA

Time: 1146 **Meter Serial Number:** Dura - 9

- [x] Sensor Cleaning
- [x] Calibration Check
- [x] Data Download
- [ ] Other:

Data Downloaded: [x] Yes [ ] No

[ ] By Modem on:

[x] To Laptop Serial Number: #MK

Battery Replacement: [ ] Yes [x] No

Existing voltage: 11.7 New voltage:

Dessicant Status: Good

Replaced: [ ] Yes [x] No

METER READINGS

Levels: Meter: 1.192 (in.) Actual: 1.2 (in.)

Recalibrated: [ ] Yes [x] No

Sensor Type: [ ] Area Velocity [ ] Ultrasonic [x] Laser

Velocity: Meter: 7.752 (ft/s) Actual: 7.8 (ft/s)

NOTES

Notes:

EST
Associates, Inc.

Pipeline Services
Sampling Monitoring
Operations Maintenance

CALIBRATION & DATA COLLECTION

Client: SLR CONSULTING **Meter ID:** SMH -6

Address: 411 MONTGOMERY ST

SERVICES PERFORMED

Date: 4/9/25 **Technicians:** JC/TA

Time: 0533 **Meter Serial Number:** DUE 9

- [x] Sensor Cleaning
- [x] Calibration Check
- [x] Data Download
- [x] Other: Meter Removal

Data Downloaded: [x] Yes [ ] No

[ ] By Modem on:

[x] To Laptop Serial Number: JR

Battery Replacement: [ ] Yes [x] No

Existing voltage: 11.90 New voltage:

Dessicant Status: Good

Replaced: [ ] Yes [x] No

METER READINGS

Levels: Meter: 1.41 *(in.)* Actual: 1.4 *(in.)*

Recalibrated: [ ] Yes [ ] No

Sensor Type: [x] Area Velocity [ ] Ultrasonic [ ] Laser

Velocity: Meter: 7.83 *(ft/s)* Actual: 7.8 *(ft/s)*

NOTES

Notes:

EST Associates, Inc.

Environmental Monitoring
Pipeline Services
Operations Maintenance

SITE INVESTIGATION FORM

Client: SLR Consulting
Gauge ID: **Salisbury Rain Gauge**
Location: Salisbury, CT
Gauge Type: Rain Gauge

INSTALL DATA

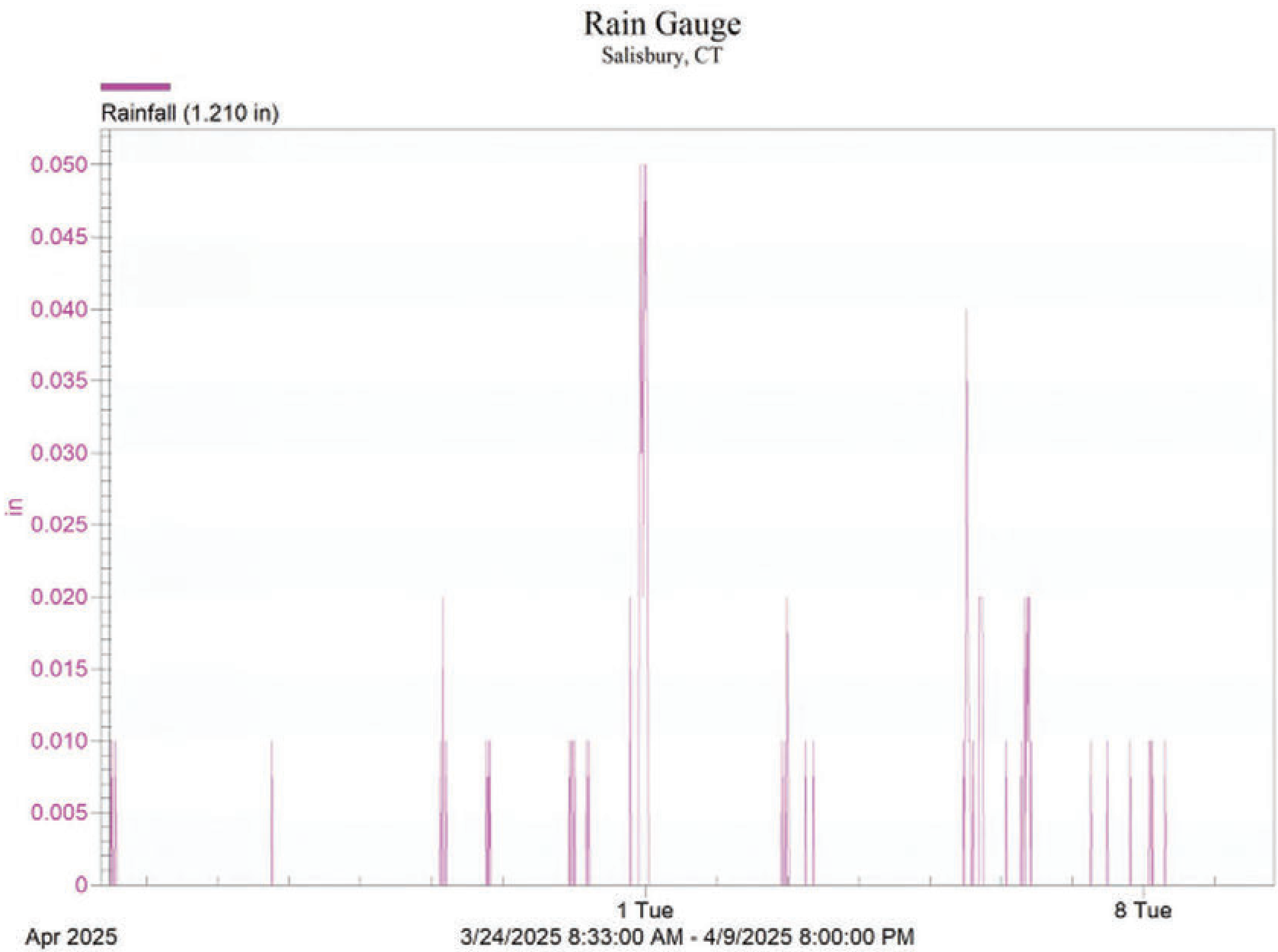
Date: 3/24/2025

Time: 11:20 AM

GPS Coordinates: 41.967845, -73.430007

Installed By: MK/TA
Monitored By: EST

GAUGE AREA


Rain Gauge
Salisbury, CT
Rainfall (1.210 in)
0.050
0.045
0.040
0.035
0.030
0.025
0.020
0.015
0.010
0.005
0
in
1 Tue
8 Tue
Apr 2025
3/24/2025 8:33:00 AM - 4/9/2025 8:00:00 PM

Associates, Inc.

Rain Gauge, Salisbury, CT
Daily Flow Rate Table

Date/Time (m/d/yyyy)	Average Flow Rate (gpm)	Minimum Flow Rate (gpm)	Time of Minimum Flow Rate (h:mm)	Maximum Flow Rate (gpm)	Time of Maximum Flow Rate (h:mm)	Total Flow (gal)
3/24/2025	0.000	0.000	11:30 AM	0.000	11:30 AM	0.000
3/24/2025	0.005	0.000	12:15 PM	0.010	12:00 PM	0.020
3/24/2025	0.003	0.000	1:00 PM	0.010	1:30 PM	0.010
3/24/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
3/24/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
3/24/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
3/24/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
3/24/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
3/24/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
3/24/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
3/24/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
3/24/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
3/24/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
3/25/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
3/25/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
3/25/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
3/25/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
3/25/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
3/25/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
3/25/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
3/25/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
3/25/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
3/25/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
3/25/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
3/25/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
3/25/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
3/25/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
3/25/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
3/25/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
3/25/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
3/25/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
3/25/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
3/25/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
3/25/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
3/25/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
3/25/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
3/25/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000

3/26/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
3/26/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
3/26/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
3/26/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
3/26/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
3/26/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
3/26/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
3/26/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
3/26/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
3/26/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
3/26/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
3/26/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
3/26/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
3/26/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
3/26/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
3/26/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
3/26/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
3/26/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
3/26/2025	0.003	0.000	6:00 PM	0.010	6:15 PM	0.010
3/26/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
3/26/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
3/26/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
3/26/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
3/26/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
3/27/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
3/27/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
3/27/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
3/27/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
3/27/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
3/27/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
3/27/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
3/27/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
3/27/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
3/27/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
3/27/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
3/27/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
3/27/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
3/27/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
3/27/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
3/27/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
3/27/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
3/27/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
3/27/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
3/27/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
3/27/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
3/27/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000

3/27/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
3/27/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
3/28/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
3/28/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
3/28/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
3/28/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
3/28/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
3/28/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
3/28/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
3/28/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
3/28/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
3/28/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
3/28/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
3/28/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
3/28/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
3/28/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
3/28/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
3/28/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
3/28/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
3/28/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
3/28/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
3/28/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
3/28/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
3/28/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
3/28/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
3/28/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
3/29/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
3/29/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
3/29/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
3/29/2025	0.003	0.000	3:15 AM	0.010	3:00 AM	0.010
3/29/2025	0.005	0.000	4:15 AM	0.020	4:00 AM	0.020
3/29/2025	0.003	0.000	5:15 AM	0.010	5:00 AM	0.010
3/29/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
3/29/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
3/29/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
3/29/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
3/29/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
3/29/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
3/29/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
3/29/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
3/29/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
3/29/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
3/29/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
3/29/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
3/29/2025	0.003	0.000	6:00 PM	0.010	6:30 PM	0.010
3/29/2025	0.005	0.000	7:00 PM	0.010	7:15 PM	0.020

3/29/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
3/29/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
3/29/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
3/29/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
3/30/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
3/30/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
3/30/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
3/30/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
3/30/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
3/30/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
3/30/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
3/30/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
3/30/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
3/30/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
3/30/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
3/30/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
3/30/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
3/30/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
3/30/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
3/30/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
3/30/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
3/30/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
3/30/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
3/30/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
3/30/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
3/30/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
3/30/2025	0.003	0.000	10:00 PM	0.010	10:30 PM	0.010
3/30/2025	0.005	0.000	11:00 PM	0.010	11:15 PM	0.020
3/31/2025	0.003	0.000	12:00 AM	0.010	12:15 AM	0.010
3/31/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
3/31/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
3/31/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
3/31/2025	0.003	0.000	4:00 AM	0.010	4:15 AM	0.010
3/31/2025	0.003	0.000	5:15 AM	0.010	5:00 AM	0.010
3/31/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
3/31/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
3/31/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
3/31/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
3/31/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
3/31/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
3/31/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
3/31/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
3/31/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
3/31/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
3/31/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
3/31/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000

3/31/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
3/31/2025	0.005	0.000	7:15 PM	0.020	7:00 PM	0.020
3/31/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
3/31/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
3/31/2025	0.035	0.030	10:00 PM	0.050	10:30 PM	0.140
3/31/2025	0.038	0.020	11:15 PM	0.050	11:45 PM	0.150
4/1/2025	0.040	0.030	12:45 AM	0.050	12:15 AM	0.160
4/1/2025	0.003	0.000	1:15 AM	0.010	1:00 AM	0.010
4/1/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
4/1/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
4/1/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
4/1/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
4/1/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
4/1/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
4/1/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
4/1/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
4/1/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
4/1/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
4/1/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
4/1/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
4/1/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
4/1/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
4/1/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
4/1/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
4/1/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
4/1/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
4/1/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
4/1/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
4/1/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
4/1/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
4/2/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
4/2/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
4/2/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
4/2/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
4/2/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
4/2/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
4/2/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
4/2/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
4/2/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
4/2/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
4/2/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
4/2/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
4/2/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
4/2/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
4/2/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
4/2/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000

4/2/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
4/2/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
4/2/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
4/2/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
4/2/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
4/2/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
4/2/2025	0.003	0.000	10:15 PM	0.010	10:00 PM	0.010
4/2/2025	0.008	0.000	11:15 PM	0.020	11:45 PM	0.030
4/3/2025	0.005	0.000	12:30 AM	0.010	12:00 AM	0.020
4/3/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
4/3/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
4/3/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
4/3/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
4/3/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
4/3/2025	0.003	0.000	6:15 AM	0.010	6:00 AM	0.010
4/3/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
4/3/2025	0.003	0.000	8:00 AM	0.010	8:45 AM	0.010
4/3/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
4/3/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
4/3/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
4/3/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
4/3/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
4/3/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
4/3/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
4/3/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
4/3/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
4/3/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
4/3/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
4/3/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
4/3/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
4/3/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
4/3/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
4/4/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
4/4/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
4/4/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
4/4/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
4/4/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
4/4/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
4/4/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
4/4/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
4/4/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
4/4/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
4/4/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
4/4/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
4/4/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
4/4/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000

4/4/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
4/4/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
4/4/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
4/4/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
4/4/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
4/4/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
4/4/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
4/4/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
4/4/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
4/4/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
4/5/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
4/5/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
4/5/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
4/5/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
4/5/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
4/5/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
4/5/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
4/5/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
4/5/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
4/5/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
4/5/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
4/5/2025	0.005	0.000	11:00 AM	0.010	11:15 AM	0.020
4/5/2025	0.025	0.020	12:00 PM	0.040	12:15 PM	0.100
4/5/2025	0.008	0.000	1:45 PM	0.010	1:00 PM	0.030
4/5/2025	0.003	0.000	2:00 PM	0.010	2:30 PM	0.010
4/5/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
4/5/2025	0.010	0.000	4:00 PM	0.020	4:30 PM	0.040
4/5/2025	0.018	0.010	5:45 PM	0.020	5:00 PM	0.070
4/5/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
4/5/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
4/5/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
4/5/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
4/5/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
4/5/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
4/6/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
4/6/2025	0.003	0.000	1:00 AM	0.010	1:45 AM	0.010
4/6/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
4/6/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
4/6/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
4/6/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
4/6/2025	0.003	0.000	6:00 AM	0.010	6:45 AM	0.010
4/6/2025	0.003	0.000	7:00 AM	0.010	7:45 AM	0.010
4/6/2025	0.013	0.000	8:15 AM	0.020	8:00 AM	0.050
4/6/2025	0.013	0.000	9:45 AM	0.020	9:15 AM	0.050
4/6/2025	0.003	0.000	10:15 AM	0.010	10:00 AM	0.010
4/6/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000

4/6/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
4/6/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
4/6/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
4/6/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
4/6/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
4/6/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
4/6/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
4/6/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
4/6/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
4/6/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
4/6/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
4/6/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
4/7/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
4/7/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
4/7/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
4/7/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
4/7/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
4/7/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
4/7/2025	0.003	0.000	6:00 AM	0.010	6:15 AM	0.010
4/7/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
4/7/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
4/7/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000
4/7/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
4/7/2025	0.003	0.000	11:00 AM	0.010	11:45 AM	0.010
4/7/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
4/7/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
4/7/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
4/7/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
4/7/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
4/7/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
4/7/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
4/7/2025	0.003	0.000	7:00 PM	0.010	7:30 PM	0.010
4/7/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
4/7/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
4/7/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
4/7/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
4/8/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
4/8/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
4/8/2025	0.005	0.000	2:30 AM	0.010	2:00 AM	0.020
4/8/2025	0.003	0.000	3:15 AM	0.010	3:00 AM	0.010
4/8/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
4/8/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
4/8/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
4/8/2025	0.003	0.000	7:00 AM	0.010	7:15 AM	0.010
4/8/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000
4/8/2025	0.000	0.000	9:00 AM	0.000	9:00 AM	0.000

4/8/2025	0.000	0.000	10:00 AM	0.000	10:00 AM	0.000
4/8/2025	0.000	0.000	11:00 AM	0.000	11:00 AM	0.000
4/8/2025	0.000	0.000	12:00 PM	0.000	12:00 PM	0.000
4/8/2025	0.000	0.000	1:00 PM	0.000	1:00 PM	0.000
4/8/2025	0.000	0.000	2:00 PM	0.000	2:00 PM	0.000
4/8/2025	0.000	0.000	3:00 PM	0.000	3:00 PM	0.000
4/8/2025	0.000	0.000	4:00 PM	0.000	4:00 PM	0.000
4/8/2025	0.000	0.000	5:00 PM	0.000	5:00 PM	0.000
4/8/2025	0.000	0.000	6:00 PM	0.000	6:00 PM	0.000
4/8/2025	0.000	0.000	7:00 PM	0.000	7:00 PM	0.000
4/8/2025	0.000	0.000	8:00 PM	0.000	8:00 PM	0.000
4/8/2025	0.000	0.000	9:00 PM	0.000	9:00 PM	0.000
4/8/2025	0.000	0.000	10:00 PM	0.000	10:00 PM	0.000
4/8/2025	0.000	0.000	11:00 PM	0.000	11:00 PM	0.000
4/9/2025	0.000	0.000	12:00 AM	0.000	12:00 AM	0.000
4/9/2025	0.000	0.000	1:00 AM	0.000	1:00 AM	0.000
4/9/2025	0.000	0.000	2:00 AM	0.000	2:00 AM	0.000
4/9/2025	0.000	0.000	3:00 AM	0.000	3:00 AM	0.000
4/9/2025	0.000	0.000	4:00 AM	0.000	4:00 AM	0.000
4/9/2025	0.000	0.000	5:00 AM	0.000	5:00 AM	0.000
4/9/2025	0.000	0.000	6:00 AM	0.000	6:00 AM	0.000
4/9/2025	0.000	0.000	7:00 AM	0.000	7:00 AM	0.000
4/9/2025	0.000	0.000	8:00 AM	0.000	8:00 AM	0.000

Flow Total (gal)	**Average Flow Rate Total (gpm)**	**Minimum Flow Rate (gpm)**	**Time of Minimum Flow Rate (m/d/yyyy h:mm)**	**Maximum Flow Rate (gpm)**	**Time of Maximum Flow Rate (m/d/yyyy h:mm)**	**Average Total Flow (gal)**
1.210	0.001	0.000	3/24/2025 11:30	0.050	3/31/2025 22:30	0.003

Appendix D Downstream Capacity Analysis

Wake Robin Inn - 104 & 106 Sharon Road, Salisbury, Connecticut

Downstream Capacity Analysis – Sanitary Sewer

ARADEV, LLC

SLR Project No.: 141.21278.00001
Client Ref. No.: 22100

April 28, 2025

SLR

Wake Robin Inn, Salisbury, CT
Sanitary Sewer Pipe Capacity Calculations
Project No. 141.V21278.00001, Phase 0015
Revision Date: 4/25/25

Manning's Numbers

PVC	0.009
AC	0.013
RCP	0.014
Clay	0.014

Metered Flow Rates

Meter	Manhole Run	Peak (gpm)	Avg (gpm)
Meter #1	SMH-1 through SMH-3A	413	207
Meter #2	SMH-3A through SMH-M6	267	104
Meter #3	SMH-M6 through SMH-SR5	224	84

Total development peak flow: 71 gpm* *includes 30 gpm for pool drain flow

	Manhole No.	Manhole Invert (ft)		Pipe Material	Pipe Length (ft)	Slope (ft/ft)	Pipe Diameter (in)	Manning's Number	Pipe Capacity (gpm)	Proj. Peak Flow (gpm)	% Full at Peak Flow (%)
SMH-SR5 to SMH-1	SMH-SR5	In	773.14								
		Out	773.14								
				AC	95	0.004	10	0.013	598.5	295	49.3%
	SMH-SR4	In	772.79								
		Out	772.79								
				AC	197	0.002	10	0.013	427.3	295	69.0%
	SMH-SR3	In	772.42								
		Out	772.42								
				AC	240	0.003	10	0.013	505.2	295	58.4%
	SMH-SR2	In	771.79								
		Out	771.79								
				AC	116	0.030	10	0.013	1720.0	295	17.2%
	SMH-SR1	In	768.26								
		Out	767.70								
				AC	136	0.035	10	0.013	1852.3	295	15.9%
	SMH-WH1	In	762.90								
		Out	762.30								
				AC	246	0.074	10	0.013	2674.4	295	11.0%
	SMH-M7	In	744.20								
		Out	744.20								
				AC	221	0.090	10	0.013	2951.2	295	10.0%
	SMH-M6	In	724.40								
		Out	724.40								
				AC	249	0.039	10	0.013	1955.9	338	17.3%
	SMH-M5	In									
		Out									
				AC	244	0.039	10	0.013	1955.9	338	17.3%
	SMH-A1	In	705.00								
		Out	704.70								
				AC	127	0.063	12	0.013	4024.0	338	8.4%
	SMH-10	In	696.70								
		Out	695.70								
				PVC	296	0.017	12	0.009	3039.9	338	11.1%
	SMH-9	In	690.60								
		Out	690.30								
				PVC	302	0.004	12	0.009	1459.8	338	23.2%
	SMH-8	In	689.10								
		Out	688.80								
				RCP	447	0.002	12	0.014	738.5	338	45.8%
	SMH-7	In	687.70								
		Out	687.60								
				RCP	303	0.001	12	0.014	540.9	338	62.5%
	SMH-6	In	687.20								
		Out	687.20								
				RCP	303	0.002	12	0.014	662.5	338	51.0%
	SMH-5	In	686.60								
		Out	686.60								
				RCP	298	0.002	12	0.014	668.0	338	50.6%
	SMH-3A	In	686.00								
		Out	686.00								
				RCP	294	0.001	12	0.014	549.1	484	88.1%
	SMH-3	In	685.60								
		Out	685.60								
				RCP	277	0.002	15	0.014	1146.8	484	42.2%
	SMH-2A	In	685.10								
		Out	685.00								
				RCP	319	0.003	15	0.014	1351.8	484	35.8%
	SMH-2	In	684.20								
		Out	684.10								
				RCP	132	0.001	15	0.014	743.0	484	65.1%
	SMH-1	In	684.00								
		Out	683.90								

Wake Robin Inn, Salisbury, CT
Sanitary Sewer Pipe Capacity Calculations
Project No. 141.V21278.00001, Phase 0015
Revision Date: 4/25/25

Manning's Numbers

PVC	0.009
AC	0.013
RCP	0.014
Clay	0.014

Metered Flow Rates

Meter	Manhole Run	Peak (gpm)	Avg (gpm)
Meter #1	SMH-1 through SMH-3A	413	207
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Meter #3	SMH-M6 through SMH-SR5	224	84

Total development peak flow: 71 gpm* *includes 30 gpm for pool drain flow

	Manhole No.	Manhole Invert	(ft)	Pipe Material	Pipe Length (ft)	Slope (ft/ft)	Pipe Diameter (in)	Manning's Number	Pipe Capacity (gpm)	Proj. Peak Flow (gpm)	% Full at Peak Flow (%)
Wells Hill Road											
SMH-WH5 to SMH-WH1	SMH-WH6	In	805.40								
		Out	804.60								
				Clay	191	0.066	8	0.014	1302.1	21.0	1.6%
	SMH-WH5	In	791.90								
		Out	791.70								
				Clay	277	0.044	8	0.014	1055.4	21.0	2.0%
	SMH-WH4	In	779.60								
		Out	779.20								
				Clay	284	0.049	8	0.014	1117.1	21.0	1.9%
	SMH-WH3	In	765.30								
		Out	764.70								
				Clay	216	0.007	8	0.014	420.8	21.0	5.0%
	SMH-WH2	In	763.20								
		Out	763.20								
				Clay	219	0.002	8	0.014	241.3	21.0	8.7%
	SMH-WH1	In	762.70								
		Out	762.30								

NOTES:
1-With the proposed development added to the peak metered flows, every pipe segment is flowing less than 90% pipe capacity as required by the Town
2-SMH-M5 could not be opened. Calculations done between SMH-M6 and SMH-A1.

Making Sustainability Happen

DRAINAGE REPORT

Wake Robin Inn Redevelopment

104 & 106 Sharon Road, Salisbury, Connecticut

Drainage Report

Prepared for:
Aradev LLC

352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

Prepared by:

SLR International Corporation

99 Realty Drive, Cheshire, Connecticut, 06410

SLR Project No.: 141.22100.00001

April 29, 2025

Making Sustainability Happen

Drainage Report

Wake Robin Inn Redevelopment
104 & 106 Sharon Road
Salisbury, Connecticut
April 29, 2025
SLR #141.22100.00001

This Drainage Report has been prepared in support of the proposed Wake Robin Inn redevelopment located on 104 & 106 Sharon Road/53 Wells Hill Road in the town of Salisbury, Connecticut. The development proposes to redevelop the existing Wake Robin Inn site with a building addition to the existing Inn, four cottages, an event space, a spa, a pool, and associated infrastructure including storage buildings, parking, drives, and walking trails.

Figure 1 – 104 & 106 Sharon Road

Table 1 – Stormwater Data

Parcel Size Total	13.79 acres
Existing Impervious Area (Watershed Area)	1.0 acres
Proposed Impervious Area (Watershed Area)	2.98 acres
Soil Type (Hydrologic Soil Group)	"B", "C", and "D"
Existing Land Use	Woods, open space, gravel, building, and driveway
Proposed Land Use	Woods, open space, gravel, building, and driveway
Design Storm for Stormwater Management	No increases in peak rates of runoff for the 2-, 10-, 25-, 50-, and 100-year storms Connecticut Department of Energy & Environmental Protection (CTDEEP) water quality volume (WQV) and water quality flow (WQF) treatment
Water Quality Measures	Catch basins with 2-foot sumps, hydrodynamic separator, retention storage for WQV
Design Storm for Storm Drainage	10-year storm
Federal Emergency Management Agency (FEMA) Special Flood Hazard Areas	Area of Minimal Flood Hazard (Zone X)
Connecticut Department of Energy & Environmental Protection Aquifer Protection Areas	Lakeville (Pettee Street) – Level A

Stormwater Management Approach

The proposed stormwater management system for the project focuses on providing water quality management while attenuating proposed peak-flows. Water quality treatment in accordance with the CTDEEP requirements for water quality volume (WQV) and water quality flow (WQF) is provided. The proposed stormwater treatment train consists of catch basins with 2-foot sumps, a hydrodynamic separator, and retention storage for the WQV.

The computer program entitled *Hydraflow Storm Sewers Extension for AutoCAD® Civil 3D® 2023* by Autodesk, Inc. was used for designing the proposed storm drainage collection system. Storm drainage computations performed include pipe capacity and hydraulic grade line calculations. The contributing watershed to each individual catch basin inlet was delineated to determine the drainage area and land coverage. These values were used to determine the stormwater runoff to each inlet using the Rational Method. The rainfall intensities for the site were obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 10, Precipitation Frequency Data Server (PFDS). The proposed storm drainage system is designed to provide adequate capacity to convey the 10-year storm event.

Water Quality Management

Water quality measures or Best Management Practices (BMPs) have been incorporated into the design to maintain water quality to provide protection of the areas downgradient of the proposed development. The proposed stormwater management system will include catch basins with 2-foot sumps, a hydrodynamic separator, and retention storage for the WQV.

Each of the proposed stormwater basins will provide retention volume along its bottom, thus creating a water quality feature within it. This serves several purposes, including stormwater renovation and providing WQV. The CTDEEP *2024 Stormwater Quality Manual* (Chapter 7) recommends methods for sizing stormwater treatment measures with WQV computations. The WQV addresses the initial stormwater runoff, also commonly referred to as the "first-flush" runoff. The WQV provides adequate volume to store the runoff associated with the first 1.3 inches of rainfall, which tends to contain the highest concentration of potential pollutants.

A hydrodynamic separator will be installed in the proposed storm drainage system prior to discharging stormwater to Detention Basin 210. This unit will further remove suspended solids before discharging downgradient, which will in turn remove other pollutants that tend to attach to the suspended solids and effectively remove other debris and floatables that may be present in stormwater runoff. The hydrodynamic separator has been designed to meet criteria recommended by the CTDEEP *2024 Stormwater Quality Manual*. The device was designed based on the determined WQF, which is the peak-flow rate associated with the Water Quality Volume (WQV) and sized based on the manufacturer's specifications.

Hydrologic Analysis

A hydrologic analysis was conducted to analyze the pre-development and post-development peak-flow rates from the site. Three analysis points that receive runoff from the site were selected. Analysis Point A represents Wells Hill Road and the properties to the north of the site. Analysis Point B represents the existing storm drainage in Sharon Road adjacent to the site. Analysis Point C represents the properties southwest of the site and Sharon Road. The total watershed area delineated is approximately 25.2 acres under both existing and proposed conditions.

The method of predicting the surface water runoff rates utilized in this analysis was a computer program titled *HydroCAD 10.20-4a* by HydroCAD Software Solutions LLC. The *HydroCAD* program is a computer model that utilizes the methodologies set forth in the *Technical Release No. 55* (TR-55) manual and *Technical Release No. 20* (TR-20) computer model, originally developed by the United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS). The *HydroCAD* computer modeling program is primarily used for conducting hydrology studies such as this one.

The *HydroCAD* computer program forecasts the rate of surface water runoff based upon several factors. The input data includes information on land use, hydrologic soil type, vegetation, contributing watershed area, time of concentration, rainfall data, storage volumes, and the hydraulic capacity of structures. The computer model predicts the amount of runoff as a function of time, with the ability to include the attenuation effect due to dams, lakes, large wetlands, floodplains, and stormwater management basins. The input data for rainfalls with statistical recurrence frequencies of 1, 2, 5, 10, 25, 50, and 100 years was obtained from the NOAA Atlas 14, Volume 10 database. The corresponding rainfall totals are listed below.

Storm Frequency	Rainfall (inches)
1-year	2.41
2-year	3.08
5-year	4.19
10-year	5.11
25-year	6.37
50-year	7.28
100-year	8.32

Land use for the site under existing and proposed conditions was determined from field survey and aerial photogrammetry. Land use types used in the analysis included woods, grassed or open space, gravel, building, and impervious (paved) cover. Soil types in the watershed were determined from the CTDEEP Geographic Information System (GIS) database of the USDA-NRCS soil survey for Litchfield County, Connecticut. For the analysis, the site was determined to contain hydrologic soil types "B", “C”, and "D" as classified by USDA-NRCS. Composite runoff Curve Numbers (CN) for each subwatershed were calculated based on the different land use and soil types. The time of concentration (Tc) was estimated for each subwatershed using the TR-55 methodology and was computed by summing all travel times through the watershed as sheet flow, shallow concentrated flow, and channel flow.

The existing conditions were modeled with the *HydroCAD* program to determine the peak-flow rates for the various storm events at each analysis point. A revised model was developed incorporating the proposed site conditions and stormwater management basins. The flows obtained with the revised model were then compared to the results of the existing conditions model. Peak-flow rates from the project site were controlled by the storage volume provided within the stormwater basins and their respective outlet control structures.

The following peak rates of runoff were obtained from the *HydroCAD* hydrology results:

Analysis Point A – Wells Hill Road							
	Peak Runoff Rate (cubic feet per second)						
Storm Frequency (years)	**1**	**2**	**5**	**10**	**25**	**50**	**100**
Existing Conditions	4.2	8.1	15.5	22.3	32.2	39.6	48.1
Proposed Conditions	4.0	7.8	14.9	21.5	31.0	38.0	46.3

Water Quality Basin 140**							
	Water Surface Elevation (feet)						
Storm Frequency (years)	**1**	**2**	**5**	**10**	**25**	**50**	**100**
Proposed Conditions	838.5	838.5	838.6	838.6	838.7	838.7	838.7

Top of Berm Elevation = 839.0

Analysis Point B – Sharon Road Storm Drainage							
	Peak Runoff Rate (cubic feet per second)						
Storm Frequency (years)	**1**	**2**	**5**	**10**	**25**	**50**	**100**
Existing Conditions	3.9	6.1	10.1	13.5	18.2	21.6	25.5
Proposed Conditions	2.0	3.1	5.6	12.6	17.6	20.3	23.3

Detention Basin 210***							
	Water Surface Elevation (feet)						
Storm Frequency (years)	**1**	**2**	**5**	**10**	**25**	**50**	**100**
Proposed Conditions	815.4	815.7	816.0	816.1	816.4	816.7	817.0

***Top of Berm Elevation = 818.2**

Detention Basin 220****							
	Water Surface Elevation (feet)						
Storm Frequency (years)	**1**	**2**	**5**	**10**	**25**	**50**	**100**
Proposed Conditions	802.1	802.4	802.7	802.9	802.9	803.0	803.0

****Top of Berm Elevation = 804.0**

Analysis Point C – Sharon Road and Southern Properties							
	Peak Runoff Rate (cubic feet per second)						
Storm Frequency (years)	**1**	**2**	**5**	**10**	**25**	**50**	**100**
Existing Conditions	0.9	1.6	2.9	4.0	5.6	6.8	8.1
Proposed Conditions	0.7	1.2	2.1	2.8	3.9	4.7	5.7

Conclusion

The results of the hydrologic analysis demonstrate that there will be no increases in peak-flow rates from the proposed redevelopment. This was achieved for the storm events modeled through a planned stormwater management system with detention provided in the stormwater management basins. The proposed development will also introduce a new stormwater treatment train consisting of catch basins with 2-foot sumps, a hydrodynamic separator, and retention storage for the WQV.

All supporting documentation and stormwater-related computations are attached to this report along with the *HydroCAD* model results for stormwater management and *Hydraflow Storm Sewers* model results for the proposed storm drainage system. Illustrative Watershed Maps for both existing and proposed conditions are also attached to this report.

Appendices

Appendix A United States Geological Survey Location Map
Appendix B Federal Emergency Management Agency Flood Insurance Rate Map
Appendix C Natural Resources Conservation Service Hydrologic Soil Group Map
Appendix D Storm Drainage Computations
Appendix E Water Quality Computations
Appendix F Hydrologic Analysis – Input Computations
Appendix G Hydrologic Analysis – Computer Model Results
Appendix H Watershed Maps

Appendix A
United States Geological Survey Location Map

Wake Robin Inn Redevelopment

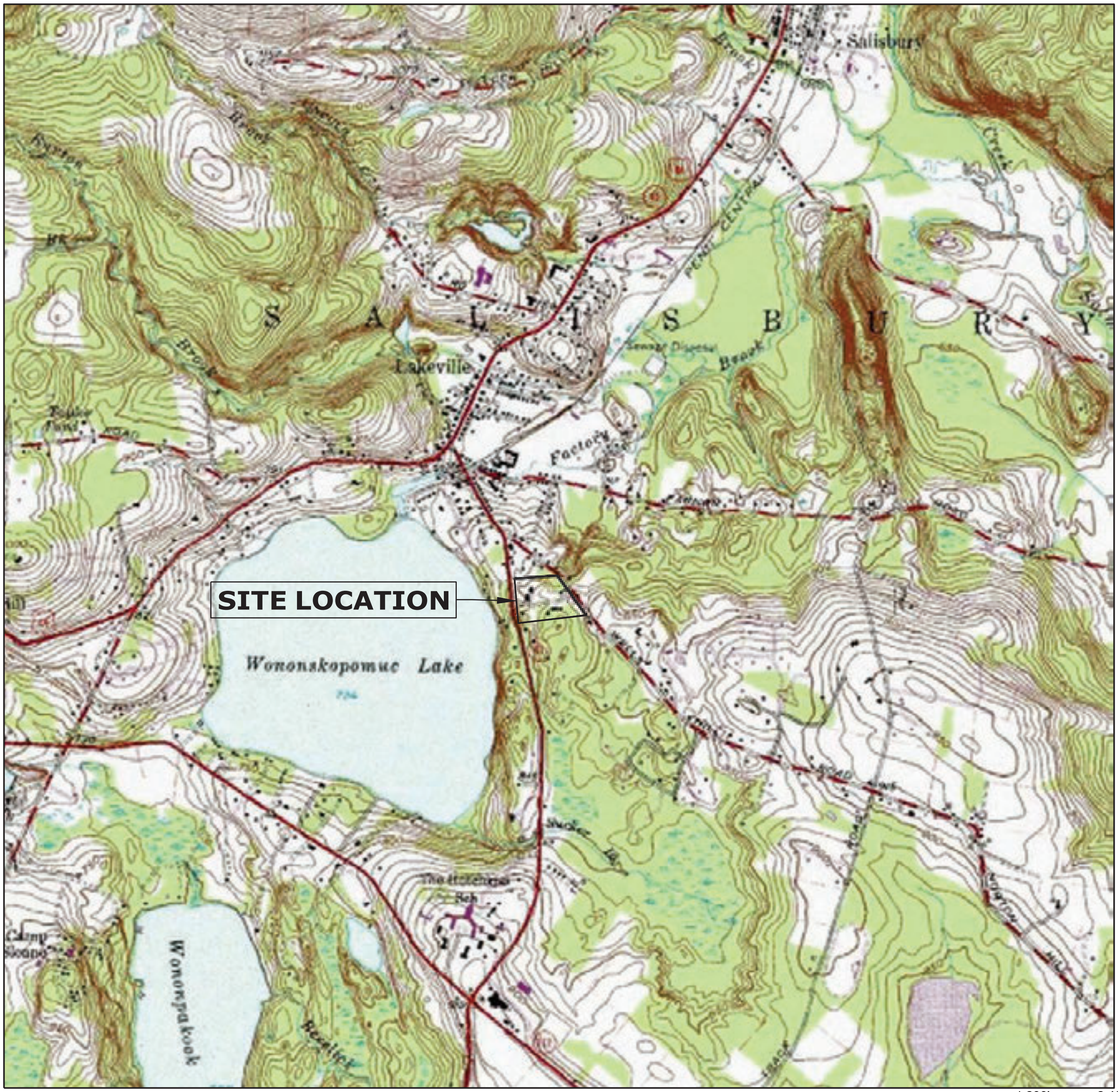
104 & 106 Sharon Road, Salisbury, Connecticut

Drainage Report

Prepared for:
Aradev LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

SLR Project No.: 141.22100.00001

April 25, 2025



0' 1,200' 2,400'
0 1/2" 1"

SLR

99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

USGS QUADRANGLE MAP, QUAD NO. 16

**WAKE ROBIN
EVENT VENUE**

**104 AND 106 SHARON ROAD
SALISBURY, CONNECTICUT**

PROJECT PHASE:

REV: ---

DATE	JULY 19, 2024	
SCALE	1"=2,400'	
PROJ. NO.	22100.00001	
DESIGNED ---	DRAWN MCB	CHECKED ---
DRAWING NAME:	LOC	

Appendix B
FEMA Flood Insurance Rate Map

Wake Robin Inn Redevelopment

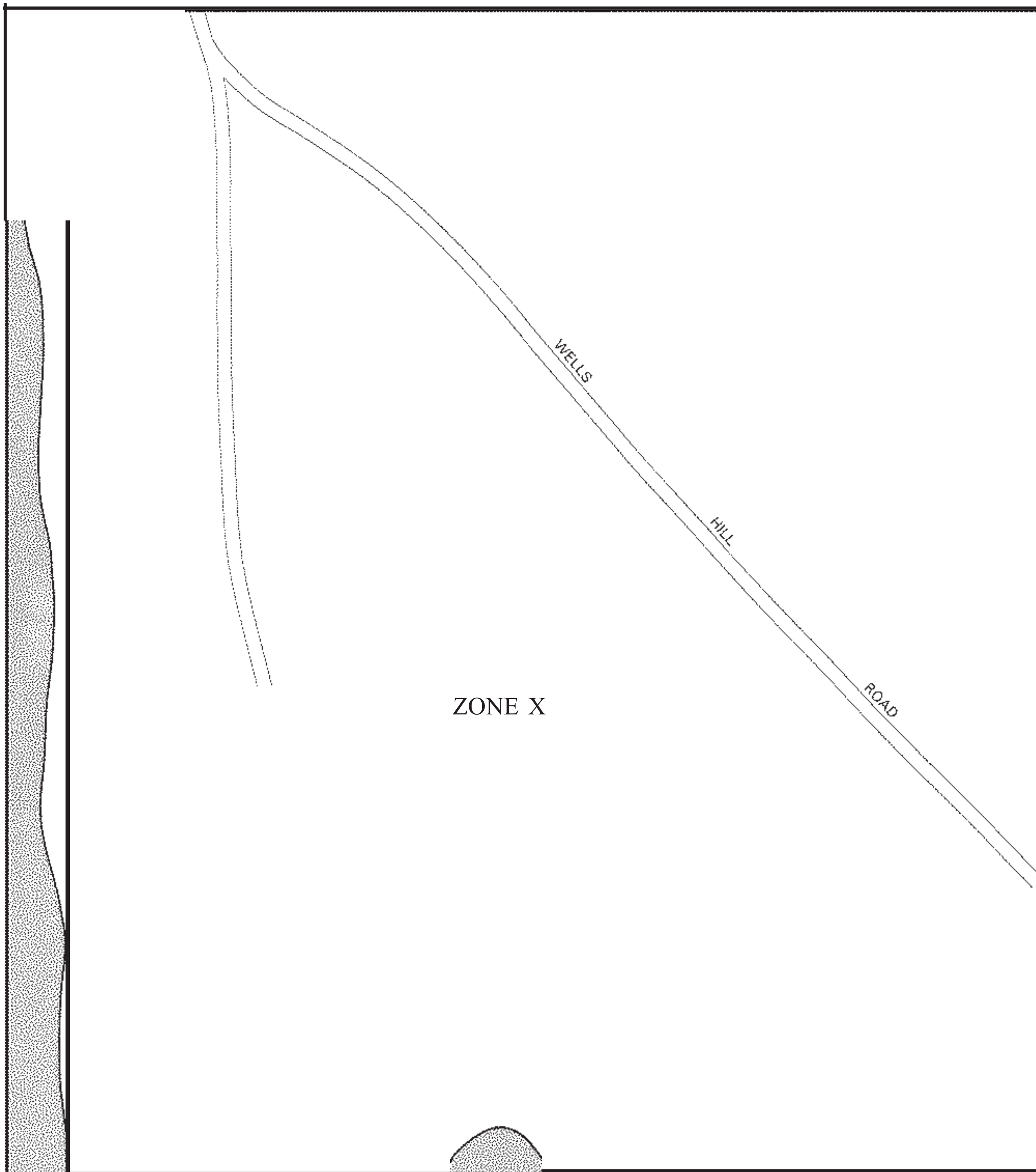
104 & 106 Sharon Road, Salisbury, Connecticut

Drainage Report

Prepared for:
Aradev LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

SLR Project No.: 141.22100.00001

April 25, 2025



38·6620.

APPROXIMATE SCALE

400 0 400 EET

NHIOl!U moo HISRUNtf PIIOGRMf.

FIRM

fIOOD INSURANCE RATE MAP

TOWN OF

SALISBURY,
CONNECTfCUT
LITCHF!EtJ; COUNTY

PANEl1B Of 30

(SEE MAP INDEX FOR PANELS NOT PRINTED)

PANEL LOCATION

COMMtlNHY•P NH NilM E!i.
09005200188

EFFECTIVE Oil!:
iANUARY 5, 1589

i,·eae,al Emergency Mo.nagemem Agency

Thi,;,anoffidal FIRMette ,howino a po,tion of the ahove-n,/e,en<edflood map created from the MSC F!RMette Web <ool. n,;,mapdo.. "" n,/1,a cban9.. o, amendm,nt> which m.ay have b.,n mado 1ub»o<1,.,nt lo tho dato"" <ho titlo blodt. Fo,addit;,,.,,I info,n,.tion about howto maOe ,u,e themapi, """"• plo.,se, u,, Flood flamd Moppi"!I llpda,e, O.er.iow Foel Sll,., ovoilablo on tho FEMA fl<>od Map S..-vi<o Cmlet ho,nopogo a< hUp>://"1".ferna.gov,

Appendix C
Natural Resources Conservation Service Hydrologic Soil Group Map

Wake Robin Inn Redevelopment

104 & 106 Sharon Road, Salisbury, Connecticut

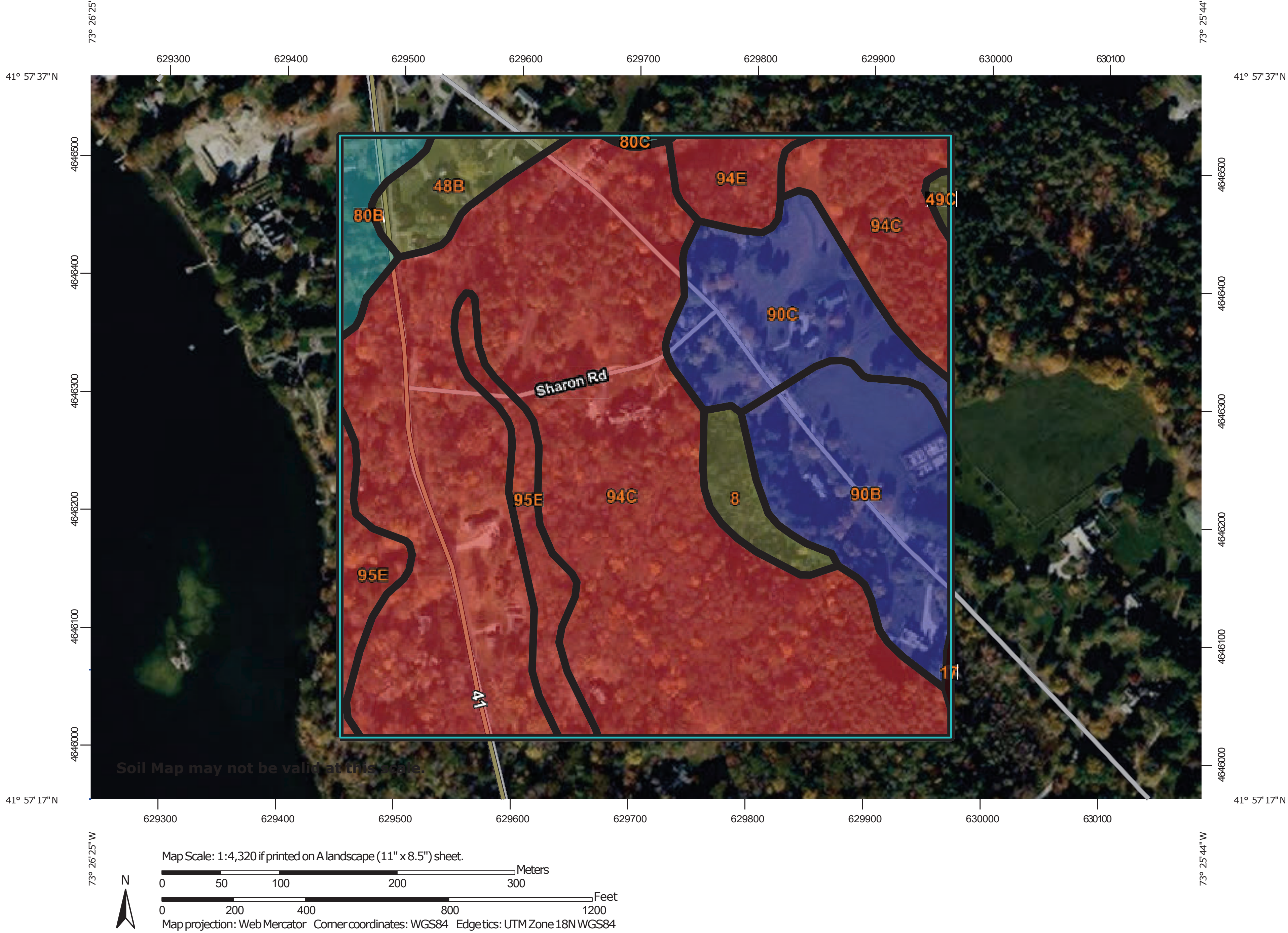
Drainage Report

Prepared for:
Aradev LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

SLR Project No.: 141.22100.00001

April 25, 2025

Hydrologic Soil Group—State of Connecticut, Western Part



MAP LEGEND

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

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: State of Connecticut, Western Part
Survey Area Data: Version 1, Sep 15, 2023

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

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
8	Mudgepond and Alden soils, extremely stony	C/D	1.5	2.3%
17	Timakwa and Natchaug soils, 0 to 2 percent slopes	B/D	0.1	0.1%
48B	Georgia and Amenia silt loams, 2 to 8 percent slopes	C/D	2.1	3.2%
49C	Georgia and Amenia silt loams, 8 to 15 percent slopes, very stony	C/D	0.2	0.3%
80B	Bernardston silt loam, 3 to 8 percent slopes	C	1.6	2.4%
80C	Bernardston silt loam, 8 to 15 percent slopes	C	0.1	0.2%
90B	Stockbridge loam, 3 to 8 percent slopes	B	7.4	11.3%
90C	Stockbridge loam, 8 to 15 percent slopes	B	6.2	9.4%
94C	Farmington-Nellis complex, 3 to 15 percent slopes, very rocky	D	41.0	62.3%
94E	Farmington-Nellis complex, 15 to 35 percent slopes, very rocky	D	1.7	2.6%
95E	Farmington-Rock outcrop complex, 15 to 45 percent slopes	D	3.9	6.0%
Totals for Area of Interest			**65.9**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix D
Storm Drainage Computations

Wake Robin Inn Redevelopment

104 & 106 Sharon Road, Salisbury, Connecticut

Drainage Report

Prepared for:
Aradev LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

SLR Project No.: 141.22100.00001

April 25, 2025

Rational Method Individual Basin Calculations

Project: Wake Robin Inn By: MCB Date: Rev. 4/17/25

Location: Salisbury, CT Checked: TDR Date: 4/17/25

Basin Name	Impervious Area C=0.9 (sf)	Grassed Area C=0.3 (sf)	Wooded Area C=0.2 (sf)	Total Area (sf)	Total Area (ac)	Weighted C	Tc (min)
System 200							
YD 6	1350	1881	19731	22962	0.53	0.25	5.0
MH 7	0	1194	0	1194	0.03	0.30	5.0
YD 9	4757	3315	1314	9386	0.22	0.59	5.0
CLCB 10	1623	161	0	1784	0.04	0.85	5.0
CLCB 28	3921	1595	12008	17524	0.40	0.37	5.0
YD 29	0	5701	2907	8608	0.20	0.27	5.0
MH 30	1207	8699	0	9906	0.23	0.37	5.0
YD 31	1966	521	0	2487	0.06	0.77	5.0
FES 31A	4555	14672	16055	35282	0.81	0.33	5.0
YD 61	0	3530	0	3530	0.08	0.30	5.0
CLCB 27A	5343	0	0	5343	0.12	0.90	5.0
System 210							
CLCB 14	4319	2904	0	7223	0.17	0.66	5.0
CLCB 15	3555	1466	0	5021	0.12	0.72	5.0
CLCB 16	3768	3488	0	7256	0.17	0.61	5.0
YD 17	1328	2727	0	4055	0.09	0.50	5.0
YD 58	298	341	0	639	0.01	0.58	5.0
CLCB 59	4992	1469	0	6461	0.15	0.76	5.0
YD 62	1076	4845	0	5921	0.14	0.41	5.0
YD 60	647	485	0	1132	0.03	0.64	5.0
YD 72	8936	9863	4345	23144	0.53	0.51	5.0
TD 13A	3368	408	0	3776	0.09	0.84	5.0
YD 74	1181	1111	0	2292	0.05	0.61	5.0
System 220							
YD 24	2279	4080	0	6359	0.15	0.52	5.0
Bridge							
Bridge	25313	70952	483320	579585	13.31	0.24	38.8

Rational Method Roof Drain System Calculations

Project: Wake Robin Inn
By: MCB
Date: Rev. 4/17/25
Location: Salisbury, CT
Checked: TDR
Date: 4/17/25

Total Roof Runoff to Proposed Storm Drainage System (In Hydraflow Model)

	ROOF TO CLCB 16	ROOF TO YD 72	ROOF TO YD 24	ROOF TO CLCB 59	FES 31A	Bridge (100-Year Tc=38.3 min)	
C	0.90	0.90	0.90	0.90	0.33	0.24	
I	6.98	6.98	6.98	6.98	10.50	3.63	
A	0.37	0.04	0.02	0.18	0.81	13.31	
Q	2.31	0.25	0.12	1.14	2.81	11.60	

SLR

NOAA Atlas 14, Volume 10, Version 3
Location name: Lakeville, Connecticut, USA*
Latitude: 41.958°, Longitude: -73.4354°
Elevation: 831 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_&_aerials

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	**4.01** (3.06-5.24)	**4.75** (3.64-6.22)	**5.96** (4.55-7.84)	**6.97** (5.29-9.22)	**8.36** (6.16-11.5)	**9.42** (6.80-13.2)	**10.5** (7.37-15.3)	**11.7** (7.82-17.4)	**13.3** (8.60-20.6)	**14.6** (9.23-23.0)
10-min	**2.84** (2.17-3.71)	**3.37** (2.57-4.40)	**4.23** (3.23-5.56)	**4.94** (3.74-6.53)	**5.93** (4.36-8.15)	**6.67** (4.81-9.38)	**7.44** (5.22-10.8)	**8.27** (5.54-12.4)	**9.41** (6.09-14.6)	**10.3** (6.53-16.3)
15-min	**2.22** (1.70-2.91)	**2.64** (2.02-3.46)	**3.32** (2.52-4.36)	**3.88** (2.94-5.12)	**4.65** (3.42-6.40)	**5.23** (3.77-7.35)	**5.84** (4.09-8.48)	**6.48** (4.35-9.69)	**7.38** (4.78-11.4)	**8.10** (5.12-12.8)
30-min	**1.53** (1.17-2.00)	**1.81** (1.39-2.37)	**2.28** (1.74-3.00)	**2.67** (2.02-3.53)	**3.20** (2.36-4.41)	**3.61** (2.60-5.07)	**4.03** (2.83-5.87)	**4.49** (3.01-6.71)	**5.15** (3.33-7.96)	**5.68** (3.59-8.97)
60-min	**0.971** (0.743-1.27)	**1.15** (0.882-1.51)	**1.45** (1.11-1.91)	**1.70** (1.29-2.25)	**2.04** (1.50-2.82)	**2.30** (1.66-3.24)	**2.57** (1.81-3.75)	**2.87** (1.92-4.29)	**3.30** (2.13-5.11)	**3.65** (2.31-5.77)
2-hr	**0.638** (0.490-0.831)	**0.740** (0.568-0.965)	**0.907** (0.694-1.19)	**1.05** (0.796-1.38)	**1.24** (0.913-1.69)	**1.38** (1.00-1.93)	**1.53** (1.08-2.21)	**1.69** (1.14-2.52)	**1.91** (1.24-2.95)	**2.09** (1.32-3.29)
3-hr	**0.488** (0.376-0.634)	**0.566** (0.435-0.735)	**0.692** (0.531-0.902)	**0.797** (0.608-1.04)	**0.941** (0.697-1.29)	**1.05** (0.763-1.46)	**1.16** (0.821-1.68)	**1.29** (0.867-1.91)	**1.46** (0.948-2.24)	**1.60** (1.02-2.51)
6-hr	**0.299** (0.231-0.387)	**0.354** (0.274-0.458)	**0.444** (0.342-0.577)	**0.519** (0.398-0.678)	**0.622** (0.464-0.851)	**0.698** (0.512-0.979)	**0.781** (0.559-1.14)	**0.879** (0.594-1.30)	**1.03** (0.669-1.58)	**1.15** (0.734-1.80)
12-hr	**0.174** (0.135-0.224)	**0.216** (0.167-0.278)	**0.284** (0.220-0.367)	**0.340** (0.262-0.442)	**0.418** (0.315-0.575)	**0.475** (0.352-0.670)	**0.538** (0.392-0.797)	**0.620** (0.419-0.919)	**0.753** (0.491-1.16)	**0.870** (0.557-1.36)
24-hr	**0.100** (0.078-0.128)	**0.128** (0.100-0.164)	**0.174** (0.135-0.224)	**0.212** (0.164-0.275)	**0.265** (0.201-0.364)	**0.303** (0.227-0.429)	**0.346** (0.255-0.516)	**0.404** (0.274-0.597)	**0.501** (0.328-0.766)	**0.587** (0.377-0.916)
2-day	**0.057** (0.044-0.072)	**0.073** (0.057-0.093)	**0.100** (0.078-0.128)	**0.123** (0.095-0.158)	**0.153** (0.117-0.210)	**0.176** (0.132-0.248)	**0.201** (0.149-0.299)	**0.235** (0.160-0.346)	**0.292** (0.191-0.445)	**0.343** (0.221-0.533)
3-day	**0.041** (0.032-0.052)	**0.053** (0.042-0.067)	**0.072** (0.057-0.092)	**0.088** (0.069-0.113)	**0.110** (0.084-0.151)	**0.126** (0.095-0.178)	**0.144** (0.107-0.214)	**0.169** (0.115-0.248)	**0.210** (0.138-0.319)	**0.246** (0.159-0.382)
4-day	**0.033** (0.026-0.042)	**0.042** (0.033-0.054)	**0.058** (0.045-0.074)	**0.070** (0.055-0.090)	**0.088** (0.067-0.120)	**0.100** (0.076-0.141)	**0.115** (0.085-0.170)	**0.134** (0.091-0.197)	**0.166** (0.109-0.252)	**0.195** (0.126-0.302)
7-day	**0.022** (0.018-0.028)	**0.028** (0.022-0.036)	**0.038** (0.030-0.048)	**0.046** (0.036-0.059)	**0.057** (0.044-0.078)	**0.065** (0.049-0.091)	**0.074** (0.055-0.109)	**0.086** (0.059-0.126)	**0.106** (0.070-0.161)	**0.123** (0.080-0.191)
10-day	**0.018** (0.014-0.023)	**0.023** (0.018-0.029)	**0.030** (0.023-0.038)	**0.036** (0.028-0.045)	**0.044** (0.033-0.059)	**0.050** (0.037-0.069)	**0.056** (0.042-0.082)	**0.065** (0.044-0.095)	**0.079** (0.052-0.120)	**0.091** (0.059-0.141)
20-day	**0.013** (0.010-0.016)	**0.015** (0.012-0.019)	**0.019** (0.015-0.024)	**0.022** (0.017-0.028)	**0.026** (0.020-0.035)	**0.030** (0.022-0.041)	**0.033** (0.024-0.047)	**0.037** (0.026-0.054)	**0.044** (0.029-0.066)	**0.049** (0.032-0.076)
30-day	**0.011** (0.009-0.014)	**0.012** (0.010-0.016)	**0.015** (0.012-0.019)	**0.017** (0.013-0.022)	**0.020** (0.015-0.027)	**0.022** (0.017-0.030)	**0.024** (0.018-0.035)	**0.027** (0.019-0.039)	**0.031** (0.021-0.047)	**0.034** (0.022-0.053)
45-day	**0.009** (0.007-0.011)	**0.010** (0.008-0.013)	**0.012** (0.009-0.015)	**0.013** (0.011-0.017)	**0.015** (0.012-0.020)	**0.017** (0.013-0.023)	**0.019** (0.013-0.026)	**0.020** (0.014-0.029)	**0.022** (0.015-0.034)	**0.024** (0.016-0.037)
60-day	**0.008** (0.006-0.010)	**0.009** (0.007-0.011)	**0.010** (0.008-0.013)	**0.011** (0.009-0.014)	**0.013** (0.010-0.017)	**0.014** (0.010-0.019)	**0.015** (0.011-0.021)	**0.016** (0.011-0.024)	**0.018** (0.012-0.027)	**0.019** (0.012-0.029)

[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.

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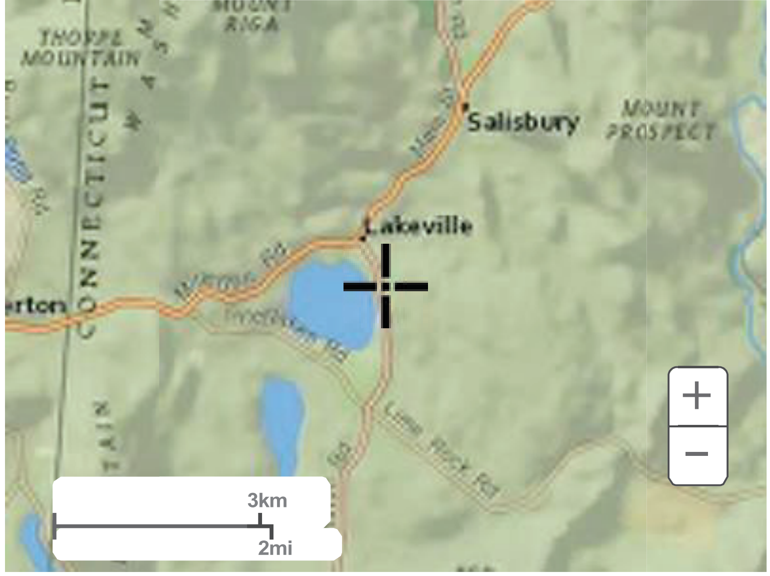
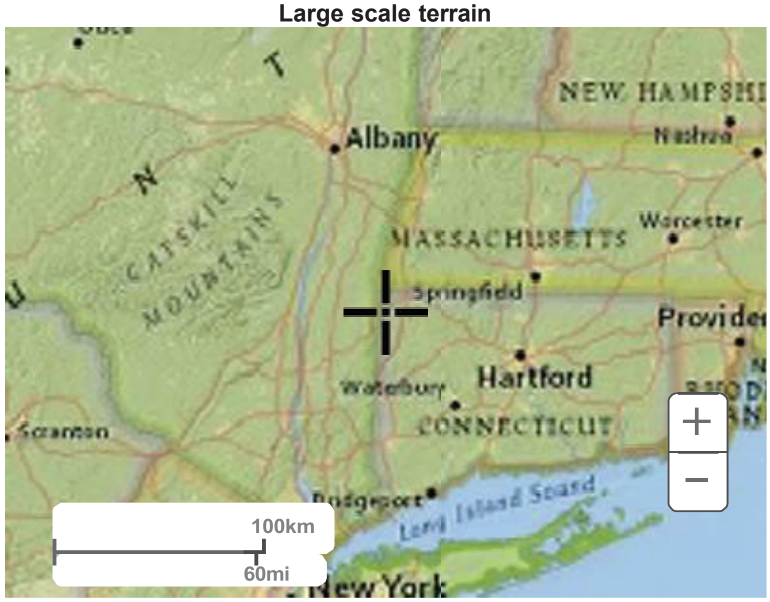
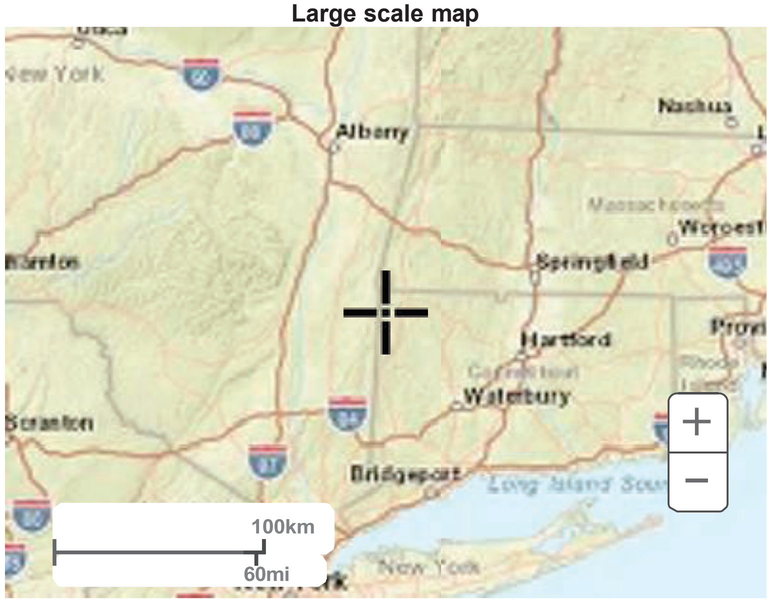
PF graphical



Large scale terrain



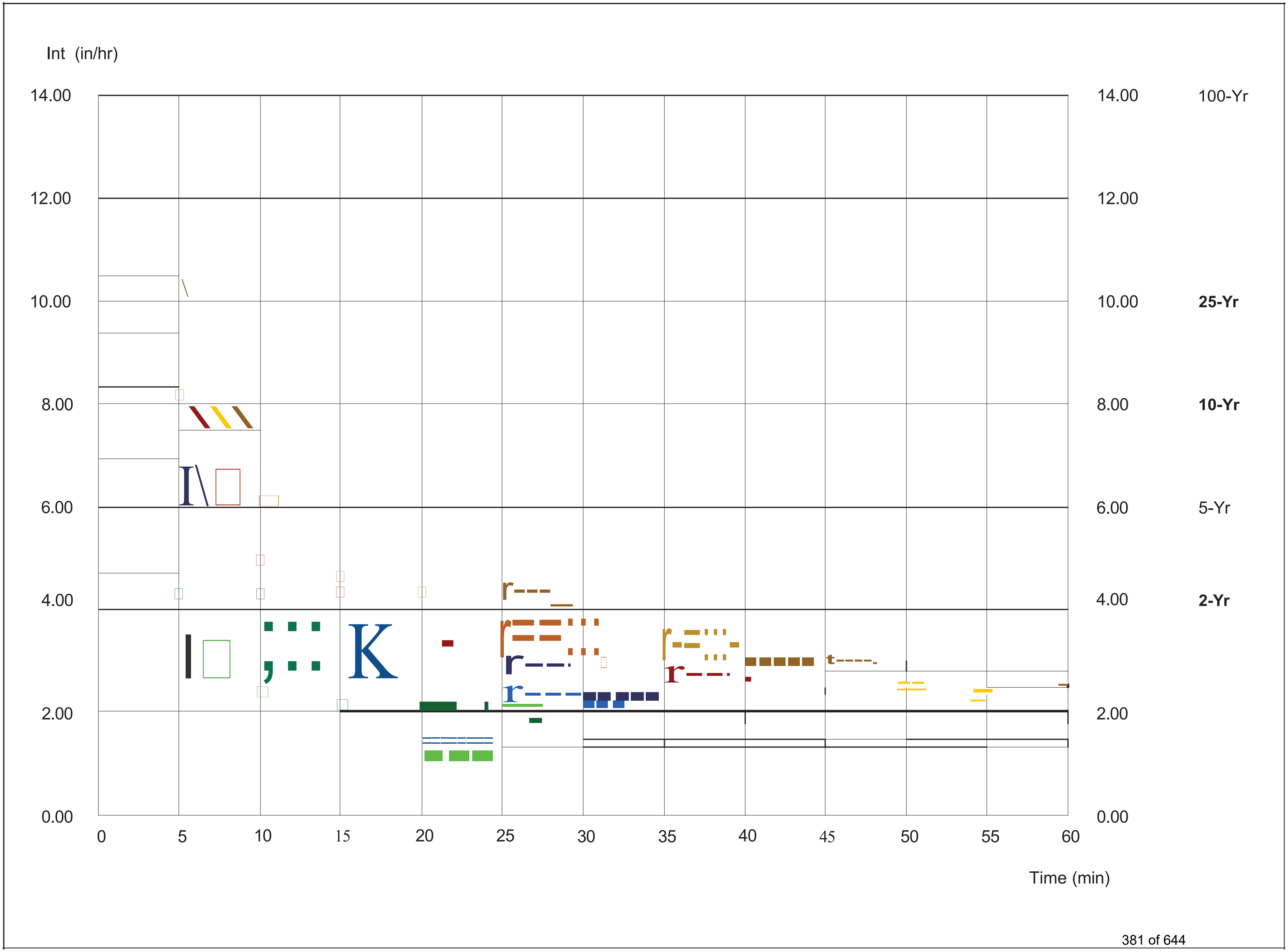
Large scale map



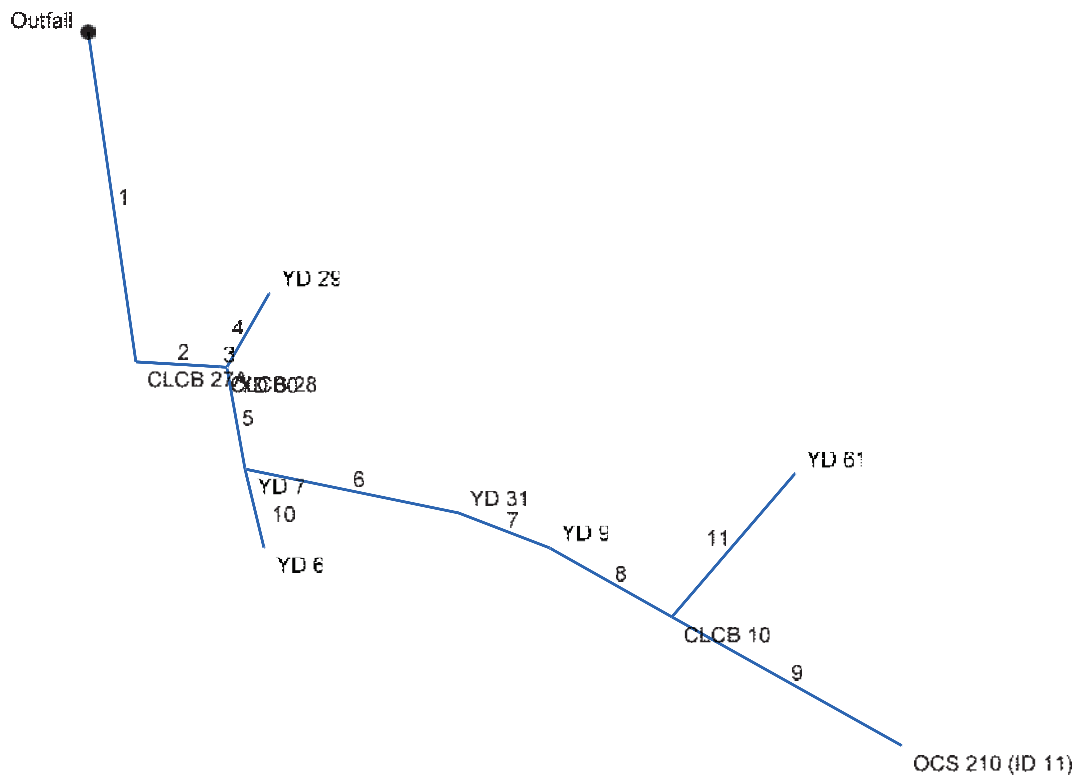
Large scale aerial

Storm Sewer IDF Curves

IDF file: Salisbury.IDF



Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: Storm 200-05.stm	Number of lines: 11	Date: 4/21/2025

Storm Sewers v2023.00

Storm Sewer Inventory Report

Line No,	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No,	Line Length (ft)	Defl angle (deg)	June Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (CJ	Inlet Time (min)	Invert ElDn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	161.000	81.800	Grate	0.00	0.12	0.90	5.0	773.00	2.61	777.20	18	Cir	0.013	1.48	781.00	MH 27A- CLCB 27A
2	1	40,000	-78.400	Grate	0,00	0.40	0,37	5,0	778,20	2.75	779,30	15	Cir(2b)	0.013	0,50	782,00	CLCB 27A - CLCB 28
3	2	4.000	0.000	DrGrt	2.81	0.23	0.37	5.0	779.30	2.50	779.40	18	Cir	0.012	1.47	781.80	CLCB 28 - MH 30
4	3	41,000	-.53.600	DrGrt	0,00	0.20	0.27	5,0	779.40	0.73	779,70	15	Cir	0.012	1.00	782,70	MH 30-YD 29
5	3	50.000	76.500	DrGrt	0.00	0.03	0.30	5.0	779.40	3.20	781.00	15	Cir	0.012	1.41	784.60	MH 30-MH 7
6	5	105,000	-.68,200	DrGrt	0,00	0,06	0.77	5,0	781,00	8.57	790,00	15	Cir	0.012	0,50	795,80	MH7-YD31
7	6	47.000	9.300	DrGrt	0.00	0.23	0.57	5.0	792.00	10.00	796.70	15	Cir	0.012	0.50	800.70	YD 31 -YD 9
8	7	68,000	8,500	Grate	0,00	0,04	0,85	5,0	796,70	8,97	802,80	15	Cir	0.012	1.48	807,80	YD 9-CLCB 10
9	8	127,000	-0,200	None	6.32	0,00	0,00	0,0	804,50	7.87	814,50	15	Cir	0.012	1.00	817,00	CLCB 10 - OCS 210
10	5	39.000	-3.500	DrGrt	0.00	0.53	0.25	5.0	781.00	5.13	783.00	12	Cir	0.012	1.00	785.50	MH 7-YD 6
11	8	90.900	-79.000	DrGrt	0,00	0,08	0,30	5,0	804,50	0.55	805,00	12	Cir	0.012	1.00	809,00	CLCB 10 - YD 61

Project File: Storm 200-05.stm | Number of lines: 11 | Date: 412112025

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area xC		Tc		Rain (I)	Total flow	Cap full	□el	Pipe		Invert Elev		HGL Elev		Grnd I Rim Elev		Line ID
Line	To Line		Iner	Total		Iner	Total	Inlet	Syst					Size	Slope	Dn	Up	Dn	Up	Dn	Up	
		(ft)	(ac)	(ac)	(CJ			(min)	(min)	(infhr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	End	161.000	0.12	1.92	0.90	0.11	0.77	5.0	6.5	9.4	16.37	16.96	9.34	18	2.61	773.00	777.20	774.50	778.63	777.70	781.00	MH 27A-CLCB 2
2	1	40,000	0.40	1.80	0,37	0.15	0,66	5,0	6.4	9.4	15.39	21.42	8.61	15(2b)	2.75	778,20	779,30	778,98	780,24	781,00	782,00	CLCB 27A • CLC
3	2	4.000	0.23	1.40	0.37	0.09	0.52	5.0	6.4	9.4	14.00	17.99	9.74	18	2.50	779.30	779.40	780.29	780.78	782.00	781.80	CLCB 28 - MH 30
4	3	41,000	0.20	0.20	0.27	0,05	0,05	5,0	5,0	10.5	0.57	5,98	0.48	15	0.73	779.40	779,70	780,78	780,78	781,80	782,70	MH 30-YD 29
5	3	50.000	0.03	0.97	0.30	0.01	0.38	5.0	6.2	9.6	9.93	12.51	8.18	15	3.20	779.40	781.00	780.78	782.18	781.80	784.60	MH 30-MH 7
6	5	105,000	0,06	0.41	0.77	0,05	0.24	5,0	5,9	9,8	8.62	20.48	7.25	15	8.57	781,00	790,00	782.18	791.14	784,60	795,80	MH7-YD31
7	6	47.000	0.23	0.35	0.57	0.13	0.19	5.0	5.9	9.8	8.17	22.12	11.85	15	10.00	792.00	796.70	792.53	797.82	795.80	800.70	YD 31 -YD 9
8	7	68,000	0,04	0.12	0,85	0,03	0,06	5,0	5.7	9,9	6,90	20,95	6.10	15	8,97	796,70	802,80	797.82	803,85	800,70	807,80	YD 9-CLCB 10
9	8	127,000	0,00	0,00	0,00	0,00	0,00	0,0	0,0	0,0	6.32	19,63	10.09	15	7.87	804,50	814,50	804,99	815,51	807,80	817,00	CLCB 10 - OCS 2
10	5	39.000	0.53	0.53	0.25	0.13	0.13	5.0	5.0	10.5	1.39	8.74	2.66	12	5.13	781.00	783.00	782.18	783.50	784.60	785.50	MH 7 □ YD 6
11	8	90.900	0,08	0,08	0,30	0.02	0.02	5,0	5,0	10.5	0.25	2.86	2.20	12	0.55	804,50	805,00	804,70	805,21	807,80	809,00	CLCB 10 - YD 61

Project File: Storm 200-05.stm | Number of lines: 11 | Run Date: 4/21!2025

NOTES:!Intensity = 48.64 I (Inlet time+ 3.70) *A* 0.71; Return period =Yrs. 100 : c = cir e ::: ellip b = box

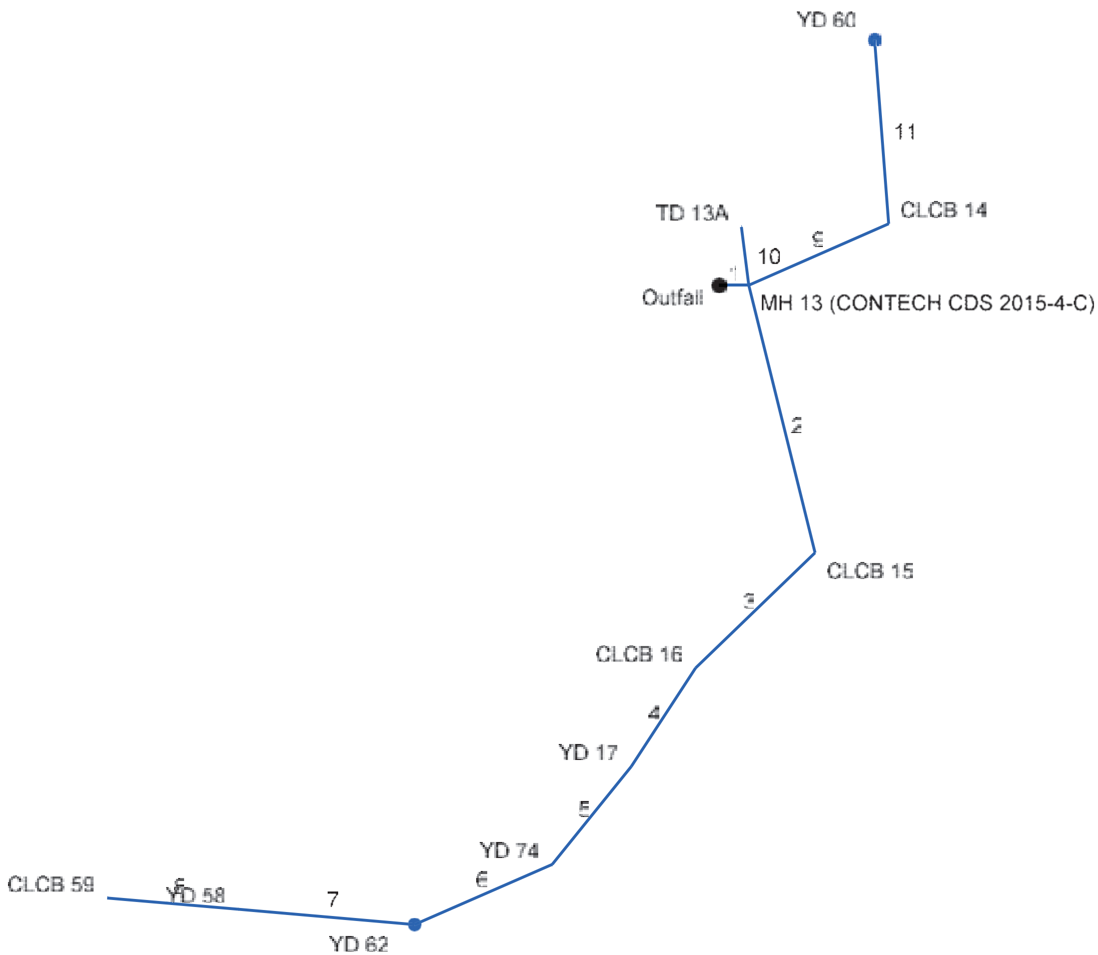
Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		JL coeff	Minor toss
	(in)	(cfs)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	(ft)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (ft/s)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy toss (ft)	(K)	(ft)
1	18	16.37	773.00	774.50	1.50	1.74	9.26	1.33	775.83	2.431	161.00	D777.20	778.63	1.43••	1.74	9.42	1.38	780.01	2.107	2.269	nla	1.48	2.04
2	15(2b)	15.39	778,20	778,98	0.78"	1.62	9.49	0,93	779,91	0,000	40,000	779,30	780,24	0,94..	1.99	7.73	0,93	781.17	0,000	0,000	n/a	0,50	n/a
3	18	14.00	779.30	780.29	0.99"	1.24	11.25	1.05	781.35	0.000	4.000	779.40	780.78	1.38..	1.70	8.23	1.05	781.83	0.000	0.000	nla	1.47	1.55
4	15	0.57	779.40	780,78	1.25	1.23	0.46	0,00	780,78	0,007	41,000	779,70	780,78	1.08	1.13	0,50	0,00	780,79	0.006	0.006	0.003	1.00	0,00
5	15	9.93	779.40	780.78	1.25	1.20	8.10	1.02	781.80	2.017	50.000	781.00	782.18j	1.18..	1.20	8.27	1.06	783.25	1.744	1.881	nla	1.41	nla
6	15	8.62	781,00	782.18	1.18	1.17	7.17	0,84	783,02	0,000	105,00	0790,00	791.14 J	1.14..	1.17	7.33	0,84	791,98	0,000	0,000	n/a	0,50	n/a
7	15	8.17	792.00	792.53	0.53"	0.49	16.66	0.77	793.30	0.000	47.000	796.70	797,82	1.12..	1.16	7.04	0.77	798.59	0.000	0.000	nla	0.50	0.39
8	15	6,90	796,70	797,82	1.12	1.10	5.94	0.61	798.43	0,000	68,000	802,80	803.85 J	1.05..	1.10	6.25	0.61	804.46	0,000	0,000	n/a	1.48	n/a
9	15	6.32	804,50	804,99	0.49"	0.44	14.25	0.55	805,53	0,000	127,00	D814.50	815,51	1.01..	1.07	5,93	0.55	816,06	0,000	0,000	n/a	1.00	0.55
10	12	1.39	781.00	782.18	1.00	0.39	1.77	0.05	782.23	0.130	39.000	783.00	783.50 J	0.50..	0.39	3.55	0.20	783.70	0.525	0.327	nla	1.00	0.20
11	12	0.25	804,50	804,70	0.20·	0.11	2.24	0,07	804,77	0,000	90.900	805,00	805,21	0.21..	0.12	2.16	0,07	805,28	0,000	0,000	n/a	1.00	n/a

Project File: Storm 200-05.stm | Number of lines: 11 | Run Date: 4/21/2025

Notes: • depth assumed;•· Critical depth.; j-Line contains hyd. jump : c'" cir e::: ellip b"" box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: Storm 210-05.stm	Number of lines: 11	Date: 4/17/2025

Storm Sewers v2023.00

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	June Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert ElDn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	11.0	0.0	MH	0.00	0.00	0.00	0.0	815.00	0.91	815.10	18	Cir	0.012	1.00	819.00	FES 12 - MH 13
2	1	103.0	76.1	Grate	0.00	0.12	0.72	5.0	815.80	9.90	826.00	12	Cir	0.012	1.33	829.00	MH 13- CLCB 15
3	2	62.0	59.8	Grate	2.31	0.17	0.61	5.0	828.30	1.77	82940	12	Cir	0.012	0.50	831.70	CLCB 15- CLCB 16
4	3	44.0	-12.8	DrGrt	0.00	0.09	0.50	5.0	82940	2 05	830.30	12	Cir	0.012	0.50	833.70	CLCB 16 - YD 17
5	4	47.0	5.7	DrGrt	0.00	0.05	0.61	5.0	830.30	5.11	832.70	12	Cir	0.012	0.78	845.00	YD 17 -YD 74
6	5	56.0	27.5	DrGrt	0.00	0.00	0.00	0.0	832.70	9.82	838.20	12	Cir	0.012	0.80	844.25	YD 74 -YD 58
7	6	66.0	28.7	DrGrt	0.00	0.01	0.58	5.0	838.20	0.61	838.60	12	Cir	0.012	0.50	843.50	YD 74 - YD 58(2)
8	7	49.0	0.0	Grate	1.14	0.15	0.76	5.0	838.60	0.61	838.90	12	Cir	0.012	1.00	841.90	YD 58-CLCB 59
9	1	57.0	-23.8	Grate	0.00	0.17	0.66	5.0	815.50	2.63	817.00	12	Cir	0.012	143	82040	MH 13- CLCB 14
10	1	22.0	-97.2	DrGrt	0.00	0.09	0.84	5.0	815.10	1.14	815.35	8	Cir	0.012	1.00	818.00	MH13-TD13A
11	9	69.0	-70.5	DrGrt	0.00	0.03	0.64	5.0	817.00	0.72	817.50	12	Cir	0.012	1.00	820.00	CLCB 14 - YD 60

Project File Storm 210-05.stm | Number of lines: 11 | Date 4/17/2025

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	el	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Iner (ac)	Total (ac)	(C)	Iner	Total	Inlet (min)	Syst (min)	(in/hr)	(efs)	(efs)	(tus)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	11.0	0.00	0.88	0.00	0.00	0.59	0.0	6.4	6.3	7.15	10.85	5.11	18	0.91	815.00	815.10	816.20	816.13	817.36	819.00	FES 12 - MH 13
2	1	103.0	0.12	0.59	0.72	0.09	0.39	5.0	6.3	6.3	5.89	12.14	11.48	12	9.90	815.80	826.00	816.29	826.95	819.00	829.00	MH 13- CLCB 15
3	2	62.0	0.17	047	0.61	0.10	0.30	5.0	6.1	6.4	5.36	5.14	7.23	12	1.77	828.30	82940	829.16	830.33	829.00	831.70	CLCB 15 - CLCB
4	3	44.0	0.09	0.30	0.50	0.05	0.20	5.0	5.9	6.5	240	5.52	3.75	12	2.05	82940	830.30	830.33	830.96	83170	833.70	CLCB 16 - YD 17
5	4	47.0	0.05	0.21	0.61	0.03	0.15	5.0	5.7	6.6	2.13	8.72	3.99	12	5.11	830.30	832.70	830.96	833.32	833.70	845.00	YD 17 -YD 74
6	5	56.0	0.00	0.16	0.00	0.00	0.12	0.0	5.5	6.7	1.94	12.09	3.89	12	9.82	832.70	838.20	833.32	838.79	845.00	844.25	YD 74 -YD 58
7	6	66.0	0.01	0.16	0.58	0.01	0.12	5.0	5.2	6.8	1.96	3.00	4 02	12	0.61	838.20	838.60	838.79	839.20	844.25	843.50	YD 74 - YD 58(2)
8	7	49.0	0.15	0.15	0.76	0.11	0.11	5.0	5.0	6.9	1.93	3.02	3.97	12	0.61	838.60	838.90	839.20	83949	843.50	841.90	YD 58-CLCB 59
9	1	57.0	0.17	0.20	0.66	0.11	0.13	5.0	6.0	6.4	0.85	6.26	232	12	2.63	815.50	817.00	816.13	817.38	819.00	82040	MH 13- CLCB 14
10	1	22.0	0.09	0.09	0.84	0.08	0.08	5.0	5.0	6.9	0.53	1.39	1.50	8	1.14	815.10	815.35	816.13	816.17	819.00	818.00	MH13-TD13A
11	9	69.0	0.03	0.03	0.64	0.02	0.02	5.0	5.0	6.9	0.13	3.28	1.15	12	0.72	817.00	817.50	817.38	817.65	82040	820.00	CLCB 14 - YD 60

Project File Storm 210-05.strr | Number of lines 11 | Run Date: 4/17/2025

NOTES:Intensity = 32.58 / (Inlet time+ 3 80) ^ 0.71; Return period =Yrs. 1O ; c = cir e = ellip b = box

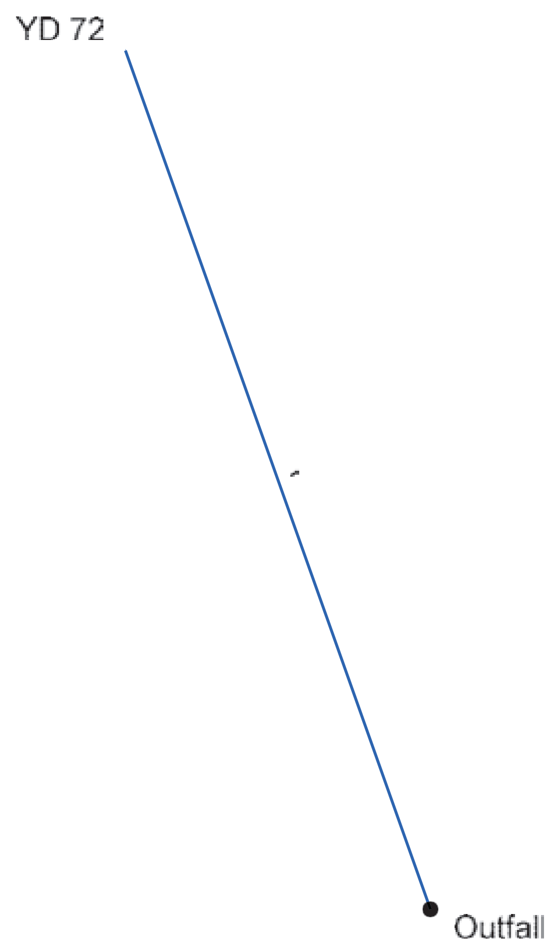
Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		Jl coeff	Minor loss
	(in)	(cfs)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (fUs)	Vel head (ft)	EGL elev (ft)	Sf (%)	(ft)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (fUs)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)	(K)	(ft)
1	18	7.15	815.00	816.20	1.20	1.30	4.72	0.47	816.67	0.000	11.0	815.10	816.13	1.03**	1.30	5.50	0.47	816.61	0.000	0.000	nla	1.00	0.47
2	12	5.89	815.80	816.29	0.49'	0.38	15.34	0.90	817.20	0.000	103.0	826.00	826.95	0.95'*	0.77	7.63	0.90	827.86	0.000	0.000	nla	1.33	nla
3	12	5.36	828.30	829.16	0.86*	0.72	7.43	0.77	829.93	0.000	62.0	829.40	830.33	0.93**	0.76	7 02	0.77	831.10	0.000	0.000	nla	0.50	nla
4	12	2.40	829.40	830.33	0.93	0.55	3.15	0.29	830.63	0.000	44.0	830.30	830.96,	0.66'*	0.55	4.35	0.29	831.26	0.000	0.000	nla	0.50	nla
5	12	2.13	830.30	830.96	0.66	0.51	3.85	0.27	831.23	0.000	47.0	832.70	833.32,	0.62**	0.51	4.14	0.27	833.59	0.000	0.000	nla	0.78	nla
6	12	1.94	832.70	833.32	0.62	0.49	3.78	0.25	833.57	0.000	56.0	838.20	838.79,	0.59'*	0.49	4.00	0.25	839 04	0.000	0.000	nla	0.80	nla
7	12	1.96	838.20	838.79	0.59	0.49	4 03	0.25	839 04	0.000	66.0	838.60	839.20	0.60**	0.49	4.01	0.25	839.45	0.000	0.000	nla	0.50	0.12
8	12	1.93	838.60	839.20	0.60	0.48	3.95	0.25	839.44	0.000	49.0	838.90	839.49,	0.59'*	0.48	3.99	0.25	839.74	0.000	0.000	nla	1.00	nla
9	12	0.85	815.50	816.13	0.63	0.28	1.61	0.14	816.28	0.000	57.0	817.00	817.38,	0.38'*	0.28	304	0.14	817.53	0.000	0.000	nla	1.43	nla
10	8	0.53	815.10	816.13	0.67	0.35	1.50	0.04	816.17	0.161	22.0	815.35	816.17	0.67	0.35	1.50	0.04	816.21	0 16ˡ	0.161	0.035	1.00	0.04
11	12	0.13	817.00	817.38	0.38	0.07	0.48	0.05	817.44	0.000	69.0	817.50	817.65,	0.15'*	0.07	1.82	0.05	817.70	0.000	0.000	nla	1.00	0.05

Project File Storm 210-05.stm | Number of lines 11 | Run Date: 4/17/2025

Notes:* depth assumed;** Critical depth.; j-Line contains hyd. Jump ; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: Storm 210-05-2.stm	Number of lines: 1	Date: 4/17/2025

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line No.	Line Length (ft)	Defl angle (deg)	June Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert EIDn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	N Value (n)	J-Loss Coeff (K)	Inlet/ Rim El (ft)	
1	End	75.0	-109.4	None	0.25	0.53	0.51	5.0	815.0C	0.67	815.50	12	Cir	0.012	1.00	817.50	FES 76- YD 72

Project File Storm 210-05-2.strr | Number of lines: 1 | Date 4/17/2025

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	□el	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Iner	Total		Iner	Total	Inlet	Syst					Size	Slope	Dn	Up	Dn	Up	Dn	Up	
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(efs)	(efs)	(tus)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	End	75.0	0.53	0.53	0.51	0.27	0.27	5.0	5.0	7.2	2.21	3.15	2.86	12	0.67	815.00	815.50	816.20	816.42	816.0C	817.50	FES 76- YD 72

Project File Storm 210-05-2.stm | Number of lines: 1 | Run Date: 4/17/2025

NOTES:Intensity = 88.24 / (Inlet time+ 15.50) A 0.83; Return period =Yrs. 1O c = cir e = ellip b = box

□torm Sev.1ers v:2023.UU

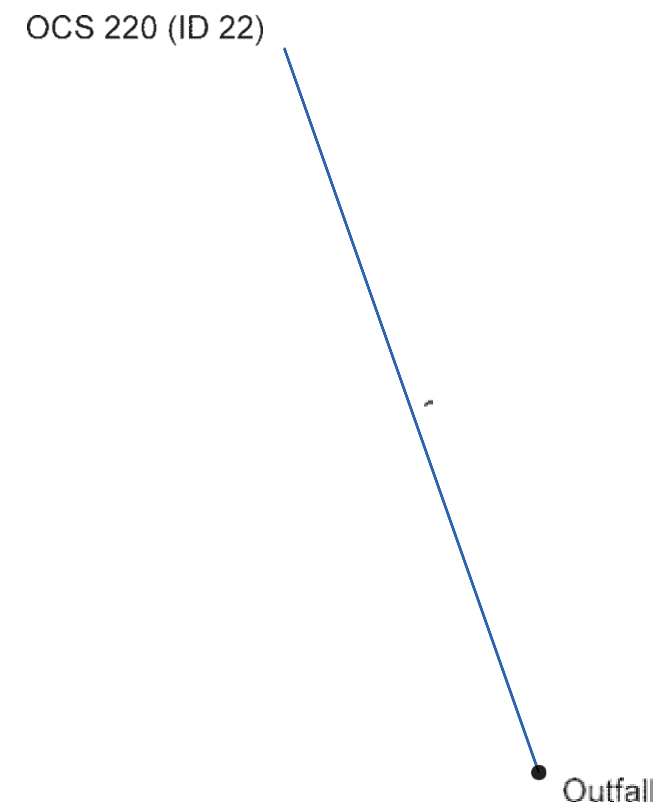
Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		Jl coeff	Minor loss
	(in)	(cfs)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (fUs)	Vel head (ft)	EGL elev (ft)	Sf (%)	(ft)	Invert elev (ft)	HGL elev (ft)	Depth (ft)	Area (sqft)	Vel (fUs)	Vel head (ft)	EGL elev (ft)	Sf (%)	Ave Sf (%)	Enrgy loss (ft)	(K)	(ft)
1	12	2.21	815.00	816.20	1.00	0.79	2.81	0.12	816.32	0.327	75.0	815.50	816.42	0.92	0.76	2.92	0.13	816.55	0.284	0.306	0.229	1.00	0.13

Project File Storm 210-05-2.strr | Number of lines: 1 | Run Date: 4/17/2025

; c = cir e = ellip b = box

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: Outlet 220-04.stm	Number of lines: 1	Date: 12/9/2024

Storm Sewer Inventory Report

Line No.	Alignment				Flow Data				Physical Data								Line ID
	Dnstr Line **No.**	Line Length (ft)	Defl angle (deg)	June Type	Known Q (cfs)	Drng Area (ac)	Runoff Coeff (C)	Inlet Time (min)	Invert EIDn (ft)	Line Slope (%)	Invert El Up (ft)	Line Size (in)	Line Shape	**N** Value (n)	J-Loss Coeff **(K)**	Inlet/ Rim El (ft)	
1	End	45.0	-109.4	None	4.73	0.00	0.00	0.0	800.00	1.11	800.50	15	Cir	0.012	1.00	803.53	FES 21 - OCS 220

Project File: Outlet 220-04.stm	Number of lines: 1	Date 12/9/2024

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	□el	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Iner	Total		Iner	Total	Inlet	Syst					Size	Slope	Dn	Up	Dn	Up	Dn	Up	
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(efs)	(efs)	(tus)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	End	45.0	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	4.73	7.37	449	15	1.11	800.00	800.50	801.25	801.38	801.36	803.53	FES 21 - OCS 22

Project File: Outlet 220-04.strr | Number of lines: 1 | Run Date: 12/9/2024

NOTES:Intensity = 48.64 / (Inlet time+ 3 70) ^ 0.71; Return period =Yrs. 100 ; c = cir e = ellip b = box

□torm Sev.1ers v:2023.UU

Hydraulic Grade Line Computations

Line	Size	Q	Downstream								Len	Upstream								Check		Jl coeff	Minor loss
			Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf		Invert elev	HGL elev	Depth	Area	Vel	Vel head	EGL elev	Sf	Ave Sf	Enrgy loss		
	(in)	(cfs)	(ft)	(ft)	(ft)	(sqft)	(fUs)	(ft)	(ft)	(%)	(ft)	(ft)	(ft)	(ft)	(sqft)	(fUs)	(ft)	(ft)	(%)	(%)	(ft)	(K)	(ft)
1	15	4.73	800.0C	801.25	1.25	0.92	3.86	0.23	80148	0457	45.0	800.50	801.38,	0.88**	0.92	5.12	0.41	80179	0.641	0.549	*nla*	1.00	0.41

Project File: Outlet 220-04.stm | Number of lines: 1 | Run Date: 12/9/2024

Notes: : ** Critical depth.: j-Line contains hyd. jump ; c = cir e = ellip b = box

Outlet Protection Calculations

Project:	Wake Robin Inn	By:	MCB	Date:	Rev. 4/21/25
Location:	Salisbury, CT	Checked:	TDR	Date:	4/21/2025
Outlet I.D.	**FES 12**				

*Based on Connecticut DOT Drainage Manual, Section 11.13

Description:

FES 12

Design Criteria (10-yr Storm Event):

Q (cfs) =	7.15	R_p (ft)=	1.5
D (in) =	18	S_p (ft) =	1.5
V (fps) =	5.11	Tw (ft)=	1.2

Q= Flow rate at discharge point in cubic feet per second (cfs)
D= Outlet pipe diameter (in)
V= Flow velocity at discharge point (ft/s)
R_p= Maximum inside pipe rise (ft)
S_p= inside diametere for circular sections of maximum inside pipe span for non-circular sections (ft)
T_w= Tailwater depth (ft)

Based on **Table 11.13.1,** A *Preformed Scour Hole* is used *One Half Pipe Rise Depression (Type I)*

Rip Rap Stone Size:

D_{50} Computed (ft)	Rip Rap Specification	D_{50} Stone Size Required
0.083	Modified	5 inches

Preformed Scour Hole Dimensions:

F = 0.5(R_p)	=	0.75 ft
C = 3.0(S_p)+6.0(F)	=	9ft
B = 2.0(S_p)+6.0(F)	=	7.5ft
d (Depth of Stone)	=	12 inches

Outlet Protection Calculations

Project:	Wake Robin Inn	By:	MCB	Date:	Rev. 11/4/24
Location:	Salisbury, CT	Checked:	TDR	Date: #	11/04/24
Outlet I.D.	**FES 23**				

*Based on Connecticut DOT Drainage Manual, Section 11.13

Description:

FES 23

Design Criteria (10-yr Storm Event):

Q (cfs) = 0.66	R_p (ft)= 0.67
D (in) = 8	S_p (ft) = 0.67
V (fps) = 4.7	Tw (ft)= 0.23

Q= Flow rate at discharge point in cubic feet per second (cfs)
D= Outlet pipe diameter (in)
V= Flow velocity at discharge point (ft/s)
R_p= Maximum inside pipe rise (ft)
S_p= inside diametere for circular sections of maximum inside pipe span for non-circular sections (ft)
T_w= Tailwater depth (ft)

Based on **Table 11-12.1** use Type 'A' ---> TW< 0.5 Rp

Rip Rap Stone Size:

Velocity	Rip Rap Specification	D_{50} Stone Size
0-8 fps	Modified	5 inches

Preformed Scour Hole Dimensions:

F(ft)=0.5(R_p)	=	n/a
C(ft)=3.0(S_p)+6.0(F)	=	n/a
B(ft)=2.0(S_p)+6.0(F)	=	n/a

Rip Rap Splash Pad Dimensions:

L_a	=	10	ft
W1 = 3.0(S_p) min.	=	2	ft
W2 = 3.0(Sp)+0.7(La) min.	=	9	ft
d (Depth of Stone)	=	12	inches

Level Spreader Design

Level Spreader 220

Broad Crest Elevation (ft)	801.00
Length (ft)	**30**
Discharge Coefficient	3.2
Elevation Increment	0.05
Q-100 year (cfs)	4.73 (DET 220 Discharge)

Elevation (Feet)	Weir Discharge (cfs)	Area (sf)	Velocity (fps)
801.00	0.00	0.00	0.00
801.05	1.07	1.50	0.72
801.10	3.04	3.00	1.01
801.13	4.73	4.03	1.17
801.15	5.58	4.50	1.24
801.20	8.59	6.00	1.43
801.25	12.00	7.50	1.60
801.30	15.77	9.00	1.75
801.35	19.88	10.50	1.89
801.40	24.29	12.00	2.02
801.45	28.98	13.50	2.15
801.50	33.94	15.00	2.26

Channel Report

Hydraflow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc. Monday, Dec 9 2024

Bridge

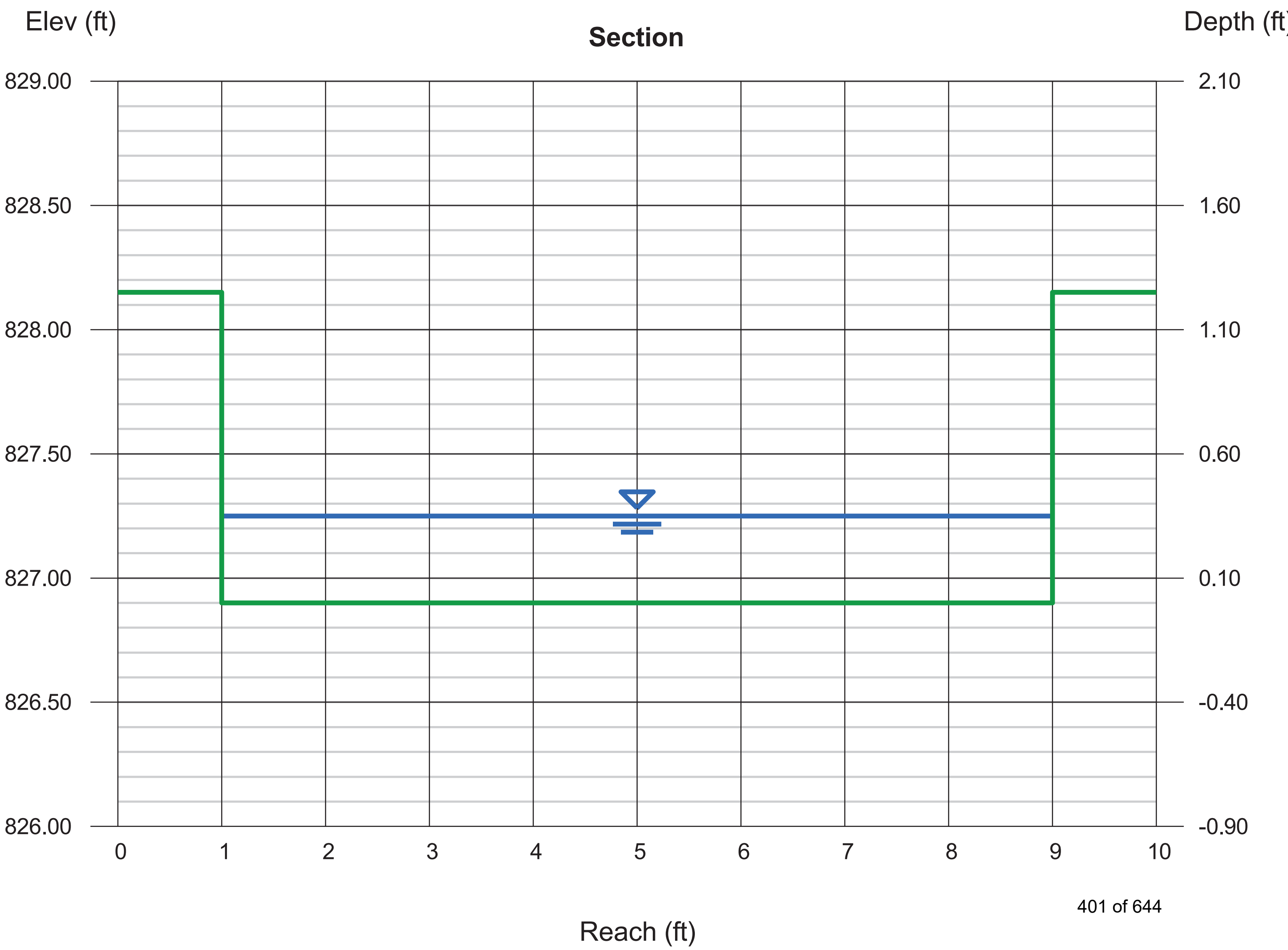
Rectangular	
Bottom Width (ft)	= 8.00
Total Depth (ft)	= 1.25
Invert Elev (ft)	= 826.90
Slope (%)	= 2.30
N-Value	= 0.024

Calculations

Compute by:	Known Q
Known Q (cfs)	= 11.60

Highlighted	
Depth (ft)	= 0.35
Q (cfs)	= 11.60
Area (sqft)	= 2.80
Velocity (ft/s)	= 4.23
Wetted Perim (ft)	= 8.70
Crit Depth, Yc (ft)	= 0.41
Top Width (ft)	= 8.00
EGL (ft)	= 0.63

Water Surface Elevation = 827.25
Low Chord of Bridge = 828.25
Top of Bridge = 829.5



Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment | By: MCB | Date: Rev. 11/04/24
Location: Salisbury, CT | Checked: TDR | Date: 11/04/24
Circle one: Present **Developed** | Watershed: Bridge
Circle one: **T_c** T_t | Subwatershed:

Sheet flow (applicable to T_c only)

		Segment ID	A-B		
1.	Surface description (Table 3-1)		WOODS		
2.	Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.400		
3.	Flow Length, L (< 300ft)	ft.	100.0		
4.	Two-year 24-hr rainfall, P_2	in.	3.08		
5.	Land slope, s	ft./ft.	0.035		
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.292	=	0.292

Shallow concentrated flow (assume hyd. radius = depth of flow)

		Segment ID	B-C					
7.	Surface description		WOODS					
8.	Manning's roughness coeff., n		0.100					
9.	Paved or unpaved		UNPVD					
10.	Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.	0.40					
11.	Flow Length, L	ft.	1176.0					
12.	Watercourse slope, s	ft./ft.	0.013					
13.	Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.	0.92					
14.	$T_t = \frac{L}{3600 * V}$	hr.	0.354				=	0.354

Channel flow

		Segment ID	C-D					
15.	Channel Bottom width, b	ft.	6.00					
16.	Horizontal side slope component, z (z horiz:1 vert)	ft.	4.00					
17.	Depth of flow, d	ft.	1.00					
18.	Cross sectional flow area, A (assume trapazoidal)	$ft.^2$	10.00					
19.	Wetted perimeter, P_w	ft.	14.25					
20.	Hydraulic Radius, $R = \frac{A}{P_w}$	ft.	0.70					
21.	Channel slope, s	ft./ft.	0.057					
22.	Manning's roughness coeff., n		0.024					
23.	$V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.	11.71					
24.	Flow length, L	ft.	6.0					
25.	$T_t = \frac{L}{3600 * V}$	hr.	0.000	+			=	0.000
26.	Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25)	hr.						0.646

SLR

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SLRCONSULTING.COM

DESCRIPTION	DATE	BY

DRAINAGE AREA MAP - STORM DRAINAGE SYSTEM

WAKE ROBIN INN REDEVELOPMENT

104 & 106 SHARON ROAD
SALISBURY, CONNECTICUT

MCB	MCB	TDR
DESIGNED	DRAWN	CHECKED

SCALE: 1"=80'

DATE: APRIL 29, 2025

PROJECT NO.: 22100.00001

SHEET NO.: 1 OF 1

SHEET NAME: CB

Appendix E
Water Quality Computations

Wake Robin Inn Redevelopment

104 & 106 Sharon Road, Salisbury, Connecticut

Drainage Report

Prepared for:
Aradev LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

SLR Project No.: 141.22100.00001

April 25, 2025

STORMWATER QUALITY CALCULATIONS
Water Quality Volume (WQV)

Basin ID	Total Area (ac.)	Impervious Area (ac.)	Percent Impervious	Volumetric Runoff Coeff., R	WQV (ac-ft)	Total Volume Required (ac-ft)	Total Volume Provided[1.] (ac-ft)
140	0.33	0.10	30%	0.32	0.012	0.012	***0.022***
210	2.84	1.42	50%	0.50	0.154	0.154	***0.171***
220	0.76	0.45	59%	0.58	0.048	0.048	***0.050***

1. - Volume provided below low-flow orifice

$$\textbf{WQV} = \frac{(1.3 \text{ inches}) \times A \times R}{12}$$

Where:

WQV = Water Quality Volume in acre-feet
A = Contributing Area in acres
R = 0.05 + 0.009 (I)
I = Site Imperviousness as percent

STORMWATER QUALITY CALCULATIONS
Water Quality Volume (WQV)

DET 210

Elevation (ft)	Surface Area (ft2)	Volume (ft3)	Volume (ac-ft)	Cumulative Volume (ac-ft)
815.0	7,672	0.0	0.000	**0.000**
815.9	8,852	7,435.8	0.171	**0.171**

DET 220

Elevation (ft)	Surface Area (ft2)	Volume (ft3)	Volume (ac-ft)	Cumulative Volume (ac-ft)
801.0	1,433	0.0	0.000	**0.000**
802.0	2,039	1,736.0	0.040	**0.040**
802.2	2,165	420.4	0.010	**0.050**

WQ 140

Elevation (ft)	Surface Area (ft2)	Volume (ft3)	Volume (ac-ft)	Cumulative Volume (ac-ft)
837.5	801	0.0	0.000	**0.000**
838.0	964	441.3	0.010	**0.010**
838.5	1,143	526.8	0.012	**0.022**

Drawdown Computations

	Basin ID	Bottom Area (sf)	Volume to be Infiltrated (cf)	Infil. Rate (in/hr)	Drawdown Time (hr)
	DET 210	7672	7438	5.32	2.19
	DET 220	1433	2156	1.58	11.43
	WQ 140	801	968	0.46	31.53

	SLR Consulting	Project	**22100.00001**
	COMPUTATION SHEET - WATER QUALITY FLOW (WQF)	Made By:	MCB
Subject:	**Wake Robin Inn**	Date:	Rev. 4/21/25
		Chkd by:	TDR
		Date:	4/21/2025

CDS Unit - MH 13

Contributing Basins			Imperv. Area (acres)	Total Area (acres)				
Total			1.11	1.55				

Table 4.1: WQV = (P)(R_v)(A)/12 =				0.117	acre-feet			
Where:								
I = % of Impervious Cover =				72%				
R_v = volumetric runoff coeff. 0.05 + 0.009(I) =				0.695				
P = design precipitation (1.3" for water quality storm) =					1.3	inch		
A = site area (acres) =				1.55	acres =	0.0024	miles^2	
Q = runoff depth (in watershed inches) = [WQV(acrefeet)]*[12(inches/foot)]/drainage area (acres)								
			Q =	0.903				
CN = 1000 / [10+ 5P + 10Q -10(Q^2 + 1.25QP)$^{0.5}$] =					96			
Where:								
Q = runoff depth (in watershed inches)								
			t_c =	0.1	hours			
Type III Rainfall Distribution:								
From Table 4-1, Ia =		0.083		Ia/P =	0.0638			
(TR-55)								
From Exhibit 4-III, q_u =		675	csm/in.					
(TR-55)								
WQF = (qu)(A)(Q) =		1.48	cfs			**CDS 2020-5-C Flow = 2.20 -> OK**		

2. Compute the time of concentration (t_c) based on the methods described in Chapter 3 of TR-55. A minimum value of 0.167 hours (10 minutes) should be used. For sheet flow, the flow path should not be longer than 300 feet.

3. Using the computed CN, t_c, and drainage area (A) in acres, compute the peak discharge for the water quality storm (i.e., the water quality flow [WQF]), based on the procedures described in Chapter 4 of TR-55.

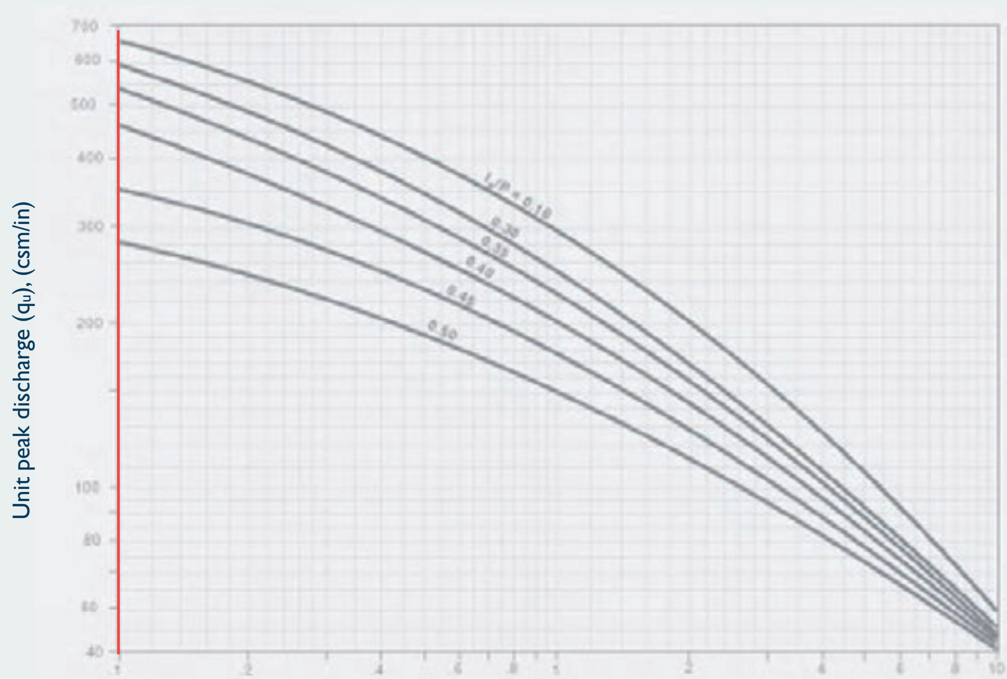
   - *Read initial abstraction (I_a) from Table 4-1 in Chapter 4 of TR-55 (reproduced below); compute I_a/P*

Table 4-1 I_a values for runoff curve numbers

Curve number	I_a (in)	Curve number	I_a (in)	Curve number	I_a (in)	Curve number	I_a (in)
40	3.000	55	1.636	70	0.857	85	0.353
41	2.878	56	1.571	71	0.817	86	0.326
42	2.762	57	1.509	72	0.778	87	0.299
43	2.651	58	1.448	73	0.740	88	0.273
44	2.545	59	1.390	74	0.703	89	0.247
45	2.444	60	1.333	75	0.667	90	0.222
46	2.348	61	1.279	76	0.632	91	0.198
47	2.255	62	1.226	77	0.597	92	0.174
48	2.167	63	1.175	78	0.564	93	0.151
49	2.082	64	1.125	79	0.532	94	0.128
50	2.000	65	1.077	80	0.500	95	0.105
51	1.922	66	1.030	81	0.469	96	0.083
52	1.846	67	0.985	82	0.439	97	0.062
53	1.774	68	0.941	83	0.410	98	0.041
54	1.704	69	0.899	84	0.381		

   - *Read the unit peak discharge (q_u) from Exhibit 4-III in Chapter 4 of TR-55 (reproduced below) for appropriate t_c*

Exhibit 4-111 Unit peak discharge (q_u) for NRCS (SCS) type III rainfall distribution



Time of concentration (T_c), (hours)

Product Flow Rates

CASCADE

Model	Treatment Rate (cfs)	Sediment Capacity[1] (CF)
CS-4	2.00	19
CS-5	3.50	29
CS-6	5.60	42
CS-8	12.00	75
CS-10	18.00	118

Model	Treatment Rate[2] (cfs)	Sediment Capacity[1] (CF)
1515-3	1.00	14
2015-4	1.40	25
2015-5	1.40	39
2015-6	1.40	57
2020-5	2.20	39
2020-6	2.20	57
2025-5	3.20	39
2025-6	3.20	57
3020-6	3.90	57
3025-6	5.00	57
3030-6	5.70	57
3035-6	6.50	57
4030-8	7.50	151
4040-8	9.50	151

VORTECHS

Model	Treatment Rate (cfs)	Sediment Capacity[3] (CF)
1000	1.60	16
2000	2.80	32
3000	4.50	49
4000	6.00	65
5000	8.50	86
7000	11.00	108
9000	14.00	130
11000	17.5	151
16000	25	192

STORMCEPTOR STC

Model	Treatment Rate (cfs)	Sediment Capacity[1] (CF)
STC 450i	0.40	46
STC 900	0.89	89
STC 2400	1.58	205
STC 4800	2.47	543
STC 7200	3.56	839
STC 11000	4.94	1086
STC 16000	7.12	1677

1 Additional sediment storage capacity available – Check with your local representative for information.

2 Treatment Capacity is based on laboratory testing using OK-110 (average D50 particle size of approximately 100 microns) and a 2400 micron screen.

3 Maintenance recommended when sediment depth has accumulated to within 12-18 inches of the dry weather water surface elevation.

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CDS Guide
Operation, Design, Performance and Maintenance

CDS®

Using patented continuous deflective separation technology, the CDS system screens, separates and traps debris, sediment, and oil and grease from stormwater runoff. The indirect screening capability of the system allows for 100% removal of floatables and neutrally buoyant material without blinding. Flow and screening controls physically separate captured solids, and minimize the re-suspension and release of previously trapped pollutants. Inline units can treat up to 6 cfs, and internally bypass flows in excess of 50 cfs (1416 L/s). Available precast or cast-in-place, offline units can treat flows from 1 to 300 cfs (28.3 to 8495 L/s). The pollutant removal capacity of the CDS system has been proven in lab and field testing.

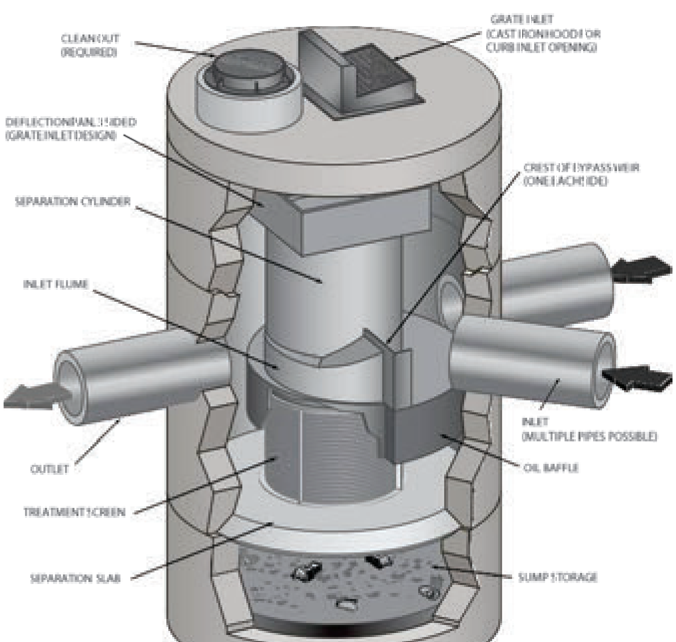
Operation Overview

Stormwater enters the diversion chamber where the diversion weir guides the flow into the unit's separation chamber and pollutants are removed from the flow. All flows up to the system's treatment design capacity enter the separation chamber and are treated.

Swirl concentration and screen deflection force floatables and solids to the center of the separation chamber where 100% of floatables and neutrally buoyant debris larger than the screen apertures are trapped.

Stormwater then moves through the separation screen, under the oil baffle and exits the system. The separation screen remains clog free due to continuous deflection.

During the flow events exceeding the treatment design capacity, the diversion weir bypasses excessive flows around the separation chamber, so captured pollutants are retained in the separation cylinder.



Design Basics

There are three primary methods of sizing a CDS system. The Water Quality Flow Rate Method determines which model size provides the desired removal efficiency at a given flow rate for a defined particle size. The Rational Rainfall Method™ or the and Probabilistic Method is used when a specific removal efficiency of the net annual sediment load is required.

Typically in the Unites States, CDS systems are designed to achieve an 80% annual solids load reduction based on lab generated performance curves for a gradation with an average particle size (d50) of 125 microns (µm). For some regulatory environments, CDS systems can also be designed to achieve an 80% annual solids load reduction based on an average particle size (d50) of 75 microns (µm) or 50 microns (µm).

Water Quality Flow Rate Method

In some cases, regulations require that a specific treatment rate, often referred to as the water quality design flow (WQQ), be treated. This WQQ represents the peak flow rate from either an event with a specific recurrence interval, e.g. the six-month storm, or a water quality depth, e.g. 1/2-inch (13 mm) of rainfall.

The CDS is designed to treat all flows up to the WQQ. At influent rates higher than the WQQ, the diversion weir will direct most flow exceeding the WQQ around the separation chamber. This allows removal efficiency to remain relatively constant in the separation chamber and eliminates the risk of washout during bypass flows regardless of influent flow rates.

Treatment flow rates are defined as the rate at which the CDS will remove a specific gradation of sediment at a specific removal efficiency. Therefore the treatment flow rate is variable, based on the gradation and removal efficiency specified by the design engineer.

Rational Rainfall Method™

Differences in local climate, topography and scale make every site hydraulically unique. It is important to take these factors into consideration when estimating the long-term performance of any stormwater treatment system. The Rational Rainfall Method combines site-specific information with laboratory generated performance data, and local historical precipitation records to estimate removal efficiencies as accurately as possible.

Short duration rain gauge records from across the United States and Canada were analyzed to determine the percent of the total annual rainfall that fell at a range of intensities. US stations' depths were totaled every 15 minutes, or hourly, and recorded in 0.01-inch increments. Depths were recorded hourly with 1-mm resolution at Canadian stations. One trend was consistent at all sites; the vast majority of precipitation fell at low intensities and high intensity storms contributed relatively little to the total annual depth.

These intensities, along with the total drainage area and runoff coefficient for each specific site, are translated into flow rates using the Rational Rainfall Method. Since most sites are relatively small and highly impervious, the Rational Rainfall Method is appropriate. Based on the runoff flow rates calculated for each intensity, operating rates within a proposed CDS system are determined. Performance efficiency curve determined from full scale laboratory tests on defined sediment PSDs is applied to calculate solids removal efficiency. The relative removal efficiency at each operating rate is added to produce a net annual pollutant removal efficiency estimate.

Probabilistic Rational Method

The Probabilistic Rational Method is a sizing program Contech developed to estimate a net annual sediment load reduction for a particular CDS model based on site size, site runoff coefficient, regional rainfall intensity distribution, and anticipated pollutant characteristics.

The Probabilistic Method is an extension of the Rational Method used to estimate peak discharge rates generated by storm events of varying statistical return frequencies (e.g. 2-year storm event). Under the Rational Method, an adjustment factor is used to adjust the runoff coefficient estimated for the 10-year event, correlating a known hydrologic parameter with the target storm event. The rainfall intensities vary depending on the return frequency of the storm event under consideration. In general, these two frequency dependent parameters (rainfall intensity and runoff coefficient) increase as the return frequency increases while the drainage area remains constant.

These intensities, along with the total drainage area and runoff coefficient for each specific site, are translated into flow rates using the Rational Method. Since most sites are relatively small and highly impervious, the Rational Method is appropriate. Based on the runoff flow rates calculated for each intensity, operating rates within a proposed CDS are determined. Performance efficiency curve on defined sediment PSDs is applied to calculate solids removal efficiency. The relative removal efficiency at each operating rate is added to produce a net annual pollutant removal efficiency estimate.

Treatment Flow Rate

The inlet throat area is sized to ensure that the WQQ passes through the separation chamber at a water surface elevation equal to the crest of the diversion weir. The diversion weir bypasses excessive flows around the separation chamber, thus preventing re-suspension or re-entrainment of previously captured particles.

Hydraulic Capacity

The hydraulic capacity of a CDS system is determined by the length and height of the diversion weir and by the maximum allowable head in the system. Typical configurations allow hydraulic capacities of up to ten times the treatment flow rate. The crest of the diversion weir may be lowered and the inlet throat may be widened to increase the capacity of the system at a given water surface elevation. The unit is designed to meet project specific hydraulic requirements.

Performance

Full-Scale Laboratory Test Results

A full-scale CDS system (Model CDS2020-5B) was tested at the facility of University of Florida, Gainesville, FL. This CDS unit was evaluated under controlled laboratory conditions of influent flow rate and addition of sediment.

Two different gradations of silica sand material (UF Sediment & OK-110) were used in the CDS performance evaluation. The particle size distributions (PSDs) of the test materials were analyzed using standard method "Gradation ASTM D-422 "Standard Test Method for Particle-Size Analysis of Soils" by a certified laboratory.

UF Sediment is a mixture of three different products produced by the U.S. Silica Company: "Sil-Co-Sil 106", "#1 DRY" and "20/40 Oil Frac". Particle size distribution analysis shows that the UF Sediment has a very fine gradation (d50 = 20 to 30 μm) covering a wide size range (Coefficient of Uniformity, C averaged at 10.6). In comparison with the hypothetical TSS gradation specified in the NJDEP (New Jersey Department of Environmental Protection) and NJCAT (New Jersey Corporation for Advanced Technology) protocol for lab testing, the UF Sediment covers a similar range of particle size but with a finer d50 (d50 for NJDEP is approximately 50 μm) (NJDEP, 2003).

The OK-110 silica sand is a commercial product of U.S. Silica Sand. The particle size distribution analysis of this material, also included in Figure 1, shows that 99.9% of the OK-110 sand is finer than 250 microns, with a mean particle size (d50) of 106 microns. The PSDs for the test material are shown in Figure 1.

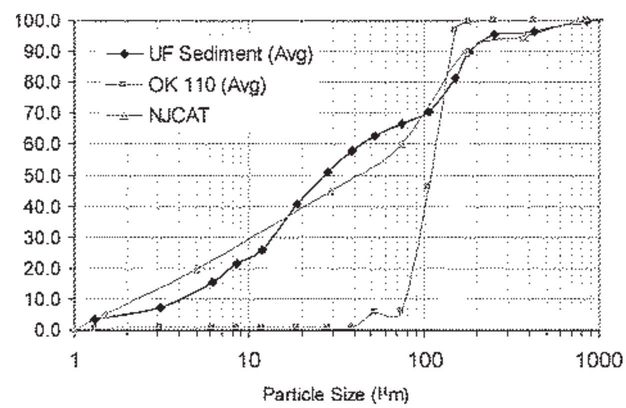


Figure 1. Particle size distributions

Tests were conducted to quantify the performance of a specific CDS unit (1.1 cfs (31.3-L/s) design capacity) at various flow rates, ranging from 1% up to 125% of the treatment design capacity of the unit, using the 2400 micron screen. All tests were conducted with controlled influent concentrations of approximately 200 mg/L. Effluent samples were taken at equal time intervals across the entire duration of each test run. These samples were then processed with a Dekaport Cone sample splitter to obtain representative sub-samples for Suspended Sediment Concentration (SSC) testing using ASTM D3977-97 "Standard Test Methods for Determining Sediment Concentration in Water Samples", and particle size distribution analysis.

Results and Modeling

Based on the data from the University of Florida, a performance model was developed for the CDS system. A regression analysis was used to develop a fitting curve representative of the scattered data points at various design flow rates. This model, which demonstrated good agreement with the laboratory data, can then be used to predict CDS system performance with respect to SSC removal for any particle size gradation, assuming the particles are inorganic sandy-silt. Figure 2 shows CDS predictive performance for two typical particle size gradations (NJCAT gradation and OK-110 sand) as a function of operating rate.

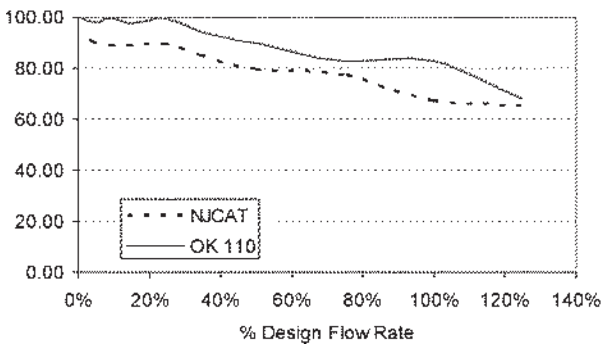


Figure 2. CDS stormwater treatment predictive performance for various particle gradations as a function of operating rate.

Many regulatory jurisdictions set a performance standard for hydrodynamic devices by stating that the devices shall be capable of achieving an 80% removal efficiency for particles having a mean particle size (d50) of 125 microns (e.g. Washington State Department of Ecology — WASDOE - 2008). The model can be used to calculate the expected performance of such a PSD (shown in Figure 3). The model indicates (Figure 4) that the CDS system with 2400 micron screen achieves approximately 80% removal at the design (100%) flow rate, for this particle size distribution (d50 = 125 μm).

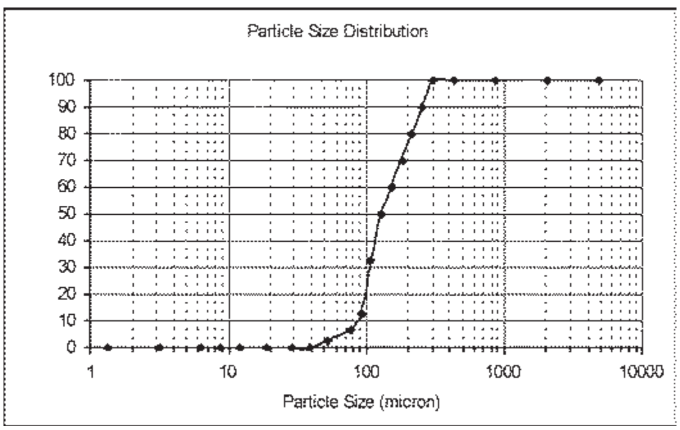


Figure 3. WASDOE PSD

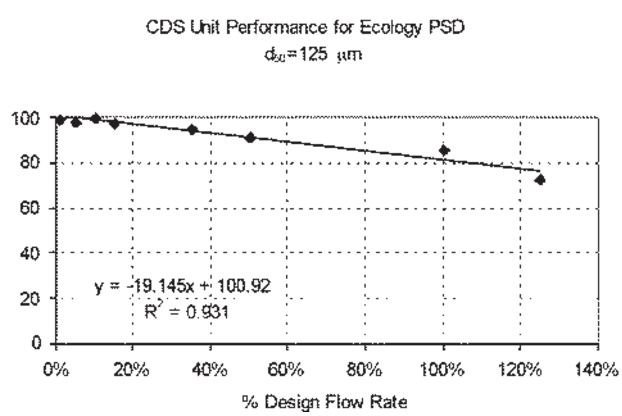


Figure 4. Modeled performance for WASDOE PSD.

Maintenance

The CDS system should be inspected at regular intervals and maintained when necessary to ensure optimum performance. The rate at which the system collects pollutants will depend more heavily on site activities than the size of the unit. For example, unstable soils or heavy winter sanding will cause the grit chamber to fill more quickly but regular sweeping of paved surfaces will slow accumulation.

Inspection

Inspection is the key to effective maintenance and is easily performed. Pollutant transport and deposition may vary from year to year and regular inspections will help ensure that the system is cleaned out at the appropriate time. At a minimum, inspections should be performed twice per year (e.g. spring and fall) however more frequent inspections may be necessary in climates where winter sanding operations may lead to rapid accumulations, or in equipment washdown areas. Installations should also be inspected more frequently where excessive amounts of trash are expected.

The visual inspection should ascertain that the system components are in working order and that there are no blockages or obstructions in the inlet and separation screen. The inspection should also quantify the accumulation of hydrocarbons, trash, and sediment in the system. Measuring pollutant accumulation can be done with a calibrated dipstick, tape measure or other measuring instrument. If absorbent material is used for enhanced removal of hydrocarbons, the level of discoloration of the sorbent material should also be identified

during inspection. It is useful and often required as part of an operating permit to keep a record of each inspection. A simple form for doing so is provided.

Access to the CDS unit is typically achieved through two manhole access covers. One opening allows for inspection and cleanout of the separation chamber (cylinder and screen) and isolated sump. The other allows for inspection and cleanout of sediment captured and retained outside the screen. For deep units, a single manhole access point would allows both sump cleanout and access outside the screen.

The CDS system should be cleaned when the level of sediment has reached 75% of capacity in the isolated sump or when an appreciable level of hydrocarbons and trash has accumulated. If absorbent material is used, it should be replaced when significant discoloration has occurred. Performance will not be impacted until 100% of the sump capacity is exceeded however it is recommended that the system be cleaned prior to that for easier removal of sediment. The level of sediment is easily determined by measuring from finished grade down to the top of the sediment pile. To avoid underestimating the level of sediment in the chamber, the measuring device must be lowered to the top of the sediment pile carefully. Particles at the top of the pile typically offer less resistance to the end of the rod than consolidated particles toward the bottom of the pile. Once this measurement is recorded, it should be compared to the as-built drawing for the unit to determine weather the height of the sediment pile off the bottom of the sump floor exceeds 75% of the total height of isolated sump.

Cleaning

Cleaning of a CDS systems should be done during dry weather conditions when no flow is entering the system. The use of a vacuum truck is generally the most effective and convenient method of removing pollutants from the system. Simply remove the manhole covers and insert the vacuum hose into the sump. The system should be completely drained down and the sump fully evacuated of sediment. The area outside the screen should also be cleaned out if pollutant build-up exists in this area.

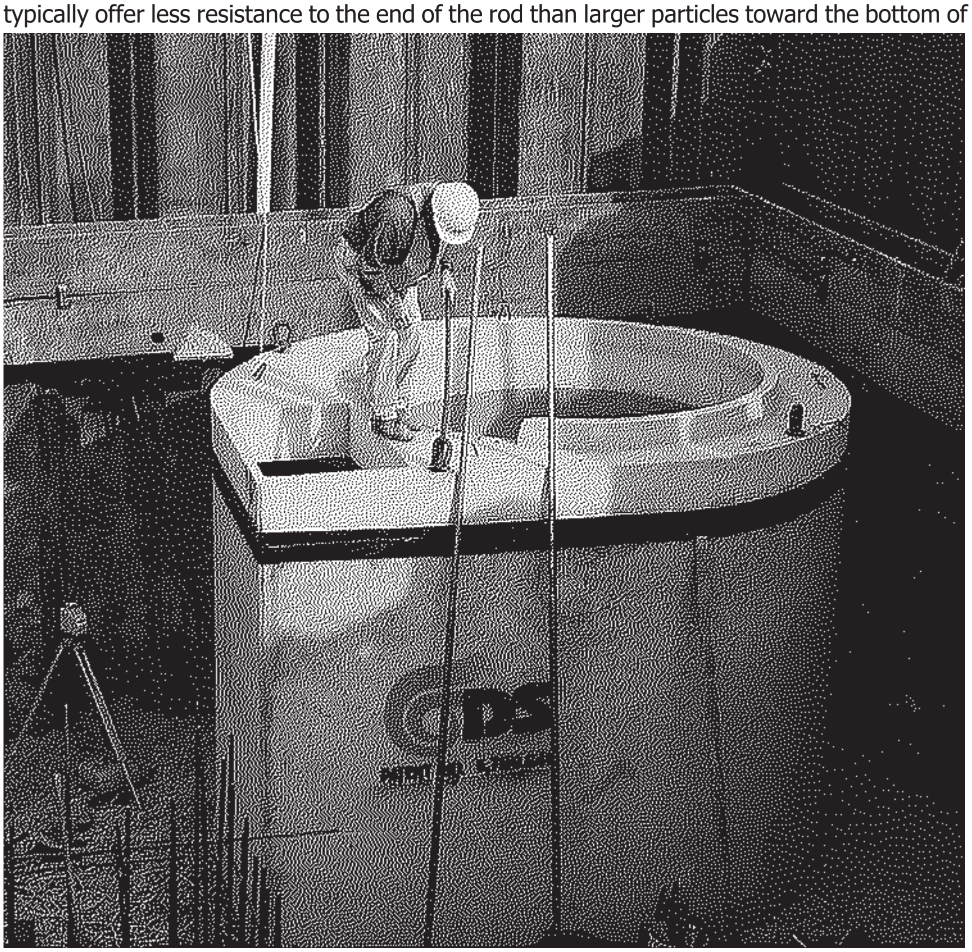
In installations where the risk of petroleum spills is small, liquid contaminants may not accumulate as quickly as sediment. However, the system should be cleaned out immediately in the event of an oil or gasoline spill. Motor oil and other hydrocarbons that accumulate on a more routine basis should be removed when an appreciable layer has been captured. To remove these pollutants, it may be preferable to use absorbent pads since they are usually less expensive to dispose than the oil/water emulsion that may be created by vacuuming the oily layer. Trash and debris can be netted out to separate it from the other pollutants. The screen should be cleaned to ensure it is free of trash and debris.

Manhole covers should be securely seated following cleaning activities to prevent leakage of runoff into the system from above and also to ensure that proper safety precautions have been followed. Confined space entry procedures need to be followed if physical access is required. Disposal of all material removed from the CDS system should be done in accordance with local regulations. In many jurisdictions, disposal of the sediments may be handled in the same manner as the disposal of sediments removed from catch basins or deep sump manholes. Check your local regulations for specific requirements on disposal.

CDS Model	Diameter		Distance from Water Surface to Top of Sediment Pile		Sediment Storage Capacity	
	ft	m	ft	m	y³	m³
CDS1515	3	0.9	3.0	0.9	0.5	0.4
CDS2015	4	1.2	3.0	0.9	0.9	0.7
CDS2015	5	1.5	3.0	0.9	1.3	1.0
CDS2020	5	1.5	3.5	1.1	1.3	1.0
CDS2025	5	1.5	4.0	1.2	1.3	1.0
CDS3020	6	1.8	4.0	1.2	2.1	1.6
CDS3025	6	1.8	4.0	1.2	2.1	1.6
CDS3030	6	1.8	4.6	1.4	2.1	1.6
CDS3035	6	1.8	5.0	1.5	2.1	1.6
CDS4030	8	2.4	4.6	1.4	5.6	4.3
CDS4040	8	2.4	5.7	1.7	5.6	4.3
CDS4045	8	2.4	6.2	1.9	5.6	4.3
CDS5640	10	3.0	6.3	1.9	8.7	6.7
CDS5653	10	3.0	7.7	2.3	8.7	6.7
CDS5668	10	3.0	9.3	2.8	8.7	6.7
CDS5678	10	3.0	10.3	3.1	8.7	6.7

Table 1: CDS Maintenance Indicators and Sediment Storage Capacities

Note: To avoid underestimating the volume of sediment in the chamber, carefully lower the measuring device to the top of the sediment pile. Finer silty particles at the top of the pile may be more difficult to feel with a measuring stick. These finer particles typically offer less resistance to the end of the rod than larger particles toward the bottom of the pile.



CDS Inspection & Maintenance Log

CDS Model: ______________________________ **Location:** ______________________________

Date	Water depth to sediment[1]	Floatable Layer Thickness[2]	Describe Maintenance Performed	Maintenance Personnel	Comments

1. The water depth to sediment is determined by taking two measurements with a stadia rod: one measurement from the manhole opening to the top of the sediment pile and the other from the manhole opening to the water surface. If the difference between these measurements is less than the values listed in table 1 the system should be cleaned out. **Note: to avoid underestimating the volume of sediment in the chamber, the measuring device must be carefully lowered to the top of the sediment pile**.

2. For optimum performance, the system should be cleaned out when the floating hydrocarbon layer accumulates to an appreciable thickness. In the event of an oil spill, the system should be cleaned immediately.

SUPPORT

- Drawings and specifications are available at www.ContechES.com.
- Site-specific design support is available from our engineers.

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cds_manual 3/17 PDF

RECYCLED PAPER

Appendix F
Hydrologic Analysis - Input Computations

Wake Robin Inn Redevelopment

104 & 106 Sharon Road, Salisbury, Connecticut

Drainage Report

Prepared for:
Aradev LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

SLR Project No.: 141.22100.00001

April 25, 2025

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB Date: Rev. 8/29/24 Checked: TDR Date: 11/4/24
Circle one: ***Present*** Developed Watershed: EXWS-10

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.] Table 2-2	CN Value [1.] Figure 2-3	CN Value [1.] Figure 2-4	Area Acres Sq. Ft. %	Product of CN x Area
B Soil	Woods - Good Condition	55			0.11	5.86
B Soil	Gravel	96			0.01	0.75
D Soil	Woods - Good Condition	77			2.29	176.68
D Soil	Open Space - Good Condition	80			0.01	0.83
N/A	Existing Building	98			0.04	3.59
				Totals =	2.46	187.72

(0.00384 sq mi)

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{187.72}{2.46}$ Use CN = $\boxed{76}$

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB   Date: Rev. 8/29/24   Checked: TDR   Date: 11/4/24
Circle one: ***Present***   Developed   Watershed: EXWS-11

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.] Table 2-2	CN Value Figure 2-3	CN Value Figure 2-4	Area Acres Sq. Ft. %	Product of CN x Area
B Soil	Woods - Good Condition	55			2.80	154.20
B Soil	Open Space - Good Condition	61			0.94	57.07
B Soil	Gravel	96			0.34	32.72
C Soil	Woods - Good Condition	70			1.52	106.74
D Soil	Woods - Good Condition	77			9.40	723.63
D Soil	Open Space - Good Condition	80			0.73	58.06
D Soil	Gravel	96			0.06	5.79
N/A	Paved/Impervious	98			0.08	7.44
N/A	Existing Building	98			0.19	18.46
				Totals =	16.05	1164.11

(0.02508 sq mi)

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{1164.11}{16.05}$$

Use CN = $\boxed{73}$

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB Date: Rev. 8/29/24 Checked: TDR Date: 11/4/24
Circle one: ***Present*** Developed Watershed: EXWS-20

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.] Table 2-2	CN Value [1.] Figure 2-3	CN Value [1.] Figure 2-4	Area Acres Sq. Ft. %	Product of CN x Area
D Soil	Woods - Good Condition	77			3.39	261.35
D Soil	Open Space - Good Condition	80			0.51	40.91
D Soil	Gravel	96			0.38	36.78
N/A	Paved/Impervious	98			0.31	30.81
N/A	Existing Building	98			0.39	38.48
				Totals =	5.00	408.33

(0.00781 sq mi)

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{408.33}{5.00}$$

Use CN = $\boxed{82}$

SLR

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB Date: Rev. 8/29/24 Checked: TDR Date: 11/4/24
Circle one: ***Present*** Developed Watershed: EXWS-30

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.] Table 2-2	Figure 2-3	Figure 2-4	Area Acres Sq. Ft. %	Product of CN x Area
D Soil	Woods - Good Condition	77			1.66	127.98
N/A	Existing Building	98			0.01	1.00
				Totals =	1.67	128.98

(0.00261 sq mi)

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{128.98}{1.67}$ Use CN = $\boxed{77}$

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB Date: Rev. 4/17/25 Checked: TDR Date: 4/17/25
Circle one: Present ***Developed*** Watershed: PRWS-10

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.] Table 2-2	Figure 2-3	Figure 2-4	Area Acres Sq. Ft. %	Product of CN x Area
B Soil	Woods - Good Condition	55			0.05	2.80
B Soil	Open Space - Good Condition	61			0.08	4.86
B Soil	Gravel	85			0.01	0.65
D Soil	Woods - Good Condition	77			0.83	64.14
D Soil	Open Space - Good Condition	80			0.54	43.60
D Soil	Gravel	91			0.03	2.59
N/A	Paved/Impervious	98			0.04	3.89
N/A	Building	98			0.02	1.53
				Totals =	1.60	124.05

(0.00250 sq mi)

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{124.05}{1.60}$ Use CN = $\boxed{78}$

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB Date: Rev. 4/17/25 Checked: TDR Date: 4/17/25
Circle one: Present ***Developed*** Watershed: PRWS-11

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.]			Area Acres Sq. Ft. %	Product of CN x Area
		Table 2-2	Figure 2-3	Figure 2-4		
B Soil	Woods - Good Condition	55			2.65	145.54
B Soil	Open Space - Good Condition	61			1.32	80.47
B Soil	Gravel	96			0.04	4.26
C Soil	Woods - Good Condition	70			1.52	106.74
D Soil	Woods - Good Condition	77			8.24	634.59
D Soil	Open Space - Good Condition	80			1.08	86.11
D Soil	Gravel	96			0.12	11.36
N/A	Paved/Impervious	98			0.49	48.46
N/A	Building	98			0.46	44.95
				Totals =	15.92	1162.48

(0.02488 sq mi)

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{1162.48}{15.92}$$

Use CN = $\boxed{73}$

SLR

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB   Date: Rev. 4/17/25   Checked: TDR   Date: 4/17/25
Circle one: Present   ***Developed***   Watershed: PRWS-14

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.]			Area	Product of CN x Area
		Table 2-2	Figure 2-3	Figure 2-4	Acres Sq. Ft. %	
D Soil	Woods	77			0.02	1.60
D Soil	Open Space - Good Condition	80			0.21	17.03
D Soil	Gravel	96			0.05	4.40
N/A	Paved/Impervious	98			0.05	4.92
				Totals =	0.33	27.94

(0.00051 sq mi)

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{27.94}{0.33}$ Use CN = $\boxed{85}$

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB   Date: Rev. 4/17/25   Checked: TDR   Date: 4/17/25
Circle one: Present ***Developed***   Watershed: PRWS-20

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.]			Area Acres Sq. Ft. %	Product of CN x Area
		Table 2-2	Figure 2-3	Figure 2-4		
D Soil	Woods - Good Condition	77			1.27	97.70
D Soil	Open Space - Good Condition	80			0.86	68.77
D Soil	Gravel	96			0.06	5.84
N/A	Paved/Impervious	98			0.39	38.45
				Totals =	2.58	210.76

(0.00403 sq mi)

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{210.76}{2.58}$$

Use CN = $\boxed{82}$

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB   Date: Rev. 4/17/25   Checked: TDR   Date: 4/17/25
Circle one: Present ***Developed***   Watershed: PRWS-21

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.]			Area Acres Sq. Ft. %	Product of CN x Area
		Table 2-2	Figure 2-3	Figure 2-4		
D Soil	Woods - Good Condition	77			0.15	11.77
D Soil	Open Space - Good Condition	80			1.27	101.29
D Soil	Gravel	96			0.16	15.48
N/A	Paved/Impervious	98			0.77	75.75
N/A	Building	98			0.49	47.89
				Totals =	2.84	252.18

(0.00444 sq mi)

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{252.18}{2.84}$ Use CN = $\boxed{89}$

SLR

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB   Date: Rev. 12/9/24   Checked: TDR   Date: 12/9/24
Circle one: Present ***Developed***   Watershed: PRWS-22

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.] Table 2-2	Figure 2-3	Figure 2-4	Area Acres Sq. Ft. %	Product of CN x Area
D Soil	Woods - Good Condition	77			0.01	0.99
D Soil	Open Space - Good Condition	80			0.31	24.45
D Soil	Gravel	96			0.19	18.21
N/A	Paved/Impervious	98			0.24	23.11
N/A	Building	98			0.02	1.94
				Totals =	0.76	68.70

(0.00119 sq mi)

CN (weighted) = $\frac{\text{total product}}{\text{total area}}$ = $\frac{68.70}{0.76}$ Use CN = $\boxed{90}$

SLR

Curve Number Calculations

Project: Wake Robin Inn Redevelopment
Location: 104 & 106 Sharon Road
Salisbury, CT
By: MCB Date: Rev. 4/17/25 Checked: TDR Date: 4/17/25
Circle one: Present ***Developed*** Watershed: PRWS-30

Soil Name and Hydrologic Group (appendix A)	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN Value [1.]			Area	Product of CN x Area
		Table 2-2	Figure 2-3	Figure 2-4	Acres / Sq. Ft. / %	
D Soil	Woods - Good Condition	77			0.73	55.93
D Soil	Open Space - Good Condition	80			0.39	31.51
N/A	Paved/Impervious	98			0.01	0.74
				Totals =	1.13	88.18

(0.00176 sq mi)

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{88.18}{1.13}$ Use CN = $\boxed{78}$

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment   By: MCB   Date: 07/19/24
Location: Salisbury, CT   Checked: TDR   Date: 11/04/24
Circle one: ***Present*** Developed   Watershed: EXWS-10
Circle one: ***T_c*** T_t Subwatershed:

Sheet flow (applicable to T_c only)

		Segment ID	A-B	
1.	Surface description (Table 3-1)		WOODS	
2.	Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.400	
3.	Flow Length, L (< 300ft)	ft.	100.0	
4.	Two-year 24-hr rainfall, P_2	in.	3.08	
5.	Land slope, s	ft./ft.	0.070	
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.221	= 0.221

Shallow concentrated flow (assume hyd. radius = depth of flow)

		Segment ID	B-C				
7.	Surface description		WOODS				
8.	Manning's roughness coeff., n		0.100				
9.	Paved or unpaved		UNPVD				
10.	Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.	0.40				
11.	Flow Length, L	ft.	108.0				
12.	Watercourse slope, s	ft./ft.	0.056				
13.	Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.	1.91				
14.	$T_t = \frac{L}{3600 * V}$	hr.	0.016				= 0.016

Channel flow

		Segment ID					
15.	Channel Bottom width, b	ft.					
16.	Horizontal side slope component, z (z horiz:1 vert)	ft.					
17.	Depth of flow, d	ft.					
18.	Cross sectional flow area, A (assume trapazoidal)	$ft.^2$					
19.	Wetted perimeter, P_w	ft.					
20.	Hydraulic Radius, $R = \frac{A}{P_w}$	ft.					
21.	Channel slope, s	ft./ft.					
22.	Manning's roughness coeff., n						
23.	$V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.					
24.	Flow length, L	ft.					
25.	$T_t = \frac{L}{3600 * V}$	hr.					= 0.000
26.	Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25)	hr.					0.237

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment — By: MCB — Date: 07/19/24
Location: Salisbury, CT — Checked: TDR — Date: 11/04/24
Circle one: ***Present*** Developed — Watershed: EXWS-11
Circle one: ***T_c*** T_t — Subwatershed:

Sheet flow (applicable to T_c only)

		Segment ID	A-B	
1.	Surface description (Table 3-1)		WOODS	
2.	Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.400	
3.	Flow Length, L (< 300ft)	ft.	100.0	
4.	Two-year 24-hr rainfall, P_2	in.	3.08	
5.	Land slope, s	ft./ft.	0.035	
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}(s^{0.4})}$	hr.	0.292	= 0.292

Shallow concentrated flow (assume hyd. radius = depth of flow)

		Segment ID	B-C				
7.	Surface description		WOODS				
8.	Manning's roughness coeff., n		0.100				
9.	Paved or unpaved		UNPVD				
10.	Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.	0.40				
11.	Flow Length, L	ft.	1176.0				
12.	Watercourse slope, s	ft./ft.	0.013				
13.	Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.	0.92				
14.	$T_t = \frac{L}{3600 * V}$	hr.	0.354				= 0.354

Channel flow

		Segment ID	C-D	D-E			
15.	Channel Bottom width, b	ft.	12" RCP	6.00			
16.	Horizontal side slope component, z (z horiz:1 vert)	ft.	--	4.00			
17.	Depth of flow, d	ft.	FULL	1.00			
18.	Cross sectional flow area, A (assume trapazoidal)	$ft.^2$	0.79	10.00			
19.	Wetted perimeter, P_w	ft.	3.14	14.25			
20.	Hydraulic Radius, $R = \frac{A}{P_w}$	ft.	0.25	0.70			
21.	Channel slope, s	ft./ft.	0.006	0.057			
22.	Manning's roughness coeff., n		0.013	0.024			
23.	$V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.	3.54	11.71			
24.	Flow length, L	ft.	31.0	514.0			
25.	$T_t = \frac{L}{3600 * V}$	hr.	0.002	+ 0.012			= 0.015
26.	Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25)	hr.					0.660

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment
By: MCB
Date: 07/19/24
Location: Salisbury, CT
Checked: TDR
Date: 11/04/24
Circle one: **Present** Developed
Watershed: EXWS-20
Circle one: **T_c** T_t
Subwatershed:

Sheet flow (applicable to T_c only)

		Segment ID	A-B	
1.	Surface description (Table 3-1)		WOODS	
2.	Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.400	
3.	Flow Length, L (< 300ft)	ft.	100.0	
4.	Two-year 24-hr rainfall, P_2	in.	3.08	
5.	Land slope, s	ft./ft.	0.060	
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.235	= 0.235

Shallow concentrated flow (assume hyd. radius = depth of flow)

		Segment ID	B-C	C-D	D-E		
7.	Surface description		WOODS	BIT	WOODS		
8.	Manning's roughness coeff., n		0.100	0.010	0.100		
9.	Paved or unpaved		UNPVD	PVD	UNPVD		
10.	Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.	0.40	0.20	0.40		
11.	Flow Length, L	ft.	40.0	159.0	52.0		
12.	Watercourse slope, s	ft./ft.	0.100	0.107	0.096		
13.	Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.	2.56	16.67	2.51		
14.	$T_t = \frac{L}{3600 * V}$	hr.	0.004 +	0.003 +	0.006		= 0.013

Channel flow

		Segment ID					
15.	Channel Bottom width, b	ft.					
16.	Horizontal side slope component, z (z horiz:1 vert)	ft.					
17.	Depth of flow, d	ft.					
18.	Cross sectional flow area, A (assume trapazoidal)	$ft.^2$					
19.	Wetted perimeter, P_w	ft.					
20.	Hydraulic Radius, $R = \frac{A}{P_w}$	ft.					
21.	Channel slope, s	ft./ft.					
22.	Manning's roughness coeff., n						
23.	$V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.					
24.	Flow length, L	ft.					
25.	$T_t = \frac{L}{3600 * V}$	hr.					= 0.000
26.	Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25)	hr.					0.248

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment | By: MCB | Date: 07/19/24
Location: Salisbury, CT | Checked: TDR | Date: 11/04/24
Circle one: ***Present*** Developed | Watershed: EXWS-30
Circle one: ***T_c*** T_t | Subwatershed:

Sheet flow (applicable to T_c only)

		Segment ID	A-B	
1.	Surface description (Table 3-1)		WOODS	
2.	Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.400	
3.	Flow Length, L (< 300ft)	ft.	114.0	
4.	Two-year 24-hr rainfall, P_2	in.	3.08	
5.	Land slope, s	ft./ft.	0.080	
6.	$T_t = \dfrac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.233	= 0.233

Shallow concentrated flow (assume hyd. radius = depth of flow)

		Segment ID					
7.	Surface description						
8.	Manning's roughness coeff., n						
9.	Paved or unpaved						
10.	Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.					
11.	Flow Length, L	ft.					
12.	Watercourse slope, s	ft./ft.					
13.	Average velocity, $V = \dfrac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.					
14.	$T_t = \dfrac{L}{3600 * V}$	hr.					= 0.000

Channel flow

		Segment ID					
15.	Channel Bottom width, b	ft.					
16.	Horizontal side slope component, z (z horiz:1 vert)	ft.					
17.	Depth of flow, d	ft.					
18.	Cross sectional flow area, A (assume trapazoidal)	$ft.^2$					
19.	Wetted perimeter, P_w	ft.					
20.	Hydraulic Radius, $R = \dfrac{A}{P_w}$	ft.					
21.	Channel slope, s	ft./ft.					
22.	Manning's roughness coeff., n						
23.	$V = \dfrac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.					
24.	Flow length, L	ft.					
25.	$T_t = \dfrac{L}{3600 * V}$	hr.					= 0.000

26. Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25) hr. 0.233

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project:	Wake Robin Inn Redevelopment	By:	MCB	Date:	Rev. 12/9/24
Location:	Salisbury, CT	Checked:	TDR	Date:	12/09/24
Circle one:	Present **Developed**	Watershed:	PRWS-10		
Circle one:	**T_c** T_t	Subwatershed:			

Sheet flow (applicable to T_c only)

		Segment ID	A-B		
1. Surface description (Table 3-1)			WOODS		
2. Manning's roughness coeff. for sheet flow, n (Table 3-1)			0.400		
3. Flow Length, L (< 300ft)		ft.	40.0		
4. Two-year 24-hr rainfall, P_2		in.	3.08		
5. Land slope, s		ft./ft.	0.038		
6. $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$		hr.	0.136	=	0.136

Shallow concentrated flow (assume hyd. radius = depth of flow)

	Unit						
Segment ID							
7. Surface description							
8. Manning's roughness coeff., n							
9. Paved or unpaved							
10. Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.						
11. Flow Length, L	ft.						
12. Watercourse slope, s	ft./ft.						
13. Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.						
14. $T_t = \frac{L}{3600 * V}$	hr.					=	0.000

Channel flow

	Unit						
Segment ID							
15. Channel Bottom width, b	ft.						
16. Horizontal side slope component, z (z horiz:1 vert)	ft.						
17. Depth of flow, d	ft.						
18. Cross sectional flow area, A (assume trapazoidal)	$ft.^2$						
19. Wetted perimeter, P_w	ft.						
20. Hydraulic Radius, $R = \frac{A}{P_w}$	ft.						
21. Channel slope, s	ft./ft.						
22. Manning's roughness coeff., n							
23. $V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.						
24. Flow length, L	ft.						
25. $T_t = \frac{L}{3600 * V}$	hr.					=	0.000
26. Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25)	hr.						0.136

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment
By: MCB
Date: Rev. 12/9/24
Location: Salisbury, CT
Checked: TDR
Date: 12/09/24
Circle one: Present **Developed**
Watershed: PRWS-11
Circle one: ***T_c*** T_t
Subwatershed:

Sheet flow (applicable to T_c only)

		A-B		
Segment ID		A-B		
1. Surface description (Table 3-1)		WOODS		
2. Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.400		
3. Flow Length, L (< 300ft)	ft.	100.0		
4. Two-year 24-hr rainfall, P_2	in.	3.08		
5. Land slope, s	ft./ft.	0.035		
6. $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.292	=	0.292

Shallow concentrated flow (assume hyd. radius = depth of flow)

Segment ID		B-C					
7. Surface description		WOODS					
8. Manning's roughness coeff., n		0.100					
9. Paved or unpaved		UNPVD					
10. Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.	0.40					
11. Flow Length, L	ft.	1176.0					
12. Watercourse slope, s	ft./ft.	0.013					
13. Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.	0.92					
14. $T_t = \frac{L}{3600 * V}$	hr.	0.354				=	0.354

Channel flow

Segment ID		C-D					
15. Channel Bottom width, b	ft.	6.00					
16. Horizontal side slope component, z (z horiz:1 vert)	ft.	4.00					
17. Depth of flow, d	ft.	1.00					
18. Cross sectional flow area, A (assume trapazoidal)	$ft.^2$	10.00					
19. Wetted perimeter, P_w	ft.	14.25					
20. Hydraulic Radius, $R = \frac{A}{P_w}$	ft.	0.70					
21. Channel slope, s	ft./ft.	0.057					
22. Manning's roughness coeff., n		0.024					
23. $V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.	11.71					
24. Flow length, L	ft.	545.0					
25. $T_t = \frac{L}{3600 * V}$	hr.	0.013	+			=	0.013

26. Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25) hr. 0.659

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment
By: MCB
Date: Rev. 12/9/24
Location: Salisbury, CT
Checked: TDR
Date: 12/09/24
Circle one: Present **Developed**
Watershed: PRWS-12
Circle one: **T_c** T_t
Subwatershed:

Sheet flow (applicable to T_c only)

Segment ID		**A-B**	
1. Surface description (Table 3-1)		GRASS	
2. Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.240	
3. Flow Length, L (< 300ft)	ft.	107.0	
4. Two-year 24-hr rainfall, P_2	in.	3.08	
5. Land slope, s	ft./ft.	0.070	
6. $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.155	= 0.155

Shallow concentrated flow (assume hyd. radius = depth of flow)

Segment ID						
7. Surface description						
8. Manning's roughness coeff., n						
9. Paved or unpaved						
10. Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.					
11. Flow Length, L	ft.					
12. Watercourse slope, s	ft./ft.					
13. Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.					
14. $T_t = \frac{L}{3600 * V}$	hr.		+			= 0.000

Channel flow

Segment ID						
15. Channel Bottom width, b	ft.					
16. Horizontal side slope component, z (z horiz:1 vert)	ft.					
17. Depth of flow, d	ft.					
18. Cross sectional flow area, A (assume trapazoidal)	ft.^{2}					
19. Wetted perimeter, P_w	ft.					
20. Hydraulic Radius, $R = \frac{A}{P_w}$	ft.					
21. Channel slope, s	ft./ft.					
22. Manning's roughness coeff., n						
23. $V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.					
24. Flow length, L	ft.					
25. $T_t = \frac{L}{3600 * V}$	hr.					= 0.000
26. Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25)	hr.					0.155

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment By: MCB Date: Rev. 4/17/25
Location: Salisbury, CT Checked: TDR Date: 04/17/25
Circle one: Present **Developed** Watershed: PRWS-14
Circle one: **T_c** T_t Subwatershed:

Sheet flow (applicable to T_c only)

		Segment ID	A-B	
1.	Surface description (Table 3-1)		GRASS	
2.	Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.240	
3.	Flow Length, L (< 300ft)	ft.	100.0	
4.	Two-year 24-hr rainfall, P_2	in.	3.08	
5.	Land slope, s	ft./ft.	0.100	
6.	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.127	= 0.127

Shallow concentrated flow (assume hyd. radius = depth of flow)

		Segment ID	B-C				
7.	Surface description		GRASS				
8.	Manning's roughness coeff., n		0.080				
9.	Paved or unpaved		UNPVD				
10.	Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.	0.40				
11.	Flow Length, L	ft.	17.0				
12.	Watercourse slope, s	ft./ft.	0.194				
13.	Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.	4.45				
14.	$T_t = \frac{L}{3600 * V}$	hr.	0.001				= 0.001

Channel flow

		Segment ID					
15.	Channel Bottom width, b	ft.					
16.	Horizontal side slope component, z (z horiz:1 vert)	ft.					
17.	Depth of flow, d	ft.					
18.	Cross sectional flow area, A (assume trapazoidal)	ft.^{2}					
19.	Wetted perimeter, P_w	ft.					
20.	Hydraulic Radius, $R = \frac{A}{P_w}$	ft.					
21.	Channel slope, s	ft./ft.					
22.	Manning's roughness coeff., n						
23.	$V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.					
24.	Flow length, L	ft.					
25.	$T_t = \frac{L}{3600 * V}$	hr.					= 0.000

26. Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25) hr. 0.128

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment — By: MCB — Date: Rev. 12/9/24
Location: Salisbury, CT — Checked: TDR — Date: 12/09/24
Circle one: Present **Developed** — Watershed: PRWS-20
Circle one: **T_c** T_t — Subwatershed:

Sheet flow (applicable to T_c only)

Segment ID		A-B	
1. Surface description (Table 3-1)		WOODS	
2. Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.400	
3. Flow Length, L (< 300ft)	ft.	100.0	
4. Two-year 24-hr rainfall, P_2	in.	3.08	
5. Land slope, s	ft./ft.	0.060	
6. $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.235	= 0.235

Shallow concentrated flow (assume hyd. radius = depth of flow)

Segment ID		B-C				
7. Surface description		GRASS				
8. Manning's roughness coeff., n		0.080				
9. Paved or unpaved		UNPVD				
10. Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.	0.40				
11. Flow Length, L	ft.	240.0				
12. Watercourse slope, s	ft./ft.	0.100				
13. Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.	3.20				
14. $T_t = \frac{L}{3600 * V}$	hr.	0.021	+			= 0.021

Channel flow

Segment ID		E-F				
15. Channel Bottom width, b	ft.	15" HDPE				
16. Horizontal side slope component, z (z horiz:1 vert)	ft.	--				
17. Depth of flow, d	ft.	FULL				
18. Cross sectional flow area, A (assume trapazoidal)	$ft.^2$	1.23				
19. Wetted perimeter, P_w	ft.	3.93				
20. Hydraulic Radius, $R = \frac{A}{P_w}$	ft.	0.31				
21. Channel slope, s	ft./ft.	0.04				
22. Manning's roughness coeff., n		0.012				
23. $V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.	11.45				
24. Flow length, L	ft.	385.0				
25. $T_t = \frac{L}{3600 * V}$	hr.	0.009				= 0.009

26. Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25) hr. 0.265

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment — By: MCB — Date: Rev. 4/17/25
Location: Salisbury, CT — Checked: TDR — Date: 04/17/25
Circle one: Present **Developed** — Watershed: PRWS-21
Circle one: **T_c** T_t — Subwatershed:

Sheet flow (applicable to T_c only)

	Units	A-B		
Segment ID		A-B		
1. Surface description (Table 3-1)		GRASS		
2. Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.240		
3. Flow Length, L (< 300ft)	ft.	100.0		
4. Two-year 24-hr rainfall, P_2	in.	3.08		
5. Land slope, s	ft./ft.	0.080		
6. $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.139	=	0.139

Shallow concentrated flow (assume hyd. radius = depth of flow)

	Units						
Segment ID							
7. Surface description							
8. Manning's roughness coeff., n							
9. Paved or unpaved							
10. Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.						
11. Flow Length, L	ft.						
12. Watercourse slope, s	ft./ft.						
13. Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.						
14. $T_t = \frac{L}{3600 * V}$	hr.		+			=	0.000

Channel flow

	Units						
Segment ID		C-D					
15. Channel Bottom width, b	ft.	15" HDPE					
16. Horizontal side slope component, z (z horiz:1 vert)	ft.	--					
17. Depth of flow, d	ft.	FULL					
18. Cross sectional flow area, A (assume trapazoidal)	$ft.^2$	1.23					
19. Wetted perimeter, P_w	ft.	3.93					
20. Hydraulic Radius, $R = \frac{A}{P_w}$	ft.	0.31					
21. Channel slope, s	ft./ft.	0.01					
22. Manning's roughness coeff., n		0.012					
23. $V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.	5.72					
24. Flow length, L	ft.	345.0					
25. $T_t = \frac{L}{3600 * V}$	hr.	0.017				=	0.017
26. Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25)	hr.						0.156

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment   By: MCB   Date: Rev. 12/9/24
Location: Salisbury, CT   Checked: TDR   Date: 12/09/24
Circle one: Present ***Developed***   Watershed: PRWS-22
Circle one: ***T_c*** T_t Subwatershed:

Sheet flow (applicable to T_c only)

	Units	Segment ID: A-B	Total
1. Surface description (Table 3-1)		GRASS	
2. Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.240	
3. Flow Length, L (< 300ft)	ft.	89.0	
4. Two-year 24-hr rainfall, P_2	in.	3.08	
5. Land slope, s	ft./ft.	0.045	
6. $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.160	= 0.160

Shallow concentrated flow (assume hyd. radius = depth of flow)

	Units	Segment ID				Total
7. Surface description						
8. Manning's roughness coeff., n						
9. Paved or unpaved						
10. Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.					
11. Flow Length, L	ft.					
12. Watercourse slope, s	ft./ft.					
13. Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.					
14. $T_t = \frac{L}{3600 * V}$	hr.					= 0.000

Channel flow

	Units	Segment ID: B-C				Total
15. Channel Bottom width, b	ft.	12" HDPE				
16. Horizontal side slope component, z (z horiz:1 vert)	ft.	--				
17. Depth of flow, d	ft.	FULL				
18. Cross sectional flow area, A (assume trapazoidal)	$ft.^2$	0.79				
19. Wetted perimeter, P_w	ft.	3.14				
20. Hydraulic Radius, $R = \frac{A}{P_w}$	ft.	0.25				
21. Channel slope, s	ft./ft.	0.039				
22. Manning's roughness coeff., n		0.012				
23. $V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.	9.77				
24. Flow length, L	ft.	89.0				
25. $T_t = \frac{L}{3600 * V}$	hr.	0.003				= 0.003

26. Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25)   hr. 0.162

Time of Concentration (T_c) or Travel Time (T_t) Worksheet

Project: Wake Robin Inn Redevelopment — By: MCB — Date: Rev. 12/9/24
Location: Salisbury, CT — Checked: TDR — Date: 12/09/24
Circle one: Present **Developed** — Watershed: PRWS-30
Circle one: ***T_c*** T_t — Subwatershed:

Sheet flow (applicable to T_c only)

	Units	Segment ID: A-B	Total
1. Surface description (Table 3-1)		WOODS	
2. Manning's roughness coeff. for sheet flow, n (Table 3-1)		0.400	
3. Flow Length, L (< 300ft)	ft.	100.0	
4. Two-year 24-hr rainfall, P_2	in.	3.08	
5. Land slope, s	ft./ft.	0.070	
6. $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5}\,(s^{0.4})}$	hr.	0.221	= 0.221

Shallow concentrated flow (assume hyd. radius = depth of flow)

	Units	Segment ID: B-C				Total
7. Surface description		WOODS				
8. Manning's roughness coeff., n		0.100				
9. Paved or unpaved		UNPVD				
10. Depth of flow, d (default values: d=.4 unpaved, d=.2 paved)	ft.	0.40				
11. Flow Length, L	ft.	17.0				
12. Watercourse slope, s	ft./ft.	0.070				
13. Average velocity, $V = \frac{1.49}{n}(d^{2/3})(s^{1/2})$	fps.	2.14				
14. $T_t = \frac{L}{3600 * V}$	hr.	0.002				= 0.002

Channel flow

	Units	Segment ID				Total
15. Channel Bottom width, b	ft.					
16. Horizontal side slope component, z (z horiz:1 vert)	ft.					
17. Depth of flow, d	ft.					
18. Cross sectional flow area, A (assume trapazoidal)	$ft.^2$					
19. Wetted perimeter, P_w	ft.					
20. Hydraulic Radius, $R = \frac{A}{P_w}$	ft.					
21. Channel slope, s	ft./ft.					
22. Manning's roughness coeff., n						
23. $V = \frac{1.49}{n}(R^{2/3})(s^{1/2})$	fps.					
24. Flow length, L	ft.					
25. $T_t = \frac{L}{3600 * V}$	hr.					= 0.000

26. Watershed or subarea T_c or T_t (add T_t in steps 6, 14 & 25) hr. 0.223

NOAA Atlas 14, Volume 10, Version 3
Location name: Lakeville, Connecticut, USA*
Latitude: 41.958°, Longitude: -73.4354°
Elevation: 831 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_&_aerials

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	0.334 (0.255-0.437)	0.396 (0.303-0.518)	0.497 (0.379-0.653)	0.581 (0.441-0.768)	0.697 (0.513-0.960)	0.785 (0.567-1.10)	0.876 (0.614-1.27)	0.973 (0.652-1.45)	1.11 (0.717-1.72)	1.21 (0.769-1.92)
10-min	0.473 (0.362-0.618)	0.561 (0.429-0.734)	0.705 (0.538-0.926)	0.824 (0.624-1.09)	0.988 (0.726-1.36)	1.11 (0.802-1.56)	1.24 (0.870-1.80)	1.38 (0.924-2.06)	1.57 (1.02-2.43)	1.72 (1.09-2.72)
15-min	0.556 (0.426-0.728)	0.660 (0.504-0.864)	0.829 (0.631-1.09)	0.969 (0.734-1.28)	1.16 (0.854-1.60)	1.31 (0.943-1.84)	1.46 (1.02-2.12)	1.62 (1.09-2.42)	1.85 (1.20-2.86)	2.02 (1.28-3.20)
30-min	0.763 (0.584-0.999)	0.906 (0.693-1.19)	1.14 (0.869-1.50)	1.33 (1.01-1.76)	1.60 (1.18-2.21)	1.80 (1.30-2.54)	2.01 (1.42-2.94)	2.24 (1.50-3.36)	2.57 (1.66-3.98)	2.84 (1.80-4.48)
60-min	0.971 (0.743-1.27)	1.15 (0.882-1.51)	1.45 (1.11-1.91)	1.70 (1.29-2.25)	2.04 (1.50-2.82)	2.30 (1.66-3.24)	2.57 (1.81-3.75)	2.87 (1.92-4.29)	3.30 (2.13-5.11)	3.65 (2.31-5.77)
2-hr	1.28 (0.981-1.66)	1.48 (1.14-1.93)	1.82 (1.39-2.37)	2.09 (1.59-2.75)	2.47 (1.83-3.39)	2.76 (2.00-3.86)	3.06 (2.15-4.43)	3.38 (2.28-5.03)	3.82 (2.48-5.90)	4.17 (2.65-6.58)
3-hr	1.47 (1.13-1.90)	1.70 (1.31-2.21)	2.08 (1.60-2.71)	2.39 (1.83-3.14)	2.83 (2.09-3.86)	3.16 (2.29-4.40)	3.49 (2.47-5.05)	3.86 (2.60-5.74)	4.38 (2.85-6.74)	4.79 (3.05-7.54)
6-hr	1.80 (1.39-2.32)	2.12 (1.64-2.75)	2.66 (2.05-3.46)	3.11 (2.39-4.06)	3.73 (2.78-5.10)	4.18 (3.07-5.86)	4.68 (3.35-6.83)	5.26 (3.56-7.81)	6.14 (4.01-9.44)	6.89 (4.40-10.8)
12-hr	2.10 (1.64-2.70)	2.60 (2.02-3.35)	3.42 (2.65-4.42)	4.11 (3.16-5.33)	5.04 (3.80-6.93)	5.73 (4.25-8.08)	6.49 (4.73-9.61)	7.48 (5.06-11.1)	9.08 (5.93-13.9)	10.5 (6.71-16.4)
24-hr	2.41 (1.88-3.08)	3.08 (2.41-3.95)	4.19 (3.26-5.39)	5.11 (3.95-6.61)	6.37 (4.83-8.76)	7.28 (5.45-10.3)	8.32 (6.14-12.4)	9.71 (6.59-14.3)	12.0 (7.87-18.4)	14.1 (9.06-22.0)
2-day	2.75 (2.16-3.50)	3.54 (2.78-4.51)	4.83 (3.78-6.18)	5.91 (4.59-7.60)	7.38 (5.62-10.1)	8.45 (6.35-11.9)	9.66 (7.16-14.4)	11.3 (7.69-16.6)	14.0 (9.21-21.4)	16.5 (10.6-25.6)
3-day	3.00 (2.36-3.81)	3.85 (3.03-4.90)	5.24 (4.11-6.68)	6.39 (4.98-8.20)	7.98 (6.09-10.9)	9.12 (6.87-12.8)	10.4 (7.74-15.5)	12.2 (8.31-17.9)	15.1 (9.95-23.0)	17.8 (11.5-27.6)
4-day	3.22 (2.54-4.08)	4.12 (3.25-5.23)	5.58 (4.38-7.11)	6.80 (5.31-8.71)	8.47 (6.48-11.5)	9.68 (7.30-13.6)	11.0 (8.21-16.3)	12.9 (8.81-18.9)	16.0 (10.5-24.3)	18.8 (12.1-29.0)
7-day	3.84 (3.04-4.85)	4.84 (3.83-6.11)	6.46 (5.10-8.20)	7.82 (6.13-9.97)	9.68 (7.42-13.1)	11.0 (8.33-15.4)	12.5 (9.32-18.4)	14.6 (9.98-21.3)	17.9 (11.8-27.1)	20.8 (13.5-32.2)
10-day	4.48 (3.55-5.63)	5.52 (4.38-6.96)	7.24 (5.72-9.15)	8.66 (6.80-11.0)	10.6 (8.14-14.3)	12.0 (9.09-16.7)	13.6 (10.1-19.9)	15.7 (10.8-22.9)	19.1 (12.6-28.8)	22.0 (14.3-34.0)
20-day	6.52 (5.20-8.16)	7.61 (6.06-9.54)	9.40 (7.46-11.8)	10.9 (8.59-13.8)	12.9 (9.92-17.2)	14.4 (10.9-19.7)	16.1 (11.8-23.0)	18.1 (12.5-26.2)	21.2 (14.1-32.0)	23.9 (15.6-36.8)
30-day	8.23 (6.58-10.3)	9.34 (7.46-11.7)	11.2 (8.89-14.0)	12.7 (10.0-16.0)	14.8 (11.3-19.5)	16.3 (12.3-22.1)	18.0 (13.2-25.4)	19.9 (13.8-28.8)	22.7 (15.2-34.1)	25.1 (16.4-38.5)
45-day	10.3 (8.29-12.9)	11.5 (9.21-14.3)	13.4 (10.7-16.8)	15.0 (11.9-18.9)	17.2 (13.2-22.5)	18.8 (14.2-25.2)	20.5 (14.9-28.5)	22.3 (15.5-32.1)	24.7 (16.6-37.0)	26.6 (17.4-40.8)
60-day	12.1 (9.70-15.0)	13.3 (10.7-16.6)	15.3 (12.2-19.1)	17.0 (13.5-21.3)	19.3 (14.8-25.1)	21.1 (15.8-28.1)	22.8 (16.5-31.4)	24.5 (17.1-35.1)	26.6 (17.8-39.6)	28.0 (18.3-42.9)

[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.

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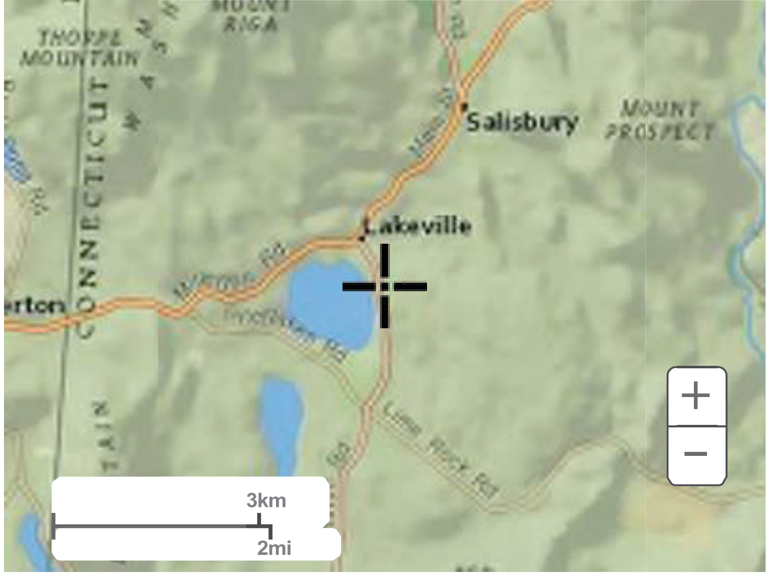
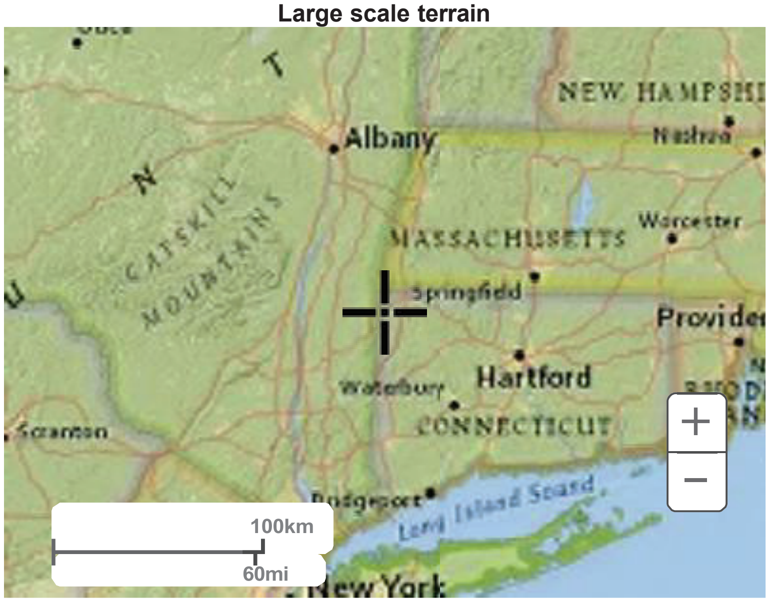
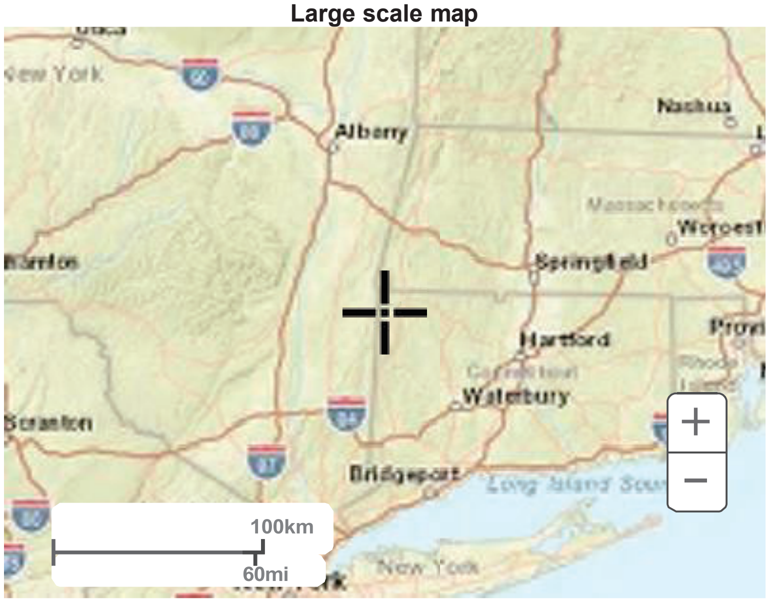
PF graphical



Large scale terrain



Large scale map



Large scale aerial

Appendix G
Hydrologic Analysis - Computer Model Results

Wake Robin Inn Redevelopment

104 & 106 Sharon Road, Salisbury, Connecticut

Drainage Report

Prepared for:
Aradev LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

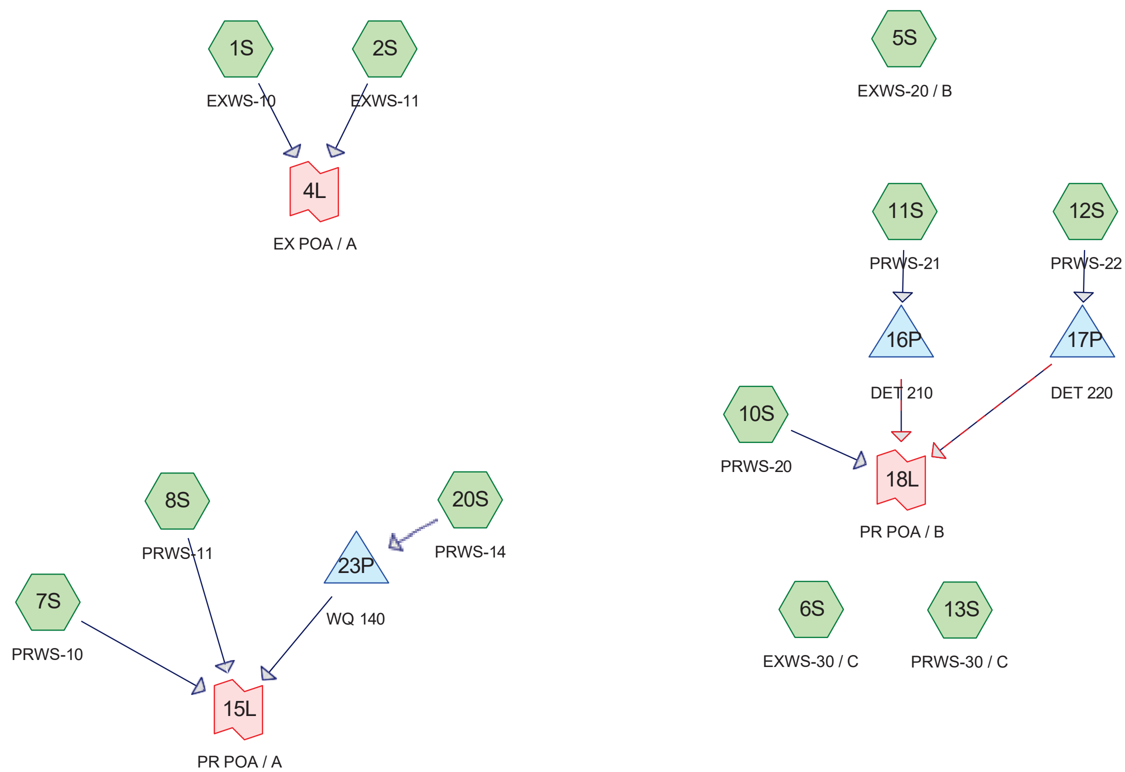
SLR Project No.: 141.22100.00001

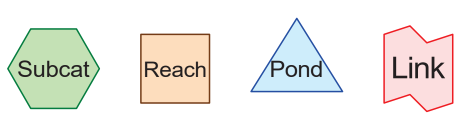
April 25, 2025

Hydrographs Peak Flowrate Summary (cfs)
Existing vs. Proposed

Storm Event	1yr		2yr		5yr		10yr		25yr		50yr		100yr	
	Exist	Prop	Exist	Prop	Exist	Prop	Exist	Prop	Exist	Prop	Exist	Prop	Exist	Prop
Point of Analysis A	4.2	4.0	8.1	7.8	15.5	14.9	22.3	21.5	32.2	31.0	39.6	38.0	48.1	46.3
WQ Basin 140 W.S. Elev. (ft.) Top of Berm Elev. = 839.0	-	838.5	-	838.5	-	838.6	-	838.6	-	838.7	-	838.7	-	838.7
Point of Analysis B	3.9	2.0	6.1	3.1	10.1	5.6	13.5	12.6	18.2	17.6	21.6	20.3	25.5	23.3
DET 210 W.S. Elev. (ft.) Top of Berm Elev. = 818.2	-	815.4	-	815.7	-	816.0	-	816.1	-	816.4	-	816.7	-	817.0
DET 220 W.S. Elev. (ft.) Top of Berm Elev. = 804.0	-	802.1	-	802.4	-	802.7	-	802.9	-	802.9	-	803.0	-	803.0
Point of Analysis C	0.9	0.7	1.6	1.2	2.9	2.1	4.0	2.8	5.6	3.9	6.8	4.7	8.1	5.7

Study Area	Description
A	Wells Hill Road
B	Sharon Road Storm Drainage
C	Sharon Road and Southern Properties





Routing Diagram for WR-Model05
Prepared by SLR International Corporation, Printed 4/17/2025
HydroCAD® 10.20-6a s/n 08105 © 2024 HydroCAD Software Solutions LLC

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141 Link 18L: PR POA / B

Summary for Subcatchment 1S: EXWS-10

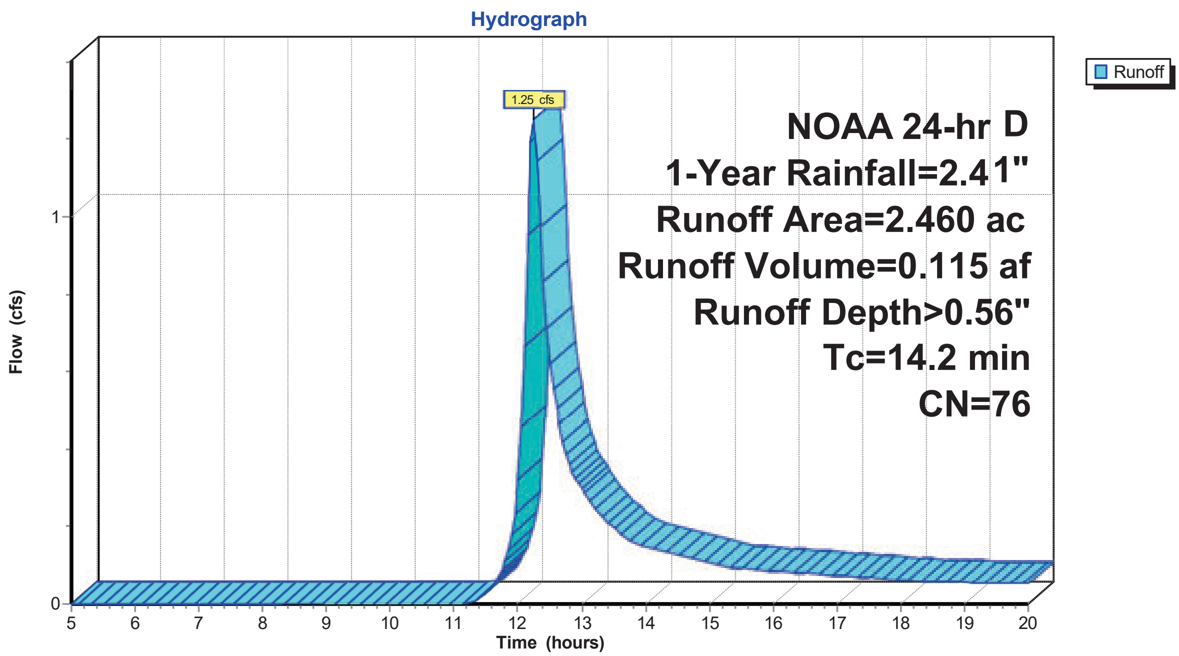
Runoff = 1.25 cfs @ 12.24 hrs, Volume= 0.115 af, Depth> 0.56"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	2.460	76	
	2.460		100.00% Pervious Area

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

Subcatchment 1S: EXWS-10



Summary for Subcatchment 2S: EXWS-11

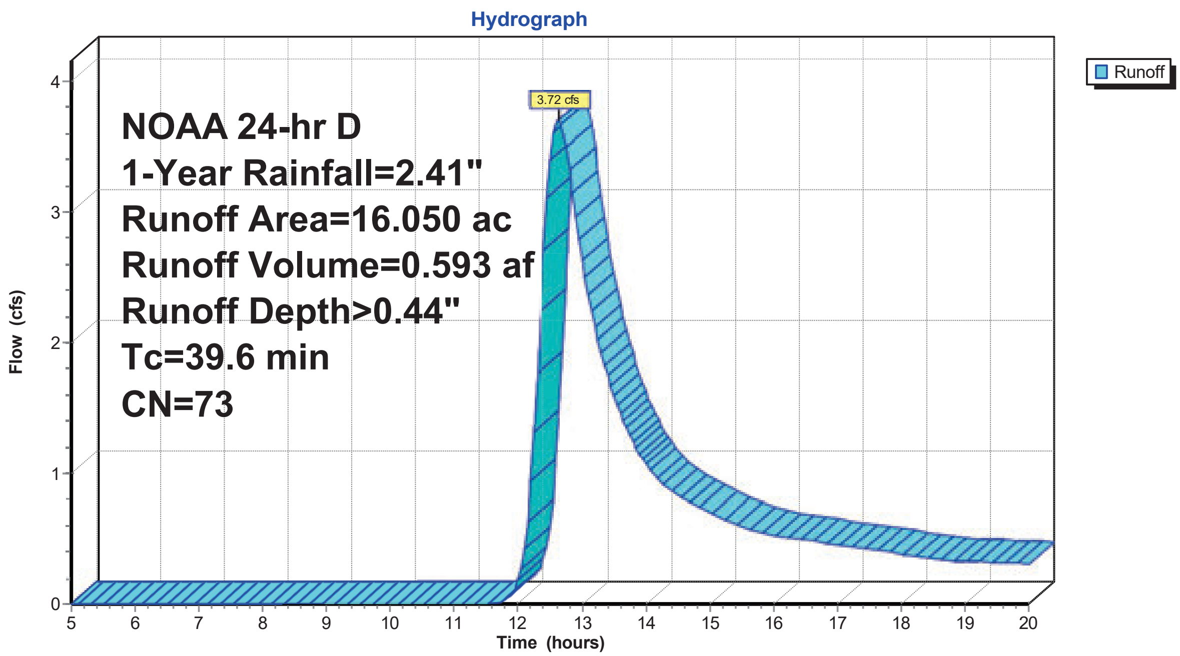
Runoff = 3.72 cfs @ 12.63 hrs, Volume= 0.593 af, Depth> 0.44"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	16.050	73	
	16.050		100.00% Pervious Area

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

Subcatchment 2S: EXWS-11



Summary for Subcatchment 5S: EXWS-20 / B

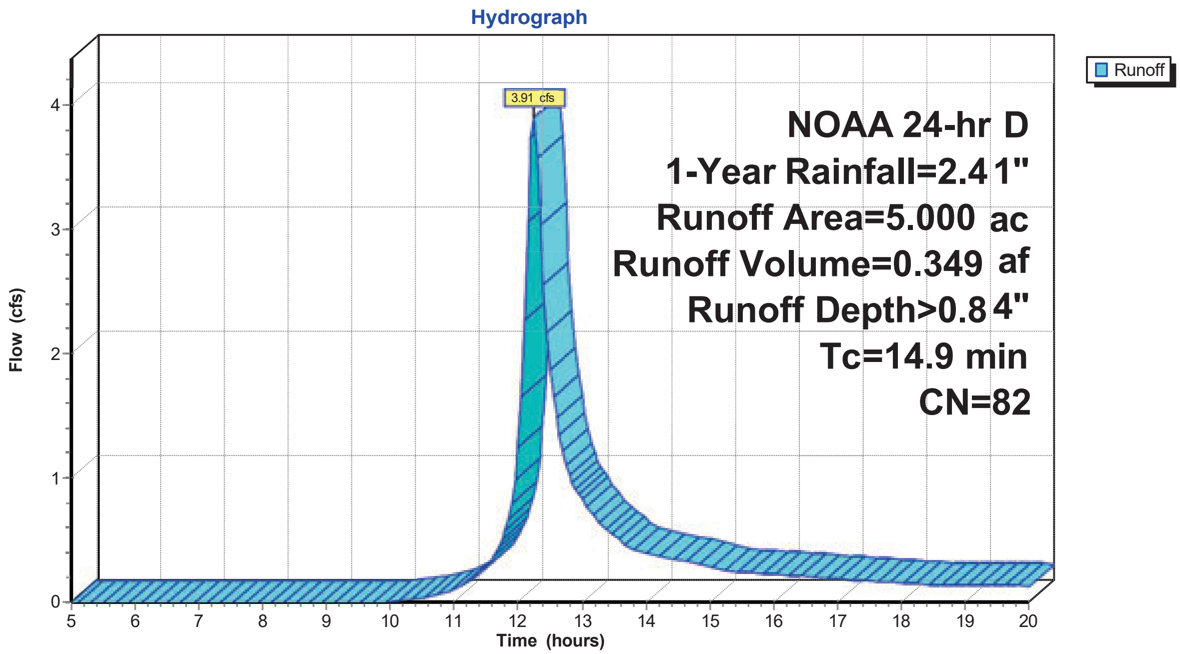
Runoff = 3.91 cfs @ 12.24 hrs, Volume= 0.349 af, Depth> 0.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	5.000	82	
	5.000		100.00% Pervious Area

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

Subcatchment 5S: EXWS-20 / B



Summary for Subcatchment 6S: EXWS-30 / C

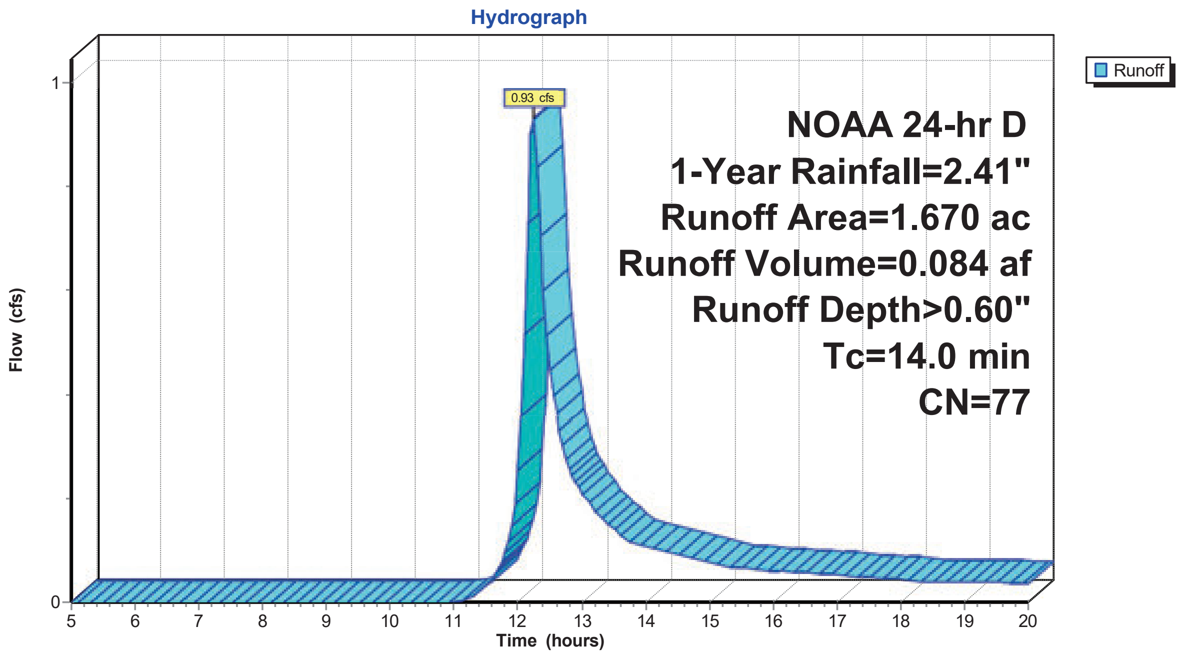
Runoff = 0.93 cfs @ 12.24 hrs, Volume= 0.084 af, Depth> 0.60"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	1.670	77	
	1.670		100.00% Pervious Area

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

Subcatchment 6S: EXWS-30 / C



Summary for Subcatchment 7S: PRWS-10

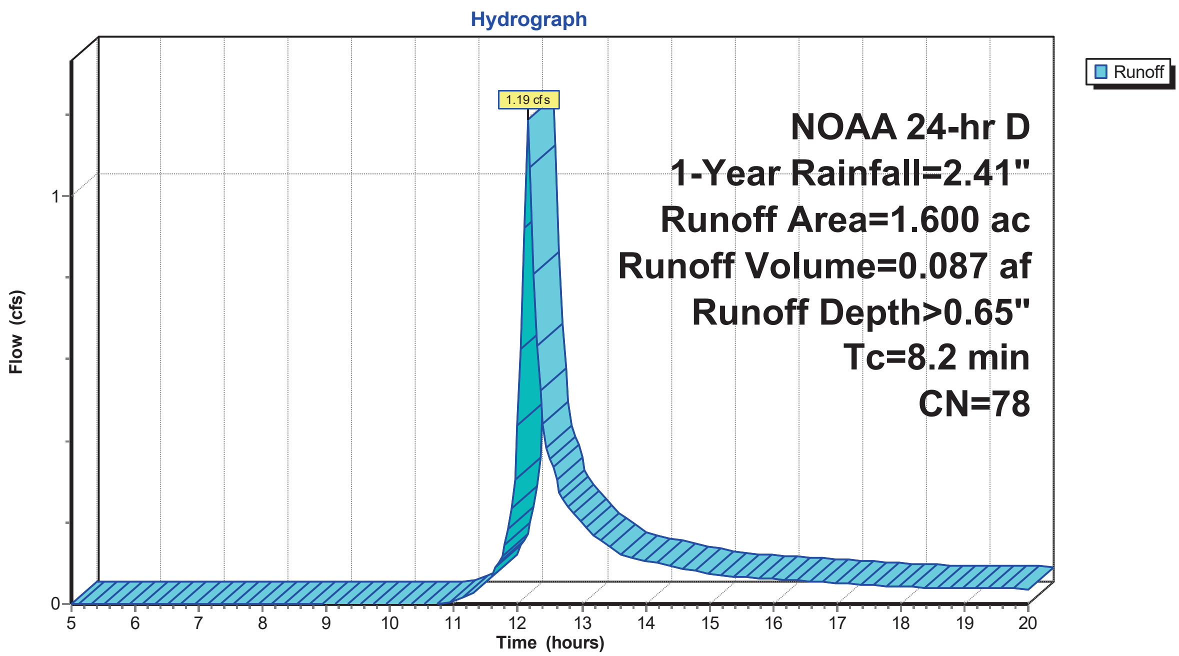
Runoff = 1.19 cfs @ 12.16 hrs, Volume= 0.087 af, Depth> 0.65"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	1.600	78	
	1.600		100.00% Pervious Area

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

Subcatchment 7S: PRWS-10



Summary for Subcatchment 8S: PRWS-11

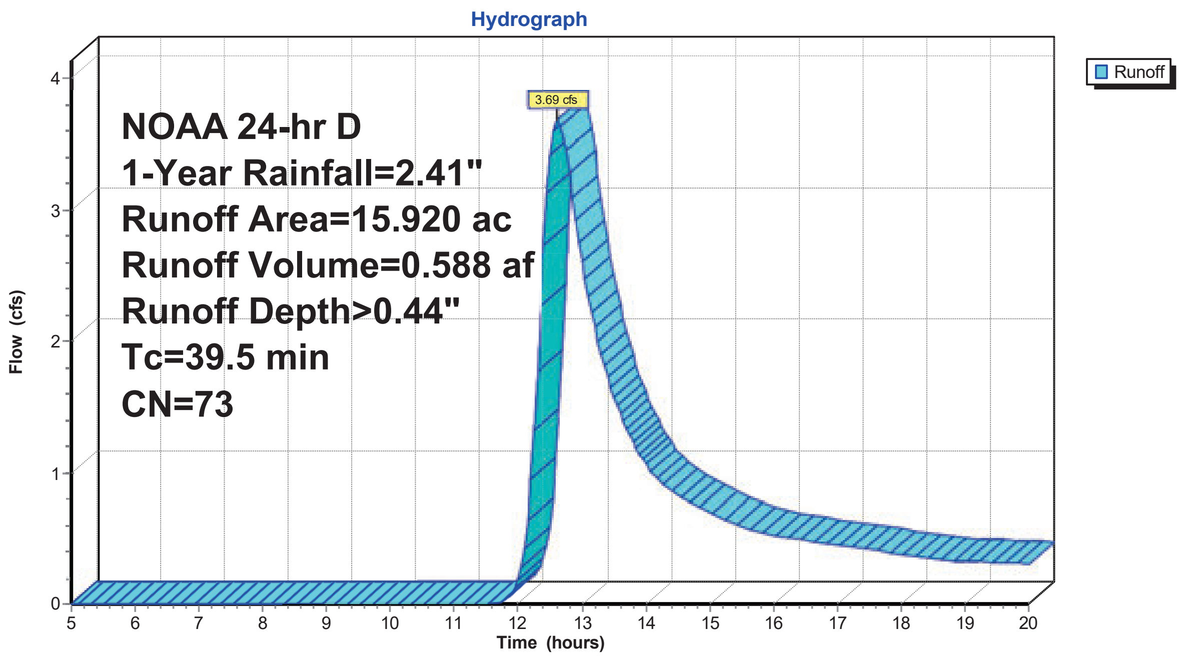
Runoff = 3.69 cfs @ 12.62 hrs, Volume= 0.588 af, Depth> 0.44"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	15.920	73	
	15.920		100.00% Pervious Area

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

Subcatchment 8S: PRWS-11



Summary for Subcatchment 10S: PRWS-20

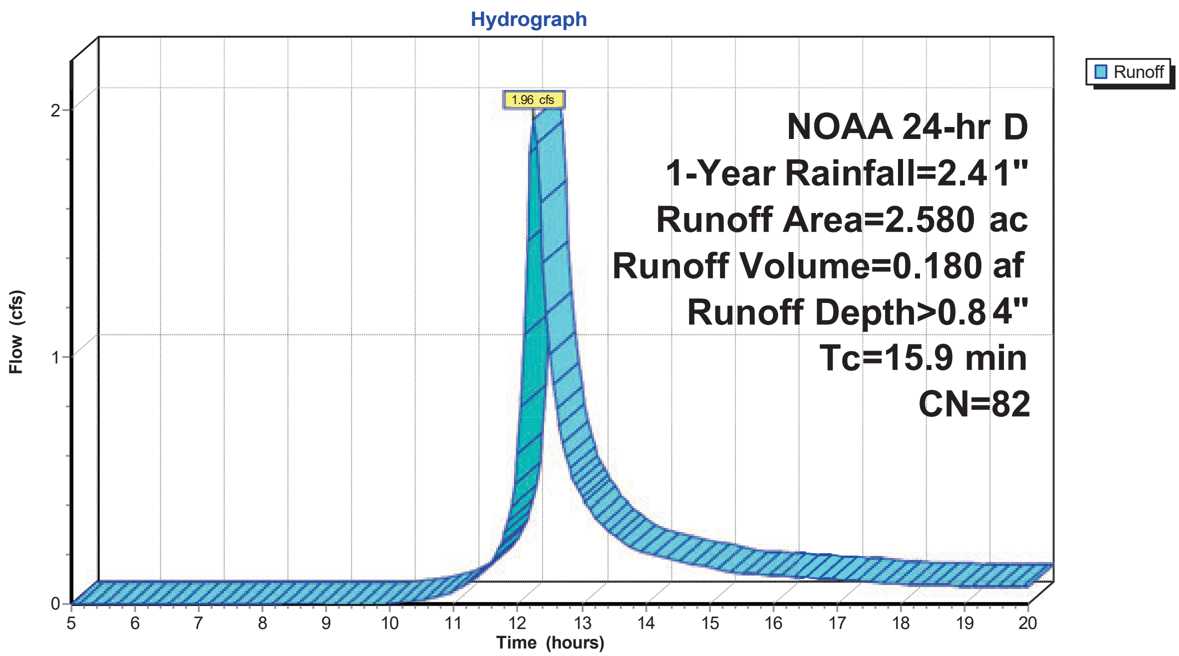
Runoff = 1.96 cfs @ 12.25 hrs, Volume= 0.180 af, Depth> 0.84"
Routed to Link 18L : PR POA / B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	2.580	82	
	2.580		100.00% Pervious Area

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

Subcatchment 10S: PRWS-20



Summary for Subcatchment 11S: PRWS-21

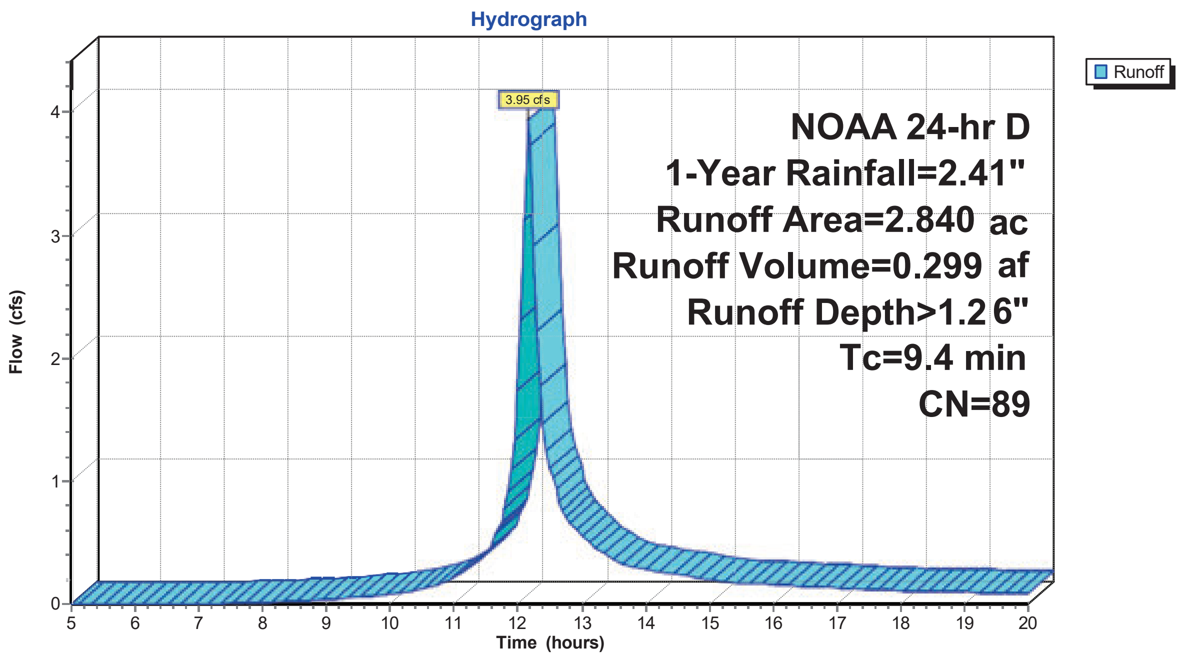
Runoff = 3.95 cfs @ 12.17 hrs, Volume= 0.299 af, Depth> 1.26"
Routed to Pond 16P : DET 210

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	2.840	89	
	2.840		100.00% Pervious Area

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

Subcatchment 11S: PRWS-21



Summary for Subcatchment 12S: PRWS-22

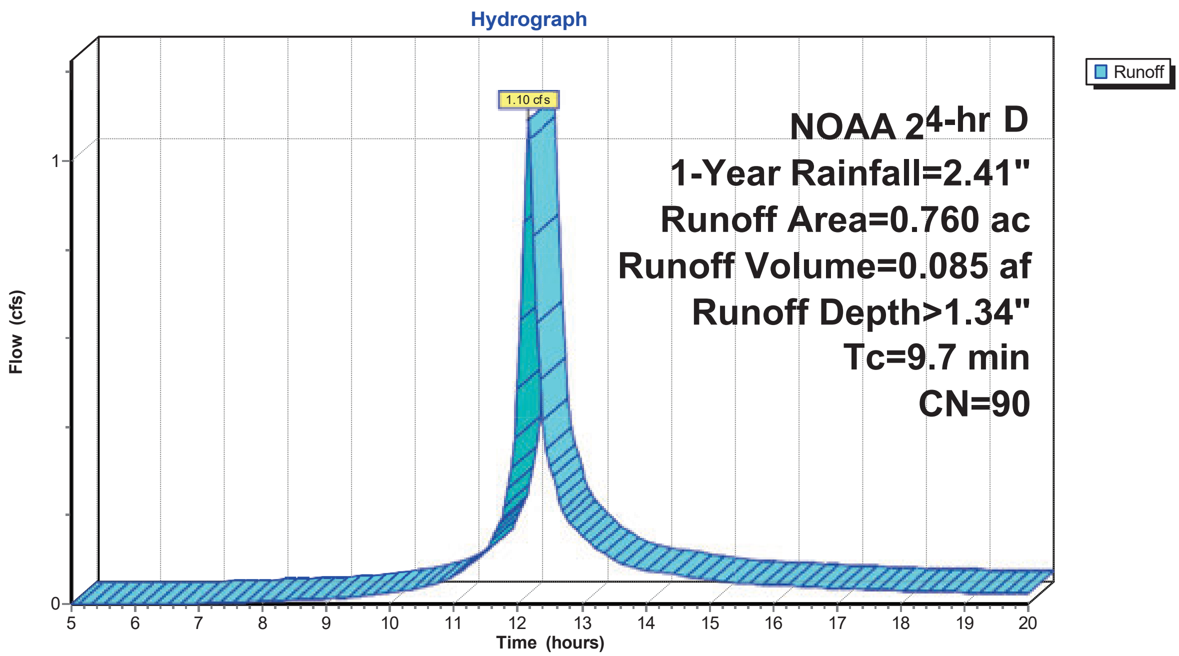
Runoff = 1.10 cfs @ 12.17 hrs, Volume= 0.085 af, Depth> 1.34"
Routed to Pond 17P : DET 220

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	0.760	90	
	0.760		100.00% Pervious Area

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

Subcatchment 12S: PRWS-22



Summary for Subcatchment 13S: PRWS-30 / C

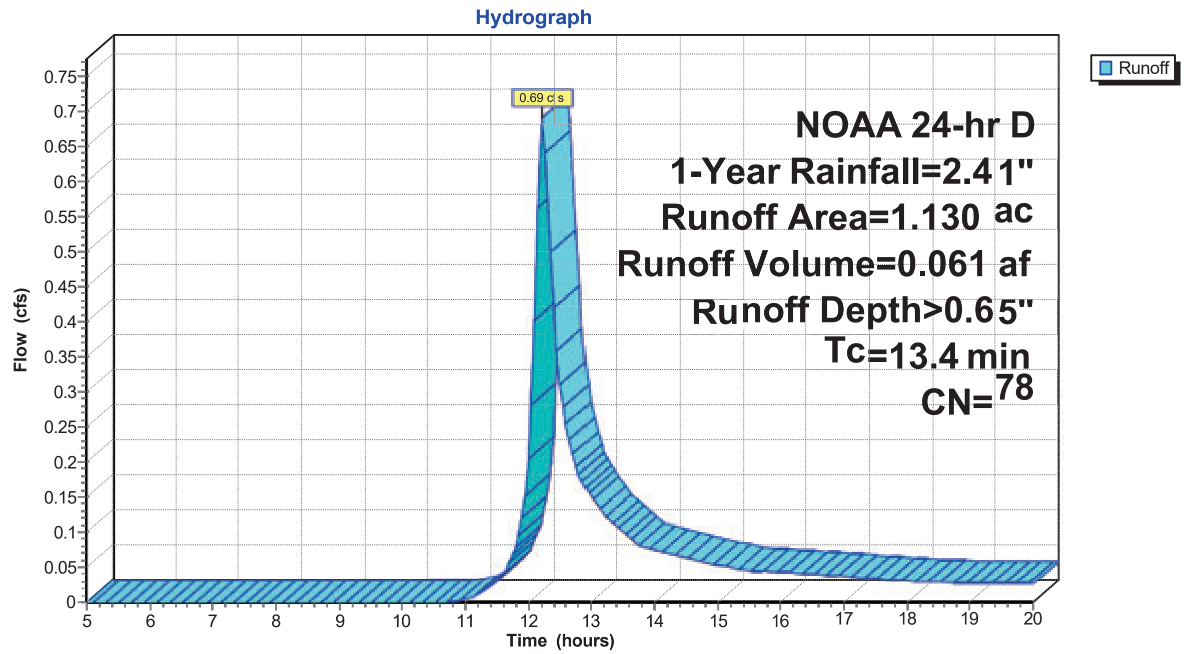
Runoff = 0.69 cfs @ 12.23 hrs, Volume= 0.061 af, Depth> 0.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	1.130	78	
	1.130		100.00% Pervious Area

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

Subcatchment 13S: PRWS-30 / C



Summary for Subcatchment 20S: PRWS-14

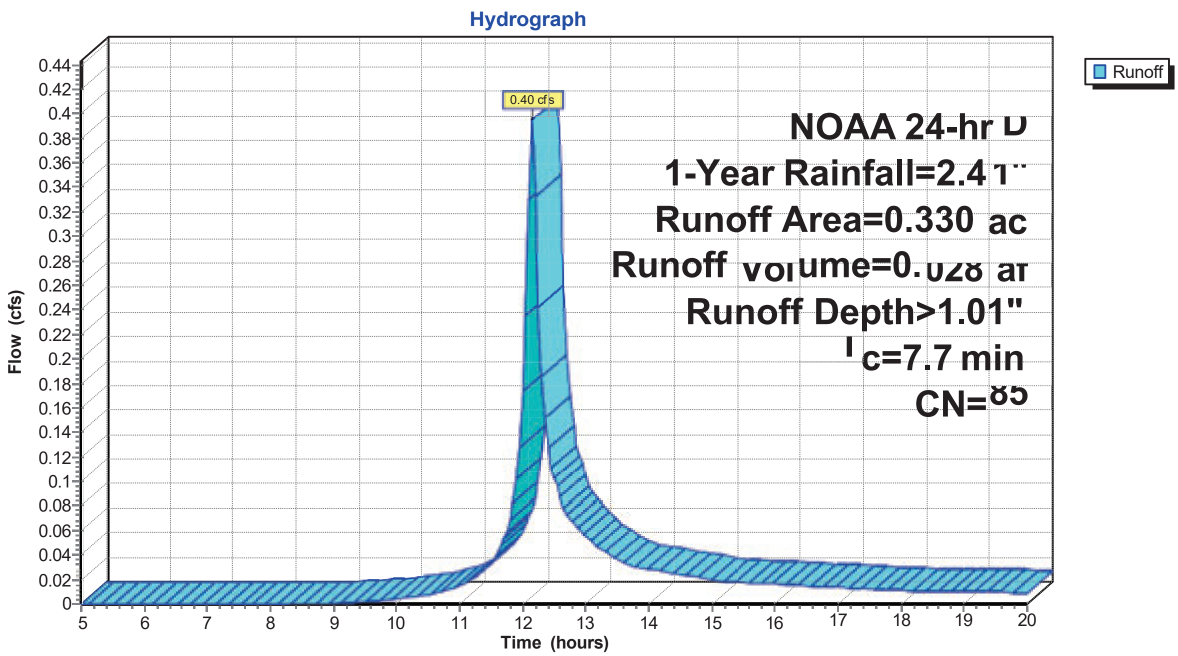
Runoff = 0.40 cfs @ 12.15 hrs, Volume= 0.028 af, Depth> 1.01"
Routed to Pond 23P : WQ 140

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 1-Year Rainfall=2.41"

	Area (ac)	CN	Description
*	0.330	85	
	0.330		100.00% Pervious Area

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

Subcatchment 20S: PRWS-14



Summary for Pond 16P: DET 210

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth > 1.26" for 1-Year event
Inflow = 3.95 cfs @ 12.17 hrs, Volume= 0.299 af
Outflow = 1.00 cfs @ 12.56 hrs, Volume= 0.298 af, Atten= 75%, Lag= 23.6 min
Discarded = 1.00 cfs @ 12.56 hrs, Volume= 0.298 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 815.37' @ 12.56 hrs Surf.Area= 8,124 sf Storage= 2,956 cf

Plug-Flow detention time= 20.0 min calculated for 0.298 af (99% of inflow)
Center-of-Mass det. time= 19.3 min (811.3 - 792.0)

Volume	Invert	Avail.Storage	Storage Description
#1	815.00'	28,886 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevatior (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
815.0C	7,672	0	0	7,672
816.0C	8,907	8,282	8,282	8,948
817.0C	10,296	9,593	17,875	10,380
818.0C	11,741	11,011	28,886	11,872

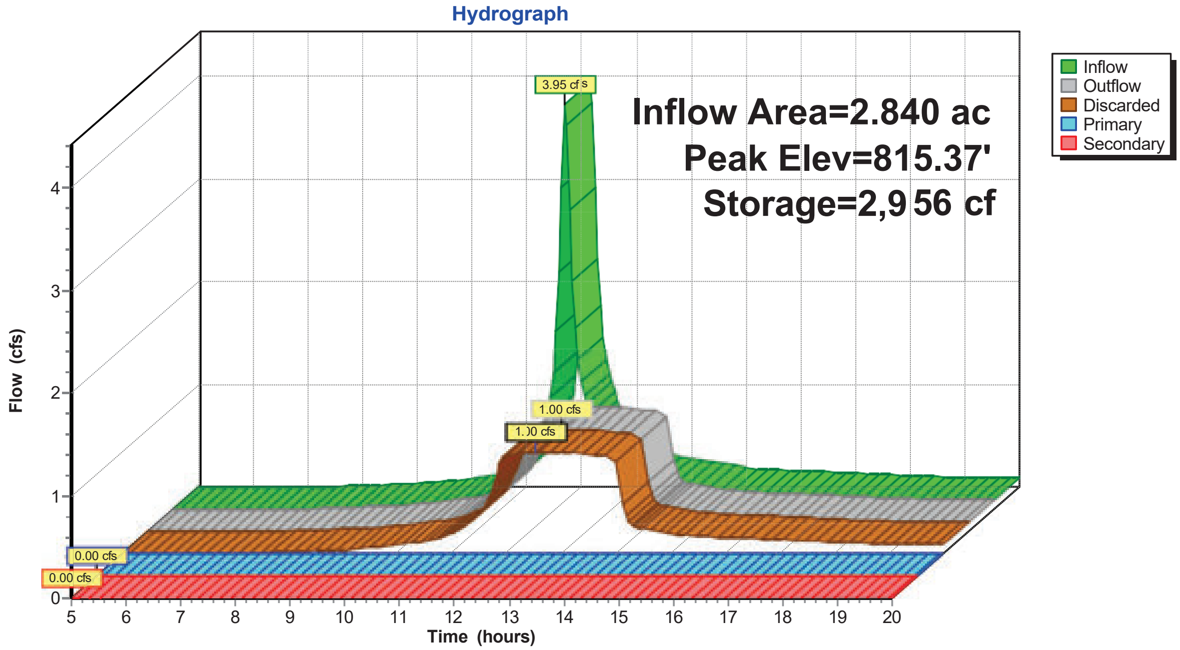
Device	Routing	Invert	Outlet Devices
#1	Discarded	815.00'	**5.320 in/hr Exfiltration over Surface area**
#2	Primary	814.50'	**15.0" Round Culvert** L= 127.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 814.50' / 806.40' S= 0.0638 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	815.90'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Secondary	817.20'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=1.00 cfs @ 12.56 hrs HW=815.37' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 1.00 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=815.00' (Free Discharge)
└─**2=Culvert** (Passes 0.00 cfs of 0.87 cfs potential flow)
  └─**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=815.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 16P: DET 210



Summary for Pond 17P: DET 220

Inflow Area = 0.760 ac, 0.00% Impervious, Inflow Depth > 1.34" for 1-Year event
Inflow = 1.10 cfs @ 12.17 hrs, Volume= 0.085 af
Outflow = 0.08 cfs @ 14.05 hrs, Volume= 0.058 af, Atten= 93%, Lag= 112.7 min
Discarded = 0.08 cfs @ 14.05 hrs, Volume= 0.058 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 802.07' @ 14.05 hrs Surf.Area= 2,091 sf Storage= 1,877 cf

Plug-Flow detention time= 188.4 min calculated for 0.058 af (68% of inflow)
Center-of-Mass det. time= 117.5 min (905.7 - 788.2)

Volume	Invert	Avail.Storage	Storage Description
#1	801.00'	7,722 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevatior (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
801.0C	1,433	0	0	1,433
802.0C	2,039	1,727	1,727	2,057
803.0C	2,810	2,414	4,141	2,847
804.0C	4,412	3,581	7,722	4,463

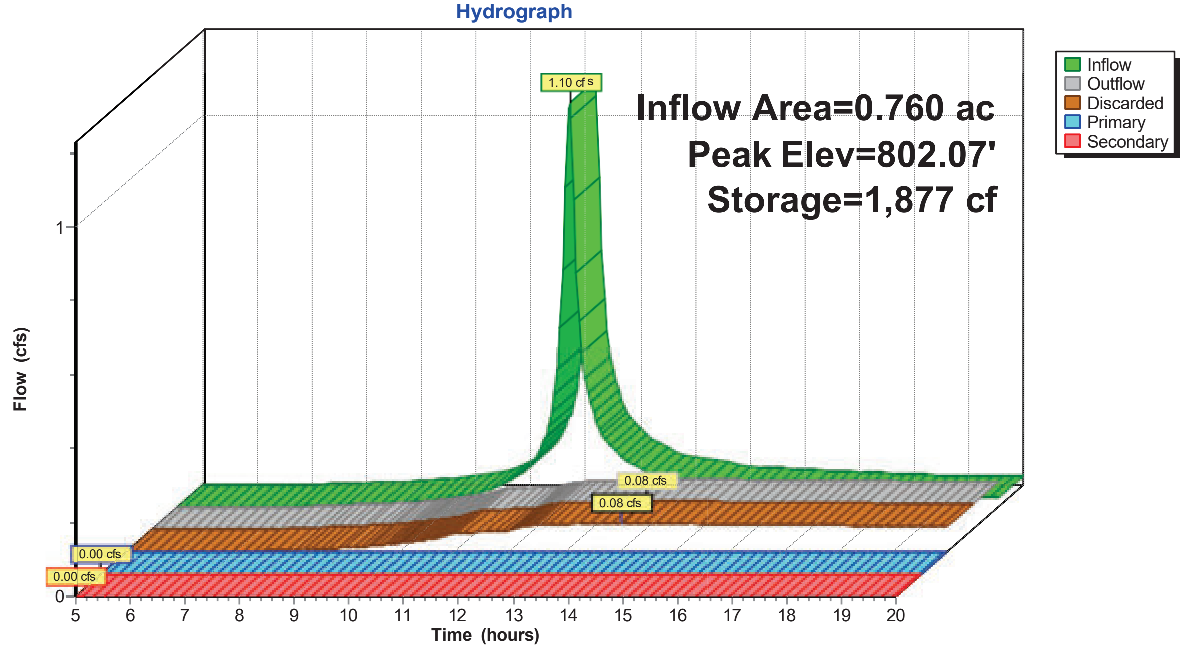
Device	Routing	Invert	Outlet Devices
#1	Discarded	801.00'	**1.580 in/hr Exfiltration over Surface area**
#2	Primary	800.50'	**15.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 800.50' / 800.00' S= 0.0128 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	802.20'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 2	802.80'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	803.00'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=0.08 cfs @ 14.05 hrs HW=802.07' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=801.00' (Free Discharge)
└─**2=Culvert** (Passes 0.00 cfs of 0.87 cfs potential flow)
  ├─**3=Orifice/Grate** (Controls 0.00 cfs)
  └─**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=801.00' (Free Discharge)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 17P: DET 220



Summary for Pond 23P: WQ 140

Inflow Area = 0.330 ac, 0.00% Impervious, Inflow Depth > 1.01" for 1-Year event
Inflow = 0.40 cfs @ 12.15 hrs, Volume= 0.028 af
Outflow = 0.02 cfs @ 15.41 hrs, Volume= 0.005 af, Atten= 96%, Lag= 195.7 min
Primary = 0.02 cfs @ 15.41 hrs, Volume= 0.005 af
Routed to Link 15L : PR POA / A

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 838.51' @ 15.41 hrs Surf.Area= 1,144 sf Storage= 976 cf

Plug-Flow detention time= 344.6 min calculated for 0.005 af (19% of inflow)
Center-of-Mass det. time= 230.9 min (1,036.0 - 805.0)

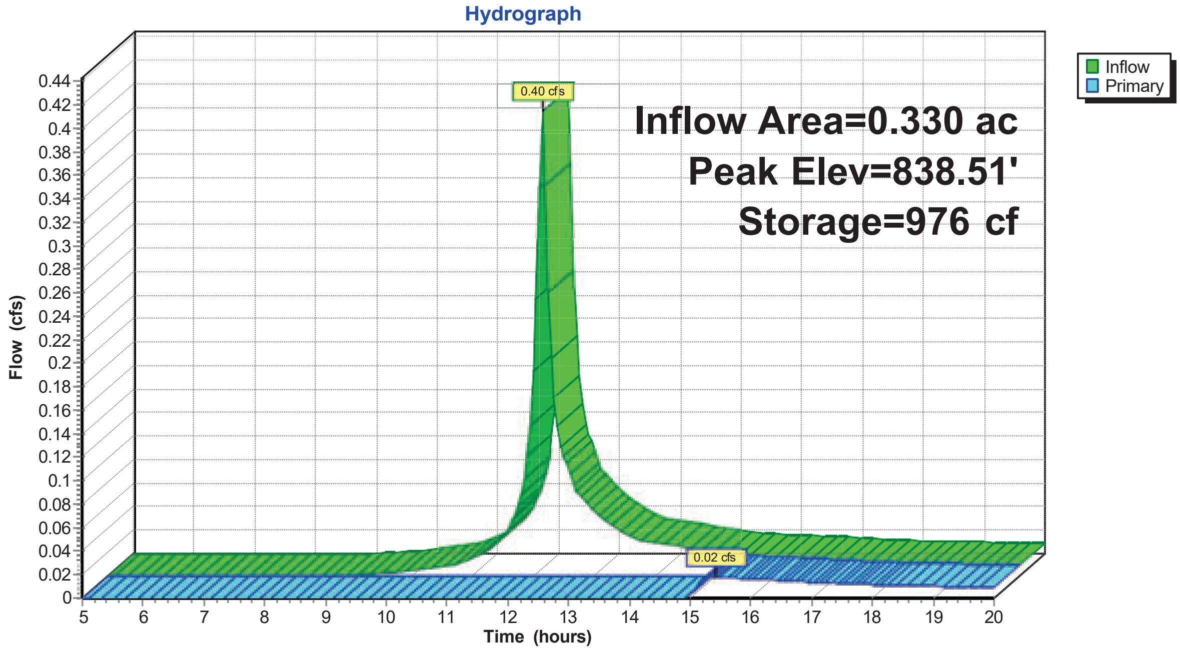
Volume	Invert	Avail.Storage	Storage Description
#1	837.50'	1,554 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
837.50	801	0	0
838.00	964	441	441
838.50	1,143	527	968
839.00	1,200	586	1,554

Device	Routing	Invert	Outlet Devices
#1	Primary	838.50'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=0.02 cfs @ 15.41 hrs HW=838.51' (Free Discharge)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 0.02 cfs @ 0.21 fps)

Pond 23P: WQ 140

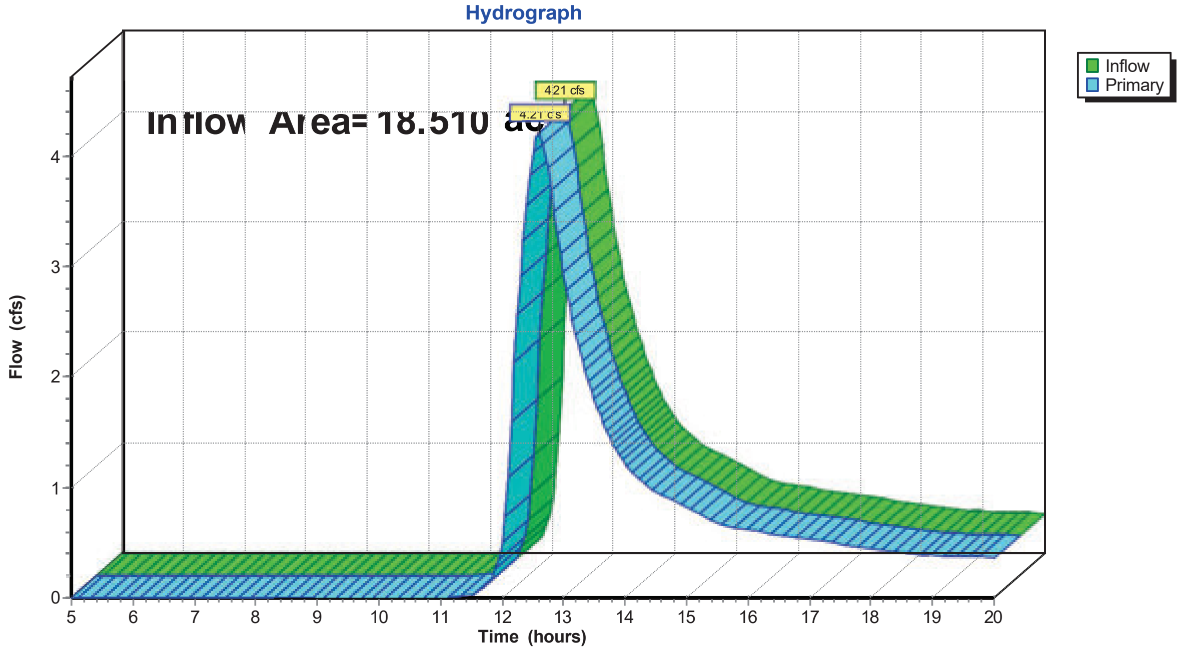


Summary for Link 4L: EX POA / A

Inflow Area =	18.510 ac,	0.00% Impervious, Inflow Depth > 0.46"		for 1-Year event
Inflow =	4.21 cfs @	12.60 hrs, Volume=	0.709 af	
Primary =	4.21 cfs @	12.60 hrs, Volume=	0.709 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: EX POA / A

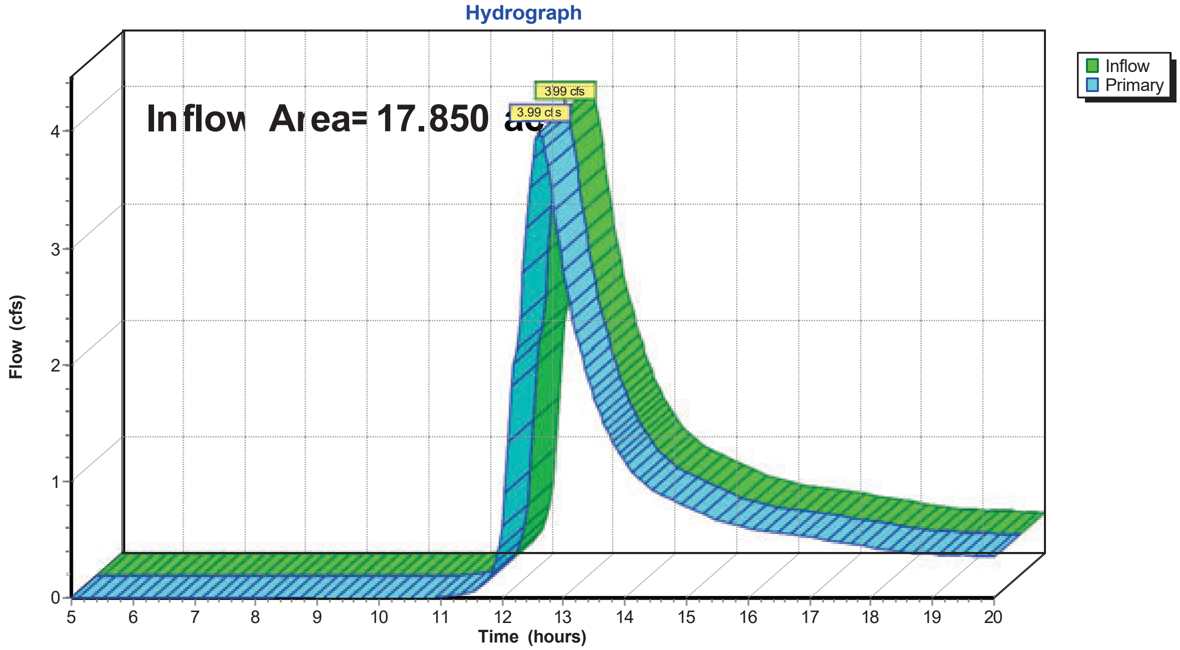


Summary for Link 15L: PR POA / A

Inflow Area =	17.850 ac,	0.00% Impervious, Inflow Depth > 0.46"	for 1-Year event
Inflow =	3.99 cfs @	12.60 hrs, Volume=	0.680 af
Primary =	3.99 cfs @	12.60 hrs, Volume=	0.680 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 15L: PR POA / A

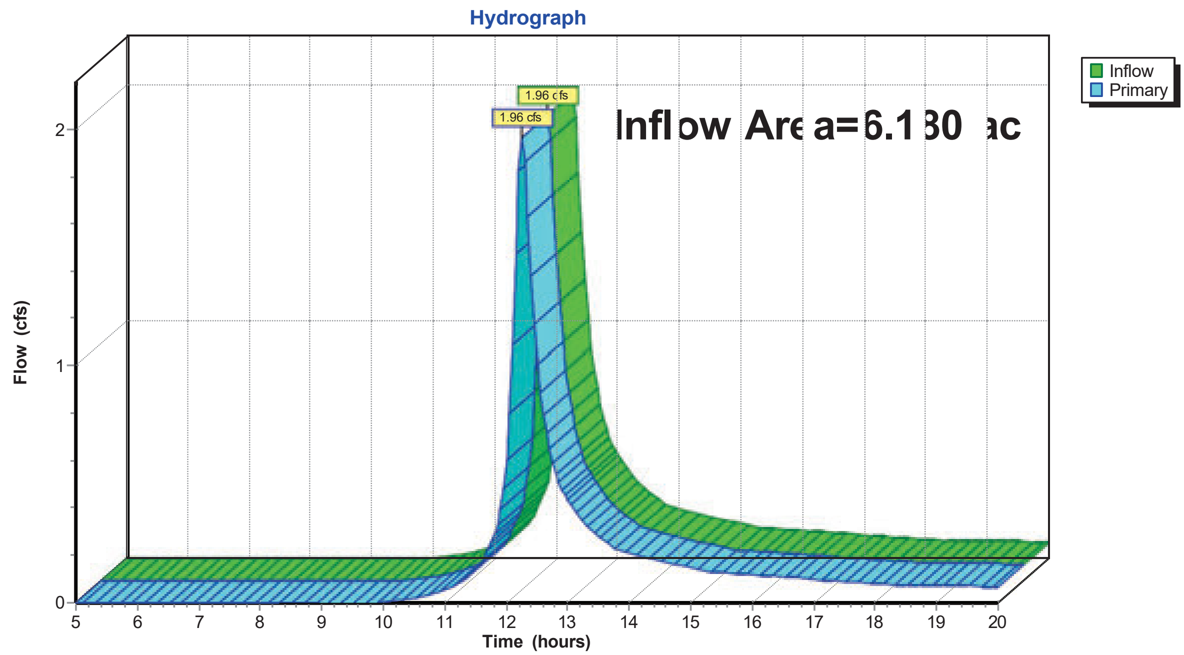


Summary for Link 18L: PR POA / B

Inflow Area =	6.180 ac,	0.00% Impervious, Inflow Depth > 0.35"		for 1-Year event
Inflow =	1.96 cfs @	12.25 hrs, Volume=	0.180 af	
Primary =	1.96 cfs @	12.25 hrs, Volume=	0.180 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 18L: PR POA / B



Summary for Subcatchment 1S: EXWS-10

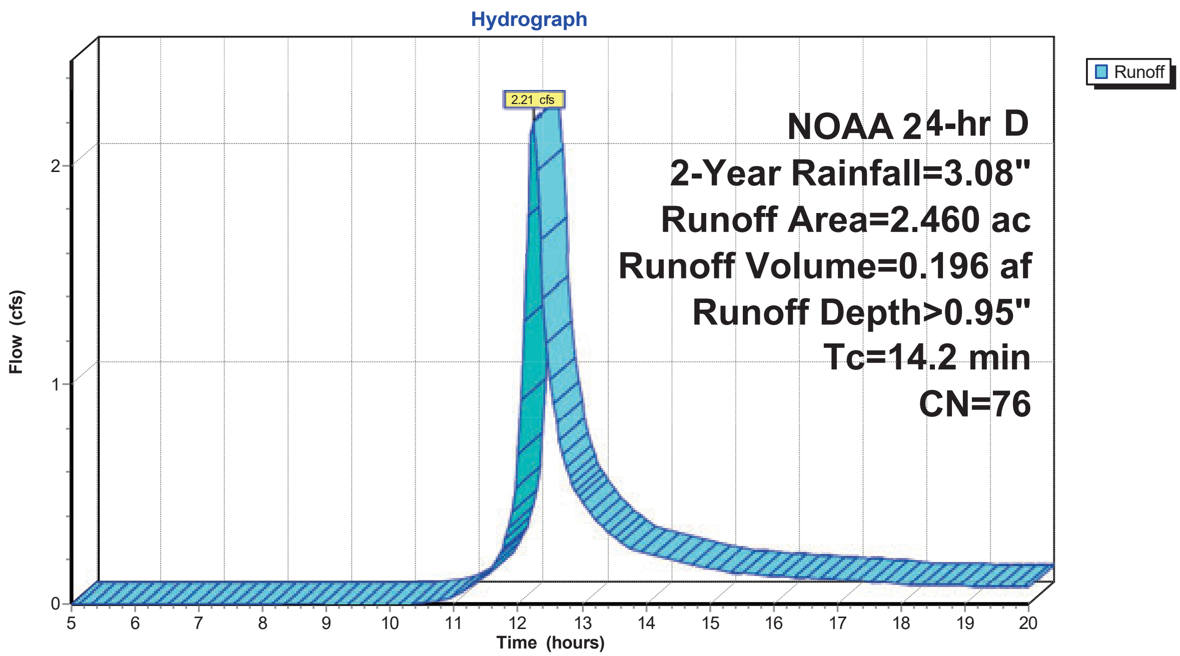
Runoff = 2.21 cfs @ 12.23 hrs, Volume= 0.196 af, Depth> 0.95"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	2.460	76	
	2.460		100.00% Pervious Area

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

Subcatchment 1S: EXWS-10



Summary for Subcatchment 2S: EXWS-11

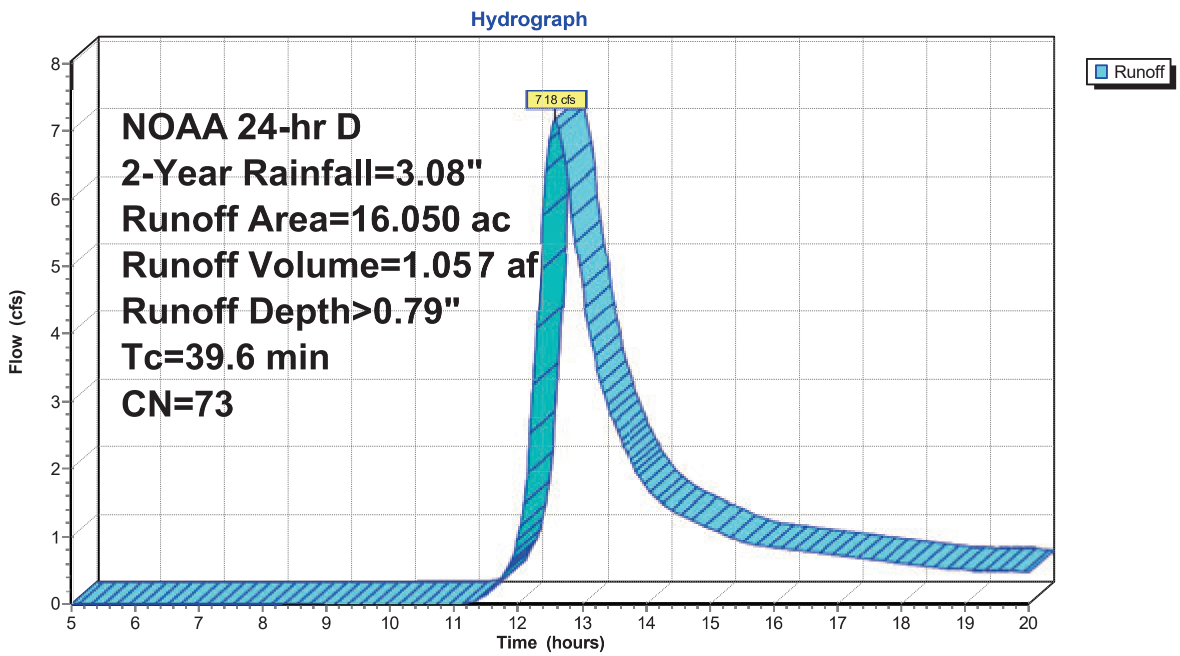
Runoff = 7.18 cfs @ 12.59 hrs, Volume= 1.057 af, Depth> 0.79"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	16.050	73	
	16.050		100.00% Pervious Area

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

Subcatchment 2S: EXWS-11



Summary for Subcatchment 5S: EXWS-20 / B

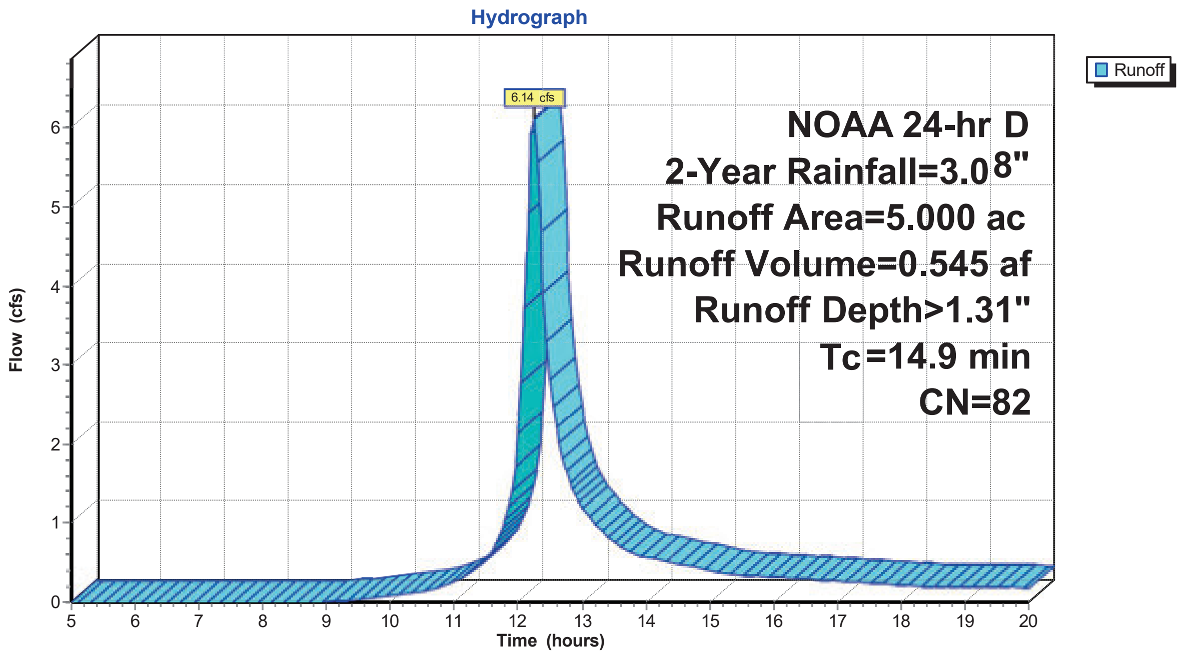
Runoff = 6.14 cfs @ 12.24 hrs, Volume= 0.545 af, Depth> 1.31"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	5.000	82	
	5.000		100.00% Pervious Area

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

Subcatchment 5S: EXWS-20 / B



Summary for Subcatchment 6S: EXWS-30 / C

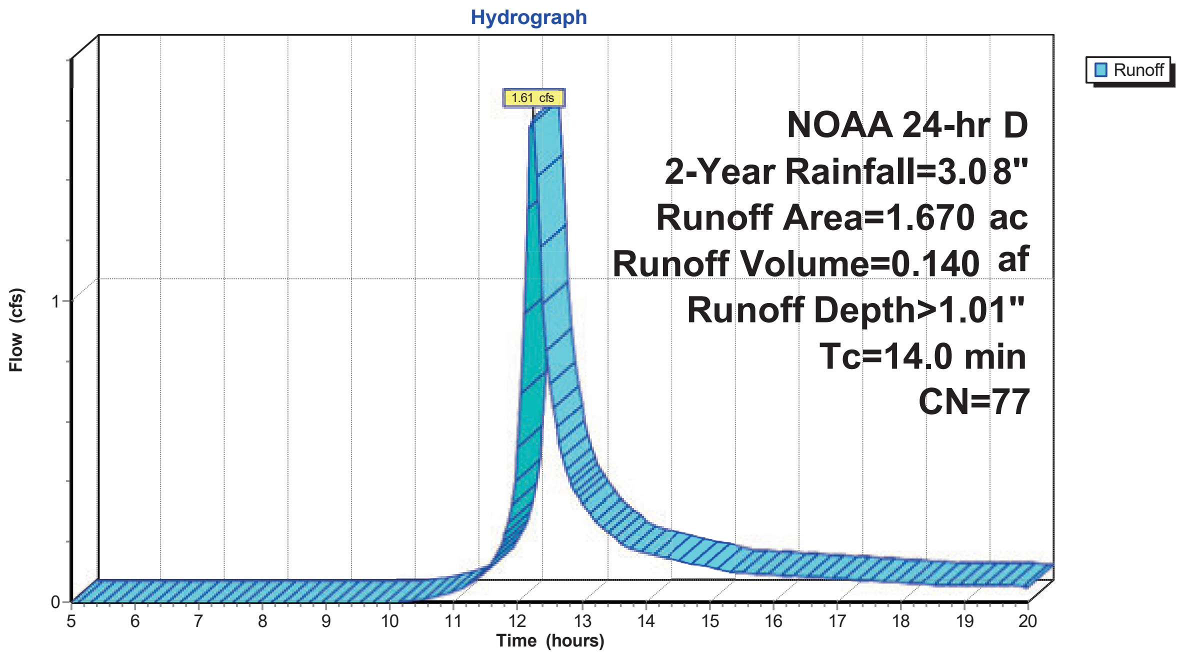
Runoff = 1.61 cfs @ 12.23 hrs, Volume= 0.140 af, Depth> 1.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	1.670	77	
	1.670		100.00% Pervious Area

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

Subcatchment 6S: EXWS-30 / C



Summary for Subcatchment 7S: PRWS-10

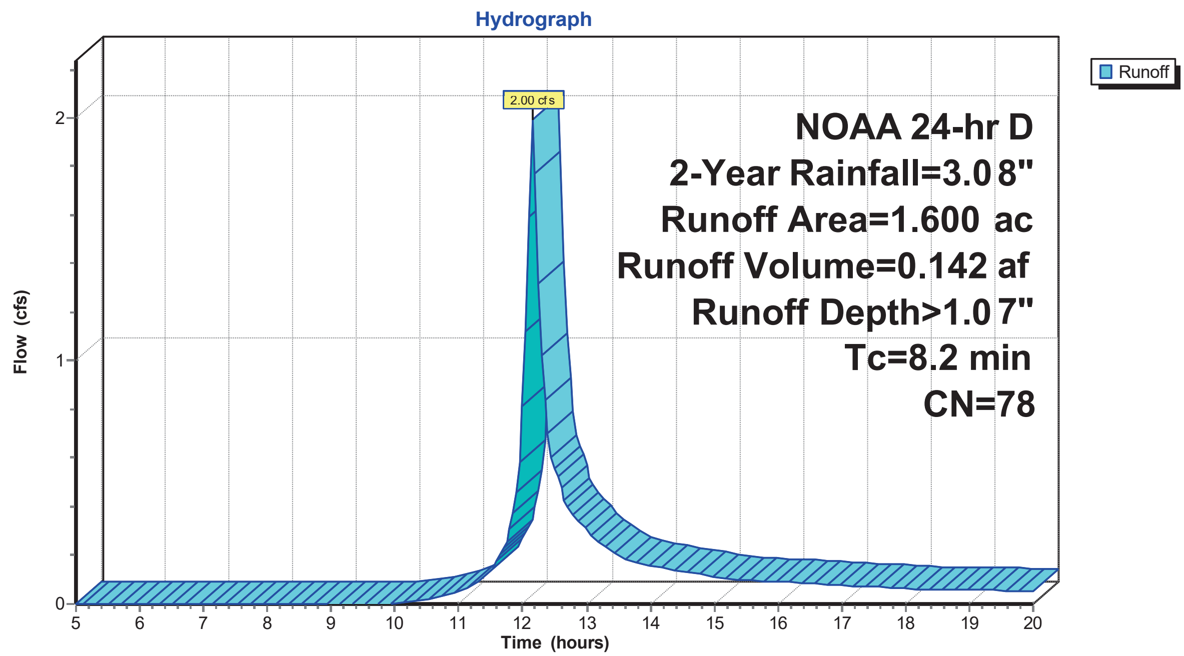
Runoff = 2.00 cfs @ 12.16 hrs, Volume= 0.142 af, Depth> 1.07"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	1.600	78	
	1.600		100.00% Pervious Area

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

Subcatchment 7S: PRWS-10



Summary for Subcatchment 8S: PRWS-11

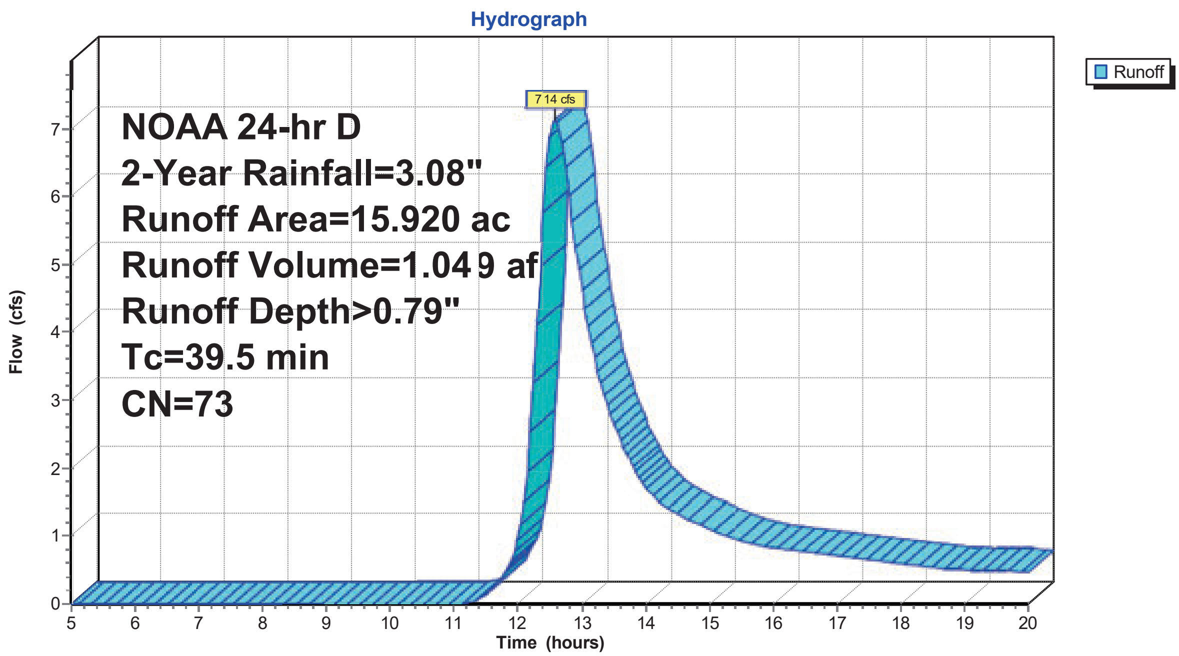
Runoff = 7.14 cfs @ 12.59 hrs, Volume= 1.049 af, Depth> 0.79"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	15.920	73	
	15.920		100.00% Pervious Area

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

Subcatchment 8S: PRWS-11



Summary for Subcatchment 10S: PRWS-20

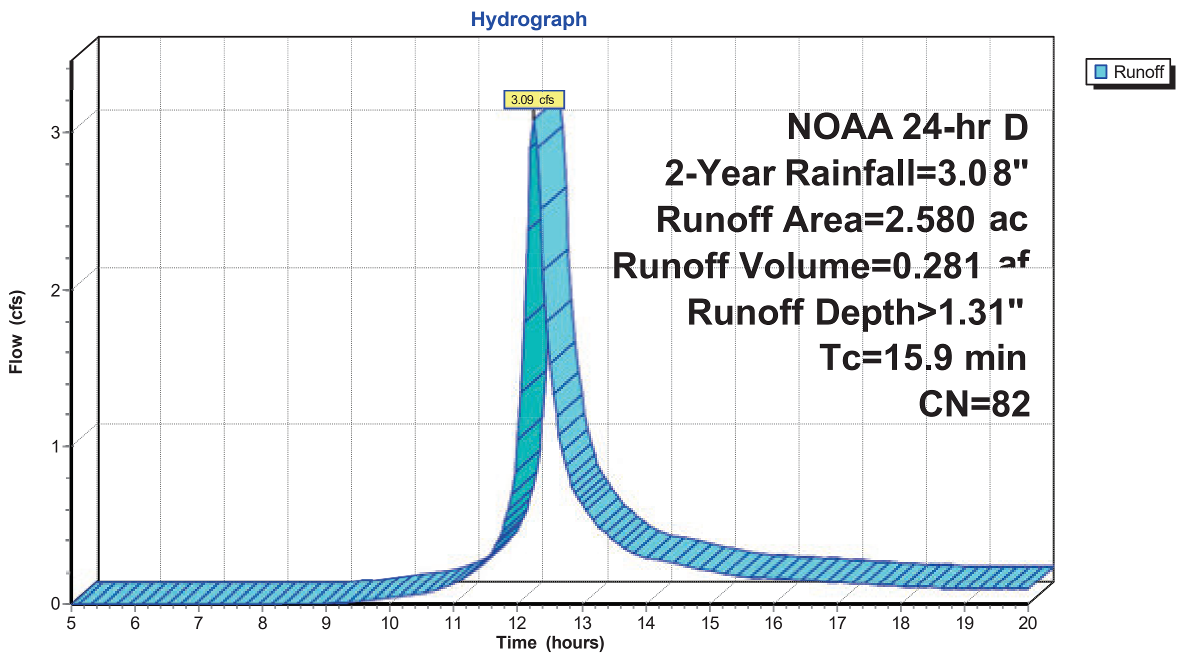
Runoff = 3.09 cfs @ 12.25 hrs, Volume= 0.281 af, Depth> 1.31"
Routed to Link 18L : PR POA / B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	2.580	82	
	2.580		100.00% Pervious Area

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

Subcatchment 10S: PRWS-20



Summary for Subcatchment 11S: PRWS-21

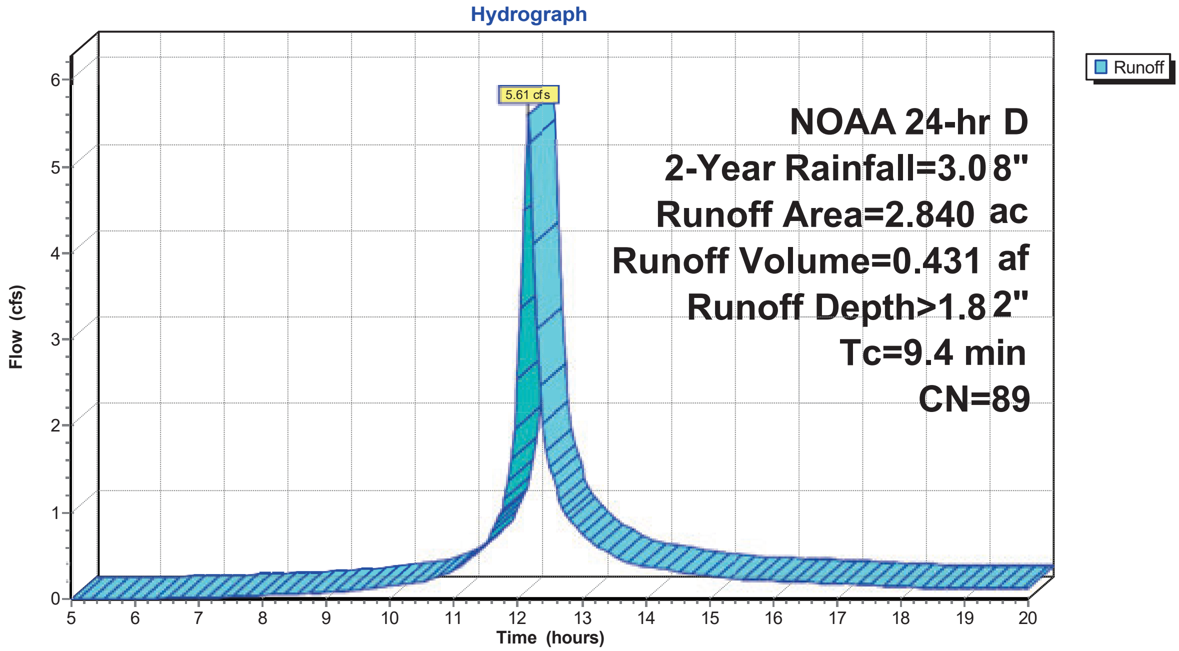
Runoff = 5.61 cfs @ 12.16 hrs, Volume= 0.431 af, Depth> 1.82"
Routed to Pond 16P : DET 210

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	2.840	89	
	2.840		100.00% Pervious Area

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

Subcatchment 11S: PRWS-21



Summary for Subcatchment 12S: PRWS-22

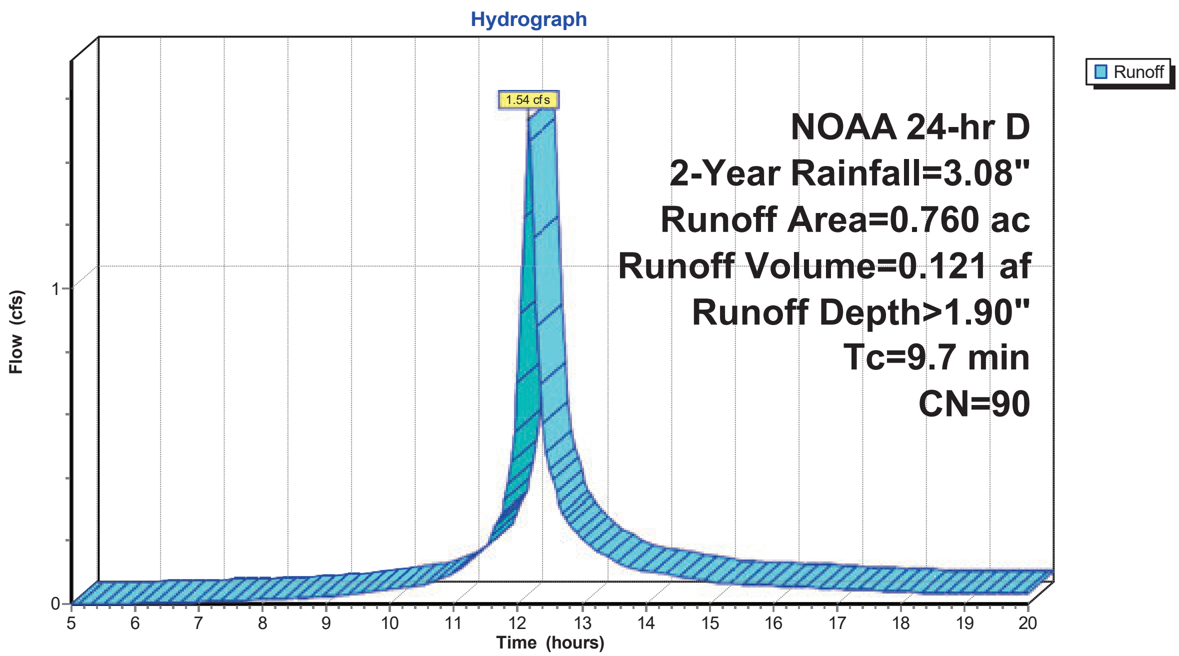
Runoff = 1.54 cfs @ 12.17 hrs, Volume= 0.121 af, Depth> 1.90"
Routed to Pond 17P : DET 220

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	0.760	90	
	0.760		100.00% Pervious Area

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

Subcatchment 12S: PRWS-22



Summary for Subcatchment 13S: PRWS-30 / C

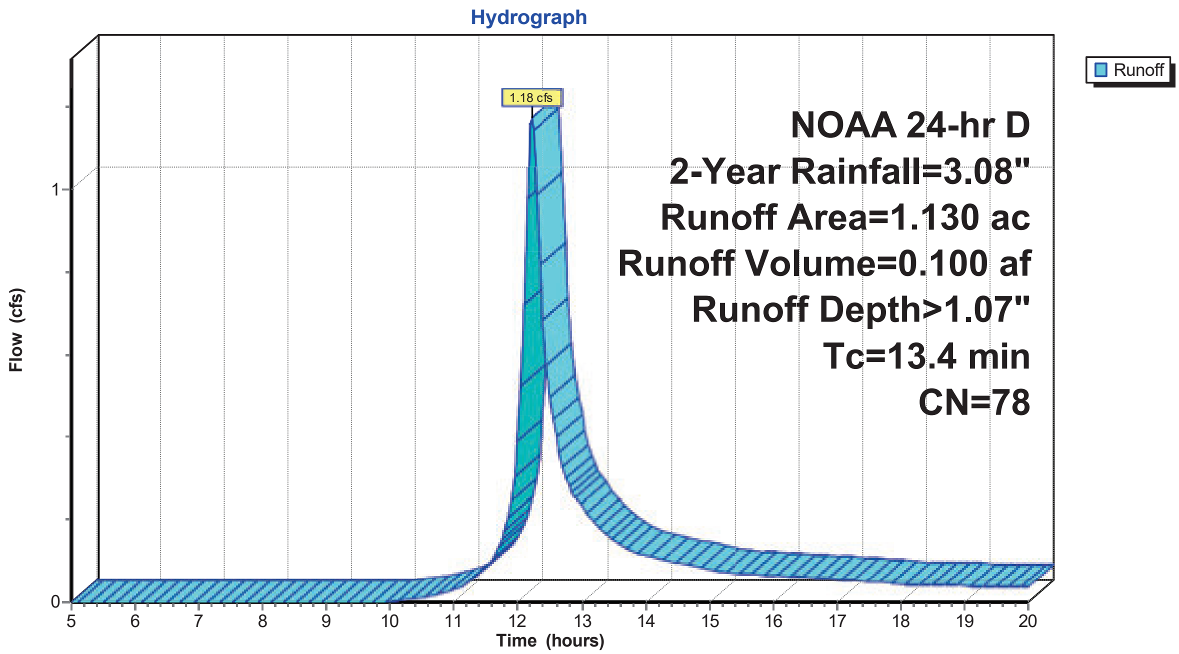
Runoff = 1.18 cfs @ 12.22 hrs, Volume= 0.100 af, Depth> 1.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	1.130	78	
	1.130		100.00% Pervious Area

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

Subcatchment 13S: PRWS-30 / C



Summary for Subcatchment 20S: PRWS-14

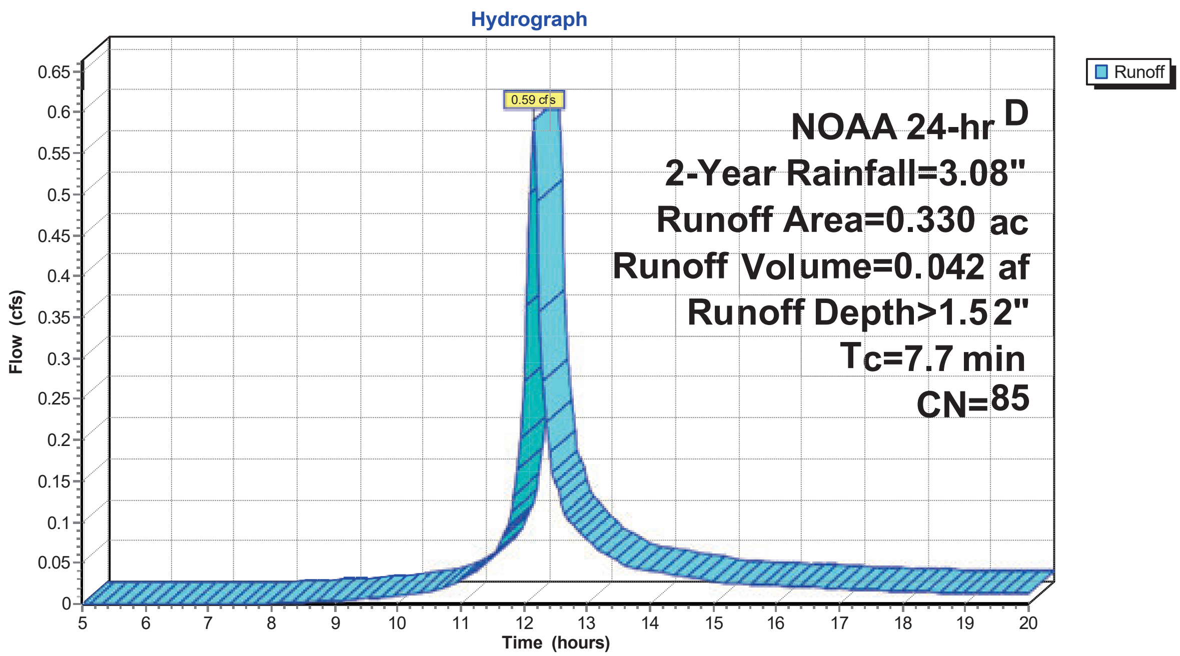
Runoff = 0.59 cfs @ 12.15 hrs, Volume= 0.042 af, Depth> 1.52"
Routed to Pond 23P : WQ 140

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-Year Rainfall=3.08"

	Area (ac)	CN	Description
*	0.330	85	
	0.330		100.00% Pervious Area

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

Subcatchment 20S: PRWS-14



Summary for Pond 16P: DET 210

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth > 1.82" for 2-Year event
Inflow = 5.61 cfs @ 12.16 hrs, Volume= 0.431 af
Outflow = 1.04 cfs @ 12.71 hrs, Volume= 0.430 af, Atten= 81%, Lag= 32.6 min
Discarded = 1.04 cfs @ 12.71 hrs, Volume= 0.430 af
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 815.66' @ 12.71 hrs Surf.Area= 8,472 sf Storage= 5,296 cf

Plug-Flow detention time= 36.9 min calculated for 0.429 af (100% of inflow)
Center-of-Mass det. time= 36.2 min (818.9 - 782.7)

Volume	Invert	Avail.Storage	Storage Description
#1	815.00'	28,886 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevatior (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
815.0C	7,672	0	0	7,672
816.0C	8,907	8,282	8,282	8,948
817.0C	10,296	9,593	17,875	10,380
818.0C	11,741	11,011	28,886	11,872

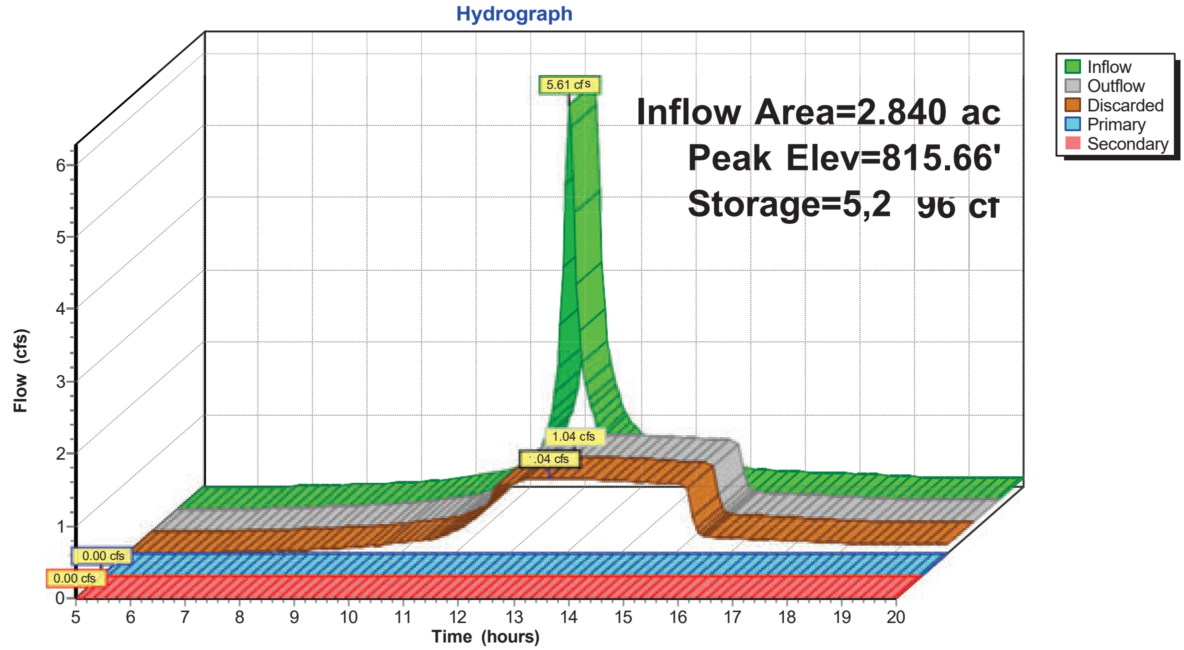
Device	Routing	Invert	Outlet Devices
#1	Discarded	815.00'	**5.320 in/hr Exfiltration over Surface area**
#2	Primary	814.50'	**15.0" Round Culvert** L= 127.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 814.50' / 806.40' S= 0.0638 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	815.90'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Secondary	817.20'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=1.04 cfs @ 12.71 hrs HW=815.66' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 1.04 cfs)

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=815.00' (Free Discharge)
└─**2=Culvert** (Passes 0.00 cfs of 0.87 cfs potential flow)
  └─**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=815.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 16P: DET 210



Summary for Pond 17P: DET 220

Inflow Area = 0.760 ac, 0.00% Impervious, Inflow Depth > 1.90" for 2-Year event
Inflow = 1.54 cfs @ 12.17 hrs, Volume= 0.121 af
Outflow = 0.19 cfs @ 13.14 hrs, Volume= 0.081 af, Atten= 88%, Lag= 58.6 min
Discarded = 0.08 cfs @ 13.14 hrs, Volume= 0.067 af
Primary = 0.10 cfs @ 13.14 hrs, Volume= 0.014 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 802.39' @ 13.14 hrs Surf.Area= 2,324 sf Storage= 2,574 cf

Plug-Flow detention time= 167.6 min calculated for 0.081 af (67% of inflow)
Center-of-Mass det. time= 95.8 min (874.8 - 779.1)

Volume	Invert	Avail.Storage	Storage Description
#1	801.00'	7,722 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)
801.00	1,433	0	0	1,433
802.00	2,039	1,727	1,727	2,057
803.00	2,810	2,414	4,141	2,847
804.00	4,412	3,581	7,722	4,463

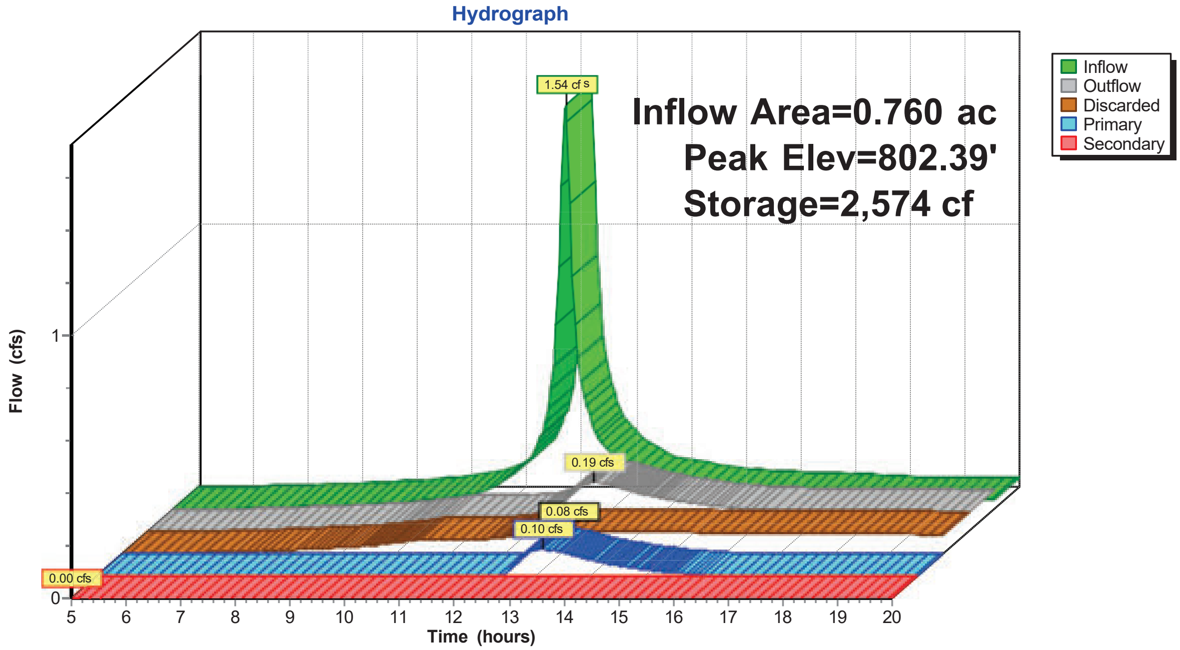
Device	Routing	Invert	Outlet Devices
#1	Discarded	801.00'	**1.580 in/hr Exfiltration over Surface area**
#2	Primary	800.50'	**15.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 800.50' / 800.00' S= 0.0128 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	802.20'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 2	802.80'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	803.00'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=0.08 cfs @ 13.14 hrs HW=802.39' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.10 cfs @ 13.14 hrs HW=802.39' (Free Discharge)
└─**2=Culvert** (Passes 0.10 cfs of 5.24 cfs potential flow)
  ├─**3=Orifice/Grate** (Orifice Controls 0.10 cfs @ 1.48 fps)
  └─**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=801.00' (Free Discharge)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 17P: DET 220



Summary for Pond 23P: WQ 140

Inflow Area = 0.330 ac, 0.00% Impervious, Inflow Depth > 1.52" for 2-Year event
Inflow = 0.59 cfs @ 12.15 hrs, Volume= 0.042 af
Outflow = 0.12 cfs @ 12.63 hrs, Volume= 0.019 af, Atten= 80%, Lag= 28.7 min
Primary = 0.12 cfs @ 12.63 hrs, Volume= 0.019 af
Routed to Link 15L : PR POA / A

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 838.53' @ 12.63 hrs Surf.Area= 1,146 sf Storage= 1,000 cf

Plug-Flow detention time= 188.9 min calculated for 0.019 af (46% of inflow)
Center-of-Mass det. time= 100.6 min (895.7 - 795.1)

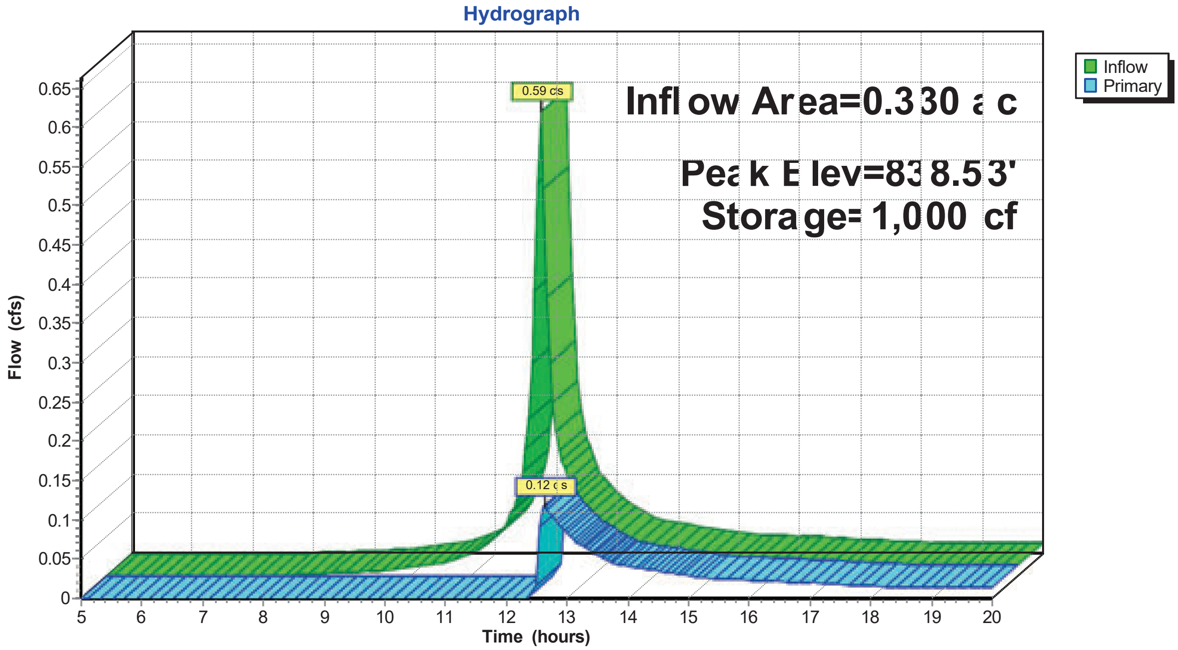
Volume	Invert	Avail.Storage	Storage Description
#1	837.50'	1,554 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
837.50	801	0	0
838.00	964	441	441
838.50	1,143	527	968
839.00	1,200	586	1,554

Device	Routing	Invert	Outlet Devices
#1	Primary	838.50'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=0.11 cfs @ 12.63 hrs HW=838.53' (Free Discharge)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 0.11 cfs @ 0.41 fps)

Pond 23P: WQ 140

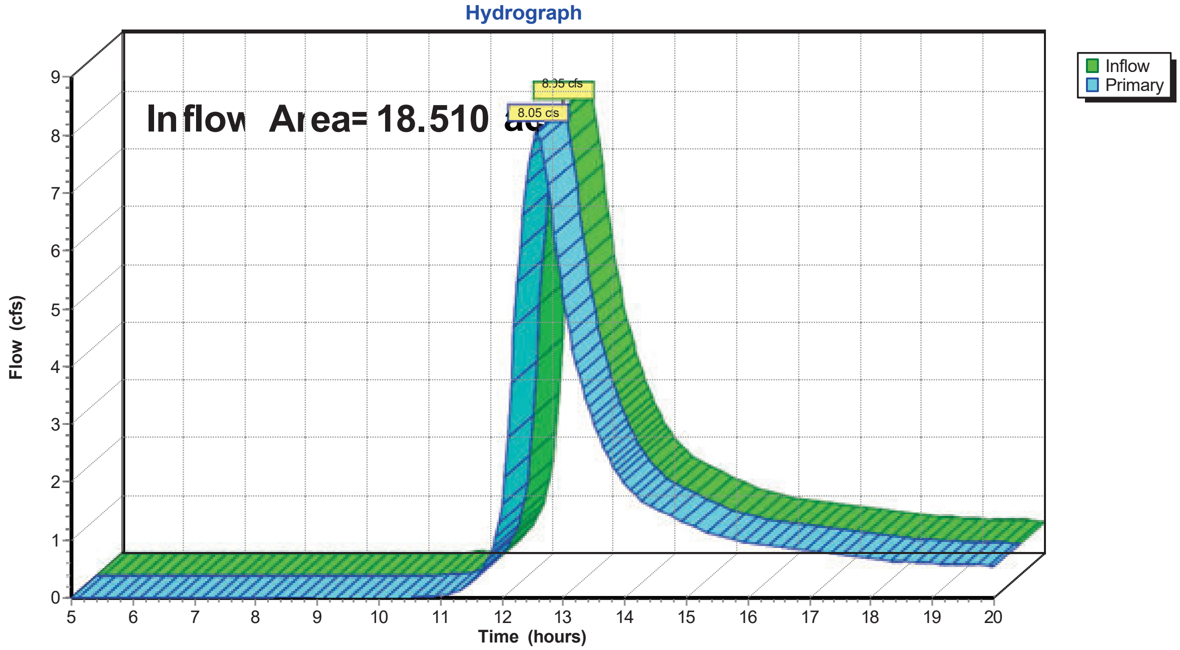


Summary for Link 4L: EX POA / A

Inflow Area =	18.510 ac,	0.00% Impervious, Inflow Depth > 0.81"		for 2-Year event
Inflow =	8.05 cfs @	12.57 hrs, Volume=	1.253 af	
Primary =	8.05 cfs @	12.57 hrs, Volume=	1.253 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: EX POA / A

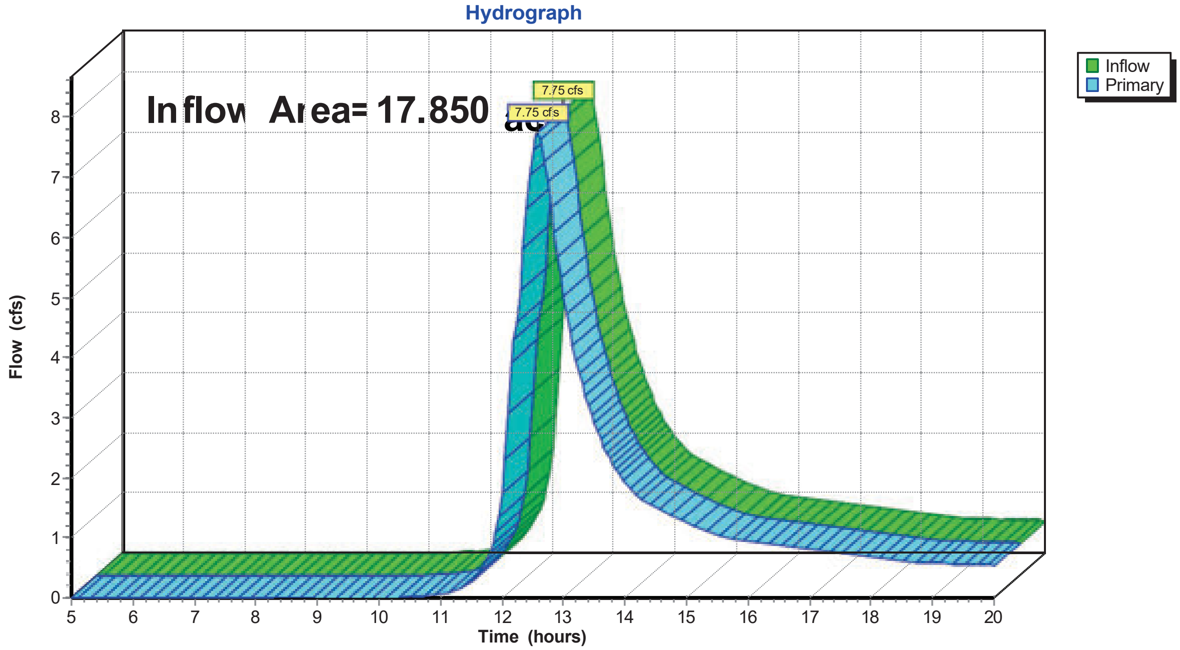


Summary for Link 15L: PR POA / A

Inflow Area =	17.850 ac,	0.00% Impervious, Inflow Depth > 0.81"		for 2-Year event
Inflow =	7.75 cfs @	12.58 hrs, Volume=	1.210 af	
Primary =	7.75 cfs @	12.58 hrs, Volume=	1.210 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

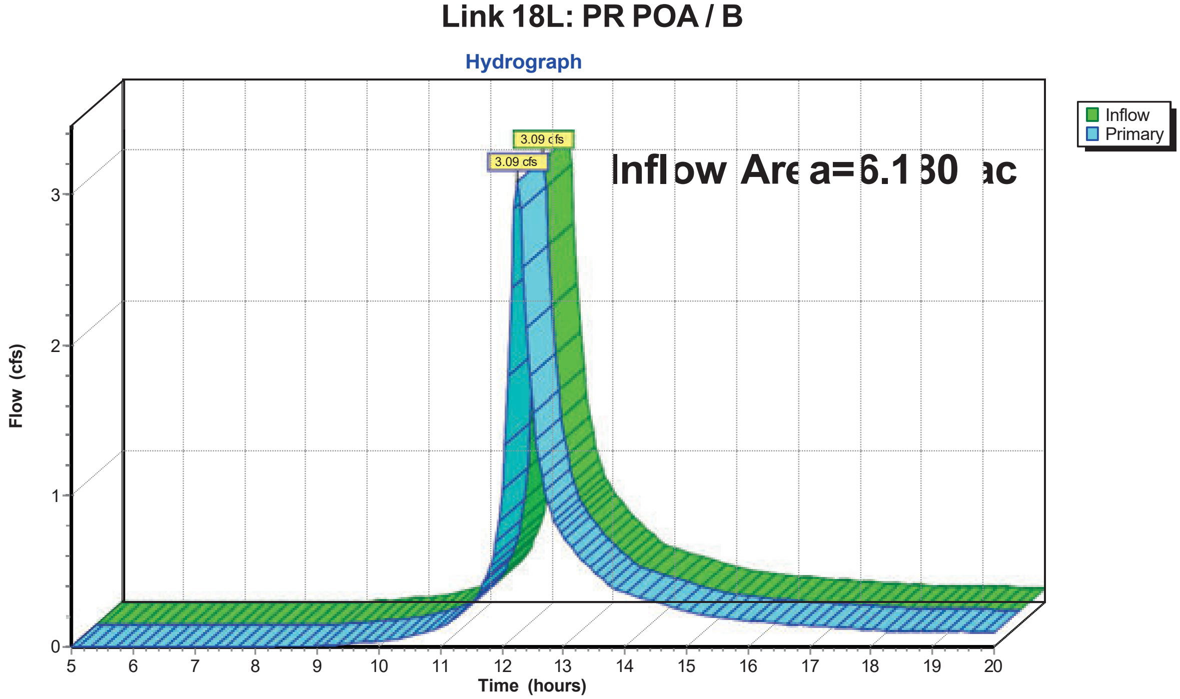
Link 15L: PR POA / A



Summary for Link 18L: PR POA / B

Inflow Area =	6.180 ac,	0.00% Impervious,	Inflow Depth > 0.57"	for 2-Year event	
Inflow =	3.09 cfs @	12.25 hrs,	Volume=	0.295 af	
Primary =	3.09 cfs @	12.25 hrs,	Volume=	0.295 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 1S: EXWS-10

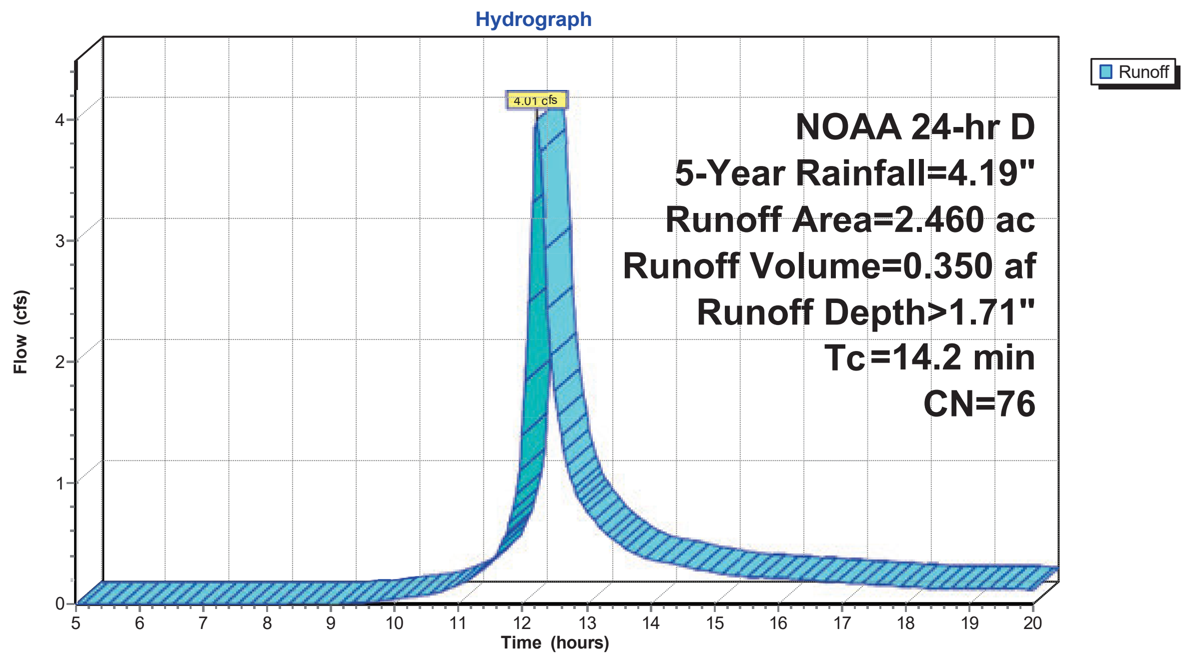
Runoff = 4.01 cfs @ 12.23 hrs, Volume= 0.350 af, Depth> 1.71"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	2.460	76	
	2.460		100.00% Pervious Area

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

Subcatchment 1S: EXWS-10



Summary for Subcatchment 2S: EXWS-11

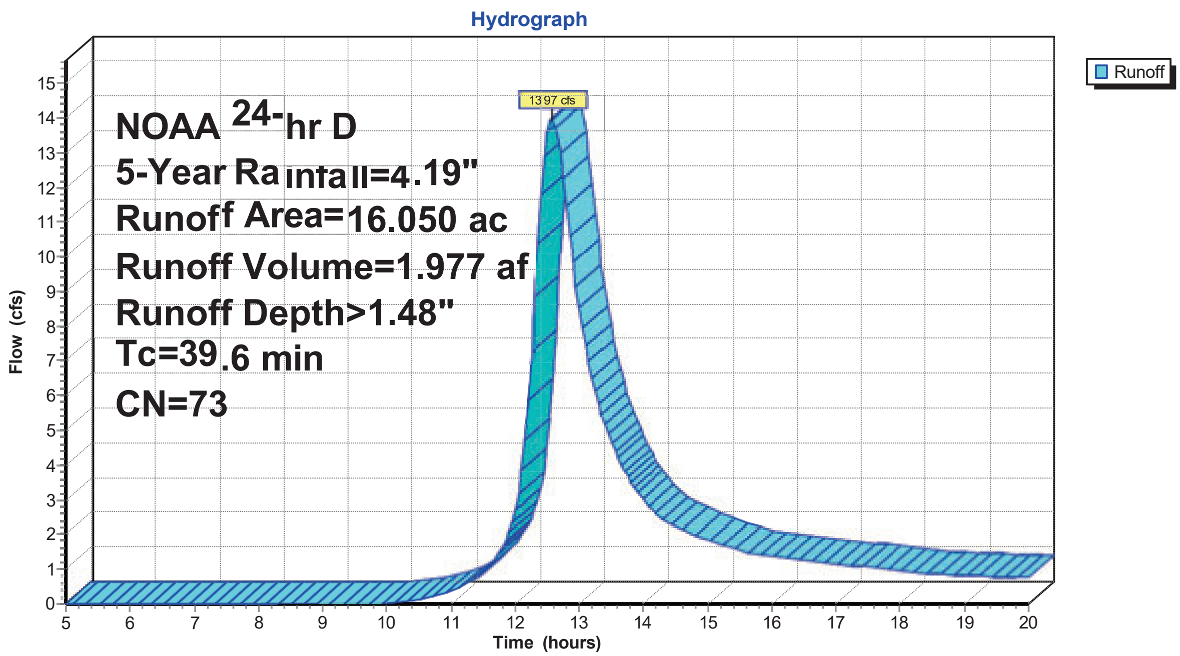
Runoff = 13.97 cfs @ 12.57 hrs, Volume= 1.977 af, Depth> 1.48"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	16.050	73	
	16.050		100.00% Pervious Area

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

Subcatchment 2S: EXWS-11



Summary for Subcatchment 5S: EXWS-20 / B

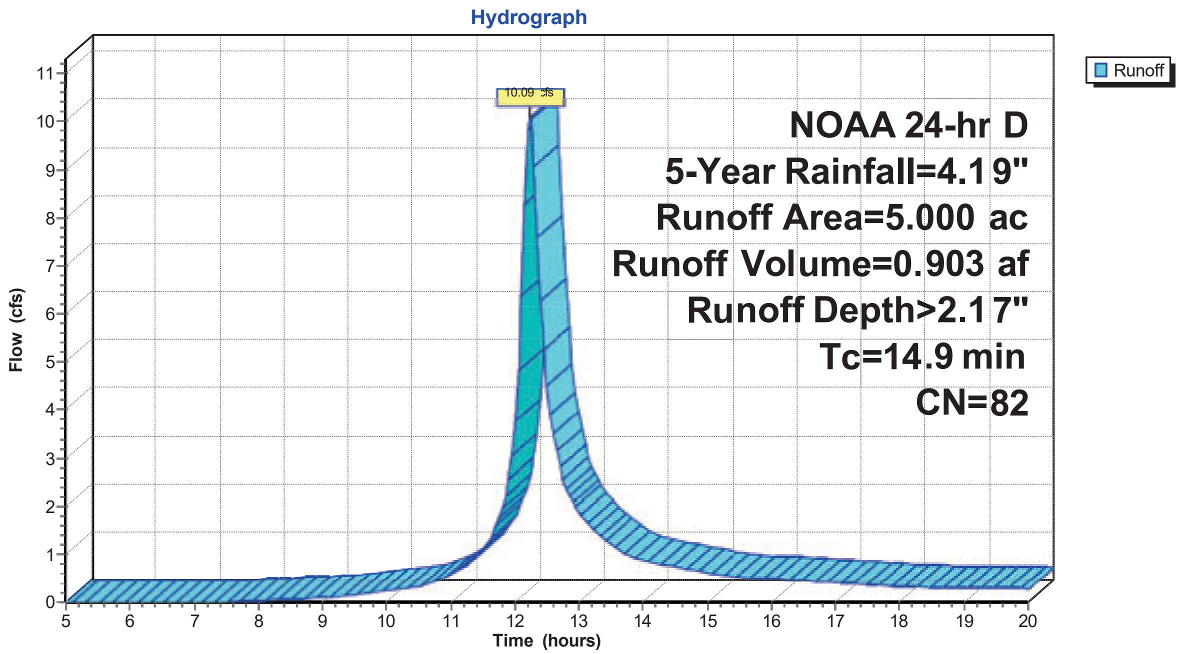
Runoff = 10.09 cfs @ 12.23 hrs, Volume= 0.903 af, Depth> 2.17"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	5.000	82	
	5.000		100.00% Pervious Area

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

Subcatchment 5S: EXWS-20 / B



Summary for Subcatchment 6S: EXWS-30 / C

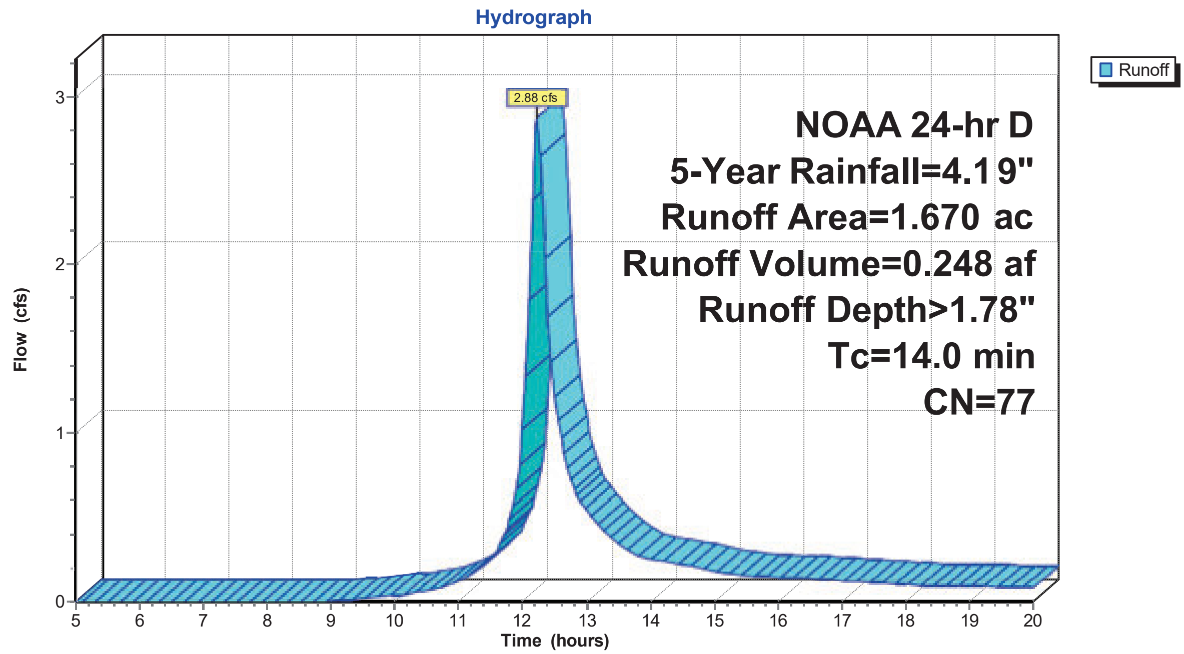
Runoff = 2.88 cfs @ 12.22 hrs, Volume= 0.248 af, Depth> 1.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	1.670	77	
	1.670		100.00% Pervious Area

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

Subcatchment 6S: EXWS-30 / C



Summary for Subcatchment 7S: PRWS-10

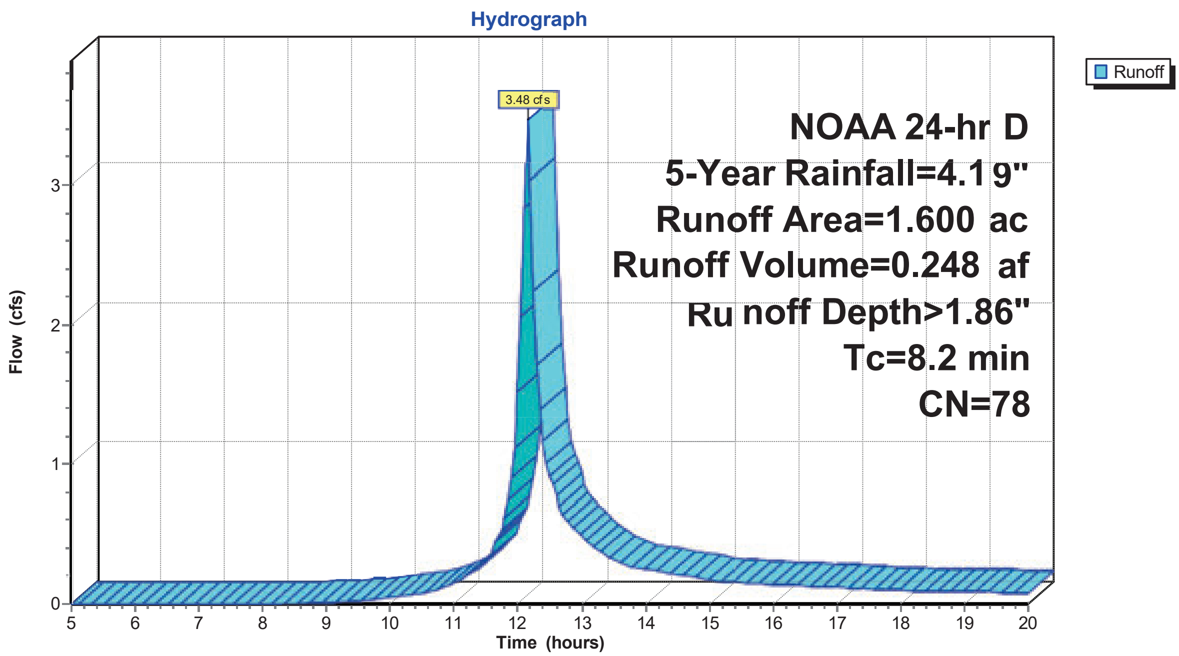
Runoff = 3.48 cfs @ 12.15 hrs, Volume= 0.248 af, Depth> 1.86"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	1.600	78	
	1.600		100.00% Pervious Area

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

Subcatchment 7S: PRWS-10



Summary for Subcatchment 8S: PRWS-11

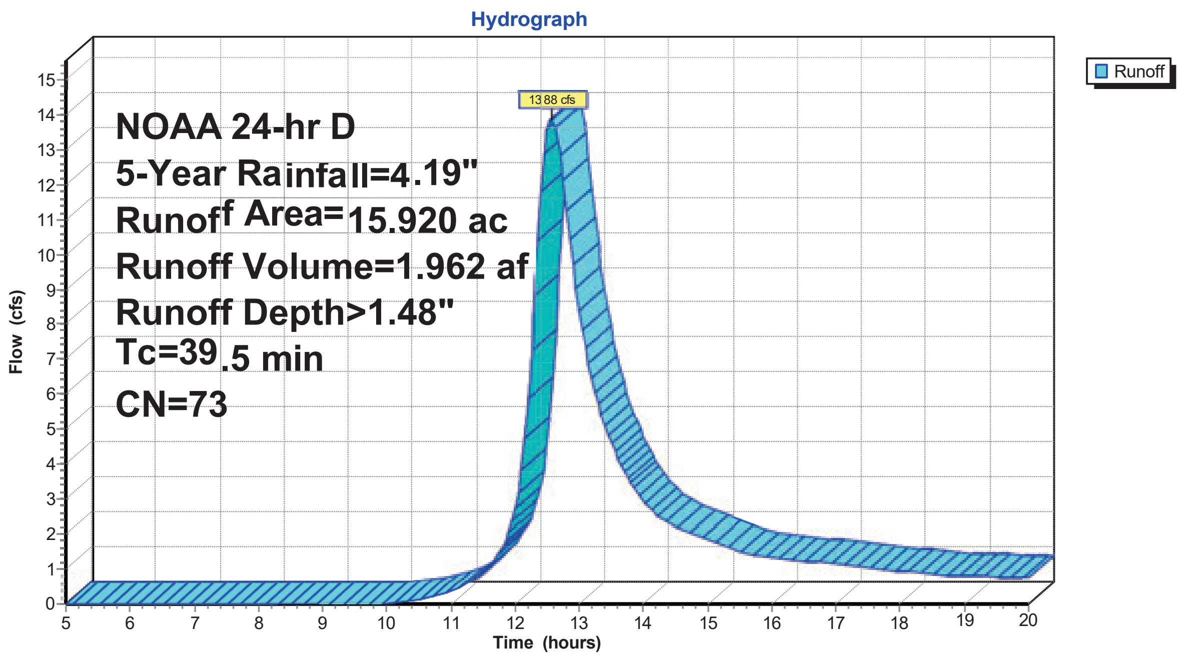
Runoff = 13.88 cfs @ 12.57 hrs, Volume= 1.962 af, Depth> 1.48"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	15.920	73	
	15.920		100.00% Pervious Area

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

Subcatchment 8S: PRWS-11



Summary for Subcatchment 10S: PRWS-20

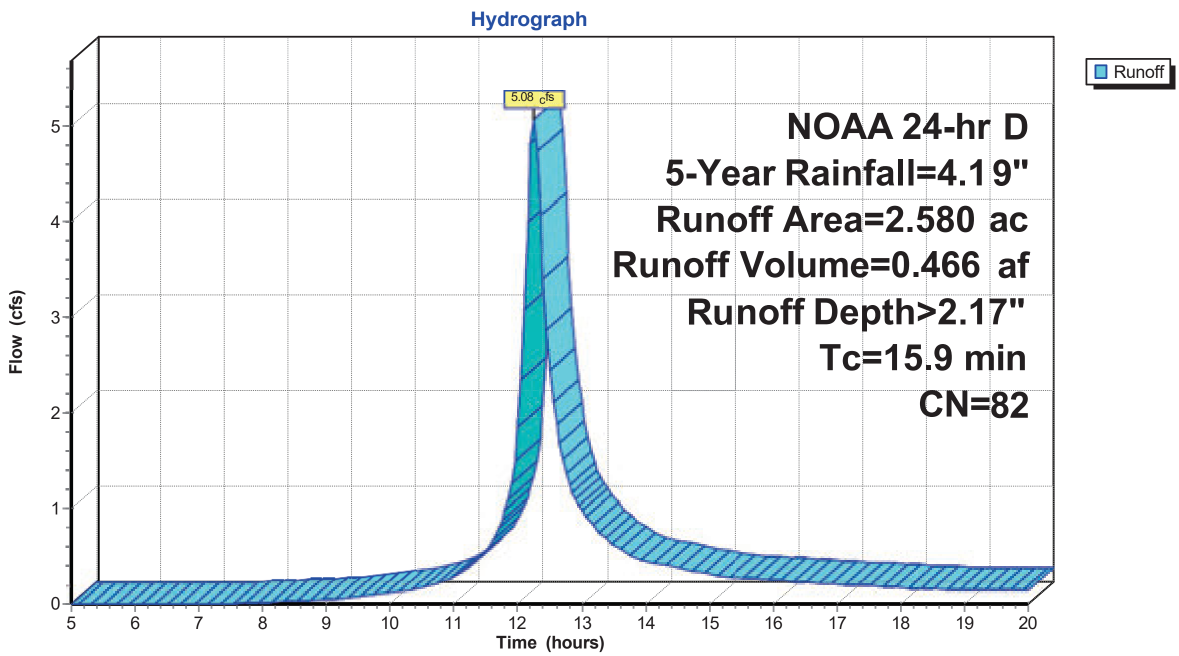
Runoff = 5.08 cfs @ 12.25 hrs, Volume= 0.466 af, Depth> 2.17"
Routed to Link 18L : PR POA / B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	2.580	82	
	2.580		100.00% Pervious Area

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

Subcatchment 10S: PRWS-20



Summary for Subcatchment 11S: PRWS-21

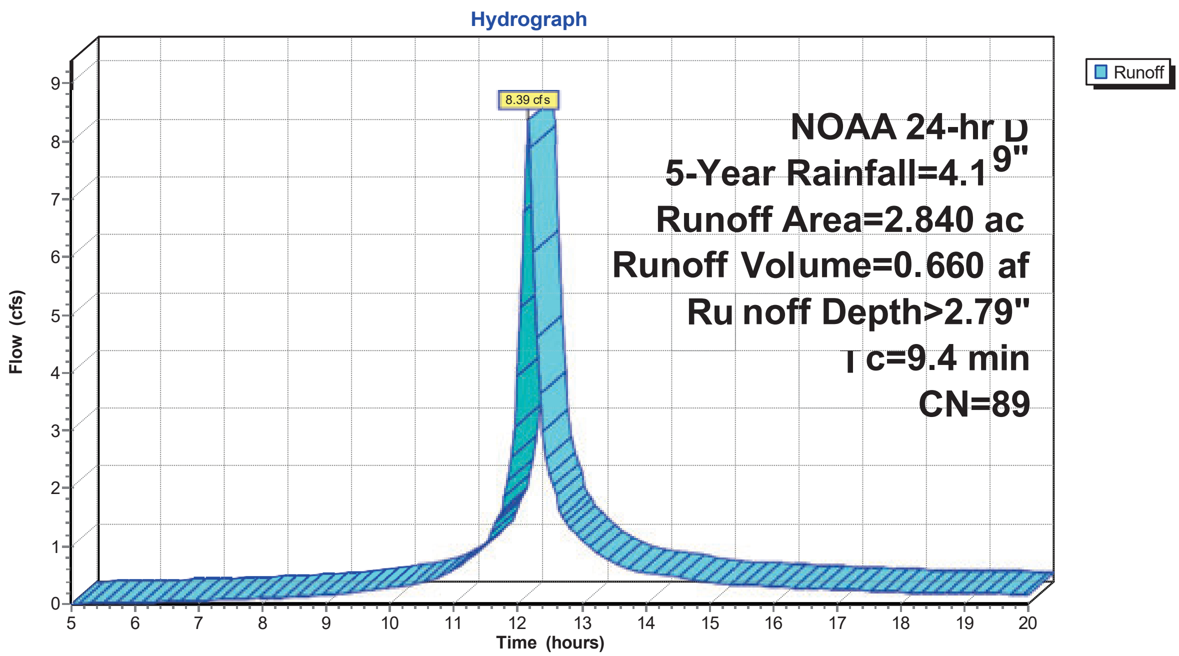
Runoff = 8.39 cfs @ 12.16 hrs, Volume= 0.660 af, Depth> 2.79"
Routed to Pond 16P : DET 210

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	2.840	89	
	2.840		100.00% Pervious Area

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

Subcatchment 11S: PRWS-21



Summary for Subcatchment 12S: PRWS-22

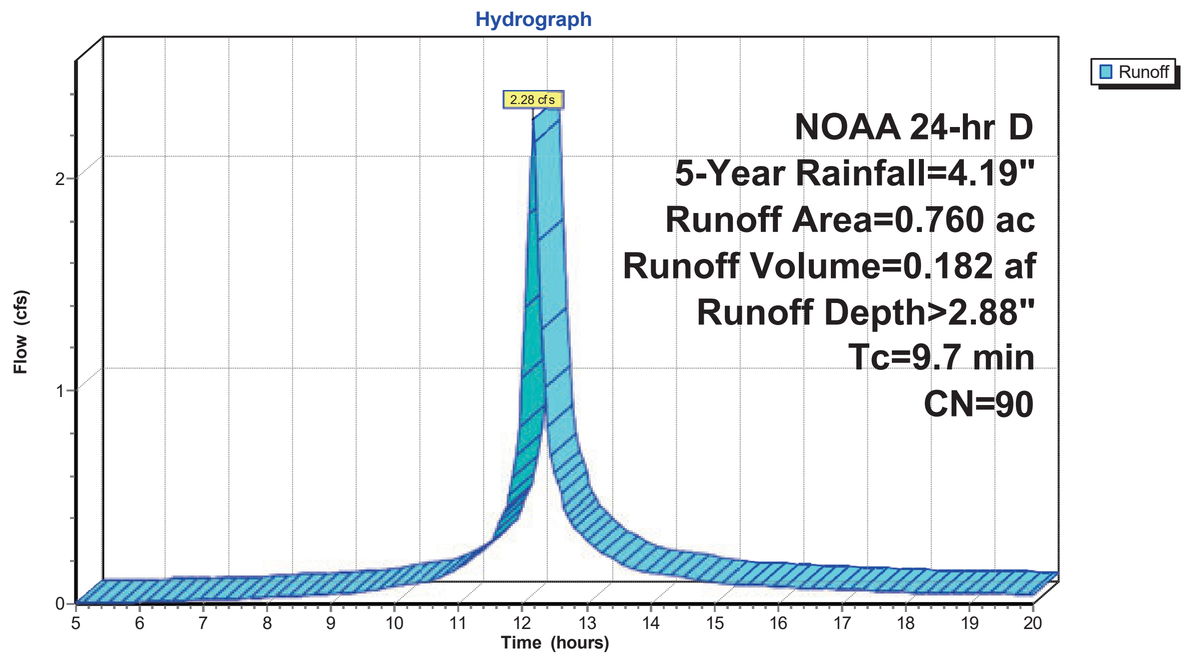
Runoff = 2.28 cfs @ 12.17 hrs, Volume= 0.182 af, Depth> 2.88"
Routed to Pond 17P : DET 220

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	0.760	90	
	0.760		100.00% Pervious Area

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

Subcatchment 12S: PRWS-22



Summary for Subcatchment 13S: PRWS-30 / C

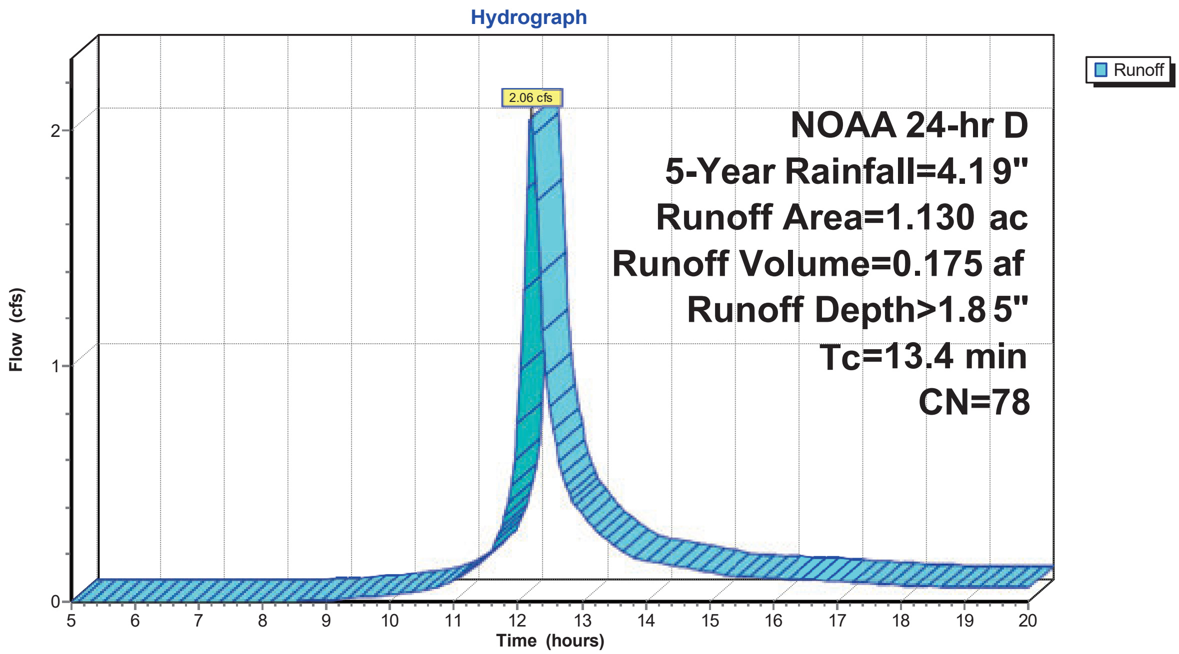
Runoff = 2.06 cfs @ 12.22 hrs, Volume= 0.175 af, Depth> 1.85"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	1.130	78	
	1.130		100.00% Pervious Area

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

Subcatchment 13S: PRWS-30 / C



Summary for Subcatchment 20S: PRWS-14

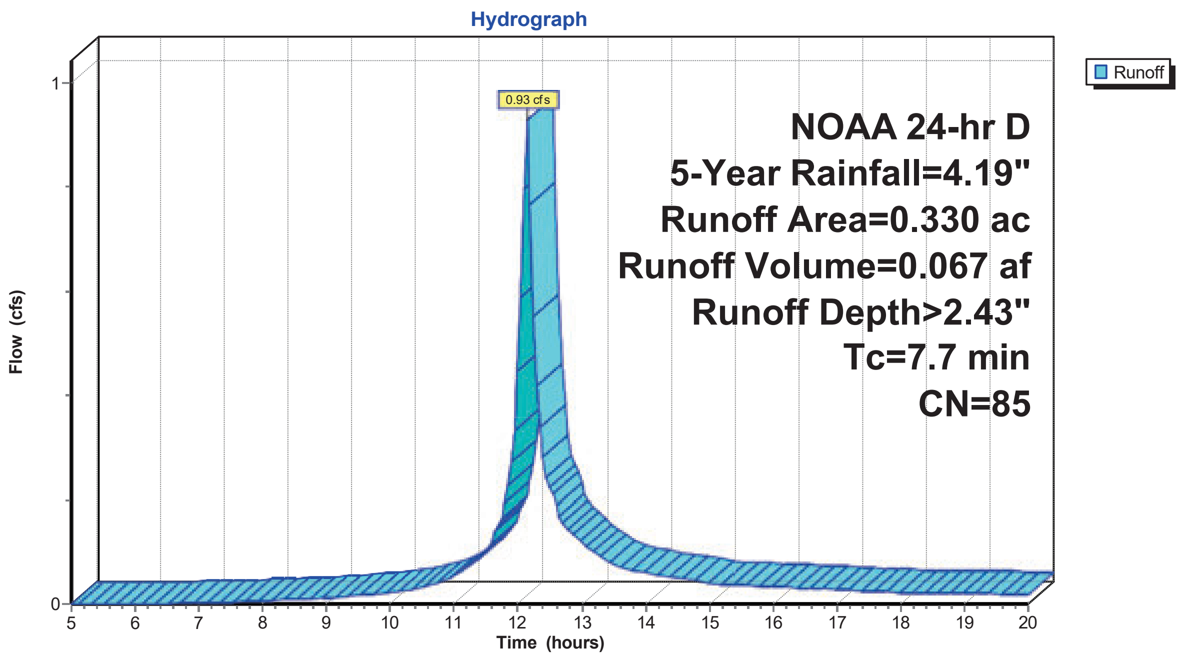
Runoff = 0.93 cfs @ 12.15 hrs, Volume= 0.067 af, Depth> 2.43"
Routed to Pond 23P : WQ 140

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 5-Year Rainfall=4.19"

	Area (ac)	CN	Description
*	0.330	85	
	0.330		100.00% Pervious Area

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

Subcatchment 20S: PRWS-14



Summary for Pond 16P: DET 210

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth > 2.79" for 5-Year event
Inflow = 8.39 cfs @ 12.16 hrs, Volume= 0.660 af
Outflow = 2.64 cfs @ 12.45 hrs, Volume= 0.659 af, Atten= 69%, Lag= 16.9 min
Discarded = 1.10 cfs @ 12.45 hrs, Volume= 0.602 af
Primary = 1.54 cfs @ 12.45 hrs, Volume= 0.056 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 816.00' @ 12.45 hrs Surf.Area= 8,912 sf Storage= 8,318 cf

Plug-Flow detention time= 50.7 min calculated for 0.656 af (100% of inflow)
Center-of-Mass det. time= 49.8 min (821.6 - 771.7)

Volume	Invert	Avail.Storage	Storage Description
#1	815.00'	28,886 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)
815.00	7,672	0	0	7,672
816.00	8,907	8,282	8,282	8,948
817.00	10,296	9,593	17,875	10,380
818.00	11,741	11,011	28,886	11,872

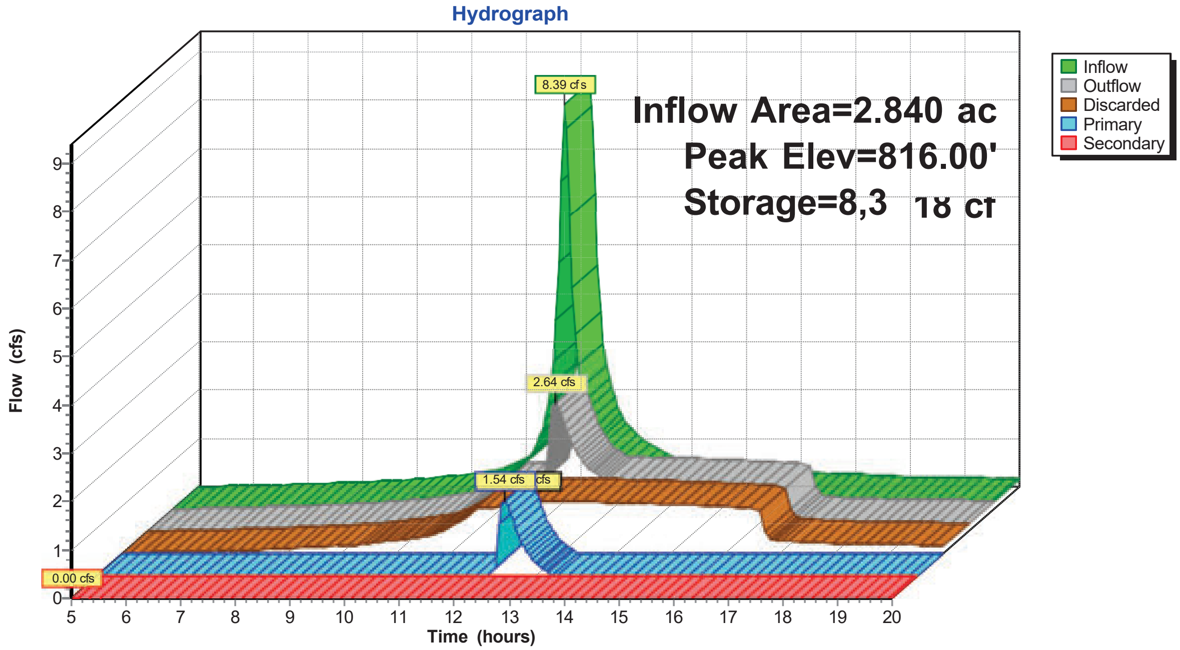
Device	Routing	Invert	Outlet Devices
#1	Discarded	815.00'	**5.320 in/hr Exfiltration over Surface area**
#2	Primary	814.50'	**15.0" Round Culvert** L= 127.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 814.50' / 806.40' S= 0.0638 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	815.90'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Secondary	817.20'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=1.10 cfs @ 12.45 hrs HW=816.00' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 1.10 cfs)

Primary OutFlow Max=1.53 cfs @ 12.45 hrs HW=816.00' (Free Discharge)
└─**2=Culvert** (Passes 1.53 cfs of 4.37 cfs potential flow)
  └─**3=Sharp-Crested Rectangular Weir** (Weir Controls 1.53 cfs @ 1.05 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=815.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 16P: DET 210



Summary for Pond 17P: DET 220

Inflow Area = 0.760 ac, 0.00% Impervious, Inflow Depth > 2.88" for 5-Year event
Inflow = 2.28 cfs @ 12.17 hrs, Volume= 0.182 af
Outflow = 0.57 cfs @ 12.54 hrs, Volume= 0.137 af, Atten= 75%, Lag= 22.5 min
Discarded = 0.09 cfs @ 12.54 hrs, Volume= 0.075 af
Primary = 0.48 cfs @ 12.54 hrs, Volume= 0.062 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 802.71' @ 12.54 hrs Surf.Area= 2,571 sf Storage= 3,352 cf

Plug-Flow detention time= 125.3 min calculated for 0.137 af (75% of inflow)
Center-of-Mass det. time= 62.5 min (831.0 - 768.5)

Volume	Invert	Avail.Storage	Storage Description
#1	801.00'	7,722 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)
801.00	1,433	0	0	1,433
802.00	2,039	1,727	1,727	2,057
803.00	2,810	2,414	4,141	2,847
804.00	4,412	3,581	7,722	4,463

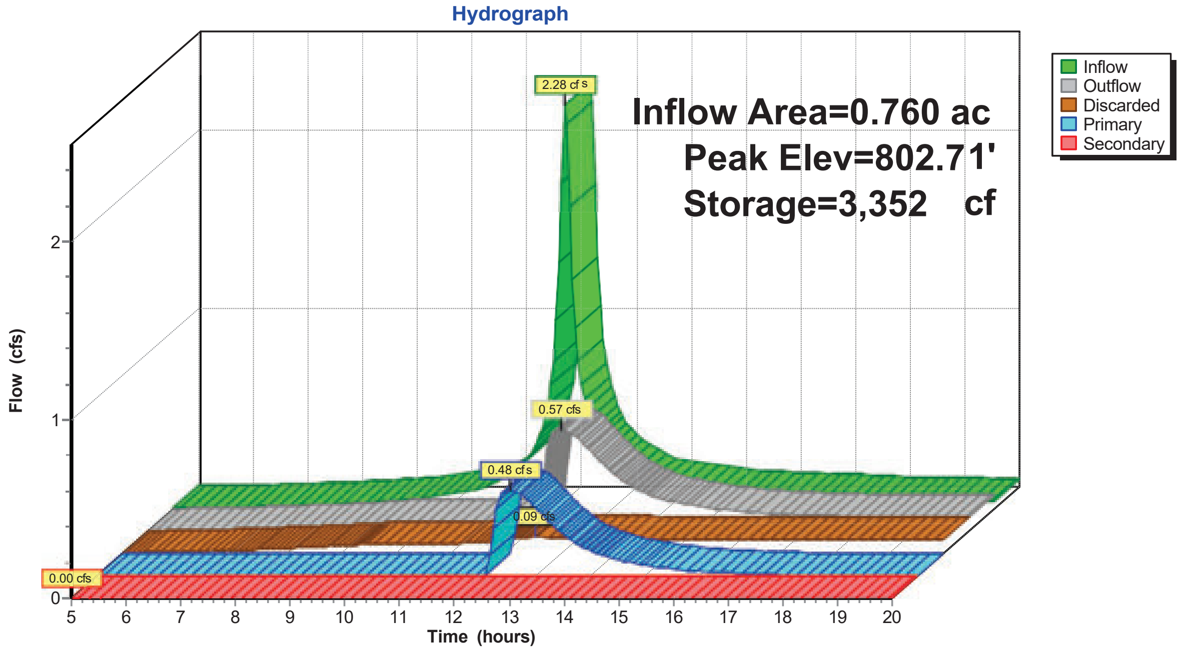
Device	Routing	Invert	Outlet Devices
#1	Discarded	801.00'	**1.580 in/hr Exfiltration over Surface area**
#2	Primary	800.50'	**15.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 800.50' / 800.00' S= 0.0128 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	802.20'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 2	802.80'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	803.00'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=0.09 cfs @ 12.54 hrs HW=802.71' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.09 cfs)

Primary OutFlow Max=0.48 cfs @ 12.54 hrs HW=802.71' (Free Discharge)
└─**2=Culvert** (Passes 0.48 cfs of 5.87 cfs potential flow)
 ├─**3=Orifice/Grate** (Orifice Controls 0.48 cfs @ 2.44 fps)
 └─**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=801.00' (Free Discharge)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 17P: DET 220



Summary for Pond 23P: WQ 140

Inflow Area = 0.330 ac, 0.00% Impervious, Inflow Depth > 2.43" for 5-Year event
Inflow = 0.93 cfs @ 12.15 hrs, Volume= 0.067 af
Outflow = 0.83 cfs @ 12.21 hrs, Volume= 0.044 af, Atten= 10%, Lag= 3.6 min
Primary = 0.83 cfs @ 12.21 hrs, Volume= 0.044 af
Routed to Link 15L : PR POA / A

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 838.60' @ 12.21 hrs Surf.Area= 1,155 sf Storage= 1,087 cf

Plug-Flow detention time= 128.1 min calculated for 0.044 af (66% of inflow)
Center-of-Mass det. time= 55.5 min (838.7 - 783.2)

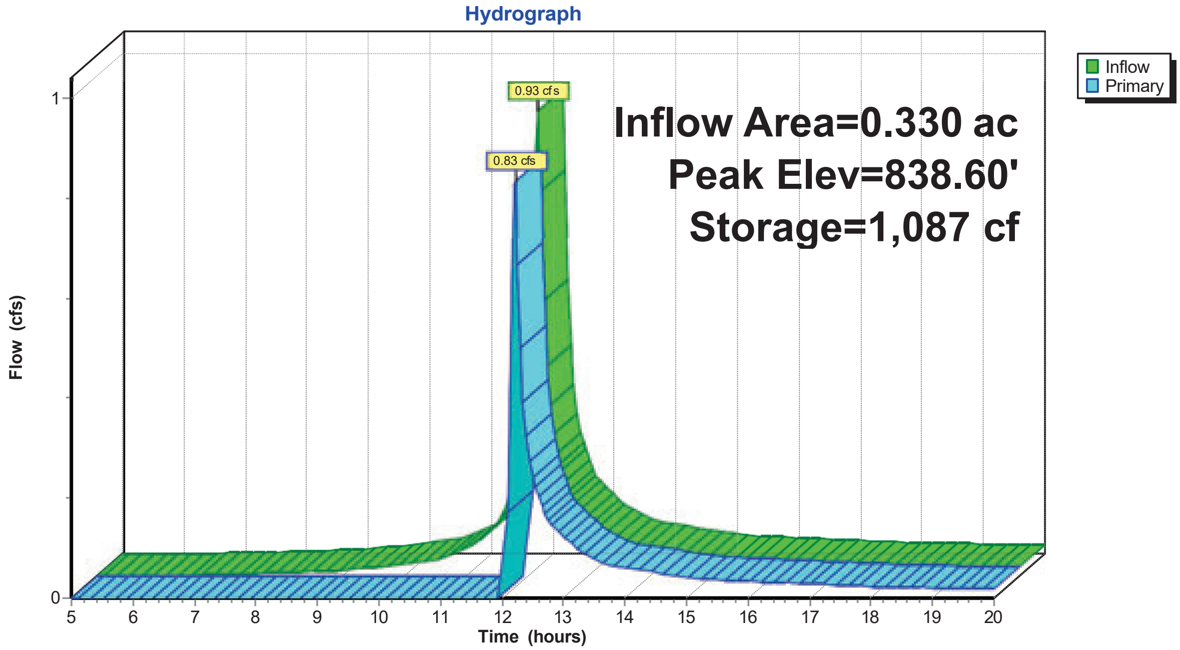
Volume	Invert	Avail.Storage	Storage Description
#1	837.50'	1,554 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
837.50	801	0	0
838.00	964	441	441
838.50	1,143	527	968
839.00	1,200	586	1,554

Device	Routing	Invert	Outlet Devices
#1	Primary	838.50'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=0.80 cfs @ 12.21 hrs HW=838.60' (Free Discharge)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 0.80 cfs @ 0.77 fps)

Pond 23P: WQ 140

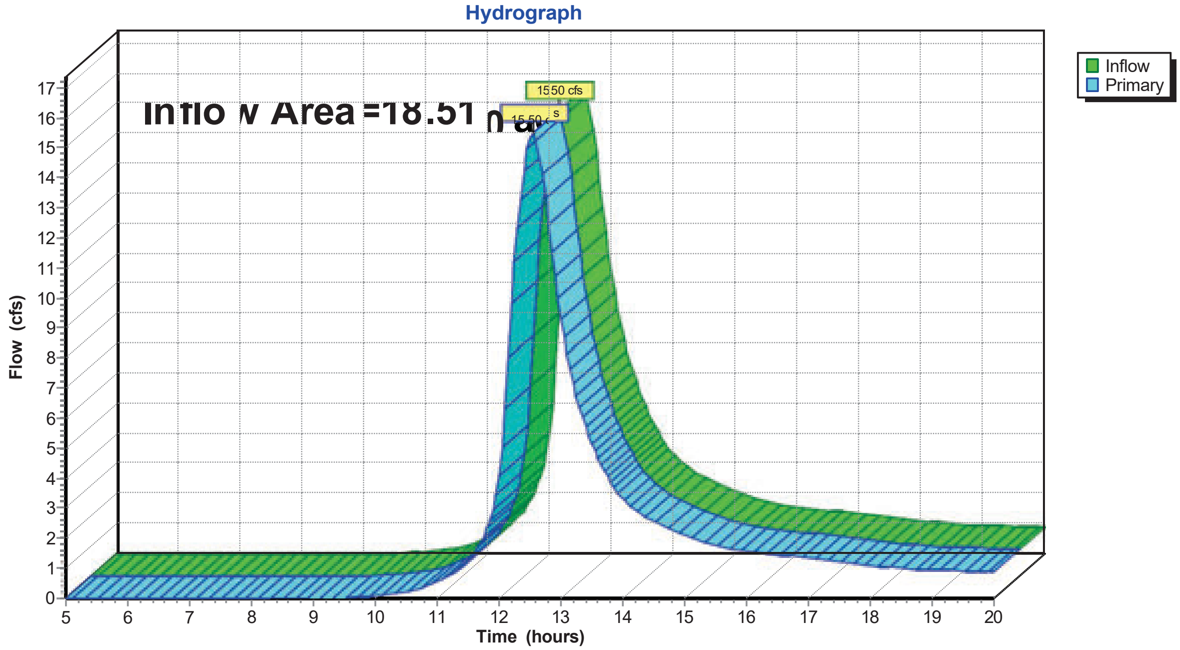


Summary for Link 4L: EX POA / A

Inflow Area =	18.510 ac,	0.00% Impervious, Inflow Depth > 1.51"		for 5-Year event
Inflow =	15.50 cfs @	12.55 hrs, Volume=	2.327 af	
Primary =	15.50 cfs @	12.55 hrs, Volume=	2.327 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: EX POA / A

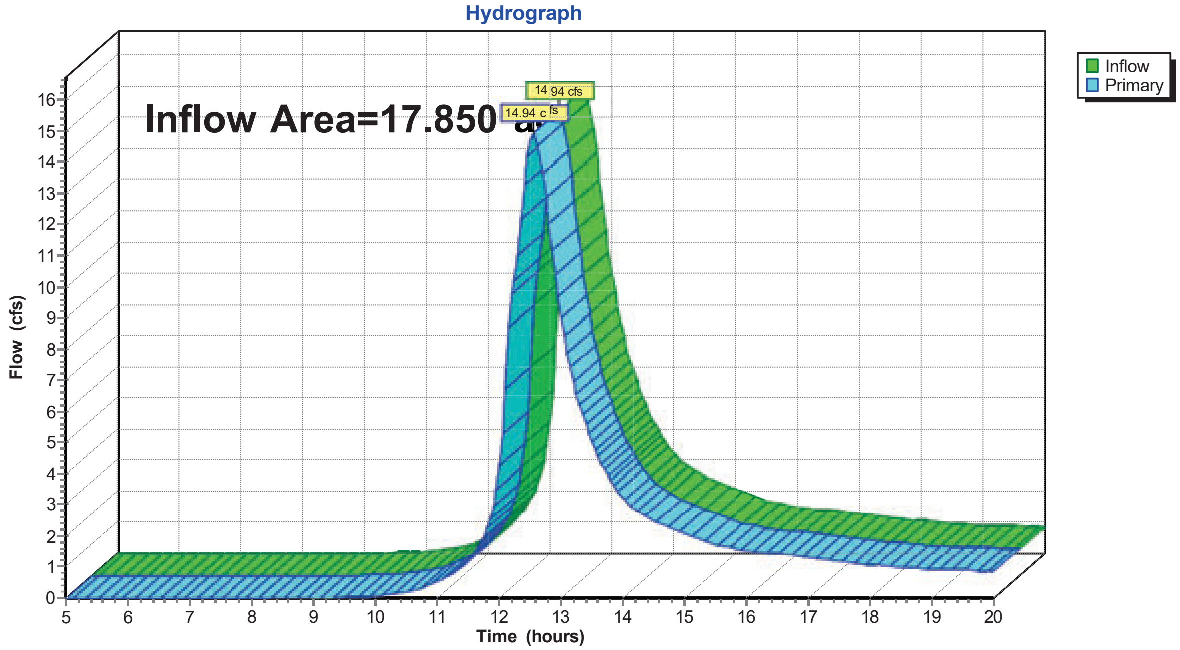


Summary for Link 15L: PR POA / A

Inflow Area =	17.850 ac,	0.00% Impervious, Inflow Depth > 1.51"		for 5-Year event
Inflow =	14.94 cfs @	12.55 hrs, Volume=	2.254 af	
Primary =	14.94 cfs @	12.55 hrs, Volume=	2.254 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 15L: PR POA / A

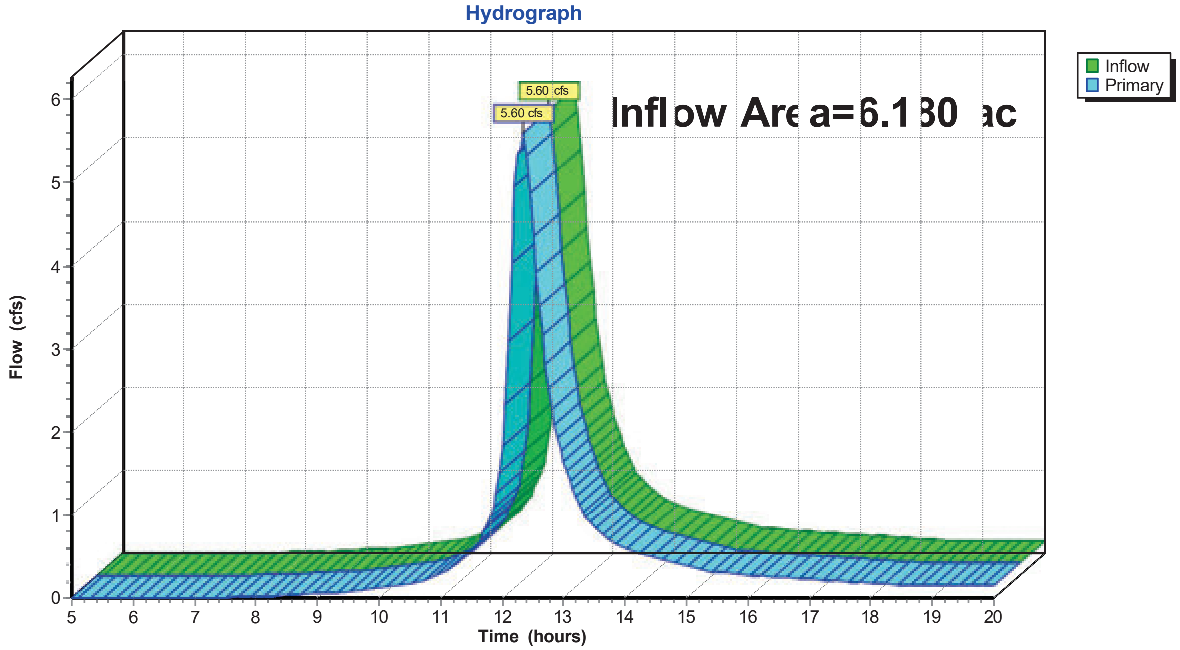


Summary for Link 18L: PR POA / B

Inflow Area =	6.180 ac,	0.00% Impervious, Inflow Depth > 1.13"		for 5-Year event
Inflow =	5.60 cfs @	12.35 hrs, Volume=	0.583 af	
Primary =	5.60 cfs @	12.35 hrs, Volume=	0.583 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 18L: PR POA / B



Summary for Subcatchment 1S: EXWS-10

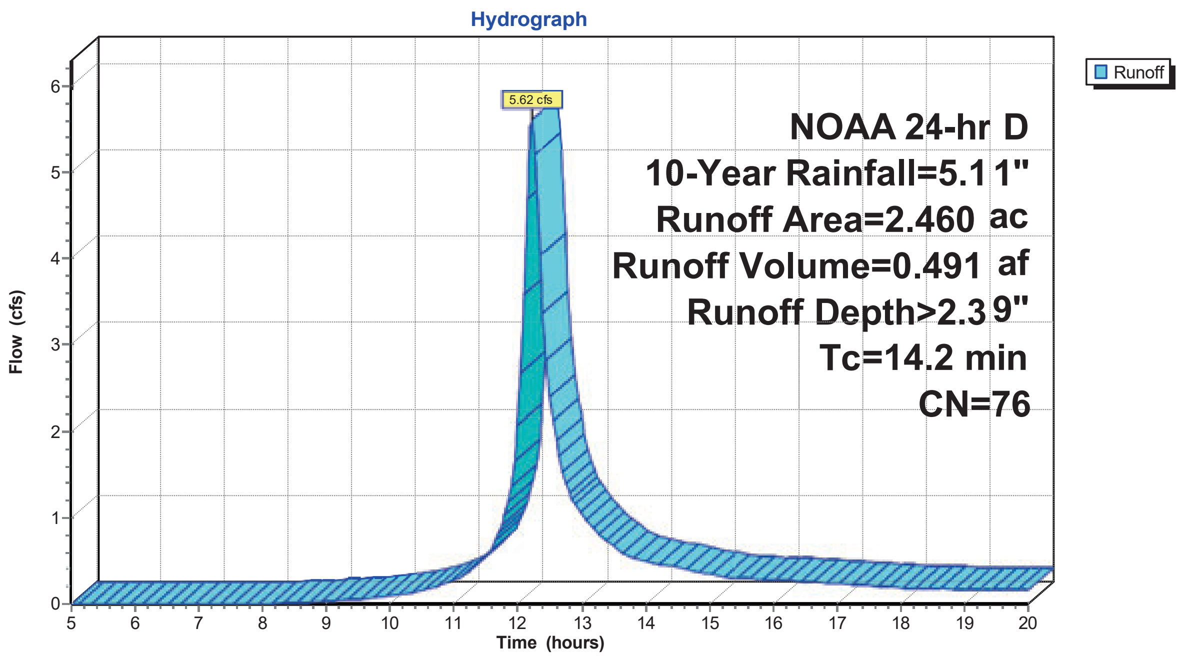
Runoff = 5.62 cfs @ 12.23 hrs, Volume= 0.491 af, Depth> 2.39"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	2.460	76	
	2.460		100.00% Pervious Area

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

Subcatchment 1S: EXWS-10



Summary for Subcatchment 2S: EXWS-11

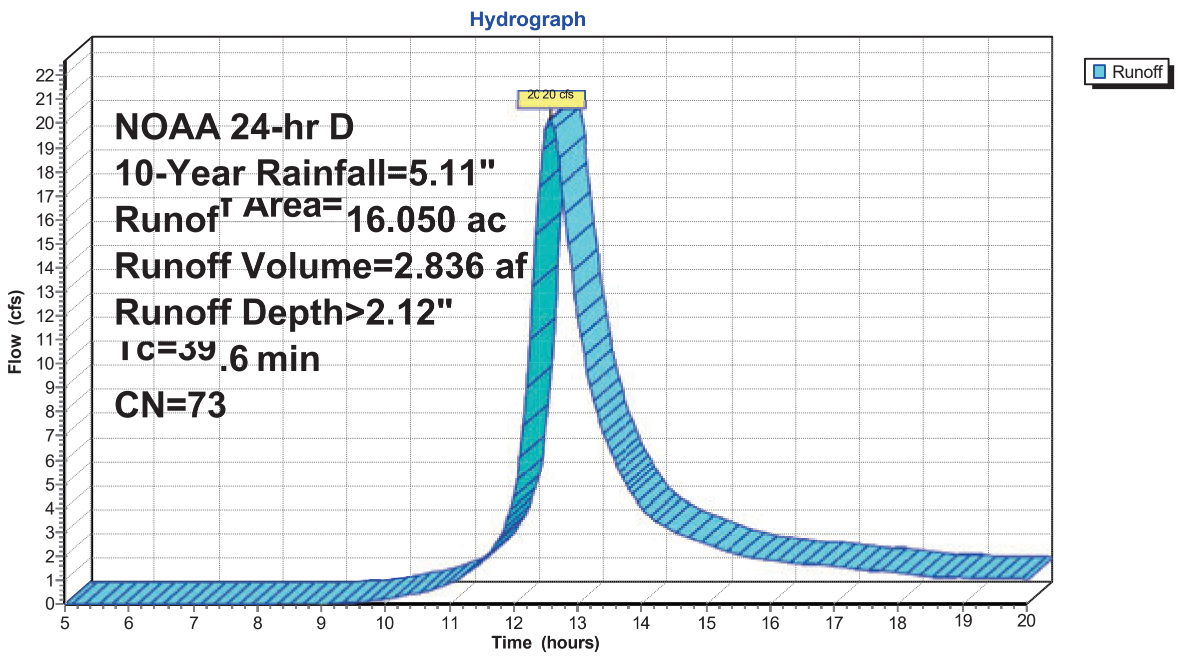
Runoff = 20.20 cfs @ 12.56 hrs, Volume= 2.836 af, Depth> 2.12"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	16.050	73	
	16.050		100.00% Pervious Area

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

Subcatchment 2S: EXWS-11



Summary for Subcatchment 5S: EXWS-20 / B

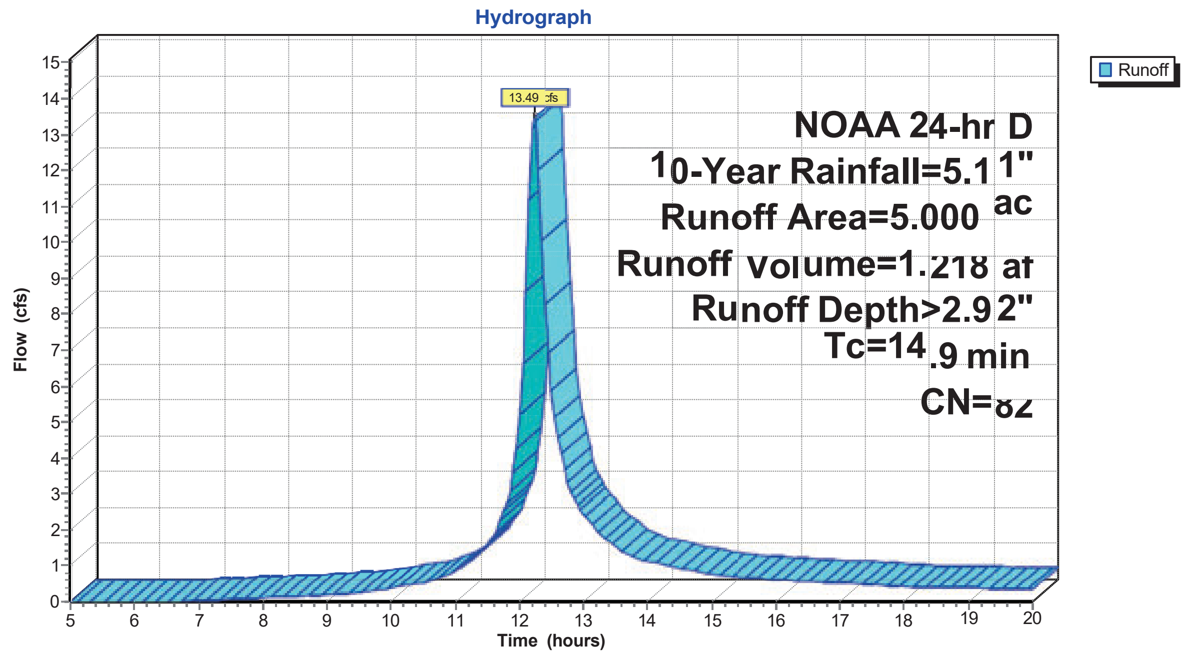
Runoff = 13.49 cfs @ 12.23 hrs, Volume= 1.218 af, Depth> 2.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	5.000	82	
	5.000		100.00% Pervious Area

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

Subcatchment 5S: EXWS-20 / B



Summary for Subcatchment 6S: EXWS-30 / C

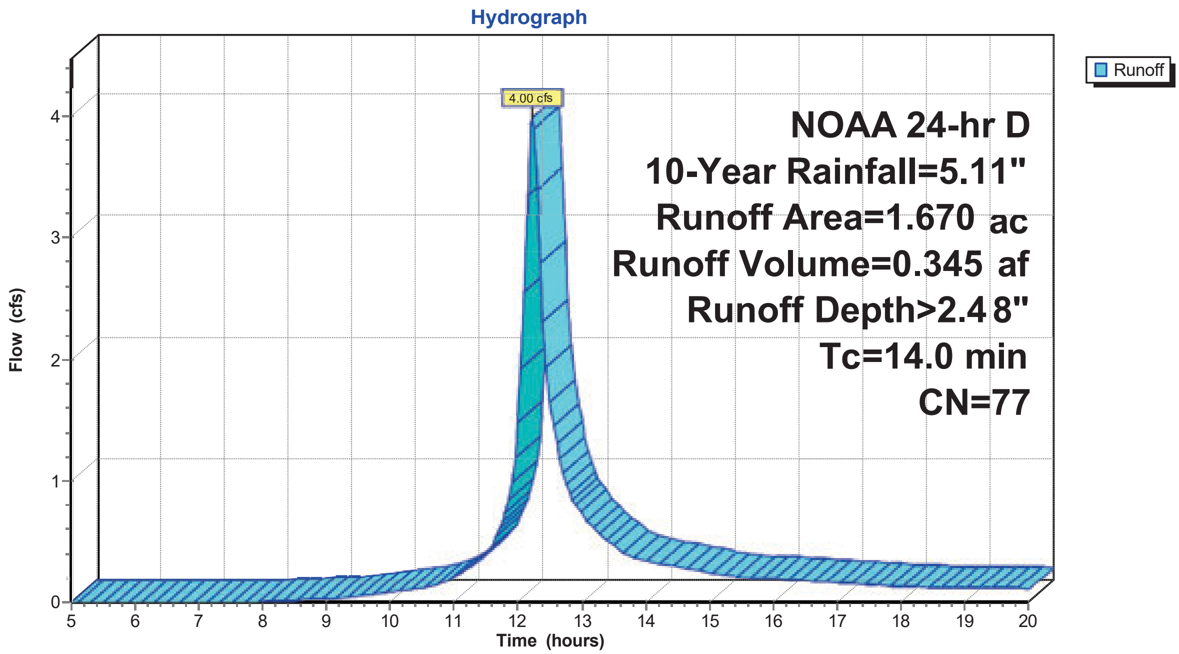
Runoff = 4.00 cfs @ 12.22 hrs, Volume= 0.345 af, Depth> 2.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	1.670	77	
	1.670		100.00% Pervious Area

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

Subcatchment 6S: EXWS-30 / C



Summary for Subcatchment 7S: PRWS-10

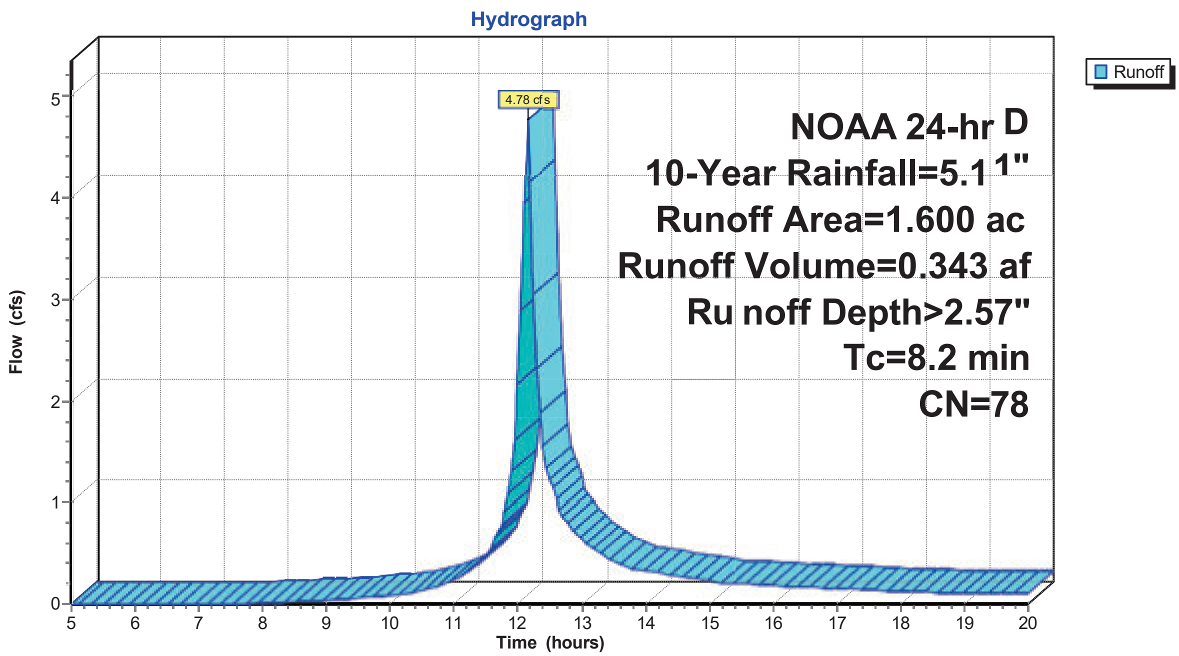
Runoff = 4.78 cfs @ 12.15 hrs, Volume= 0.343 af, Depth> 2.57"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	1.600	78	
	1.600		100.00% Pervious Area

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

Subcatchment 7S: PRWS-10



Summary for Subcatchment 8S: PRWS-11

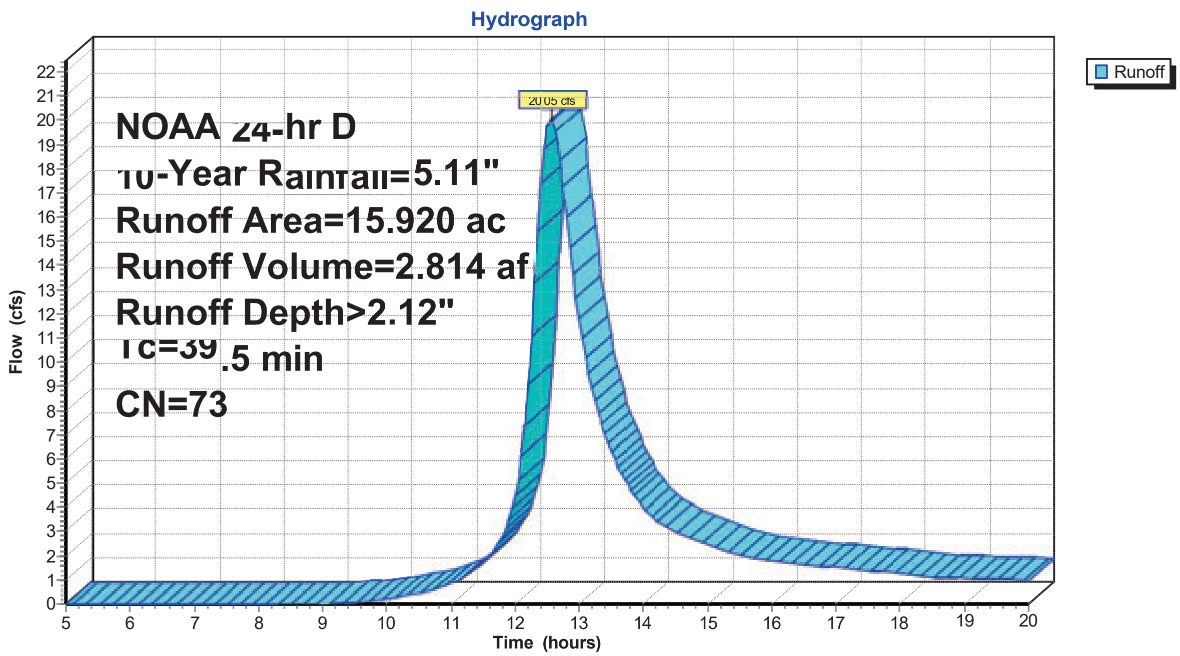
Runoff = 20.05 cfs @ 12.56 hrs, Volume= 2.814 af, Depth> 2.12"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	15.920	73	
	15.920		100.00% Pervious Area

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

Subcatchment 8S: PRWS-11



Summary for Subcatchment 10S: PRWS-20

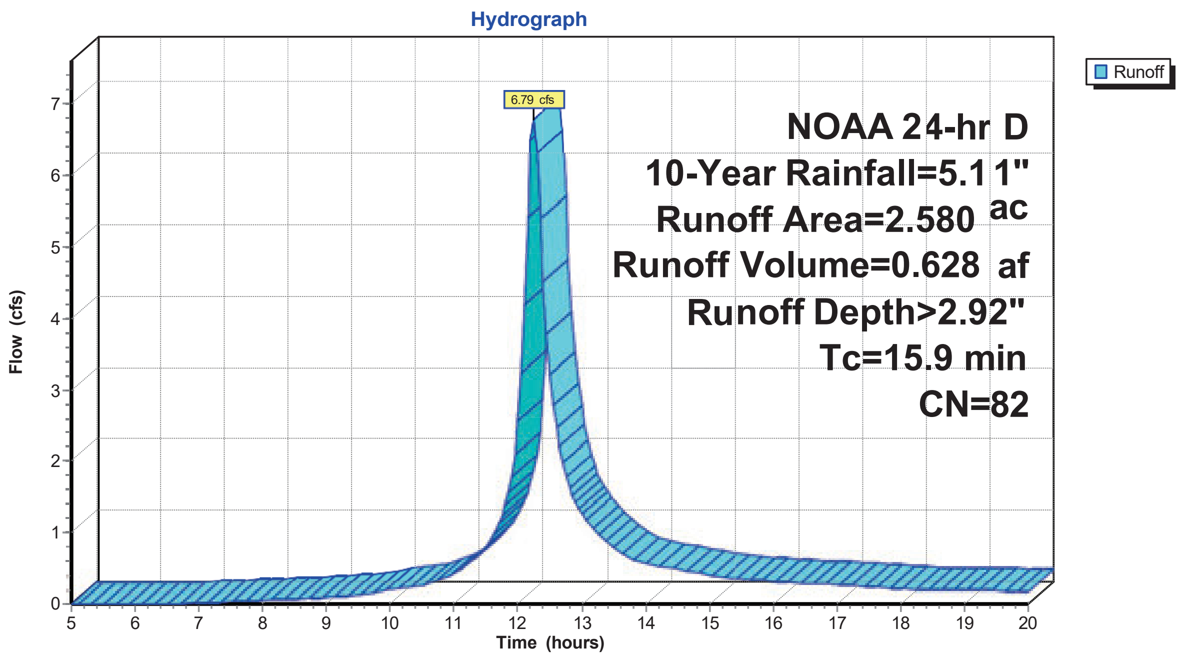
Runoff = 6.79 cfs @ 12.24 hrs, Volume= 0.628 af, Depth> 2.92"
Routed to Link 18L : PR POA / B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	2.580	82	
	2.580		100.00% Pervious Area

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

Subcatchment 10S: PRWS-20



Summary for Subcatchment 11S: PRWS-21

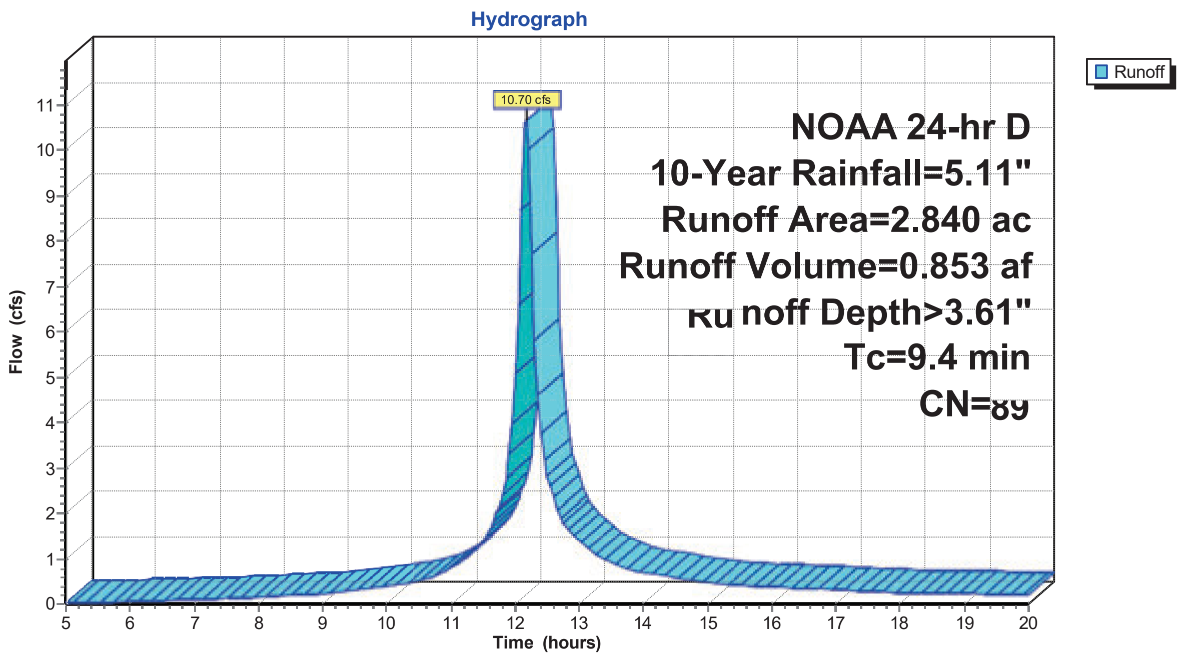
Runoff = 10.70 cfs @ 12.16 hrs, Volume= 0.853 af, Depth> 3.61"
Routed to Pond 16P : DET 210

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	2.840	89	
	2.840		100.00% Pervious Area

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

Subcatchment 11S: PRWS-21



Summary for Subcatchment 12S: PRWS-22

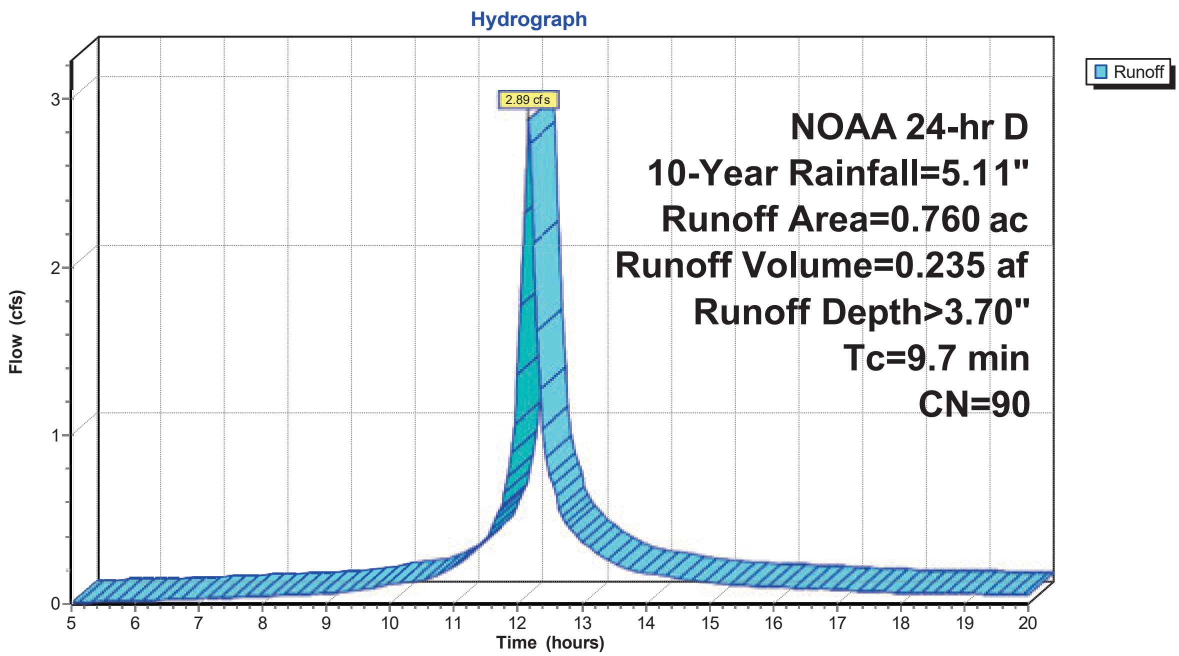
Runoff = 2.89 cfs @ 12.17 hrs, Volume= 0.235 af, Depth> 3.70"
Routed to Pond 17P : DET 220

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	0.760	90	
	0.760		100.00% Pervious Area

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

Subcatchment 12S: PRWS-22



Summary for Subcatchment 13S: PRWS-30 / C

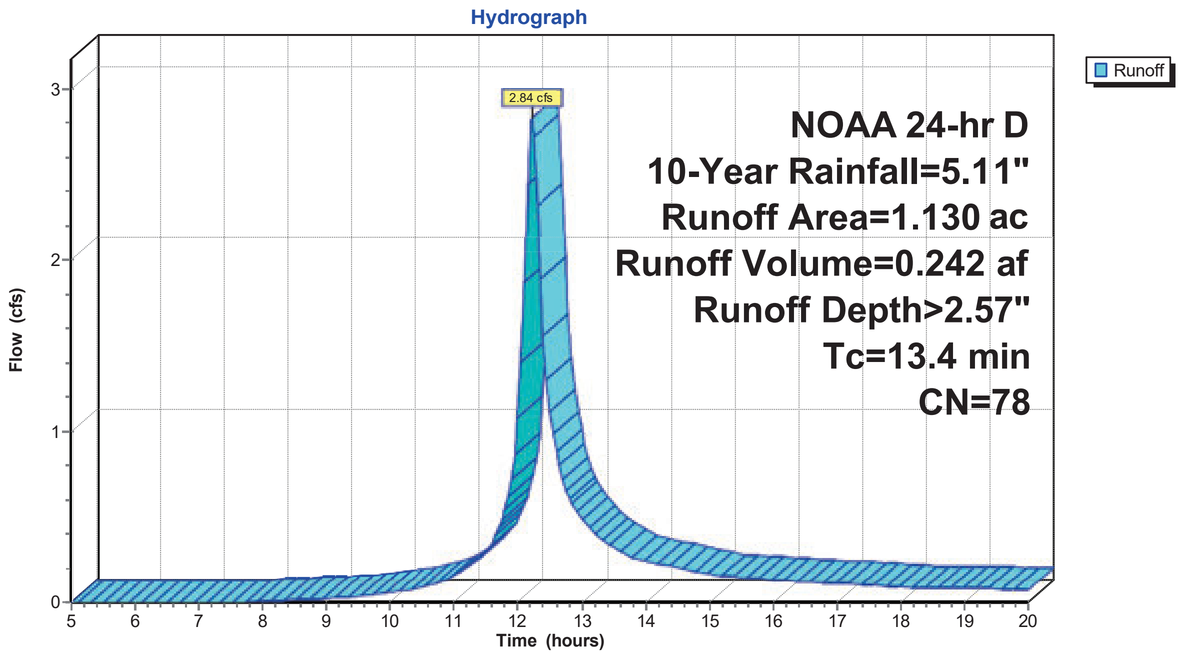
Runoff = 2.84 cfs @ 12.21 hrs, Volume= 0.242 af, Depth> 2.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	1.130	78	
	1.130		100.00% Pervious Area

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

Subcatchment 13S: PRWS-30 / C



Summary for Subcatchment 20S: PRWS-14

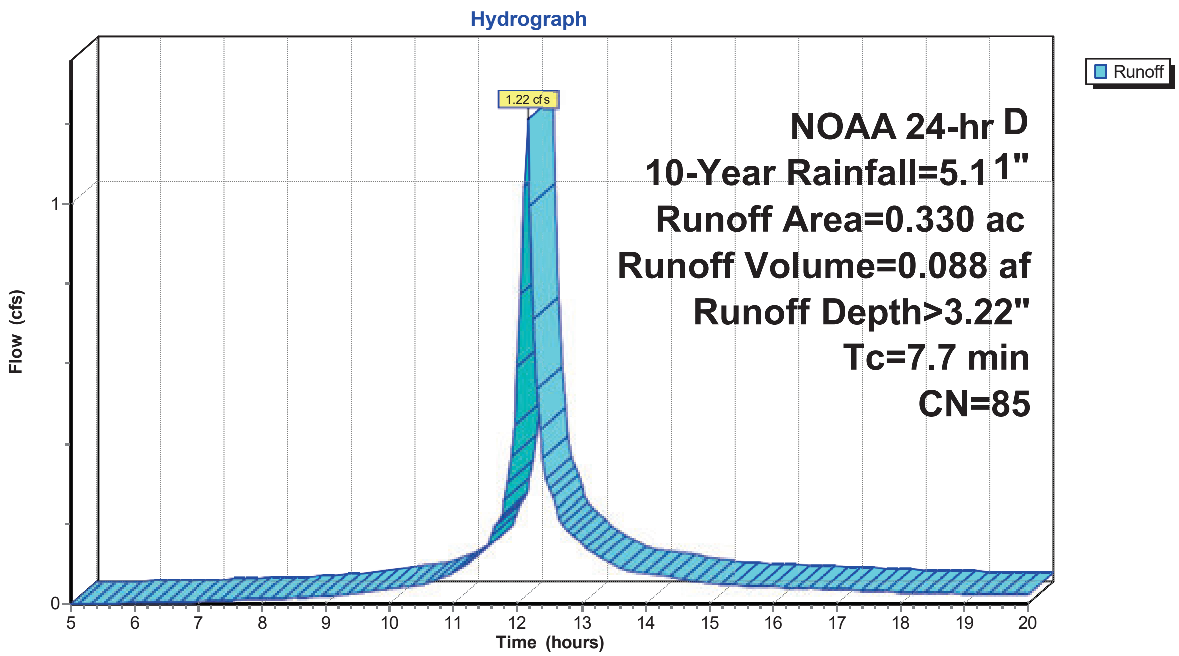
Runoff = 1.22 cfs @ 12.15 hrs, Volume= 0.088 af, Depth> 3.22"
Routed to Pond 23P : WQ 140

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-Year Rainfall=5.11"

	Area (ac)	CN	Description
*	0.330	85	
	0.330		100.00% Pervious Area

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

Subcatchment 20S: PRWS-14



Summary for Pond 16P: DET 210

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth > 3.61" for 10-Year event
Inflow = 10.70 cfs @ 12.16 hrs, Volume= 0.853 af
Outflow = 5.72 cfs @ 12.32 hrs, Volume= 0.852 af, Atten= 47%, Lag= 9.2 min
Discarded = 1.12 cfs @ 12.31 hrs, Volume= 0.691 af
Primary = 4.60 cfs @ 12.32 hrs, Volume= 0.162 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 816.13' @ 12.31 hrs Surf.Area= 9,081 sf Storage= 9,446 cf

Plug-Flow detention time= 46.6 min calculated for 0.849 af (100% of inflow)
Center-of-Mass det. time= 45.8 min (811.3 - 765.5)

Volume	Invert	Avail.Storage	Storage Description
#1	815.00'	28,886 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)
815.00	7,672	0	0	7,672
816.00	8,907	8,282	8,282	8,948
817.00	10,296	9,593	17,875	10,380
818.00	11,741	11,011	28,886	11,872

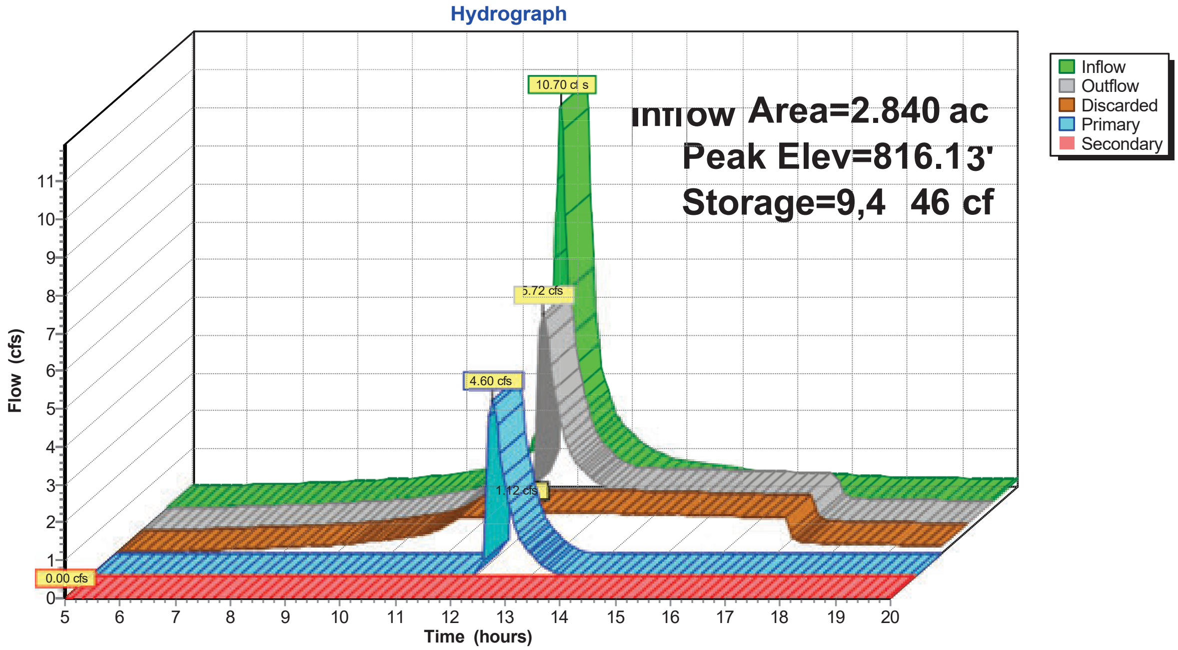
Device	Routing	Invert	Outlet Devices
#1	Discarded	815.00'	**5.320 in/hr Exfiltration over Surface area**
#2	Primary	814.50'	**15.0" Round Culvert** L= 127.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 814.50' / 806.40' S= 0.0638 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	815.90'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Secondary	817.20'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=1.12 cfs @ 12.31 hrs HW=816.13' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 1.12 cfs)

Primary OutFlow Max=4.67 cfs @ 12.32 hrs HW=816.13' (Free Discharge)
└─**2=Culvert** (Inlet Controls 4.67 cfs @ 3.80 fps)
  └─**3=Sharp-Crested Rectangular Weir** (Passes 4.67 cfs of 4.89 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=815.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 16P: DET 210



Summary for Pond 17P: DET 220

Inflow Area = 0.760 ac, 0.00% Impervious, Inflow Depth > 3.70" for 10-Year event
Inflow = 2.89 cfs @ 12.17 hrs, Volume= 0.235 af
Outflow = 1.75 cfs @ 12.31 hrs, Volume= 0.186 af, Atten= 39%, Lag= 8.5 min
Discarded = 0.10 cfs @ 12.31 hrs, Volume= 0.081 af
Primary = 1.65 cfs @ 12.31 hrs, Volume= 0.105 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 802.88' @ 12.31 hrs Surf.Area= 2,710 sf Storage= 3,808 cf

Plug-Flow detention time= 106.5 min calculated for 0.185 af (79% of inflow)
Center-of-Mass det. time= 50.5 min (813.2 - 762.8)

Volume	Invert	Avail.Storage	Storage Description
#1	801.00'	7,722 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)
801.00	1,433	0	0	1,433
802.00	2,039	1,727	1,727	2,057
803.00	2,810	2,414	4,141	2,847
804.00	4,412	3,581	7,722	4,463

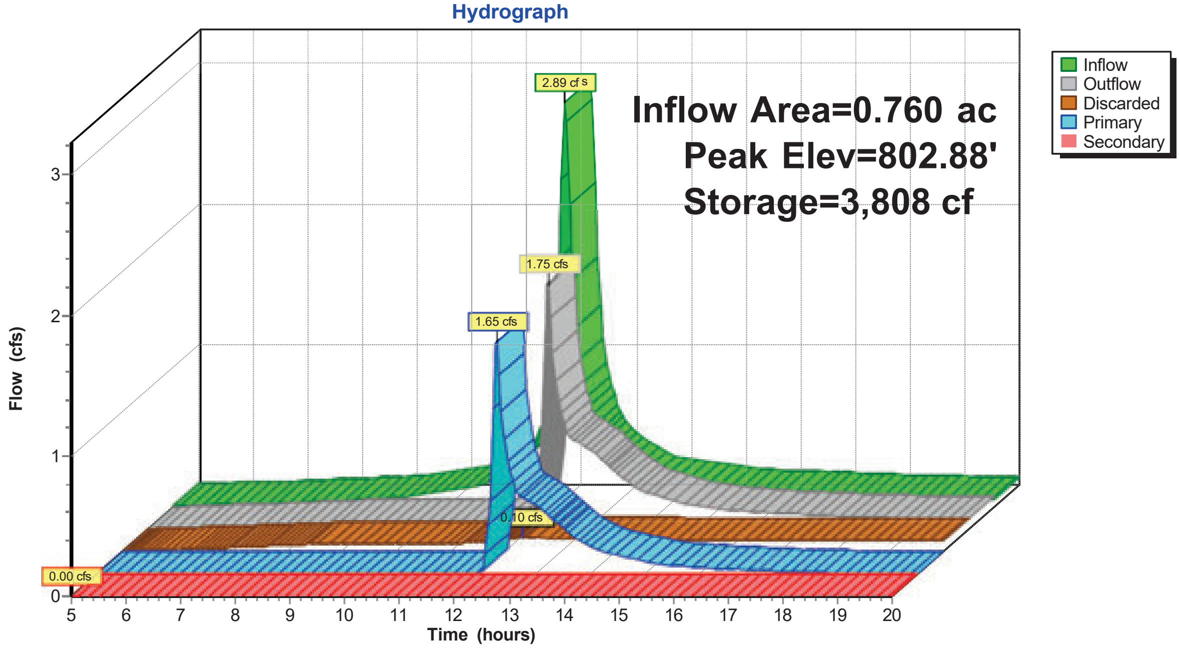
Device	Routing	Invert	Outlet Devices
#1	Discarded	801.00'	**1.580 in/hr Exfiltration over Surface area**
#2	Primary	800.50'	**15.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 800.50' / 800.00' S= 0.0128 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	802.20'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 2	802.80'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	803.00'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=0.10 cfs @ 12.31 hrs HW=802.88' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=1.59 cfs @ 12.31 hrs HW=802.88' (Free Discharge)
└─**2=Culvert** (Passes 1.59 cfs of 6.17 cfs potential flow)
  ├─**3=Orifice/Grate** (Orifice Controls 0.62 cfs @ 3.15 fps)
  └─**4=Sharp-Crested Rectangular Weir** (Weir Controls 0.97 cfs @ 0.91 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=801.00' (Free Discharge)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 17P: DET 220



Summary for Pond 23P: WQ 140

Inflow Area = 0.330 ac, 0.00% Impervious, Inflow Depth > 3.22" for 10-Year event
Inflow = 1.22 cfs @ 12.15 hrs, Volume= 0.088 af
Outflow = 1.15 cfs @ 12.17 hrs, Volume= 0.066 af, Atten= 5%, Lag= 1.4 min
Primary = 1.15 cfs @ 12.17 hrs, Volume= 0.066 af
Routed to Link 15L : PR POA / A

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 838.63' @ 12.17 hrs Surf.Area= 1,158 sf Storage= 1,116 cf

Plug-Flow detention time= 107.6 min calculated for 0.066 af (74% of inflow)
Center-of-Mass det. time= 45.5 min (821.4 - 775.9)

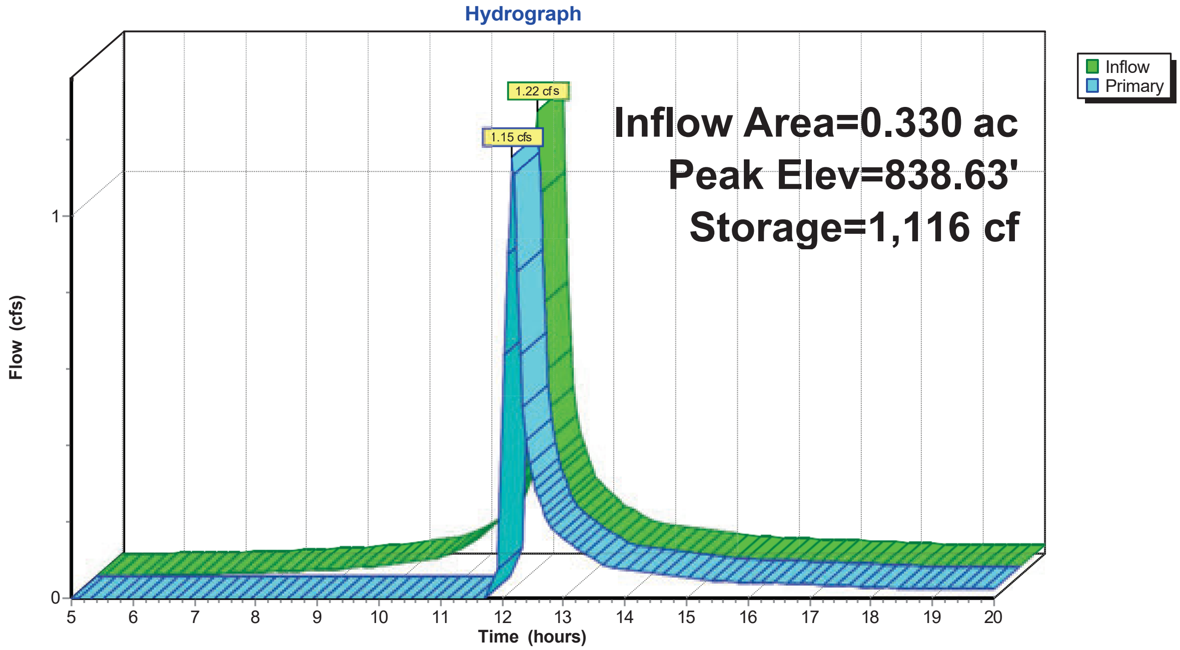
Volume	Invert	Avail.Storage	Storage Description
#1	837.50'	1,554 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
837.50	801	0	0
838.00	964	441	441
838.50	1,143	527	968
839.00	1,200	586	1,554

Device	Routing	Invert	Outlet Devices
#1	Primary	838.50'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=1.12 cfs @ 12.17 hrs HW=838.63' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 1.12 cfs @ 0.86 fps)

Pond 23P: WQ 140

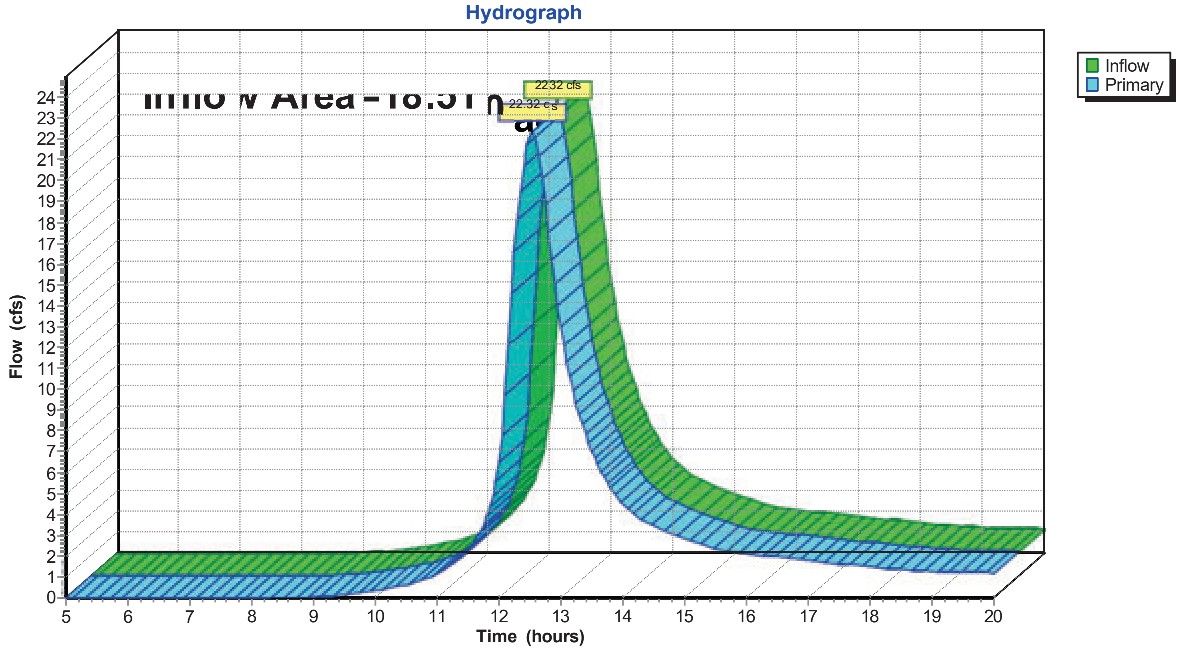


Summary for Link 4L: EX POA / A

Inflow Area =	18.510 ac,	0.00% Impervious,	Inflow Depth > 2.16"	for 10-Year event	
Inflow =	22.32 cfs @	12.54 hrs,	Volume=	3.327 af	
Primary =	22.32 cfs @	12.54 hrs,	Volume=	3.327 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: EX POA / A

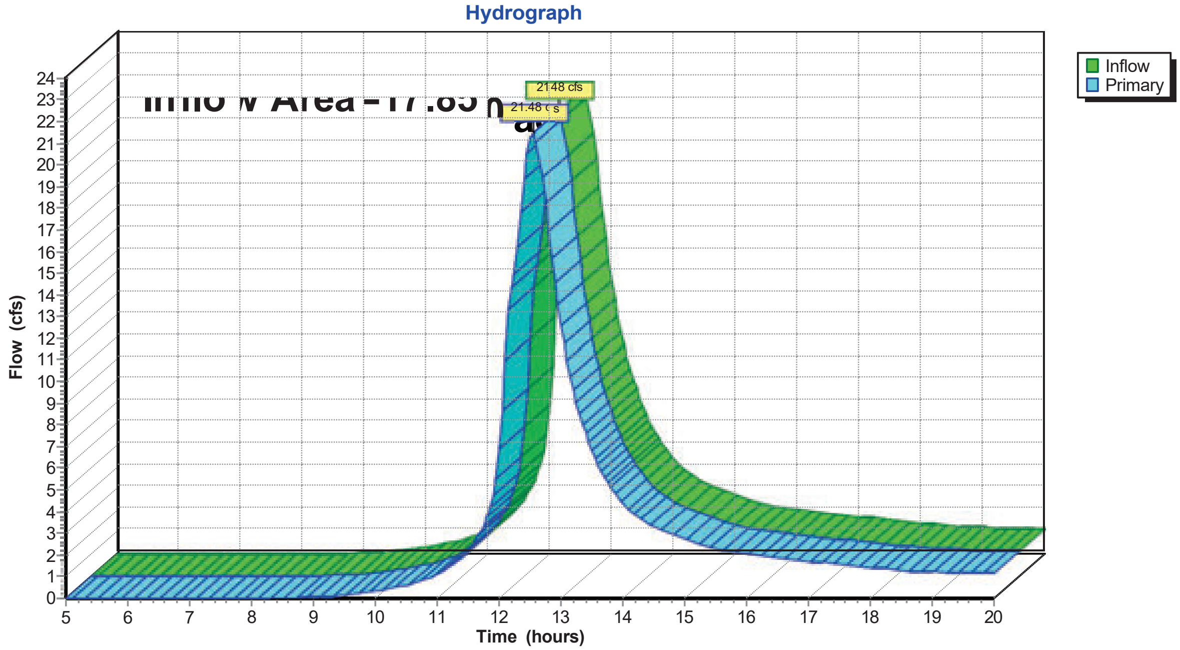


Summary for Link 15L: PR POA / A

Inflow Area =	17.850 ac,	0.00% Impervious, Inflow Depth > 2.17"		for 10-Year event
Inflow =	21.48 cfs @	12.54 hrs, Volume=	3.222 af	
Primary =	21.48 cfs @	12.54 hrs, Volume=	3.222 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

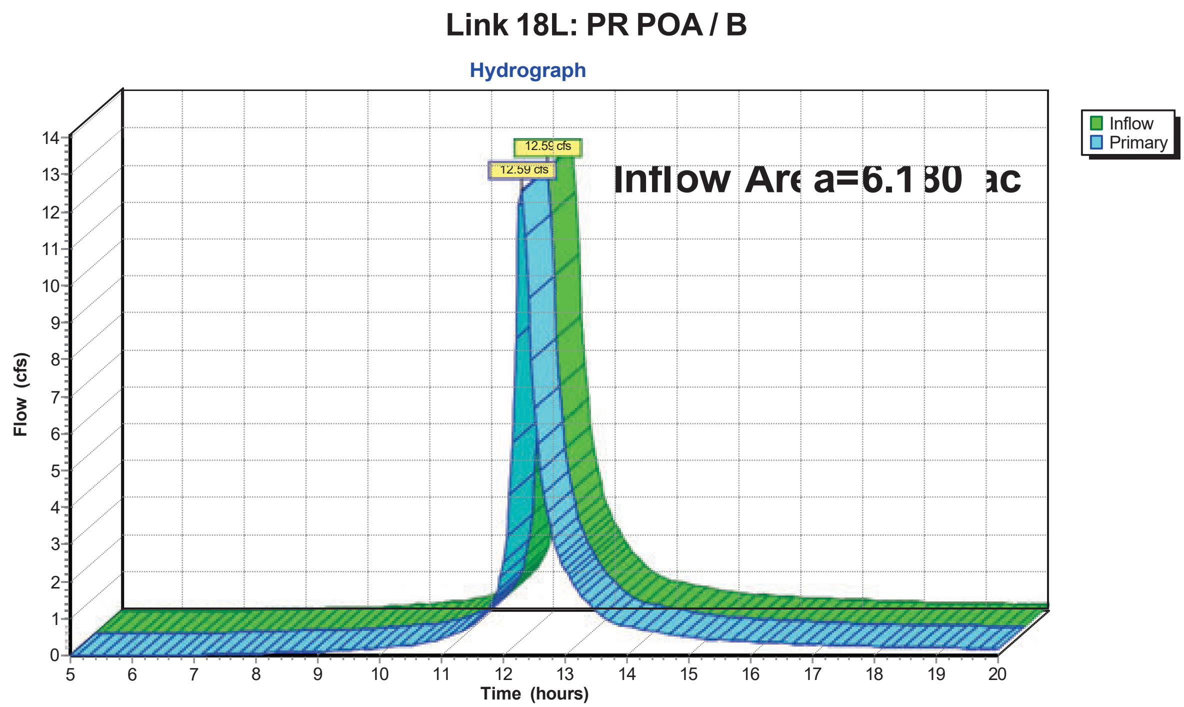
Link 15L: PR POA / A



Summary for Link 18L: PR POA / B

Inflow Area =	6.180 ac,	0.00% Impervious, Inflow Depth > 1.74"		for 10-Year event
Inflow =	12.59 cfs @	12.29 hrs, Volume=	0.895 af	
Primary =	12.59 cfs @	12.29 hrs, Volume=	0.895 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



Summary for Subcatchment 1S: EXWS-10

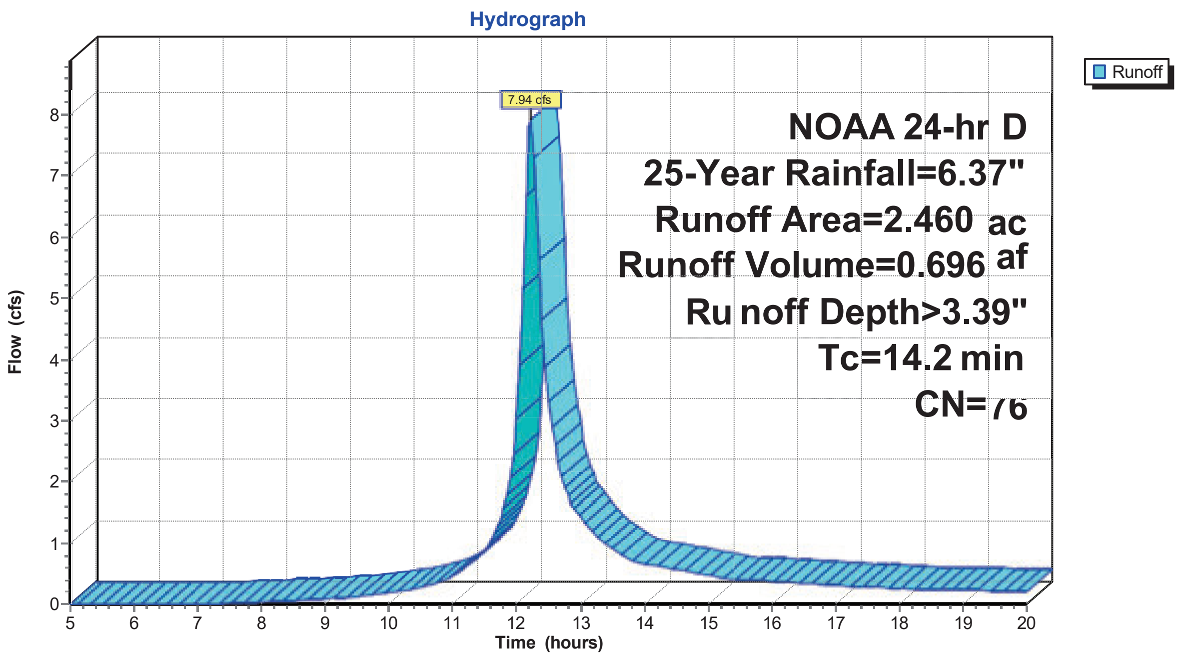
Runoff = 7.94 cfs @ 12.22 hrs, Volume= 0.696 af, Depth> 3.39"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	2.460	76	
	2.460		100.00% Pervious Area

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

Subcatchment 1S: EXWS-10



Summary for Subcatchment 2S: EXWS-11

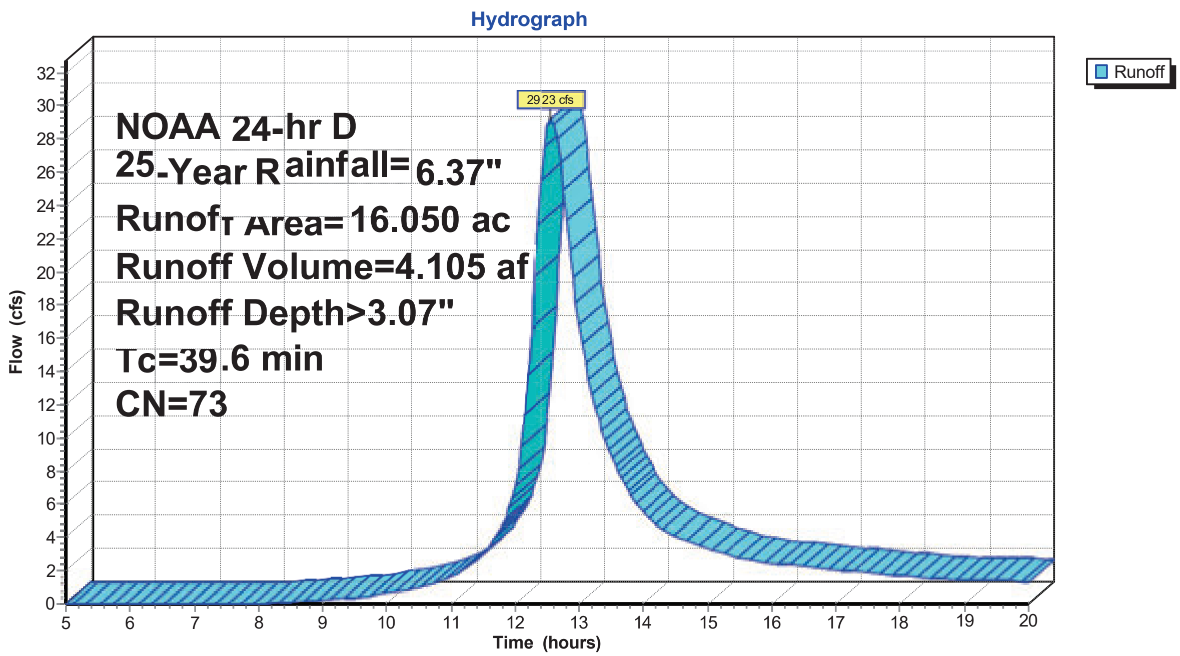
Runoff = 29.23 cfs @ 12.55 hrs, Volume= 4.105 af, Depth> 3.07"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	16.050	73	
	16.050		100.00% Pervious Area

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

Subcatchment 2S: EXWS-11



Summary for Subcatchment 5S: EXWS-20 / B

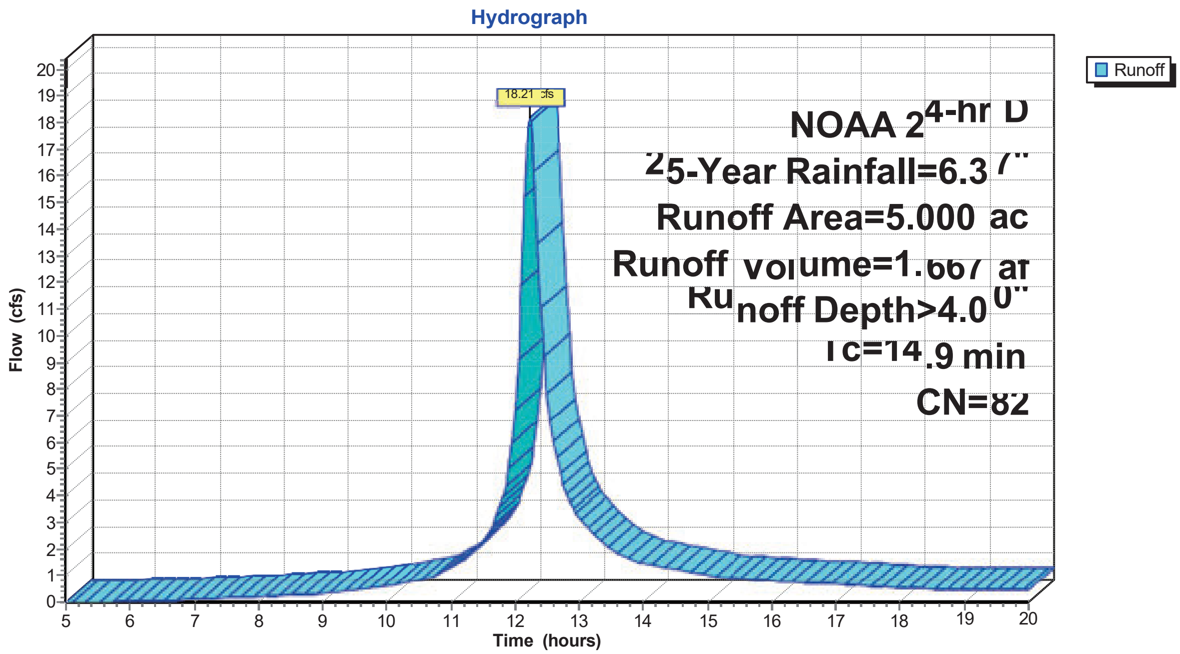
Runoff = 18.21 cfs @ 12.23 hrs, Volume= 1.667 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	5.000	82	
	5.000		100.00% Pervious Area

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

Subcatchment 5S: EXWS-20 / B



Summary for Subcatchment 6S: EXWS-30 / C

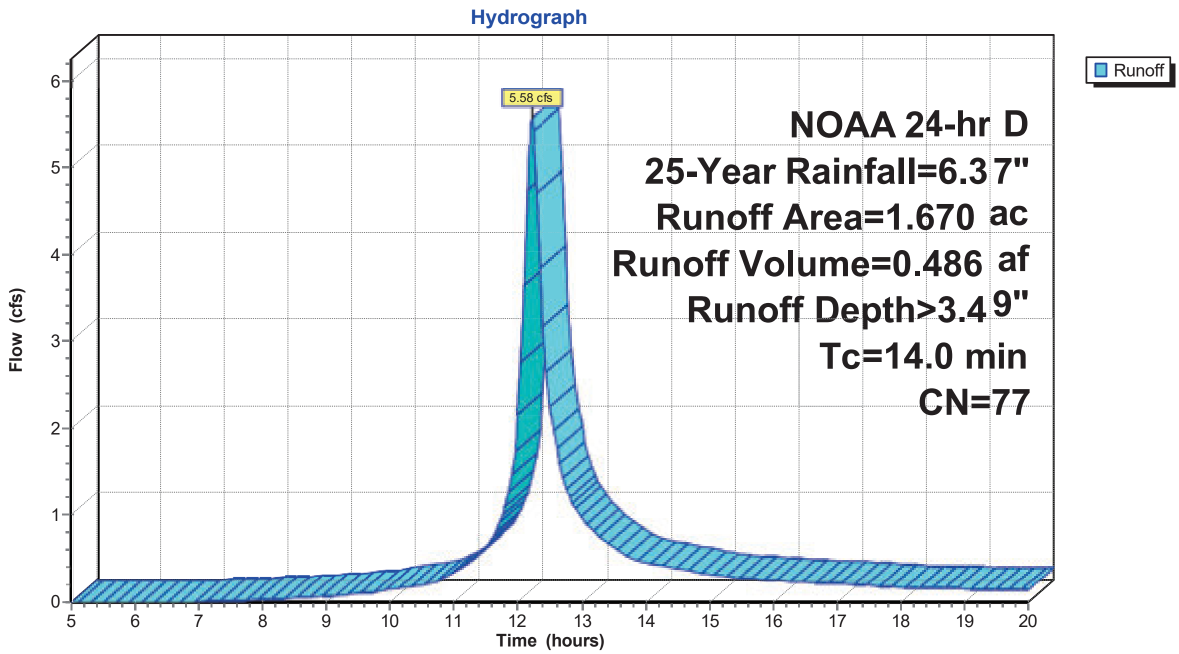
Runoff = 5.58 cfs @ 12.22 hrs, Volume= 0.486 af, Depth> 3.49"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	1.670	77	
	1.670		100.00% Pervious Area

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

Subcatchment 6S: EXWS-30 / C



Summary for Subcatchment 7S: PRWS-10

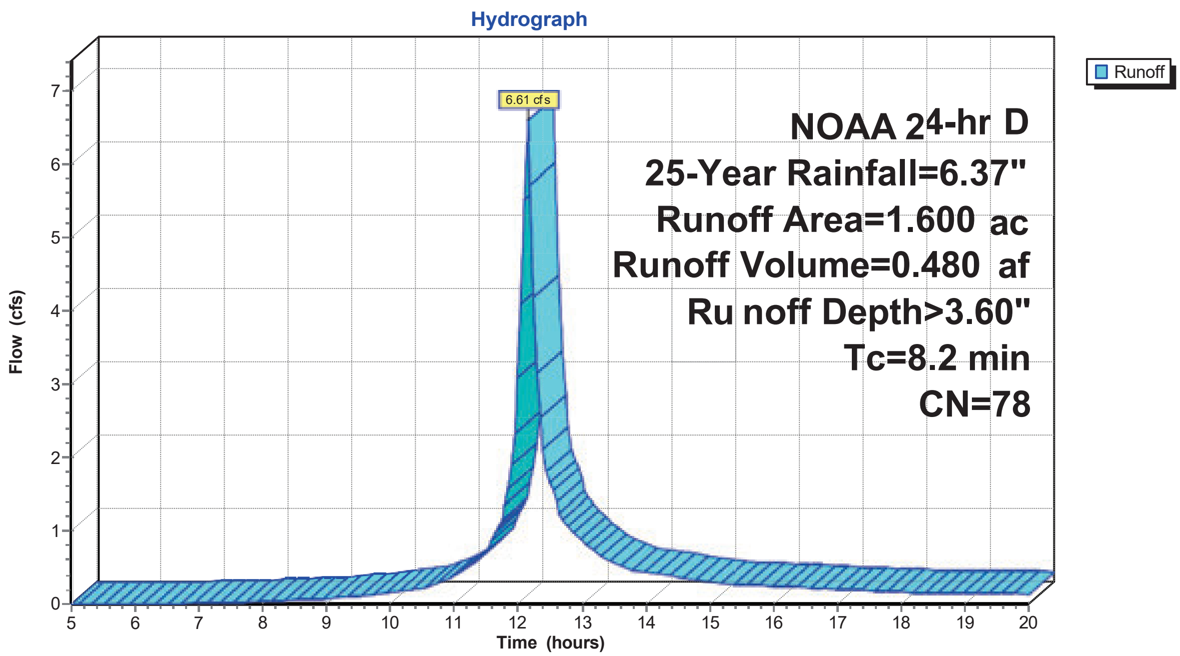
Runoff = 6.61 cfs @ 12.15 hrs, Volume= 0.480 af, Depth> 3.60"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	1.600	78	
	1.600		100.00% Pervious Area

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

Subcatchment 7S: PRWS-10



Summary for Subcatchment 8S: PRWS-11

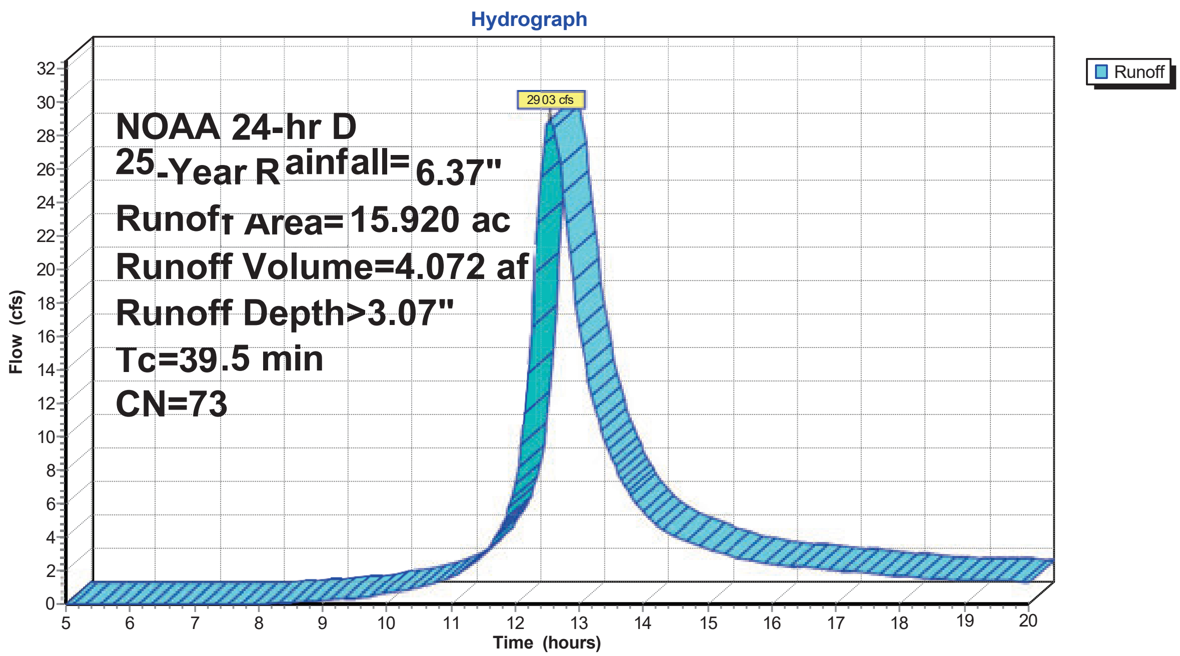
Runoff = 29.03 cfs @ 12.55 hrs, Volume= 4.072 af, Depth> 3.07"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	15.920	73	
	15.920		100.00% Pervious Area

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

Subcatchment 8S: PRWS-11



Summary for Subcatchment 10S: PRWS-20

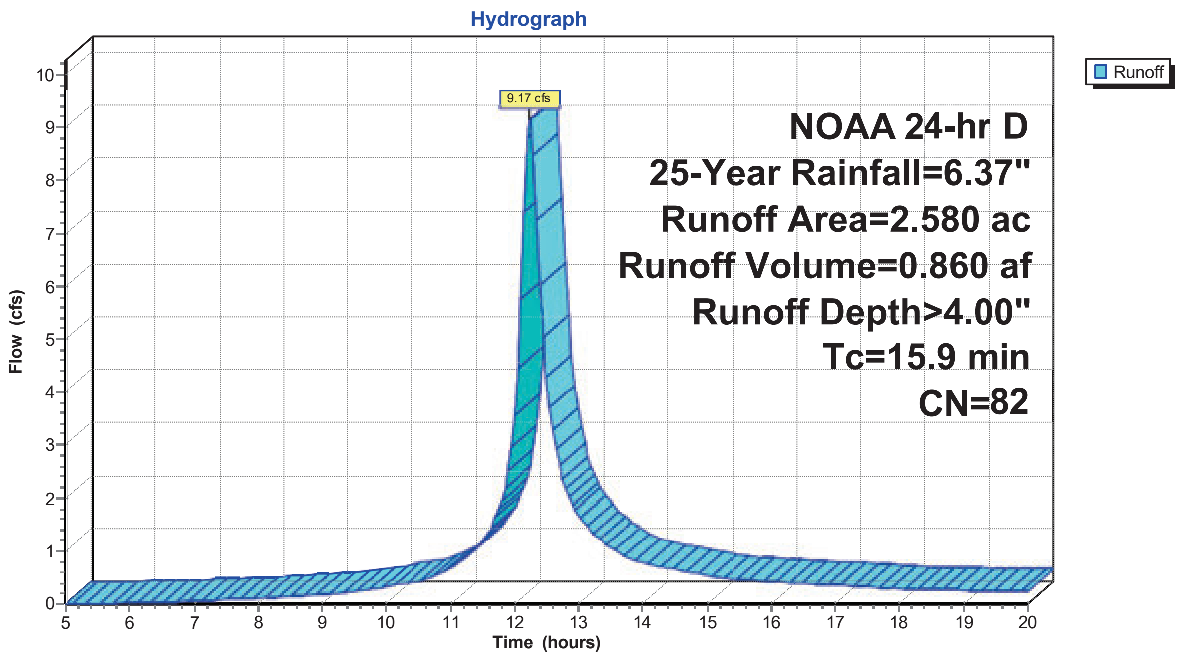
Runoff = 9.17 cfs @ 12.24 hrs, Volume= 0.860 af, Depth> 4.00"
Routed to Link 18L : PR POA / B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	2.580	82	
	2.580		100.00% Pervious Area

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

Subcatchment 10S: PRWS-20



Summary for Subcatchment 11S: PRWS-21

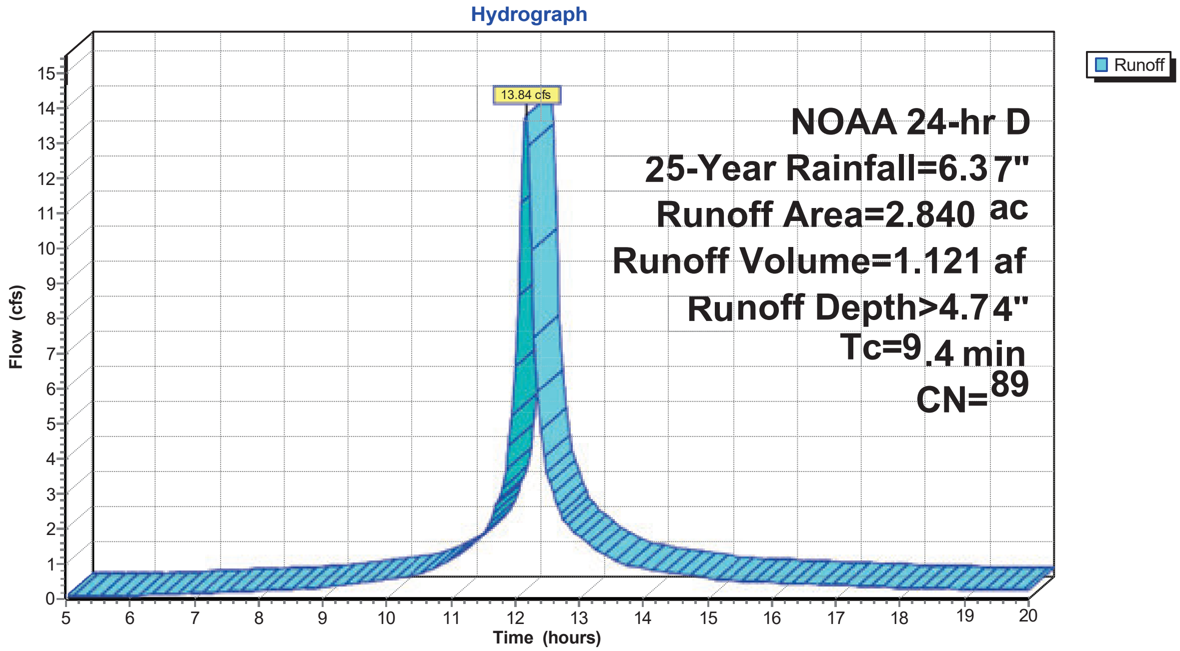
Runoff = 13.84 cfs @ 12.16 hrs, Volume= 1.121 af, Depth> 4.74"
Routed to Pond 16P : DET 210

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	2.840	89	
	2.840		100.00% Pervious Area

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

Subcatchment 11S: PRWS-21



Summary for Subcatchment 12S: PRWS-22

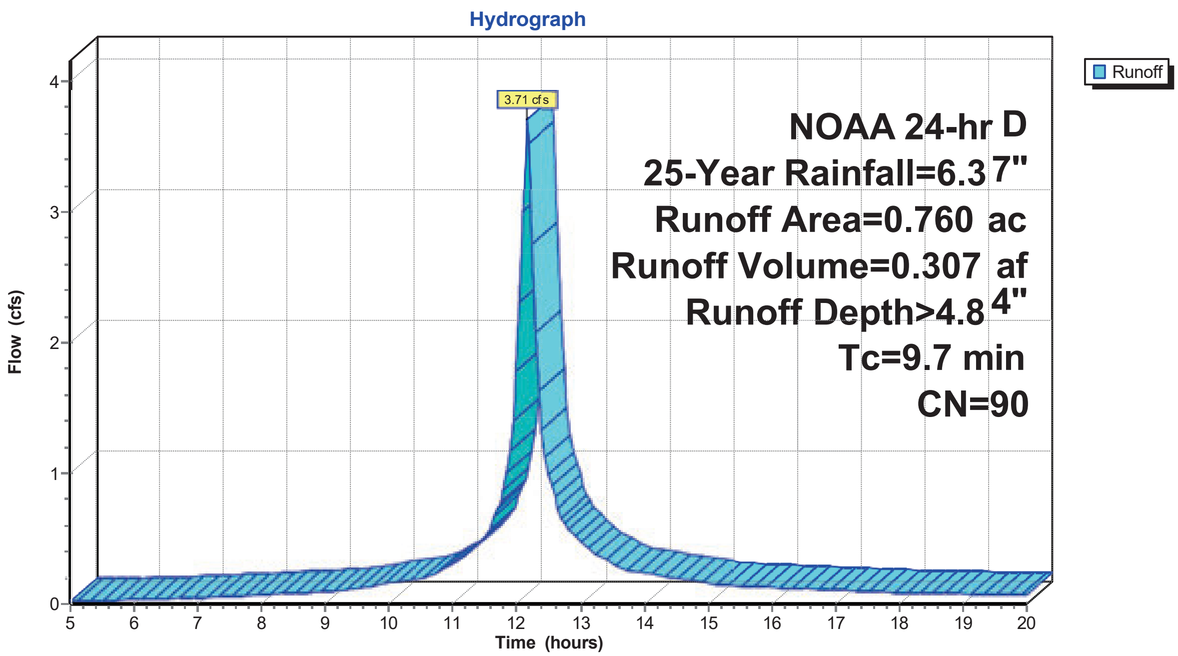
Runoff = 3.71 cfs @ 12.17 hrs, Volume= 0.307 af, Depth> 4.84"
Routed to Pond 17P : DET 220

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	0.760	90	
	0.760		100.00% Pervious Area

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

Subcatchment 12S: PRWS-22



Summary for Subcatchment 13S: PRWS-30 / C

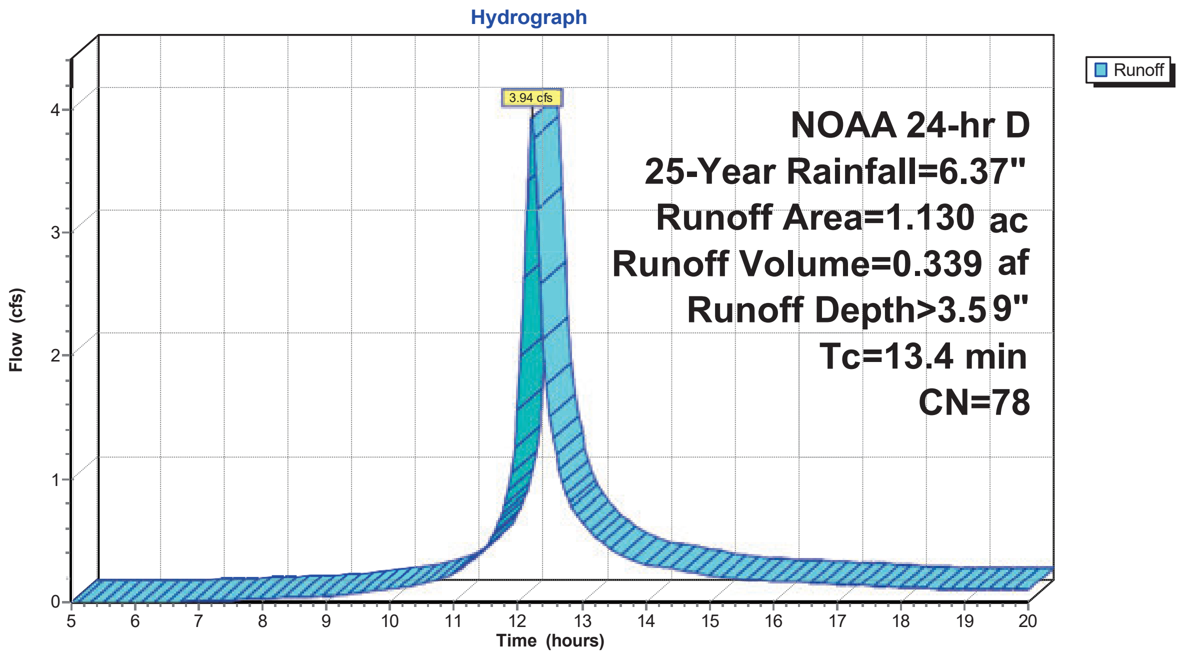
Runoff = 3.94 cfs @ 12.21 hrs, Volume= 0.339 af, Depth> 3.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	1.130	78	
	1.130		100.00% Pervious Area

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

Subcatchment 13S: PRWS-30 / C



Summary for Subcatchment 20S: PRWS-14

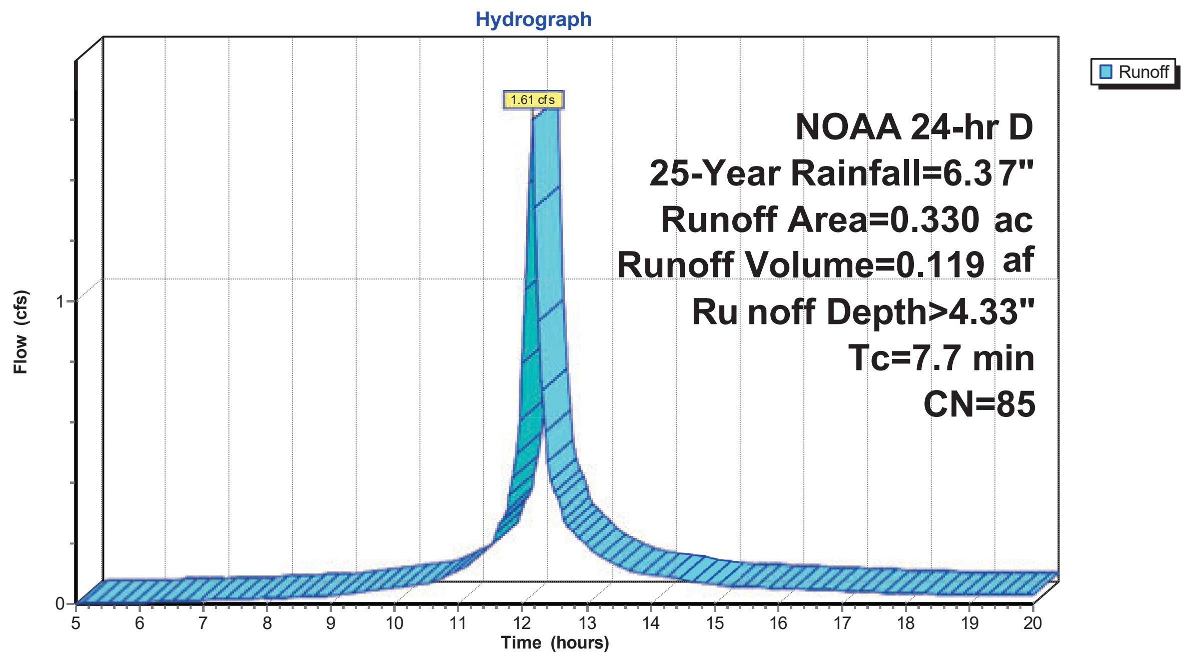
Runoff = 1.61 cfs @ 12.15 hrs, Volume= 0.119 af, Depth> 4.33"
Routed to Pond 23P : WQ 140

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-Year Rainfall=6.37"

	Area (ac)	CN	Description
*	0.330	85	
	0.330		100.00% Pervious Area

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

Subcatchment 20S: PRWS-14



Summary for Pond 16P: DET 210

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth > 4.74" for 25-Year event
Inflow = 13.84 cfs @ 12.16 hrs, Volume= 1.121 af
Outflow = 6.50 cfs @ 12.33 hrs, Volume= 1.120 af, Atten= 53%, Lag= 10.2 min
Discarded = 1.17 cfs @ 12.33 hrs, Volume= 0.802 af
Primary = 5.33 cfs @ 12.33 hrs, Volume= 0.318 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 816.43' @ 12.33 hrs Surf.Area= 9,495 sf Storage= 12,258 cf

Plug-Flow detention time= 44.3 min calculated for 1.120 af (100% of inflow)
Center-of-Mass det. time= 43.6 min (803.2 - 759.6)

Volume	Invert	Avail.Storage	Storage Description
#1	815.00'	28,886 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)
815.00	7,672	0	0	7,672
816.00	8,907	8,282	8,282	8,948
817.00	10,296	9,593	17,875	10,380
818.00	11,741	11,011	28,886	11,872

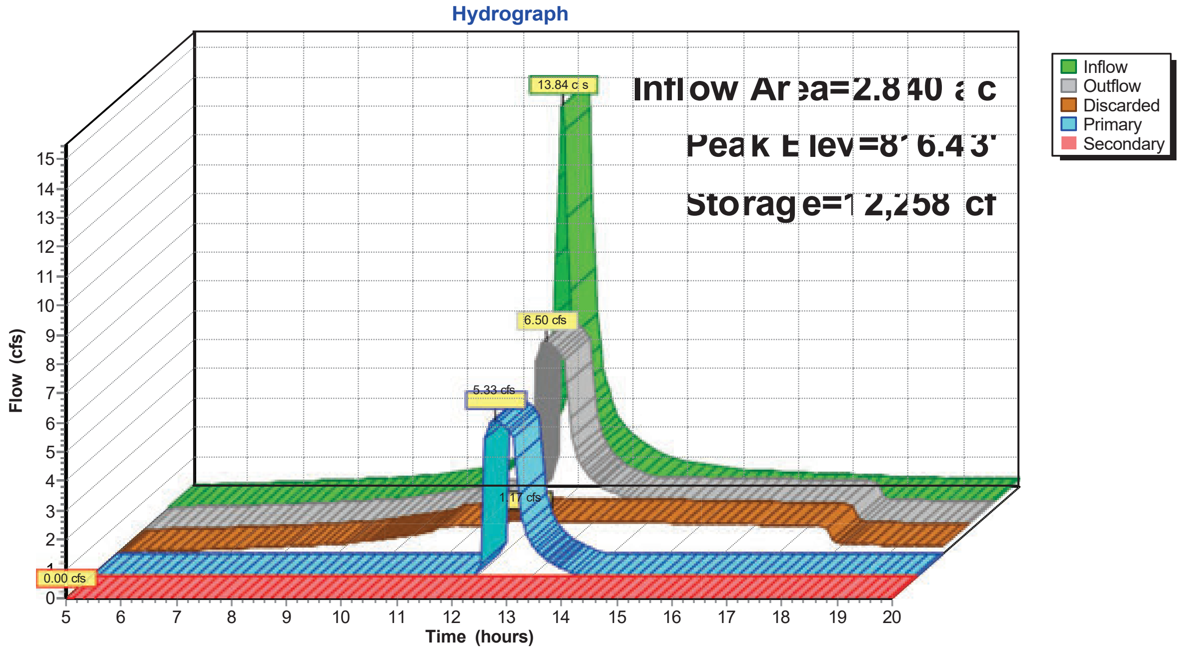
Device	Routing	Invert	Outlet Devices
#1	Discarded	815.00'	**5.320 in/hr Exfiltration over Surface area**
#2	Primary	814.50'	**15.0" Round Culvert** L= 127.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 814.50' / 806.40' S= 0.0638 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	815.90'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Secondary	817.20'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=1.17 cfs @ 12.33 hrs HW=816.43' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 1.17 cfs)

Primary OutFlow Max=5.33 cfs @ 12.33 hrs HW=816.43' (Free Discharge)
└─**2=Culvert** (Inlet Controls 5.33 cfs @ 4.34 fps)
　└─**3=Sharp-Crested Rectangular Weir** (Passes 5.33 cfs of 17.50 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=815.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 16P: DET 210



Summary for Pond 17P: DET 220

Inflow Area = 0.760 ac, 0.00% Impervious, Inflow Depth > 4.84" for 25-Year event
Inflow = 3.71 cfs @ 12.17 hrs, Volume= 0.307 af
Outflow = 3.55 cfs @ 12.21 hrs, Volume= 0.255 af, Atten= 5%, Lag= 2.8 min
Discarded = 0.10 cfs @ 12.21 hrs, Volume= 0.087 af
Primary = 3.44 cfs @ 12.21 hrs, Volume= 0.168 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 802.95' @ 12.21 hrs Surf.Area= 2,772 sf Storage= 4,014 cf

Plug-Flow detention time= 92.1 min calculated for 0.254 af (83% of inflow)
Center-of-Mass det. time= 42.8 min (800.0 - 757.3)

Volume	Invert	Avail.Storage	Storage Description
#1	801.00'	7,722 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevatior (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
801.0C	1,433	0	0	1,433
802.0C	2,039	1,727	1,727	2,057
803.0C	2,810	2,414	4,141	2,847
804.0C	4,412	3,581	7,722	4,463

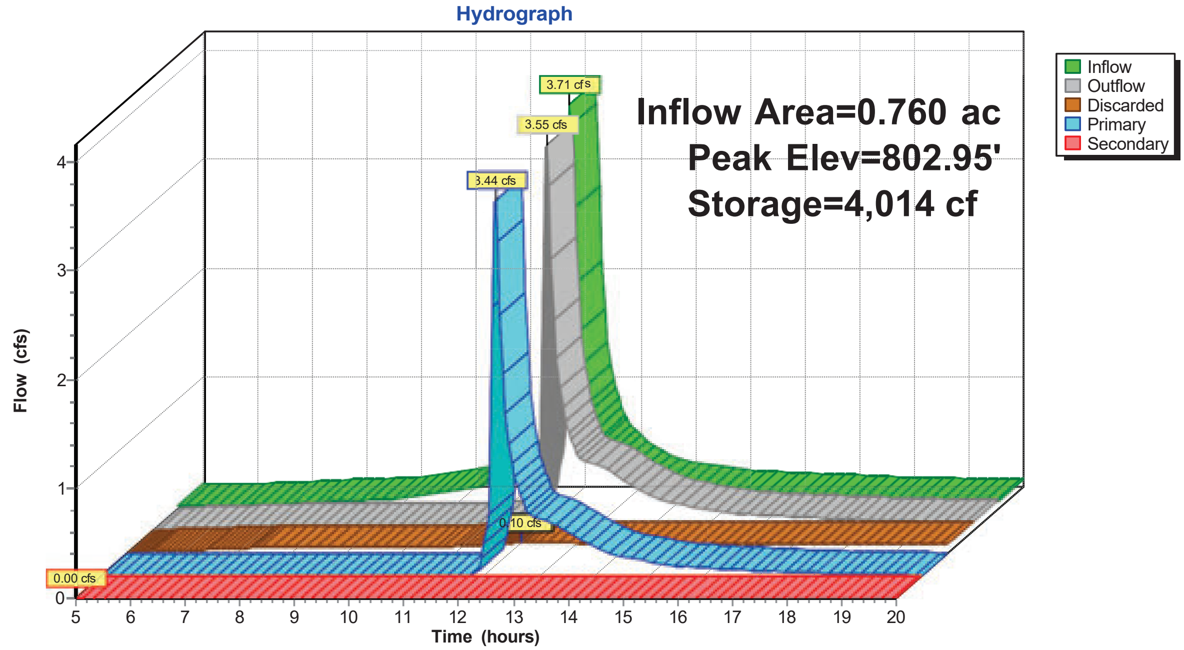
Device	Routing	Invert	Outlet Devices
#1	Discarded	801.00'	**1.580 in/hr Exfiltration over Surface area**
#2	Primary	800.50'	**15.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 800.50' / 800.00' S= 0.0128 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	802.20'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 2	802.80'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	803.00'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=0.10 cfs @ 12.21 hrs HW=802.95' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=3.32 cfs @ 12.21 hrs HW=802.95' (Free Discharge)
└─**2=Culvert** (Passes 3.32 cfs of 6.30 cfs potential flow)
  ├─**3=Orifice/Grate** (Orifice Controls 0.67 cfs @ 3.40 fps)
  └─**4=Sharp-Crested Rectangular Weir** (Weir Controls 2.65 cfs @ 1.27 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=801.00' (Free Discharge)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 17P: DET 220



Summary for Pond 23P: WQ 140

Inflow Area = 0.330 ac, 0.00% Impervious, Inflow Depth > 4.33" for 25-Year event
Inflow = 1.61 cfs @ 12.15 hrs, Volume= 0.119 af
Outflow = 1.53 cfs @ 12.17 hrs, Volume= 0.096 af, Atten= 4%, Lag= 1.2 min
Primary = 1.53 cfs @ 12.17 hrs, Volume= 0.096 af
Routed to Link 15L : PR POA / A

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 838.65' @ 12.17 hrs Surf.Area= 1,161 sf Storage= 1,146 cf

Plug-Flow detention time= 93.6 min calculated for 0.096 af (81% of inflow)
Center-of-Mass det. time= 39.8 min (808.1 - 768.4)

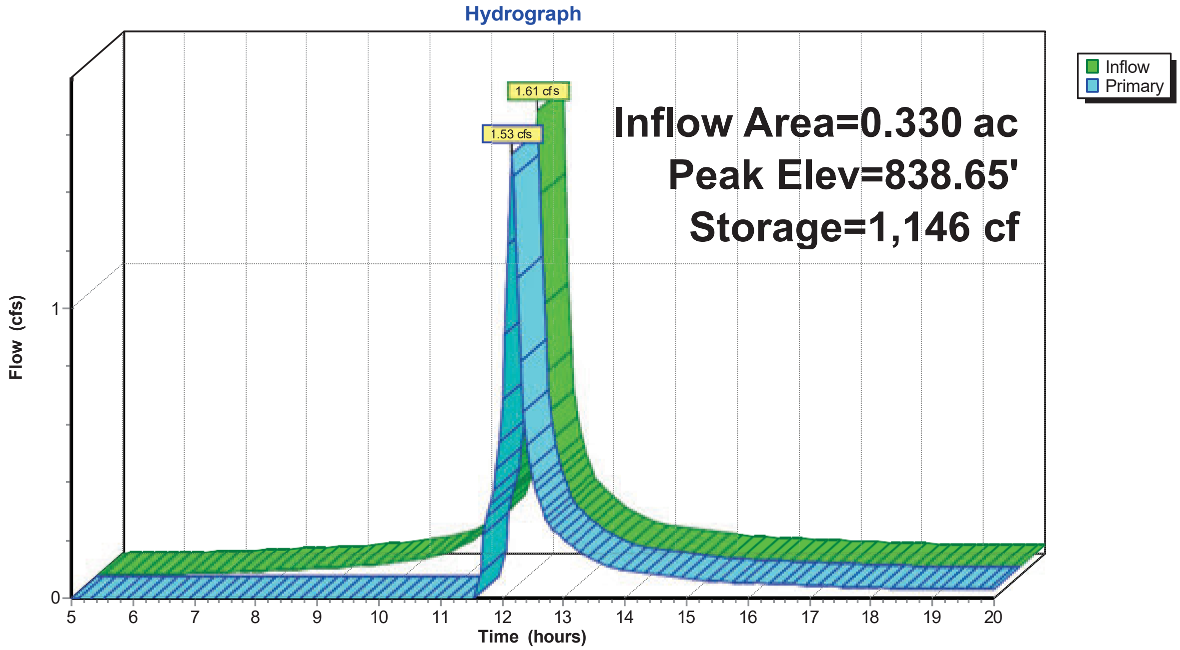
Volume	Invert	Avail.Storage	Storage Description
#1	837.50'	1,554 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
837.50	801	0	0
838.00	964	441	441
838.50	1,143	527	968
839.00	1,200	586	1,554

Device	Routing	Invert	Outlet Devices
#1	Primary	838.50'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=1.49 cfs @ 12.17 hrs HW=838.65' (Free Discharge)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 1.49 cfs @ 0.94 fps)

Pond 23P: WQ 140

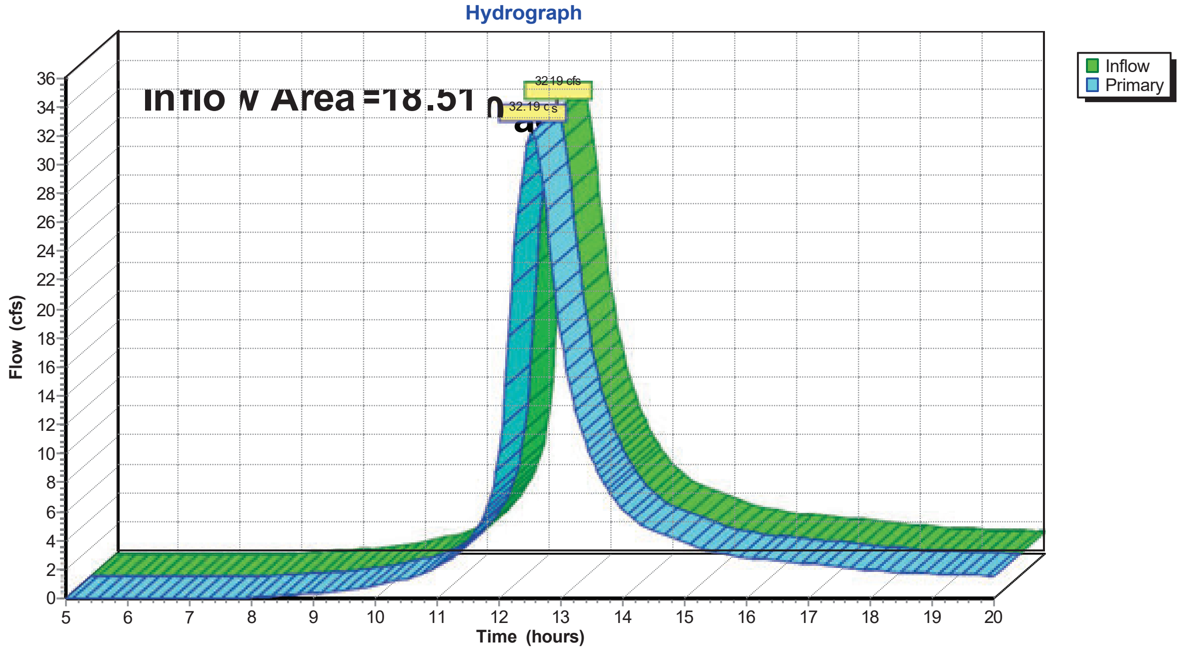


Summary for Link 4L: EX POA / A

Inflow Area =	18.510 ac,	0.00% Impervious, Inflow Depth > 3.11"		for 25-Year event
Inflow =	32.19 cfs @	12.53 hrs, Volume=	4.801 af	
Primary =	32.19 cfs @	12.53 hrs, Volume=	4.801 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

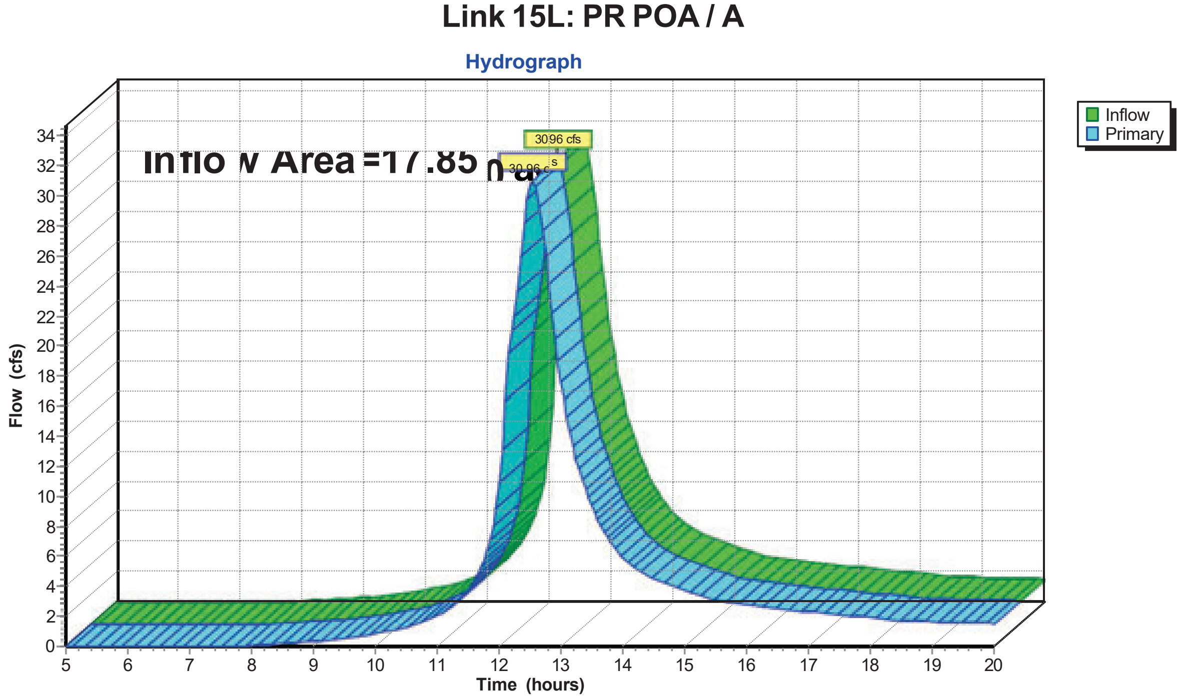
Link 4L: EX POA / A



Summary for Link 15L: PR POA / A

Inflow Area = 17.850 ac, 0.00% Impervious, Inflow Depth > 3.13" for 25-Year event
Inflow = 30.96 cfs @ 12.54 hrs, Volume= 4.649 af
Primary = 30.96 cfs @ 12.54 hrs, Volume= 4.649 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

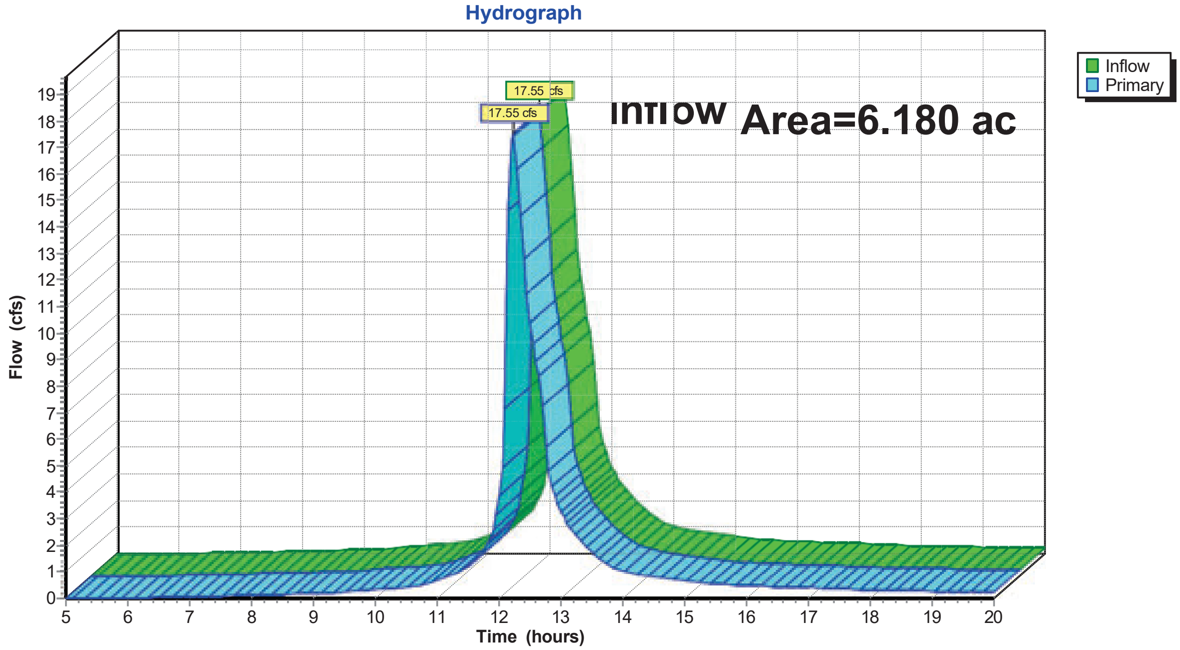


Summary for Link 18L: PR POA / B

Inflow Area =	6.180 ac,	0.00% Impervious, Inflow Depth > 2.61"		for 25-Year event
Inflow =	17.55 cfs @	12.23 hrs, Volume=	1.346 af	
Primary =	17.55 cfs @	12.23 hrs, Volume=	1.346 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 18L: PR POA / B



Summary for Subcatchment 1S: EXWS-10

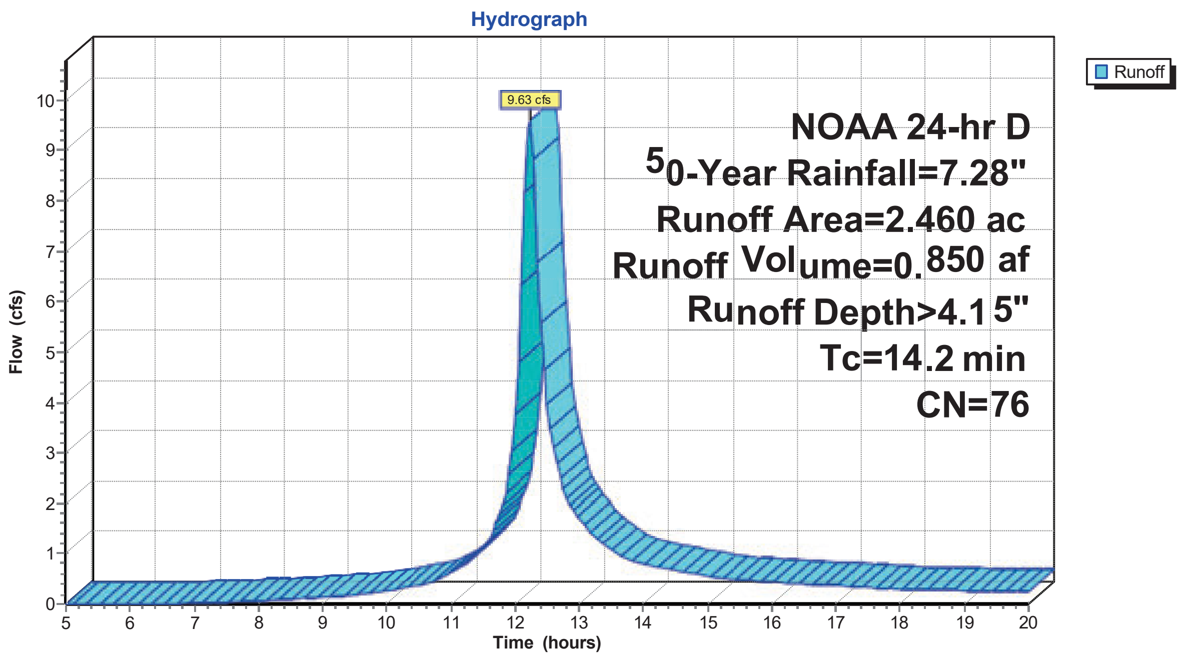
Runoff = 9.63 cfs @ 12.22 hrs, Volume= 0.850 af, Depth> 4.15"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	2.460	76	
	2.460		100.00% Pervious Area

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

Subcatchment 1S: EXWS-10



Summary for Subcatchment 2S: EXWS-11

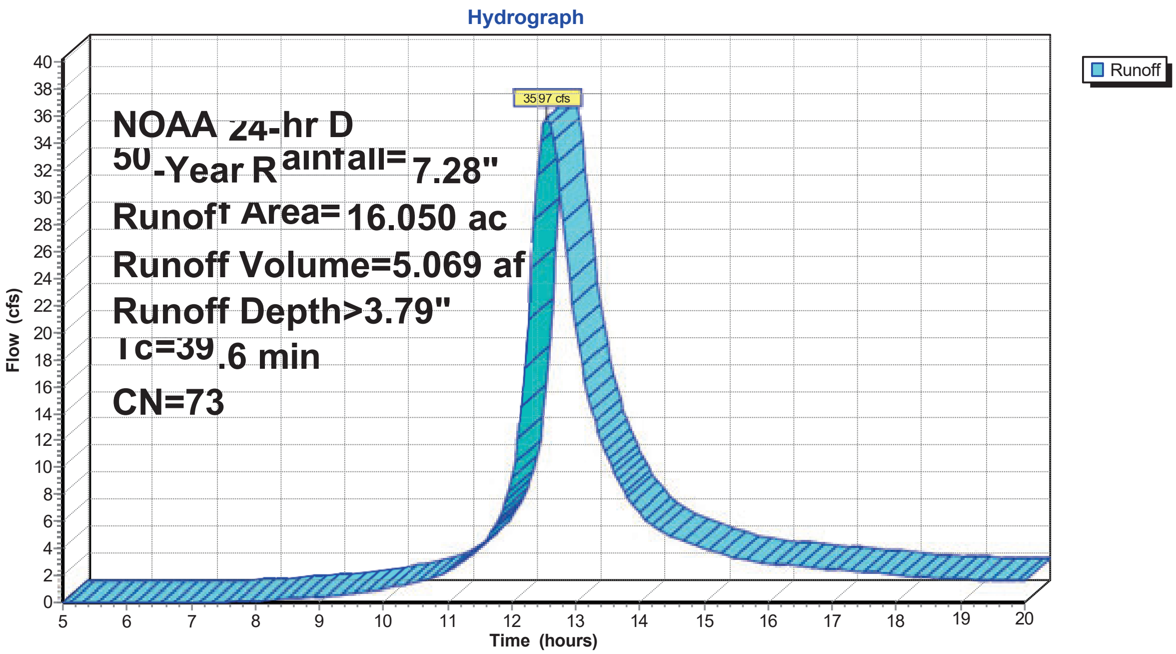
Runoff = 35.97 cfs @ 12.55 hrs, Volume= 5.069 af, Depth> 3.79"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	16.050	73	
	16.050		100.00% Pervious Area

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

Subcatchment 2S: EXWS-11



Summary for Subcatchment 5S: EXWS-20 / B

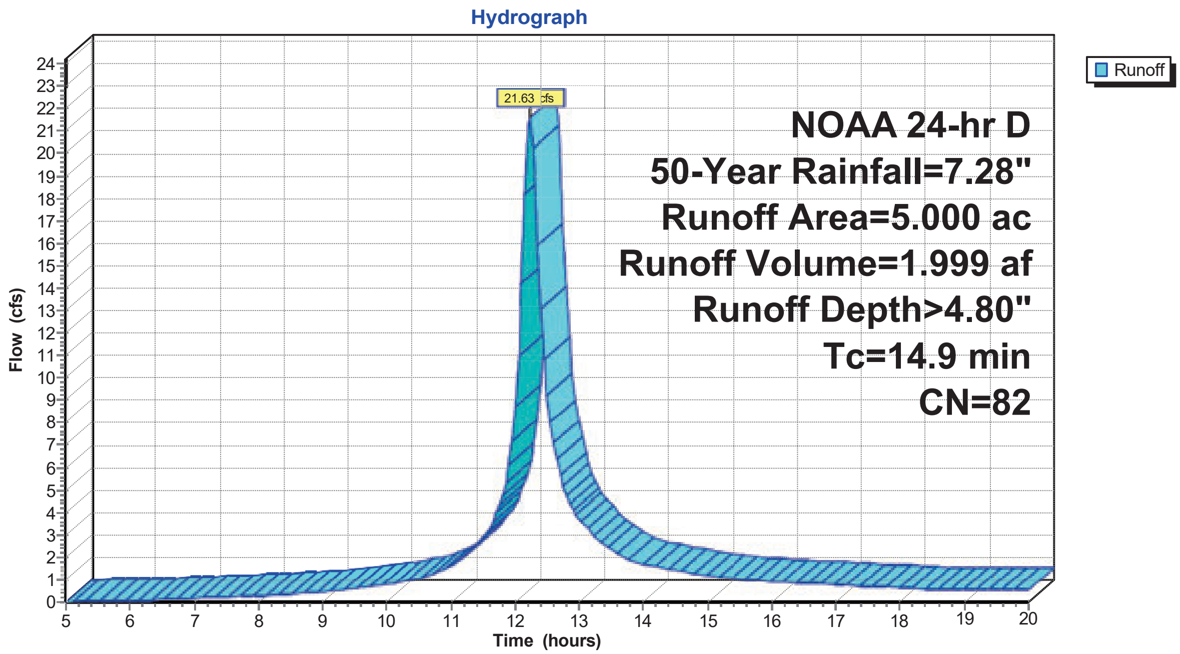
Runoff = 21.63 cfs @ 12.23 hrs, Volume= 1.999 af, Depth> 4.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	5.000	82	
	5.000		100.00% Pervious Area

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

Subcatchment 5S: EXWS-20 / B



Summary for Subcatchment 6S: EXWS-30 / C

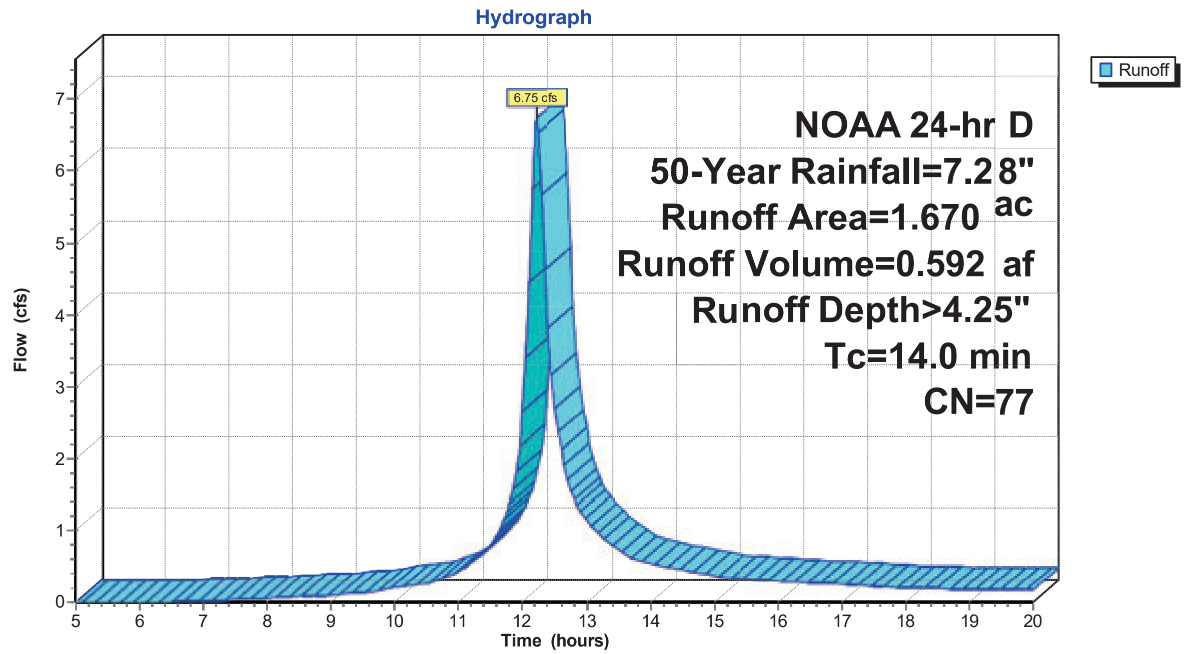
Runoff = 6.75 cfs @ 12.22 hrs, Volume= 0.592 af, Depth> 4.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	1.670	77	
	1.670		100.00% Pervious Area

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

Subcatchment 6S: EXWS-30 / C



Summary for Subcatchment 7S: PRWS-10

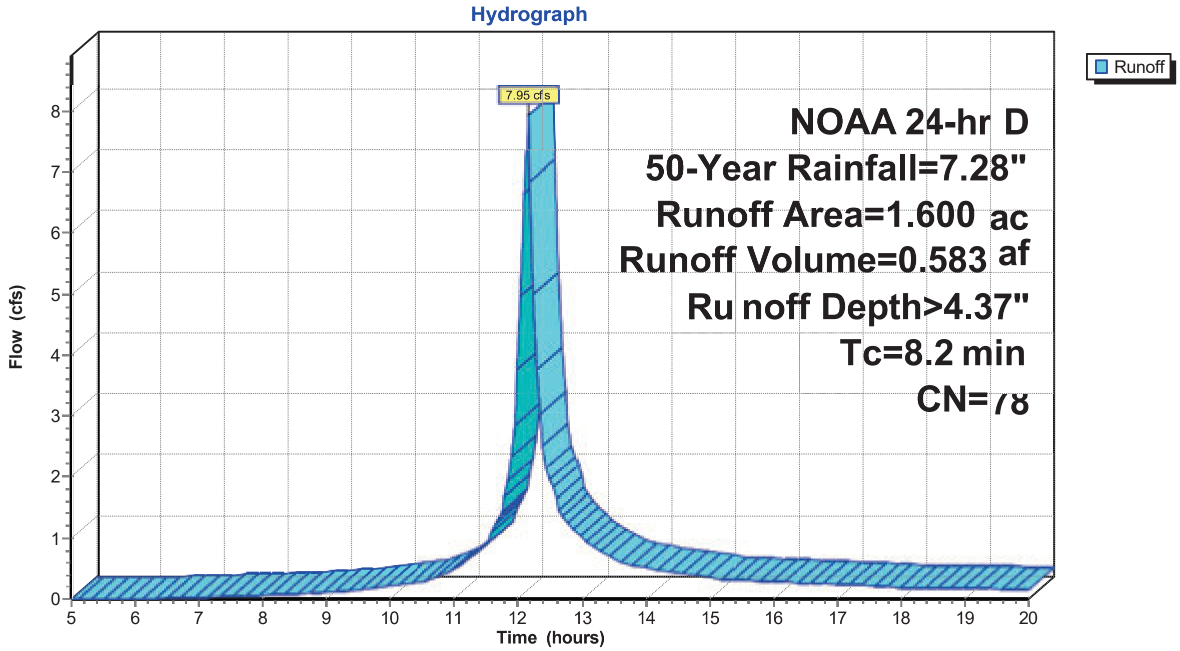
Runoff = 7.95 cfs @ 12.15 hrs, Volume= 0.583 af, Depth> 4.37"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	1.600	78	
	1.600		100.00% Pervious Area

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

Subcatchment 7S: PRWS-10



Summary for Subcatchment 8S: PRWS-11

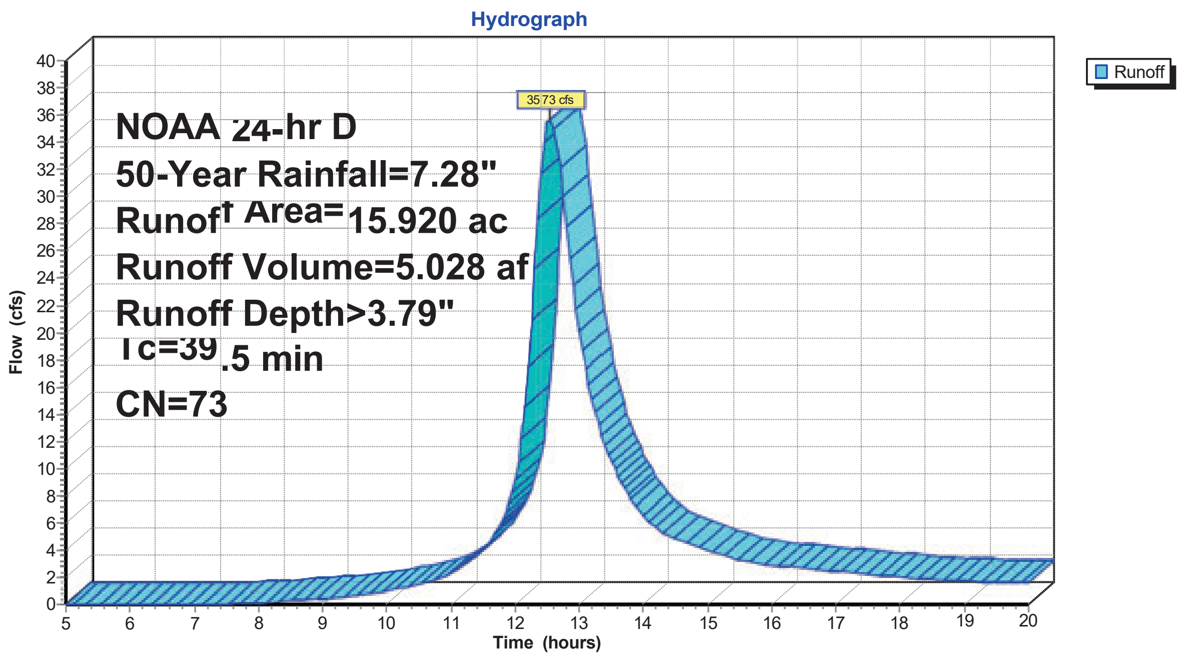
Runoff = 35.73 cfs @ 12.54 hrs, Volume= 5.028 af, Depth> 3.79"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	15.920	73	
	15.920		100.00% Pervious Area

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

Subcatchment 8S: PRWS-11



Summary for Subcatchment 10S: PRWS-20

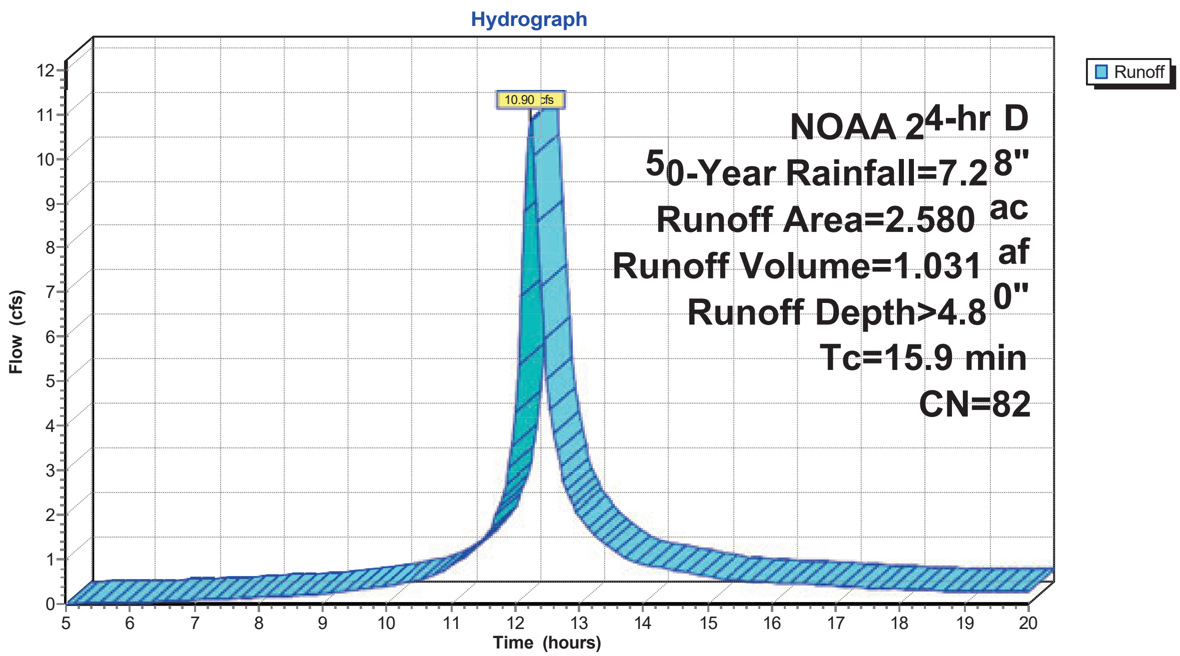
Runoff = 10.90 cfs @ 12.24 hrs, Volume= 1.031 af, Depth> 4.80"
Routed to Link 18L : PR POA / B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	2.580	82	
	2.580		100.00% Pervious Area

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

Subcatchment 10S: PRWS-20



Summary for Subcatchment 11S: PRWS-21

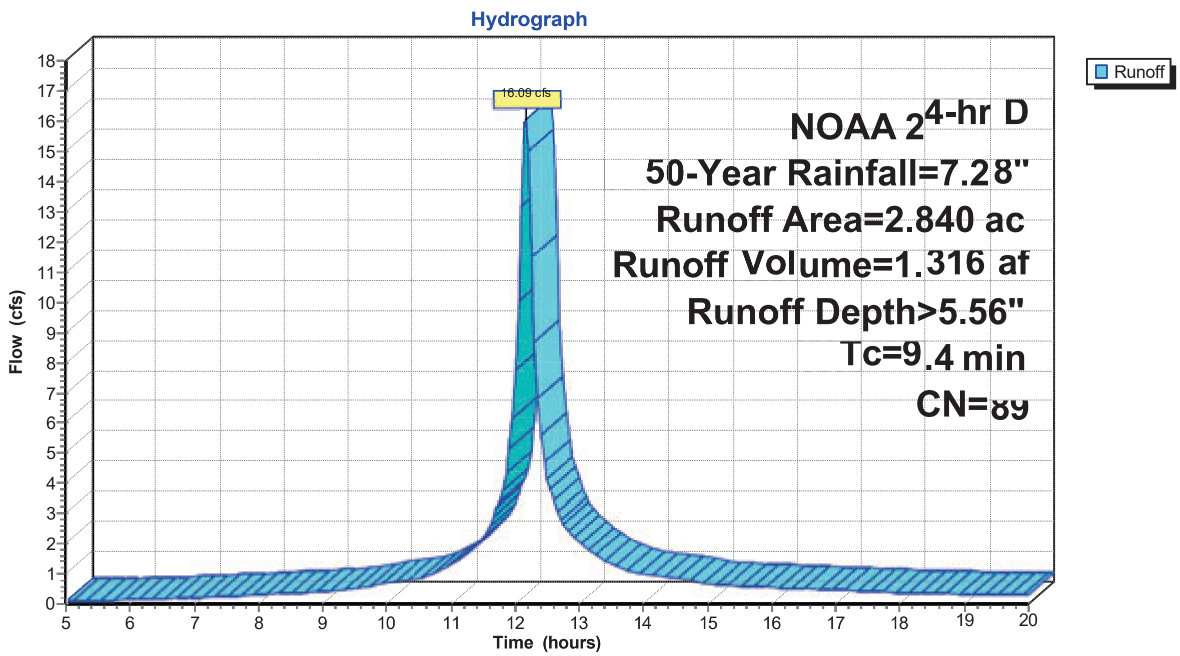
Runoff = 16.09 cfs @ 12.16 hrs, Volume= 1.316 af, Depth> 5.56"
Routed to Pond 16P : DET 210

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	2.840	89	
	2.840		100.00% Pervious Area

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

Subcatchment 11S: PRWS-21



Summary for Subcatchment 12S: PRWS-22

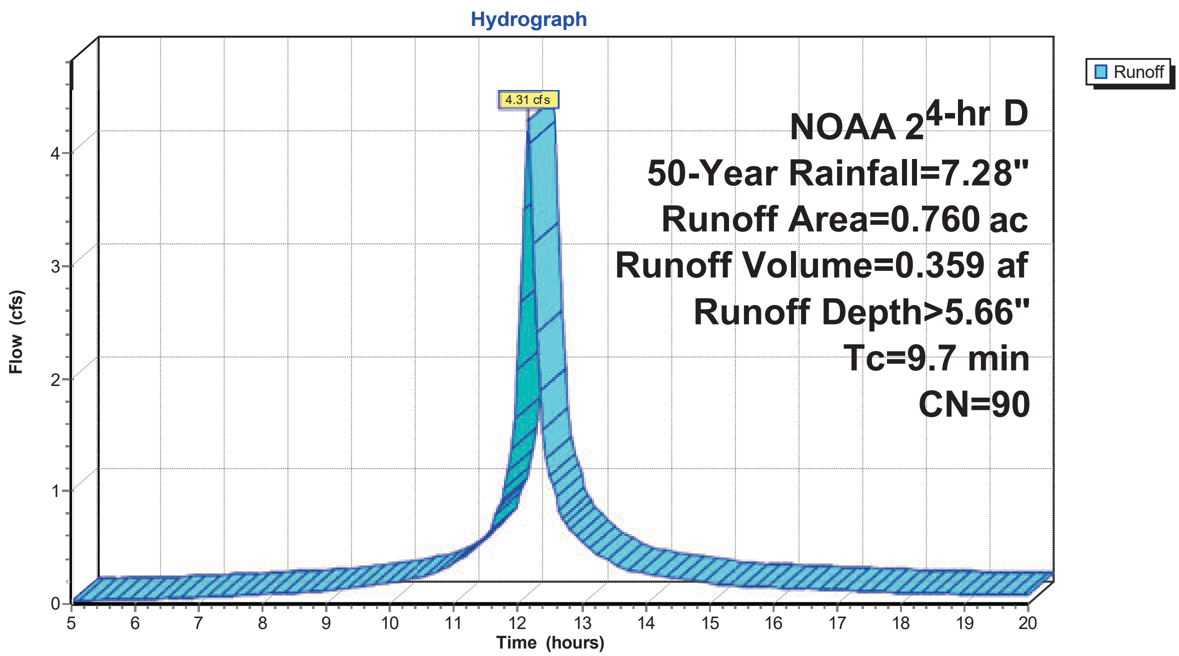
Runoff = 4.31 cfs @ 12.17 hrs, Volume= 0.359 af, Depth> 5.66"
Routed to Pond 17P : DET 220

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	0.760	90	
	0.760		100.00% Pervious Area

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

Subcatchment 12S: PRWS-22



Summary for Subcatchment 13S: PRWS-30 / C

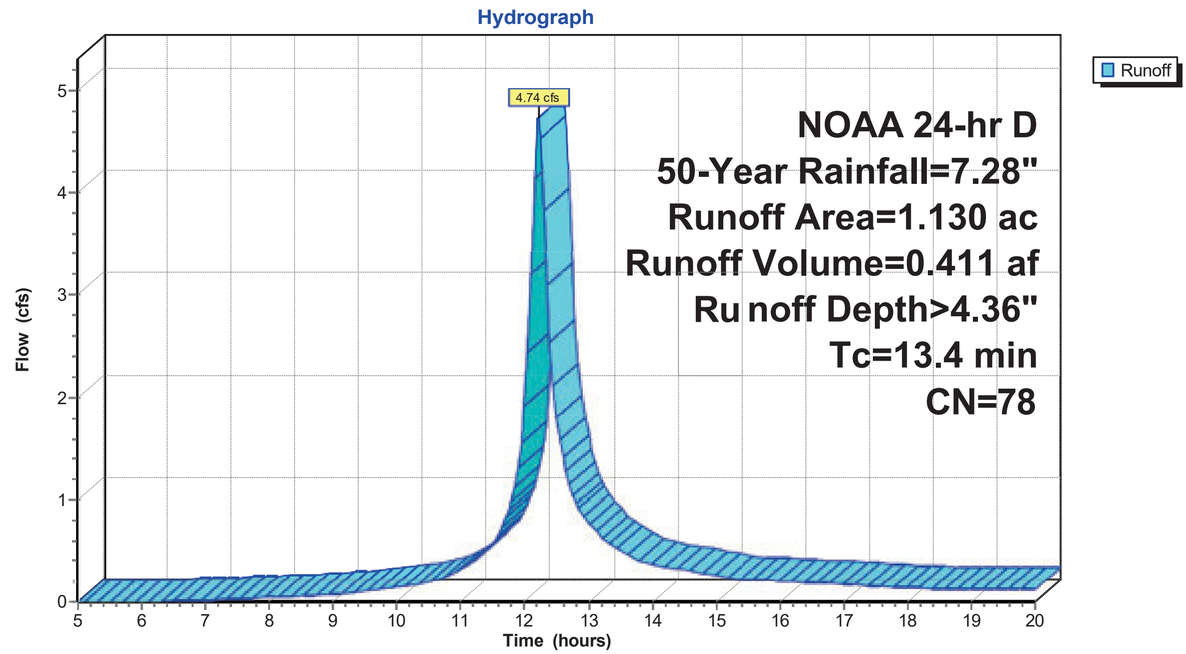
Runoff = 4.74 cfs @ 12.21 hrs, Volume= 0.411 af, Depth> 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	1.130	78	
	1.130		100.00% Pervious Area

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

Subcatchment 13S: PRWS-30 / C



Summary for Subcatchment 20S: PRWS-14

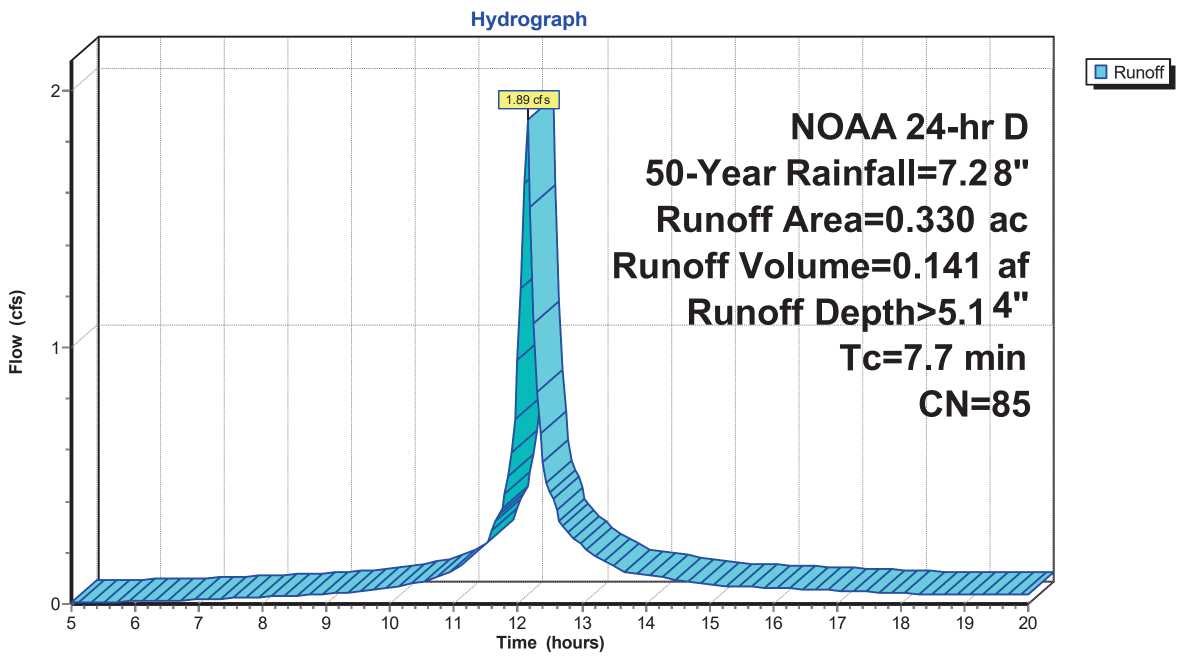
Runoff = 1.89 cfs @ 12.15 hrs, Volume= 0.141 af, Depth> 5.14"
Routed to Pond 23P : WQ 140

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 50-Year Rainfall=7.28"

	Area (ac)	CN	Description
*	0.330	85	
	0.330		100.00% Pervious Area

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

Subcatchment 20S: PRWS-14



Summary for Pond 16P: DET 210

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth > 5.56" for 50-Year event
Inflow = 16.09 cfs @ 12.16 hrs, Volume= 1.316 af
Outflow = 7.03 cfs @ 12.35 hrs, Volume= 1.314 af, Atten= 56%, Lag= 11.2 min
Discarded = 1.21 cfs @ 12.35 hrs, Volume= 0.877 af
Primary = 5.81 cfs @ 12.35 hrs, Volume= 0.437 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 816.68' @ 12.35 hrs Surf.Area= 9,839 sf Storage= 14,641 cf

Plug-Flow detention time= 44.3 min calculated for 1.309 af (100% of inflow)
Center-of-Mass det. time= 43.4 min (799.8 - 756.4)

Volume	Invert	Avail.Storage	Storage Description
#1	815.00'	28,886 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)
815.00	7,672	0	0	7,672
816.00	8,907	8,282	8,282	8,948
817.00	10,296	9,593	17,875	10,380
818.00	11,741	11,011	28,886	11,872

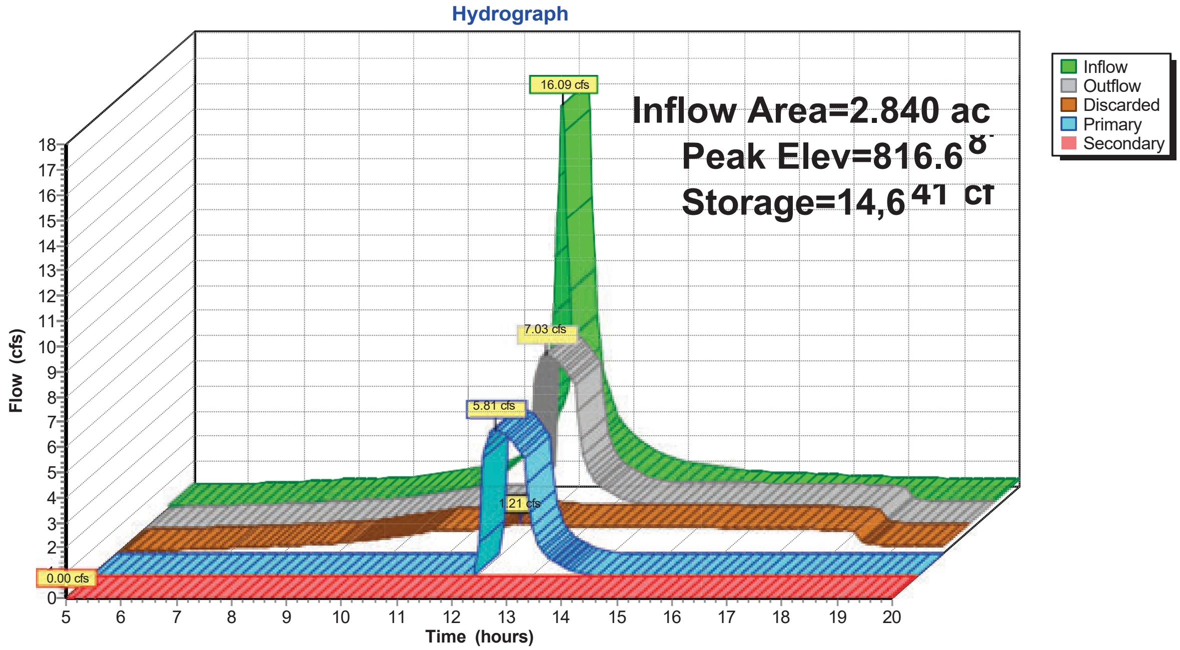
Device	Routing	Invert	Outlet Devices
#1	Discarded	815.00'	**5.320 in/hr Exfiltration over Surface area**
#2	Primary	814.50'	**15.0" Round Culvert** L= 127.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 814.50' / 806.40' S= 0.0638 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	815.90'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Secondary	817.20'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=1.21 cfs @ 12.35 hrs HW=816.68' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 1.21 cfs)

Primary OutFlow Max=5.81 cfs @ 12.35 hrs HW=816.68' (Free Discharge)
└─**2=Culvert** (Inlet Controls 5.81 cfs @ 4.74 fps)
  └─**3=Sharp-Crested Rectangular Weir** (Passes 5.81 cfs of 31.10 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=815.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 16P: DET 210



Summary for Pond 17P: DET 220

Inflow Area = 0.760 ac, 0.00% Impervious, Inflow Depth > 5.66" for 50-Year event
Inflow = 4.31 cfs @ 12.17 hrs, Volume= 0.359 af
Outflow = 4.16 cfs @ 12.20 hrs, Volume= 0.306 af, Atten= 3%, Lag= 1.8 min
Discarded = 0.10 cfs @ 12.20 hrs, Volume= 0.090 af
Primary = 4.06 cfs @ 12.20 hrs, Volume= 0.216 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 802.98' @ 12.20 hrs Surf.Area= 2,790 sf Storage= 4,074 cf

Plug-Flow detention time= 85.7 min calculated for 0.305 af (85% of inflow)
Center-of-Mass det. time= 40.4 min (794.7 - 754.3)

Volume	Invert	Avail.Storage	Storage Description
#1	801.00'	7,722 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)
801.00	1,433	0	0	1,433
802.00	2,039	1,727	1,727	2,057
803.00	2,810	2,414	4,141	2,847
804.00	4,412	3,581	7,722	4,463

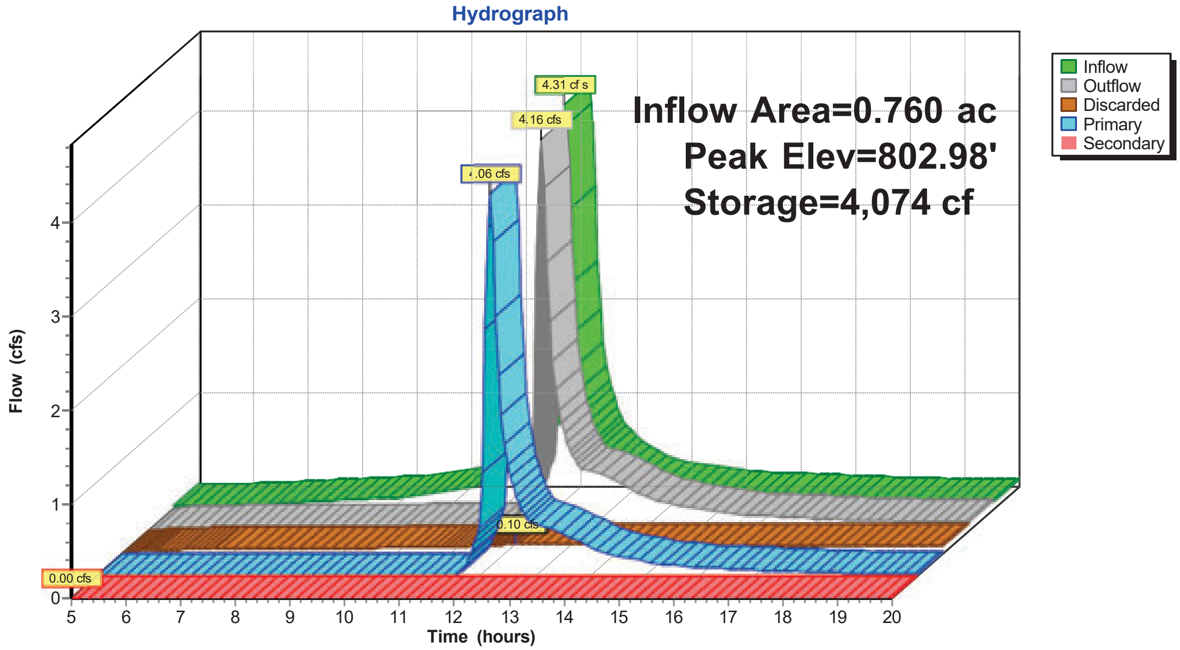
Device	Routing	Invert	Outlet Devices
#1	Discarded	801.00'	**1.580 in/hr Exfiltration over Surface area**
#2	Primary	800.50'	**15.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 800.50' / 800.00' S= 0.0128 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	802.20'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 2	802.80'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	803.00'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=0.10 cfs @ 12.20 hrs HW=802.97' (Free Discharge)
└—**1=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=4.02 cfs @ 12.20 hrs HW=802.97' (Free Discharge)
└—**2=Culvert** (Passes 4.02 cfs of 6.34 cfs potential flow)
  ├—**3=Orifice/Grate** (Orifice Controls 0.68 cfs @ 3.49 fps)
  └—**4=Sharp-Crested Rectangular Weir** (Weir Controls 3.34 cfs @ 1.37 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=801.00' (Free Discharge)
└—**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 17P: DET 220



Summary for Pond 23P: WQ 140

Inflow Area = 0.330 ac, 0.00% Impervious, Inflow Depth > 5.14" for 50-Year event
Inflow = 1.89 cfs @ 12.15 hrs, Volume= 0.141 af
Outflow = 1.81 cfs @ 12.17 hrs, Volume= 0.119 af, Atten= 4%, Lag= 1.1 min
Primary = 1.81 cfs @ 12.17 hrs, Volume= 0.119 af
Routed to Link 15L : PR POA / A

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 838.67' @ 12.17 hrs Surf.Area= 1,163 sf Storage= 1,167 cf

Plug-Flow detention time= 84.8 min calculated for 0.118 af (84% of inflow)
Center-of-Mass det. time= 37.2 min (801.5 - 764.3)

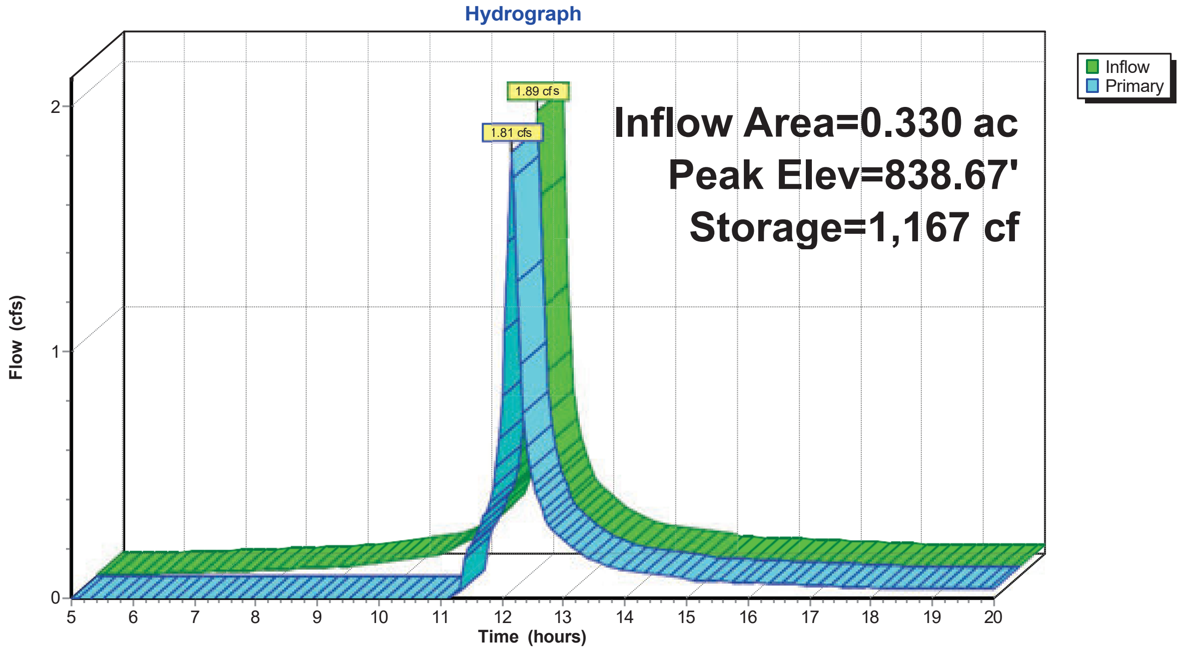
Volume	Invert	Avail.Storage	Storage Description
#1	837.50'	1,554 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
837.50	801	0	0
838.00	964	441	441
838.50	1,143	527	968
839.00	1,200	586	1,554

Device	Routing	Invert	Outlet Devices
#1	Primary	838.50'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=1.76 cfs @ 12.17 hrs HW=838.67' (Free Discharge)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 1.76 cfs @ 0.99 fps)

Pond 23P: WQ 140

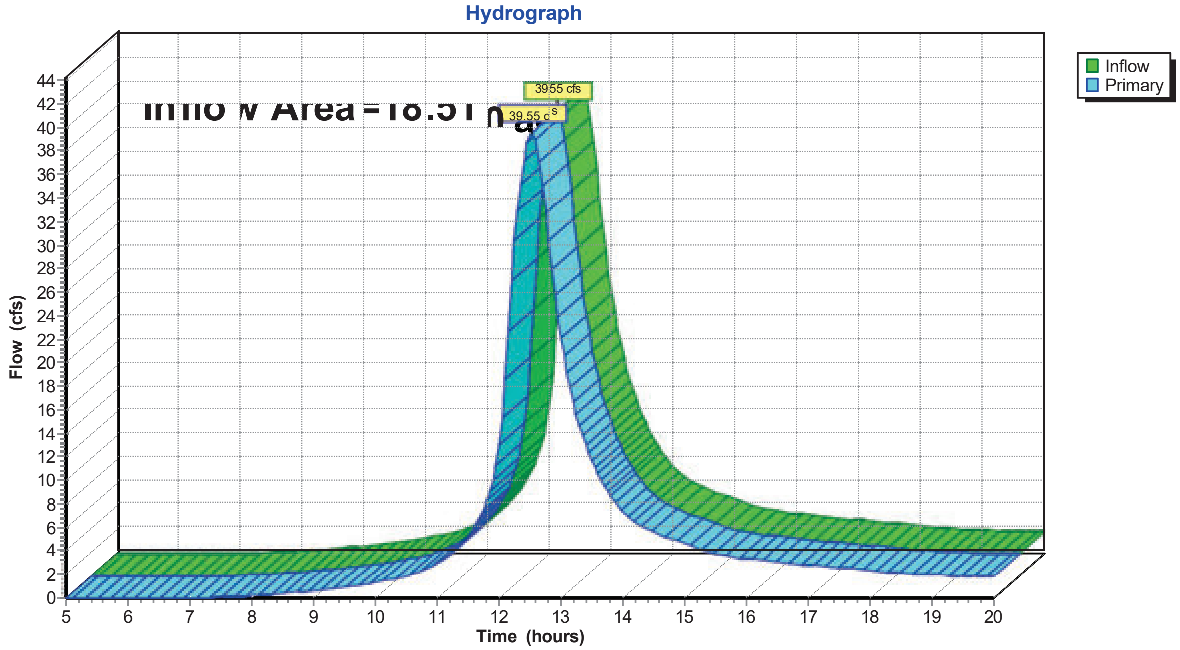


Summary for Link 4L: EX POA / A

Inflow Area =	18.510 ac,	0.00% Impervious, Inflow Depth > 3.84"		for 50-Year event
Inflow =	39.55 cfs @	12.52 hrs, Volume=	5.919 af	
Primary =	39.55 cfs @	12.52 hrs, Volume=	5.919 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: EX POA / A

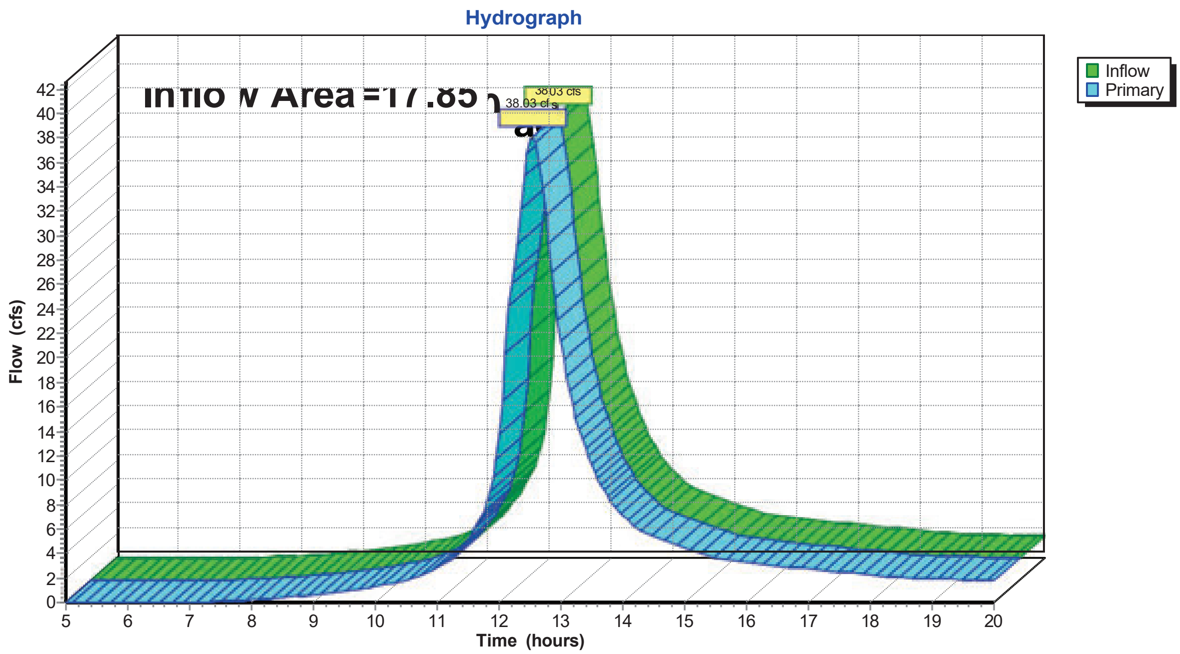


Summary for Link 15L: PR POA / A

Inflow Area = 17.850 ac, 0.00% Impervious, Inflow Depth > 3.85" for 50-Year event
Inflow = 38.03 cfs @ 12.53 hrs, Volume= 5.730 af
Primary = 38.03 cfs @ 12.53 hrs, Volume= 5.730 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 15L: PR POA / A

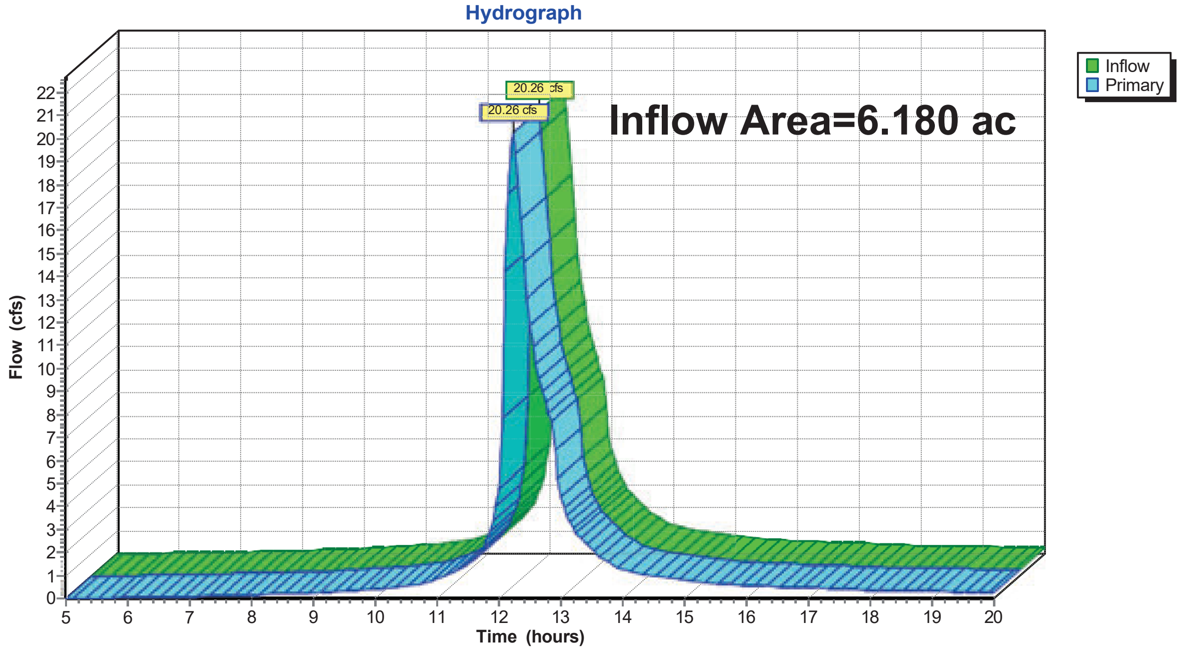


Summary for Link 18L: PR POA / B

Inflow Area =	6.180 ac,	0.00% Impervious, Inflow Depth > 3.27"		for 50-Year event
Inflow =	20.26 cfs @	12.23 hrs, Volume=	1.685 af	
Primary =	20.26 cfs @	12.23 hrs, Volume=	1.685 af, Atten= 0%, Lag= 0.0 min	

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 18L: PR POA / B



Summary for Subcatchment 1S: EXWS-10

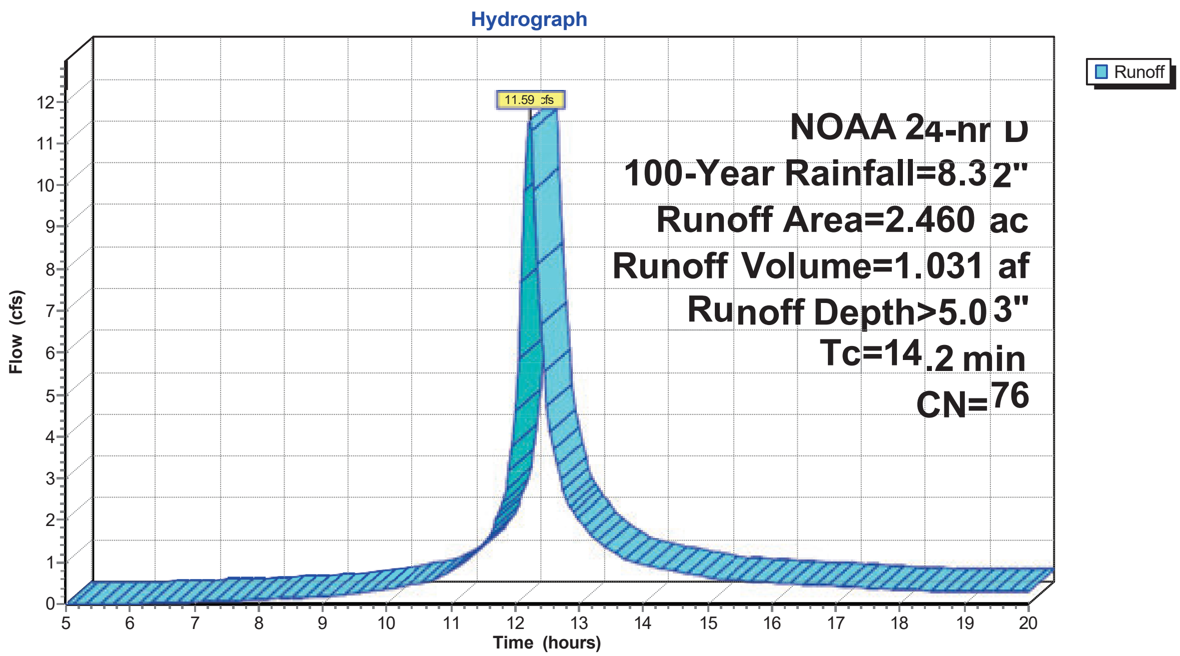
Runoff = 11.59 cfs @ 12.22 hrs, Volume= 1.031 af, Depth> 5.03"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	2.460	76	
	2.460		100.00% Pervious Area

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

Subcatchment 1S: EXWS-10



Summary for Subcatchment 2S: EXWS-11

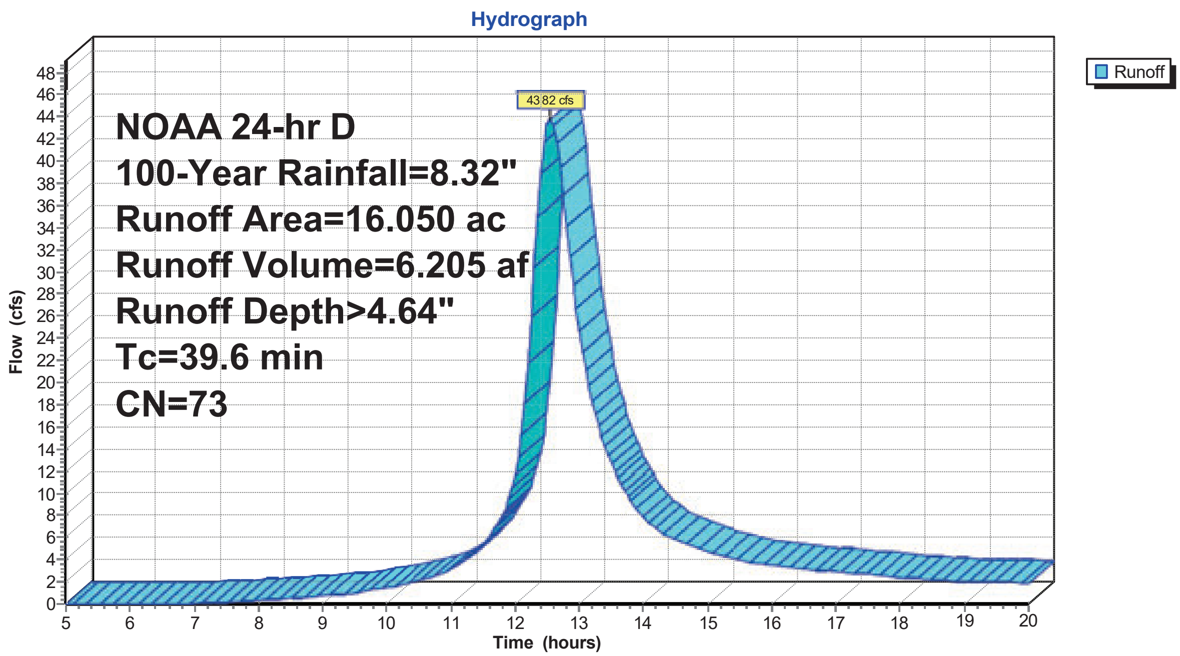
Runoff = 43.82 cfs @ 12.55 hrs, Volume= 6.205 af, Depth> 4.64"
Routed to Link 4L : EX POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	16.050	73	
	16.050		100.00% Pervious Area

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

Subcatchment 2S: EXWS-11



Summary for Subcatchment 5S: EXWS-20 / B

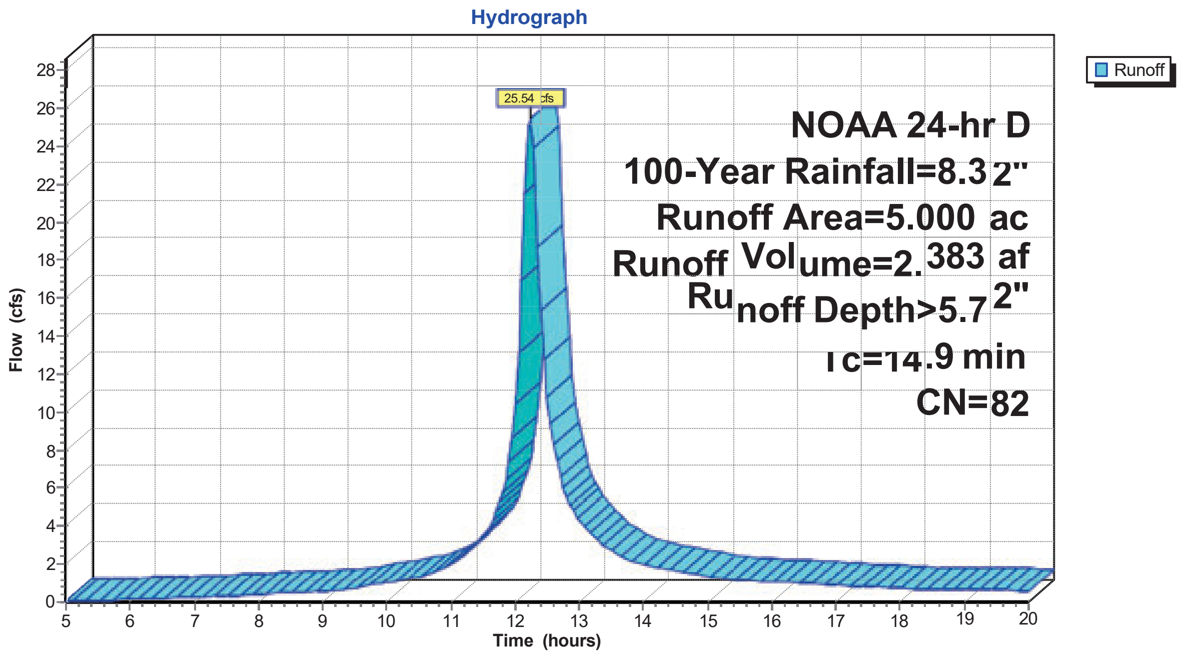
Runoff = 25.54 cfs @ 12.23 hrs, Volume= 2.383 af, Depth> 5.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	5.000	82	
	5.000		100.00% Pervious Area

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

Subcatchment 5S: EXWS-20 / B



Summary for Subcatchment 6S: EXWS-30 / C

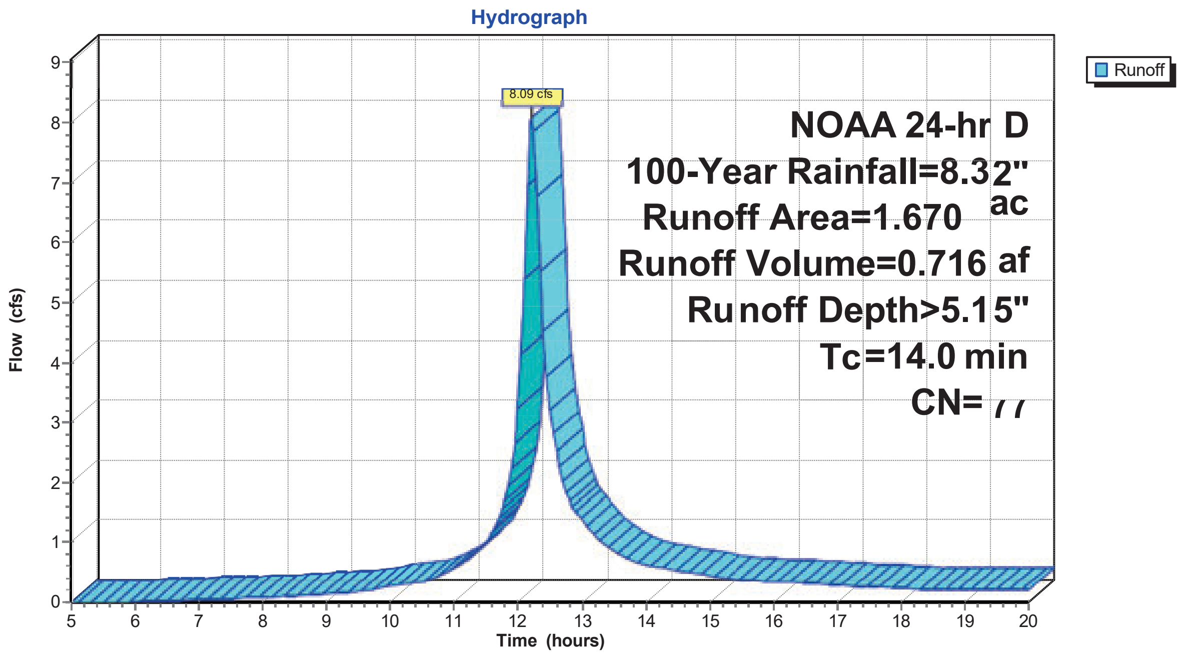
Runoff = 8.09 cfs @ 12.22 hrs, Volume= 0.716 af, Depth> 5.15"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	1.670	77	
	1.670		100.00% Pervious Area

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

Subcatchment 6S: EXWS-30 / C



Summary for Subcatchment 7S: PRWS-10

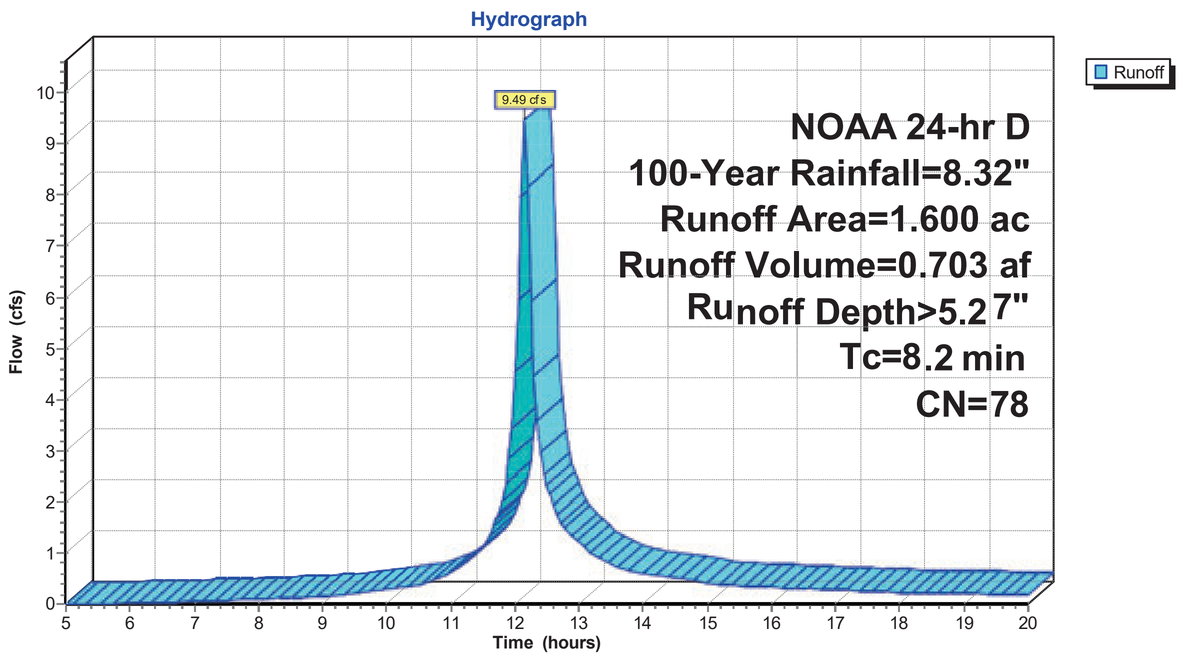
Runoff = 9.49 cfs @ 12.15 hrs, Volume= 0.703 af, Depth> 5.27"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	1.600	78	
	1.600		100.00% Pervious Area

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

Subcatchment 7S: PRWS-10



Summary for Subcatchment 8S: PRWS-11

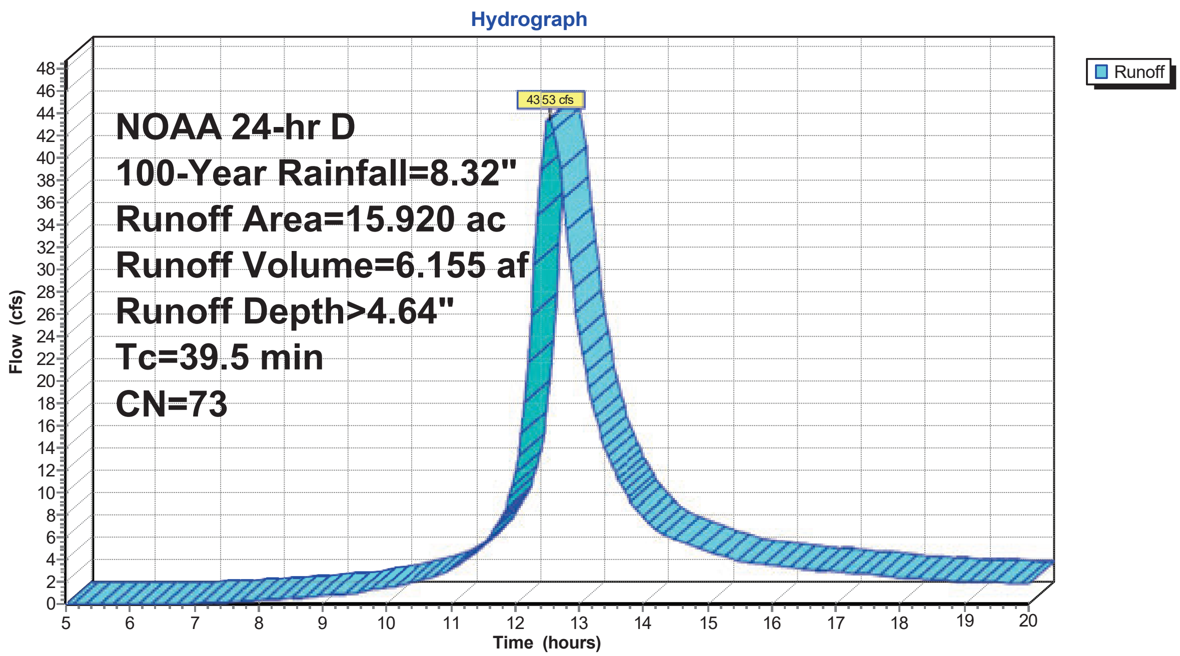
Runoff = 43.53 cfs @ 12.54 hrs, Volume= 6.155 af, Depth> 4.64"
Routed to Link 15L : PR POA / A

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	15.920	73	
	15.920		100.00% Pervious Area

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

Subcatchment 8S: PRWS-11



Summary for Subcatchment 10S: PRWS-20

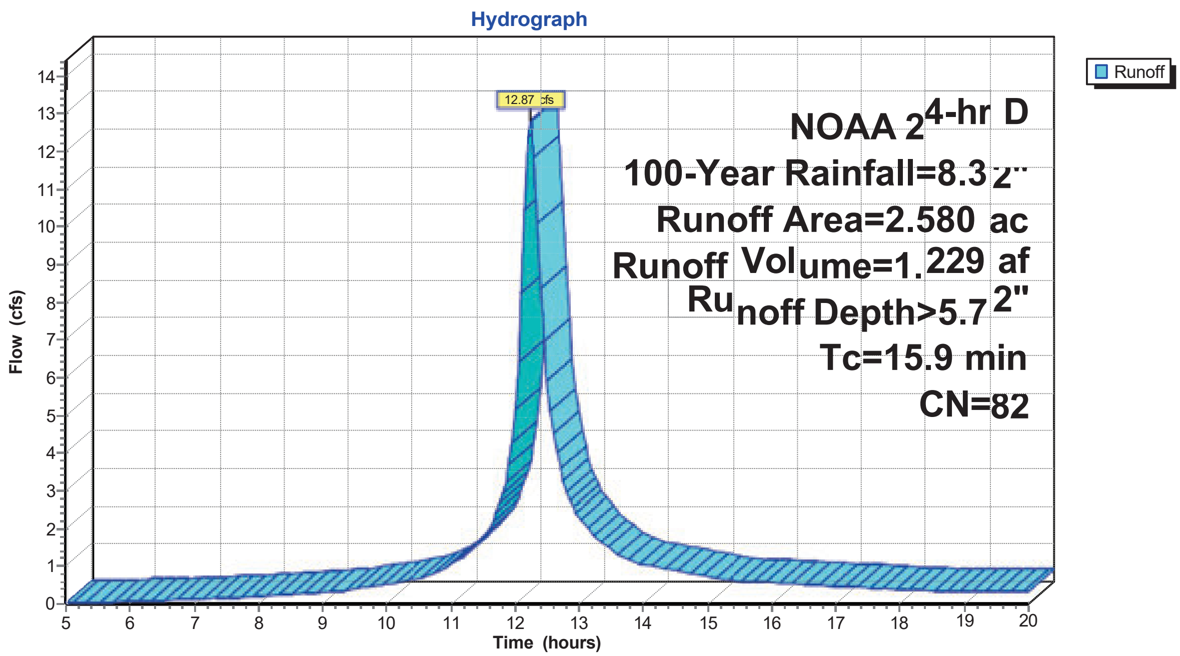
Runoff = 12.87 cfs @ 12.24 hrs, Volume= 1.229 af, Depth> 5.72"
Routed to Link 18L : PR POA / B

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	2.580	82	
	2.580		100.00% Pervious Area

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

Subcatchment 10S: PRWS-20



Summary for Subcatchment 11S: PRWS-21

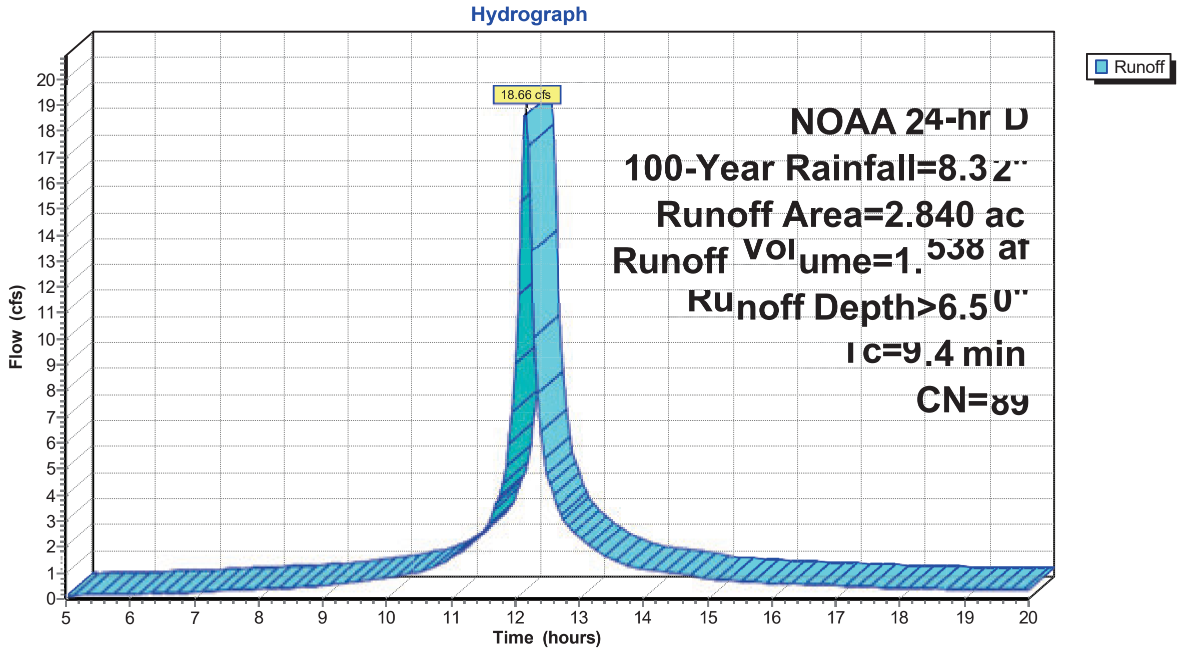
Runoff = 18.66 cfs @ 12.16 hrs, Volume= 1.538 af, Depth> 6.50"
Routed to Pond 16P : DET 210

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	2.840	89	
	2.840		100.00% Pervious Area

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

Subcatchment 11S: PRWS-21



Summary for Subcatchment 12S: PRWS-22

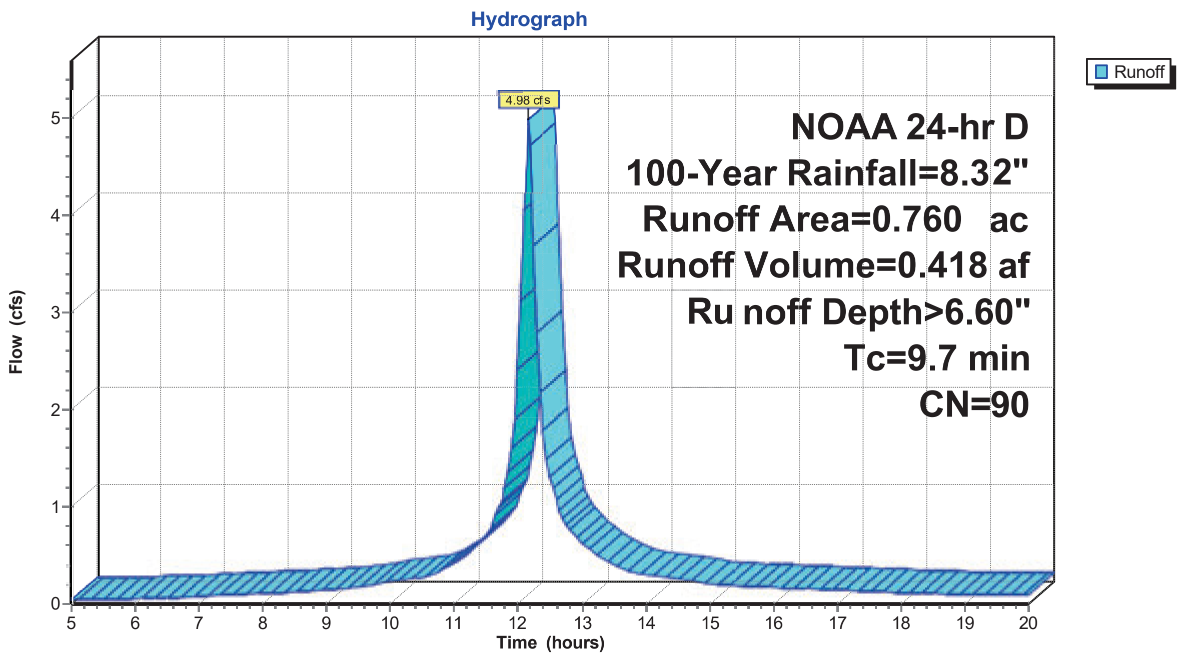
Runoff = 4.98 cfs @ 12.17 hrs, Volume= 0.418 af, Depth> 6.60"
Routed to Pond 17P : DET 220

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	0.760	90	
	0.760		100.00% Pervious Area

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

Subcatchment 12S: PRWS-22



Summary for Subcatchment 13S: PRWS-30 / C

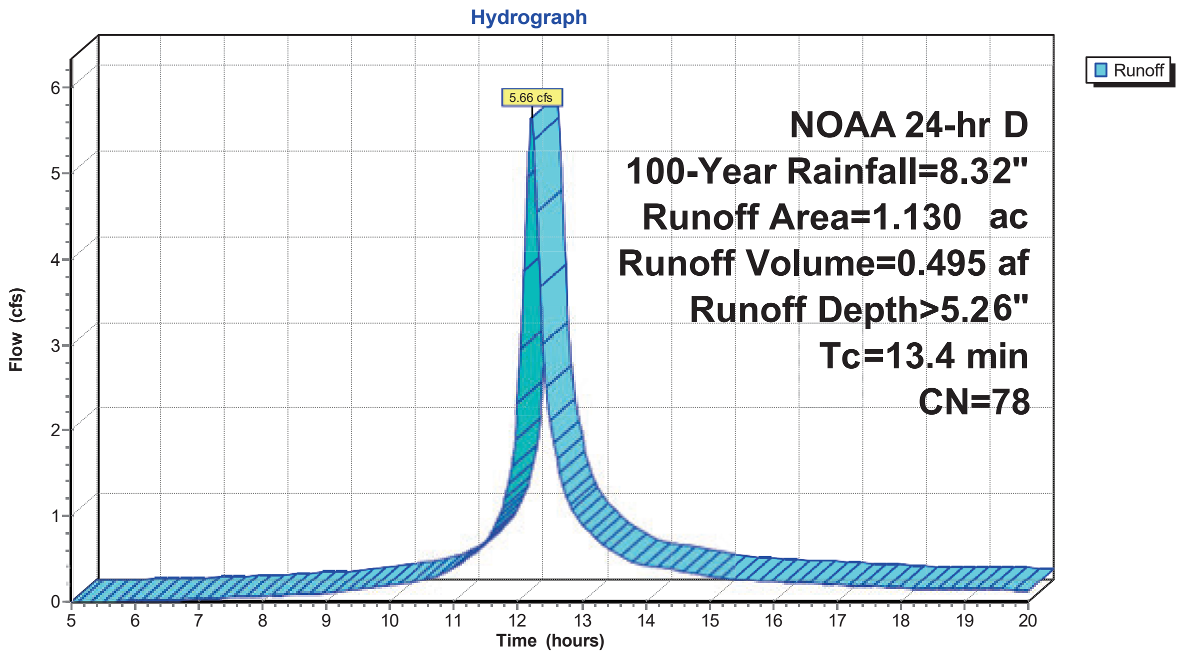
Runoff = 5.66 cfs @ 12.21 hrs, Volume= 0.495 af, Depth> 5.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	1.130	78	
	1.130		100.00% Pervious Area

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

Subcatchment 13S: PRWS-30 / C



Summary for Subcatchment 20S: PRWS-14

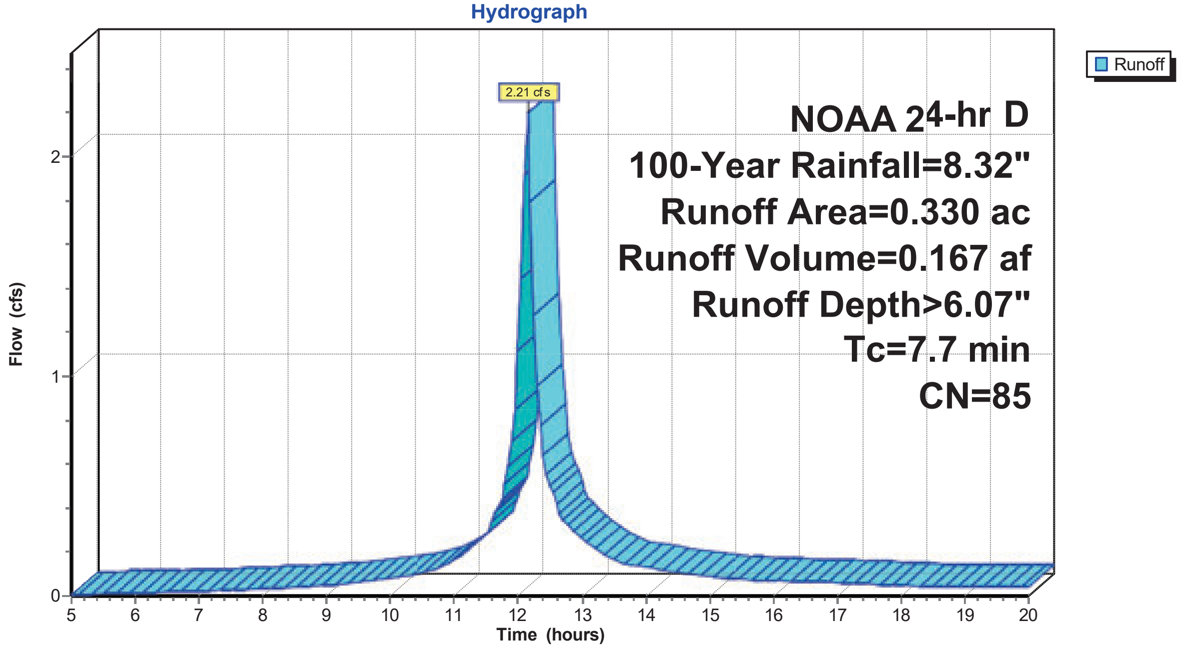
Runoff = 2.21 cfs @ 12.15 hrs, Volume= 0.167 af, Depth> 6.07"
Routed to Pond 23P : WQ 140

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-Year Rainfall=8.32"

	Area (ac)	CN	Description
*	0.330	85	
	0.330		100.00% Pervious Area

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

Subcatchment 20S: PRWS-14



Summary for Pond 16P: DET 210

Inflow Area = 2.840 ac, 0.00% Impervious, Inflow Depth > 6.50" for 100-Year event
Inflow = 18.66 cfs @ 12.16 hrs, Volume= 1.538 af
Outflow = 7.58 cfs @ 12.36 hrs, Volume= 1.536 af, Atten= 59%, Lag= 12.2 min
Discarded = 1.26 cfs @ 12.36 hrs, Volume= 0.957 af
Primary = 6.32 cfs @ 12.36 hrs, Volume= 0.580 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 816.96' @ 12.36 hrs Surf.Area= 10,235 sf Storage= 17,442 cf

Plug-Flow detention time= 44.5 min calculated for 1.536 af (100% of inflow)
Center-of-Mass det. time= 43.8 min (797.4 - 753.5)

Volume	Invert	Avail.Storage	Storage Description
#1	815.00'	28,886 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)
815.00	7,672	0	0	7,672
816.00	8,907	8,282	8,282	8,948
817.00	10,296	9,593	17,875	10,380
818.00	11,741	11,011	28,886	11,872

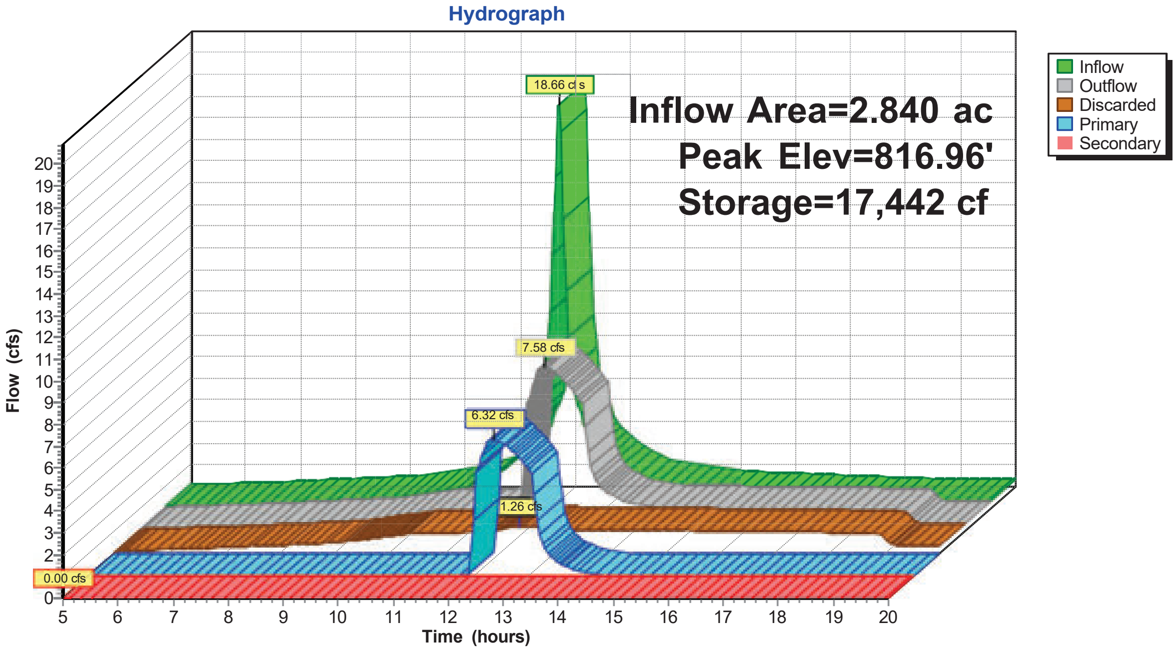
Device	Routing	Invert	Outlet Devices
#1	Discarded	815.00'	**5.320 in/hr Exfiltration over Surface area**
#2	Primary	814.50'	**15.0" Round Culvert** L= 127.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 814.50' / 806.40' S= 0.0638 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	815.90'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Secondary	817.20'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=1.26 cfs @ 12.36 hrs HW=816.95' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 1.26 cfs)

Primary OutFlow Max=6.31 cfs @ 12.36 hrs HW=816.95' (Free Discharge)
└─**2=Culvert** (Inlet Controls 6.31 cfs @ 5.14 fps)
  └─**3=Sharp-Crested Rectangular Weir** (Passes 6.31 cfs of 48.83 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=815.00' (Free Discharge)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 16P: DET 210



Summary for Pond 17P: DET 220

Inflow Area = 0.760 ac, 0.00% Impervious, Inflow Depth > 6.60" for 100-Year event
Inflow = 4.98 cfs @ 12.17 hrs, Volume= 0.418 af
Outflow = 4.83 cfs @ 12.19 hrs, Volume= 0.364 af, Atten= 3%, Lag= 1.7 min
Discarded = 0.10 cfs @ 12.19 hrs, Volume= 0.093 af
Primary = 4.73 cfs @ 12.19 hrs, Volume= 0.271 af
Routed to Link 18L : PR POA / B
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Link 18L : PR POA / B

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 803.00' @ 12.19 hrs Surf.Area= 2,808 sf Storage= 4,136 cf

Plug-Flow detention time= 80.5 min calculated for 0.363 af (87% of inflow)
Center-of-Mass det. time= 38.9 min (790.6 - 751.7)

Volume	Invert	Avail.Storage	Storage Description
#1	801.00'	7,722 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

Elevatior (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
801.0C	1,433	0	0	1,433
802.0C	2,039	1,727	1,727	2,057
803.0C	2,810	2,414	4,141	2,847
804.0C	4,412	3,581	7,722	4,463

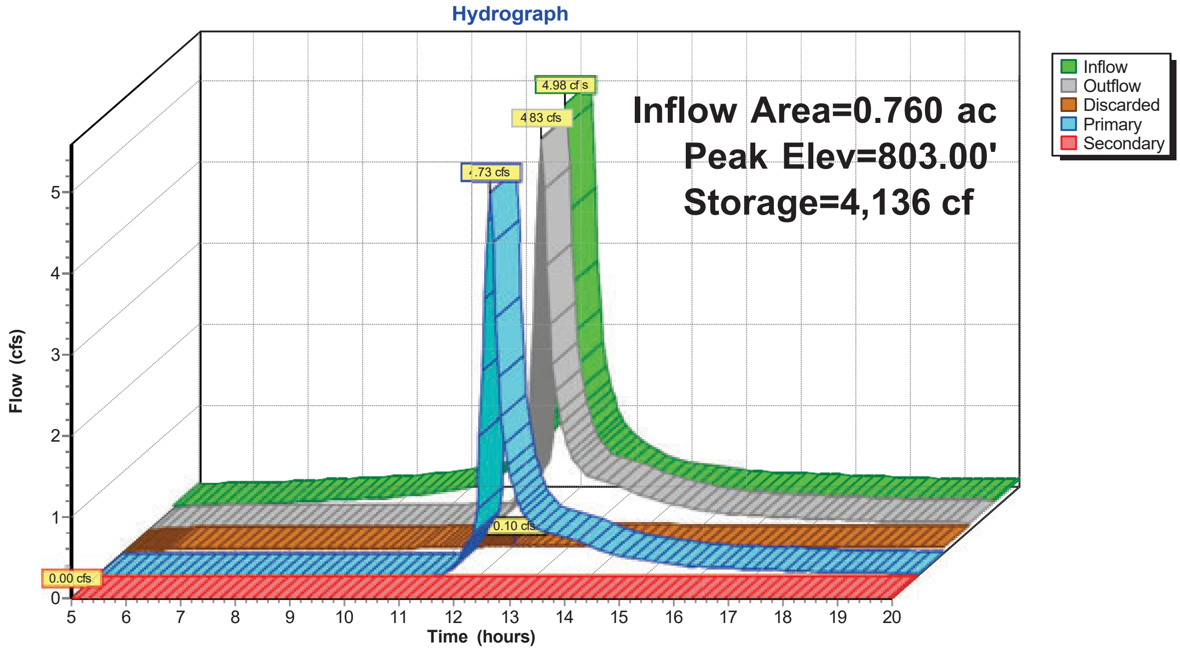
Device	Routing	Invert	Outlet Devices
#1	Discarded	801.00'	**1.580 in/hr Exfiltration over Surface area**
#2	Primary	800.50'	**15.0" Round Culvert** L= 39.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 800.50' / 800.00' S= 0.0128 '/' Cc= 0.900 n= 0.012, Flow Area= 1.23 sf
#3	Device 2	802.20'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Device 2	802.80'	**14.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	803.00'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Discarded OutFlow Max=0.10 cfs @ 12.19 hrs HW=803.00' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=4.67 cfs @ 12.19 hrs HW=803.00' (Free Discharge)
└─**2=Culvert** (Passes 4.67 cfs of 6.38 cfs potential flow)
  ├─**3=Orifice/Grate** (Orifice Controls 0.70 cfs @ 3.56 fps)
  └─**4=Sharp-Crested Rectangular Weir** (Weir Controls 3.97 cfs @ 1.45 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=801.00' (Free Discharge)
└─**5=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 17P: DET 220



Summary for Pond 23P: WQ 140

Inflow Area = 0.330 ac, 0.00% Impervious, Inflow Depth > 6.07" for 100-Year event
Inflow = 2.21 cfs @ 12.15 hrs, Volume= 0.167 af
Outflow = 2.13 cfs @ 12.16 hrs, Volume= 0.144 af, Atten= 4%, Lag= 1.1 min
Primary = 2.13 cfs @ 12.16 hrs, Volume= 0.144 af
Routed to Link 15L : PR POA / A

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 838.69' @ 12.16 hrs Surf.Area= 1,165 sf Storage= 1,189 cf

Plug-Flow detention time= 77.5 min calculated for 0.144 af (86% of inflow)
Center-of-Mass det. time= 34.8 min (795.4 - 760.6)

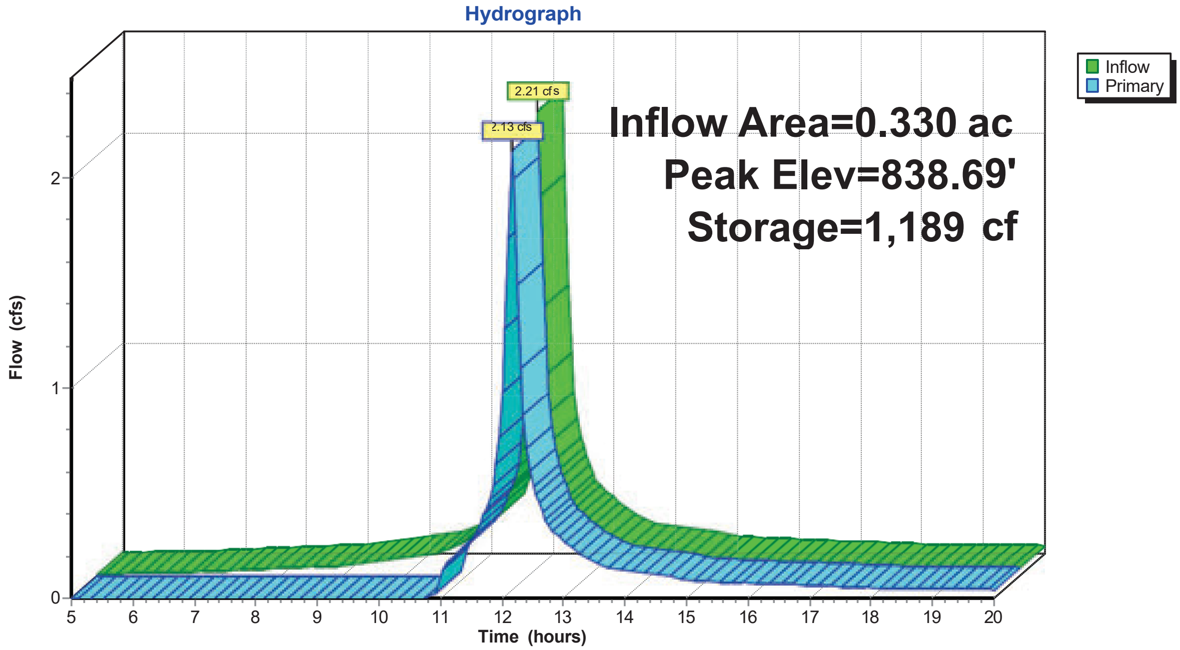
Volume	Invert	Avail.Storage	Storage Description
#1	837.50'	1,554 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
837.50	801	0	0
838.00	964	441	441
838.50	1,143	527	968
839.00	1,200	586	1,554

Device	Routing	Invert	Outlet Devices
#1	Primary	838.50'	**10.0' long + 3.0 '/' SideZ x 8.0' 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) 2.43 2.54 2.70 2.69 2.68 2.68 2.66 2.64 2.64 2.64 2.65 2.65 2.66 2.66 2.68 2.70 2.74

Primary OutFlow Max=2.07 cfs @ 12.16 hrs HW=838.69' (Free Discharge)
└─**1=Broad-Crested Rectangular Weir** (Weir Controls 2.07 cfs @ 1.04 fps)

Pond 23P: WQ 140

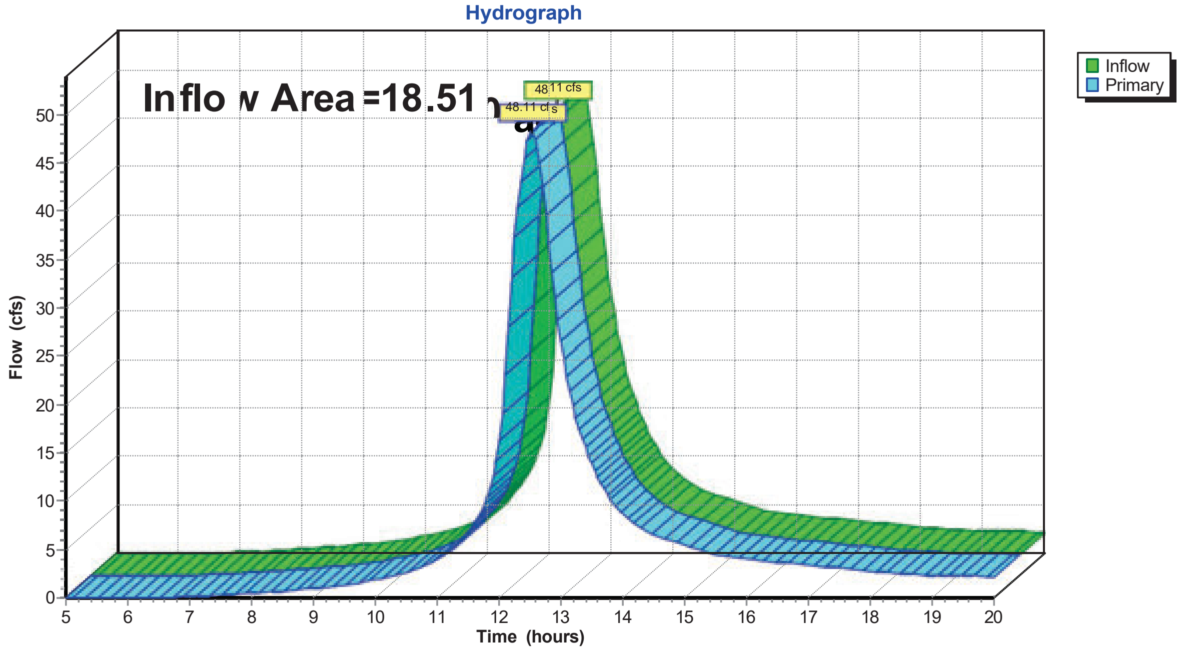


Summary for Link 4L: EX POA / A

Inflow Area =	18.510 ac,	0.00% Impervious,	Inflow Depth > 4.69"	for 100-Year event	
Inflow =	48.11 cfs @	12.52 hrs,	Volume=	7.236 af	
Primary =	48.11 cfs @	12.52 hrs,	Volume=	7.236 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 4L: EX POA / A

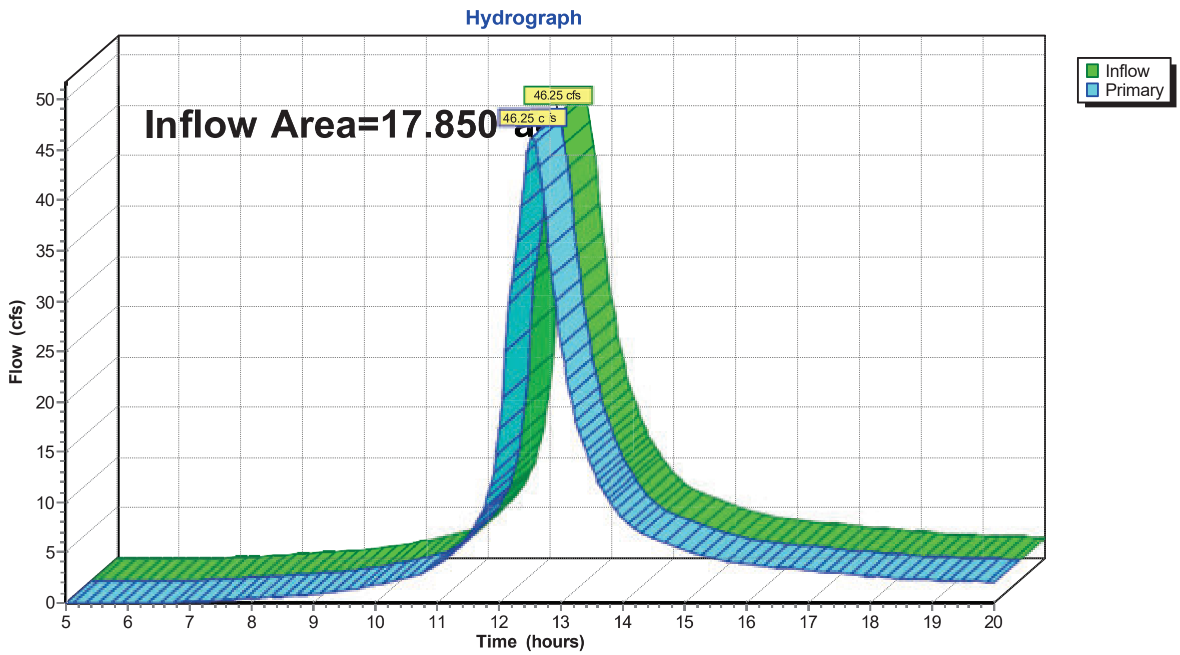


Summary for Link 15L: PR POA / A

Inflow Area =	17.850 ac,	0.00% Impervious, Inflow Depth > 4.71"	for 100-Year event	
Inflow =	46.25 cfs @	12.53 hrs, Volume=	7.002 af	
Primary =	46.25 cfs @	12.53 hrs, Volume=	7.002 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 15L: PR POA / A

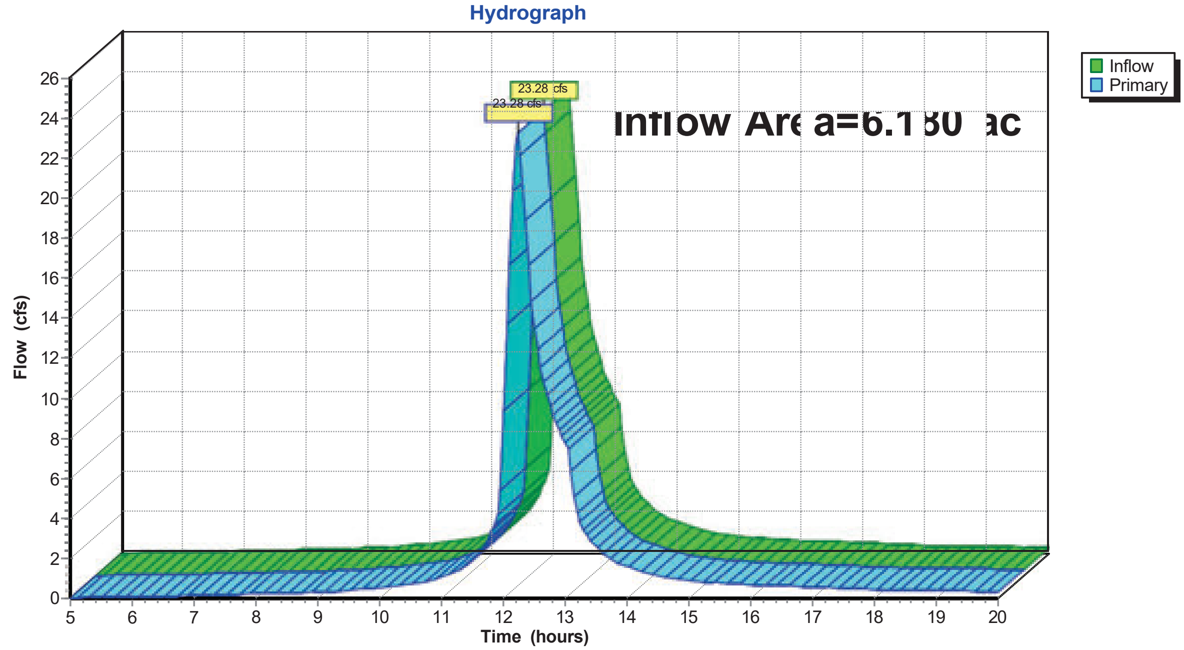


Summary for Link 18L: PR POA / B

Inflow Area =	6.180 ac,	0.00% Impervious,	Inflow Depth > 4.04"	for 100-Year event	
Inflow =	23.28 cfs @	12.23 hrs,	Volume=	2.080 af	
Primary =	23.28 cfs @	12.23 hrs,	Volume=	2.080 af,	Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 18L: PR POA / B



Appendix H
Watershed Maps

Wake Robin Inn Redevelopment

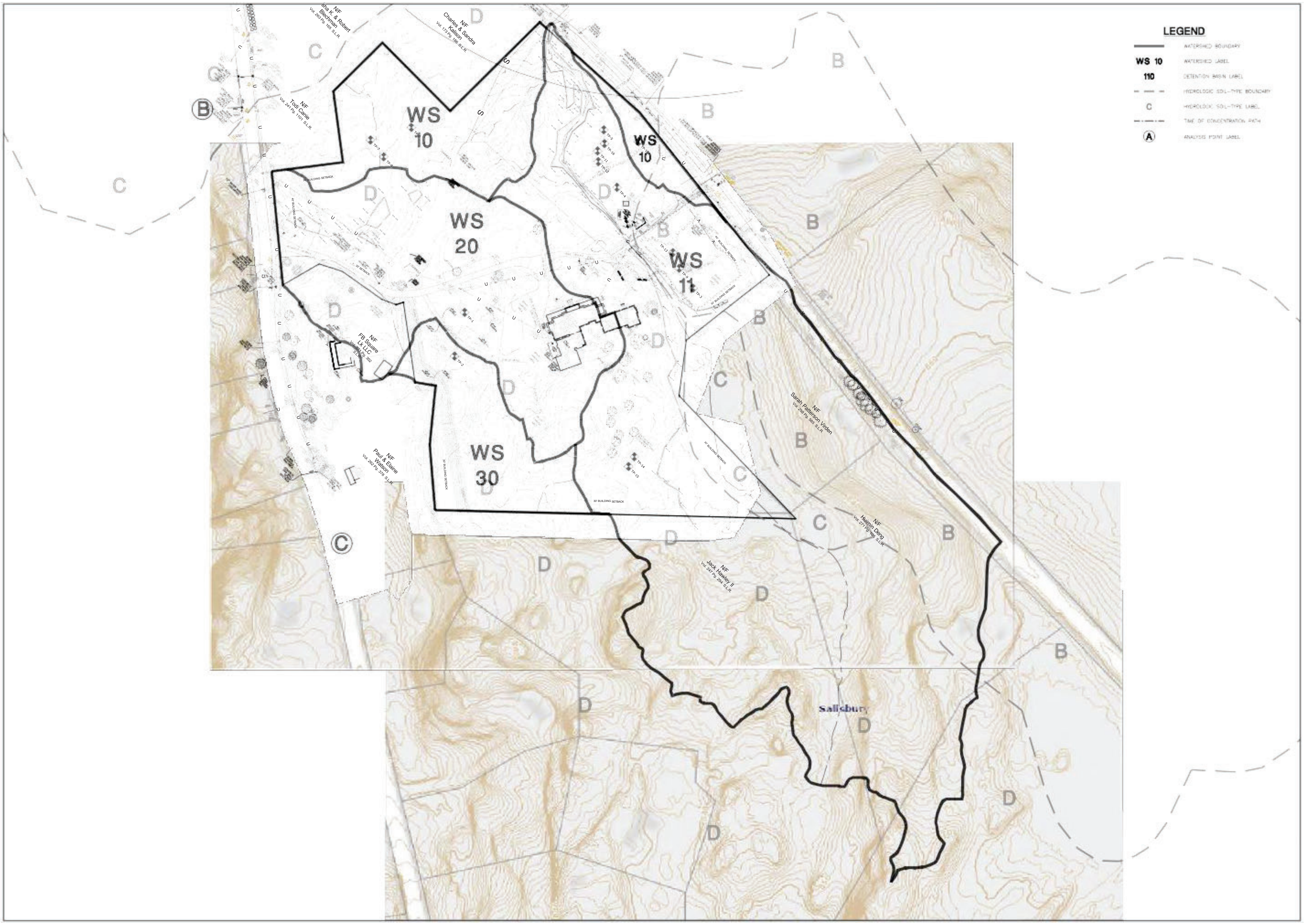
104 & 106 Sharon Road, Salisbury, Connecticut

Drainage Report

Prepared for:
Aradev LLC
352 Atlantic Avenue, Unit 2
Brooklyn, NY 11217

SLR Project No.: 141.22100.00001

April 25, 2025



SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY

WATERSHED MAP - EXISTING CONDITIONS

WAKE ROBIN INN REDEVELOPMENT

104 & 106 SHARON ROAD
SALISBURY, CONNECTICUT

MCB	MCB	TDR
DESIGNED	DRAWN	CHECKED

SCALE: 1"=80'

DATE: APRIL 29, 2025

PROJECT NO.: 22100.00001

SHEET NO.: 1 OF 2

SHEET NAME: **EXWS**

SLR
99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773
SLRCONSULTING.COM

DESCRIPTION	DATE	BY

WATERSHED MAP - PROPOSED CONDITIONS

WAKE ROBIN INN REDEVELOPMENT

104 & 106 SHARON ROAD
SALISBURY, CONNECTICUT

MCB	MCB	TDR
DESIGNED	DRAWN	CHECKED

SCALE: 1"=80'

DATE: APRIL 29, 2025

PROJECT NO.: 22100.00001

SHEET NO.: 2 OF 2

SHEET NAME: **PRWS**

NATURAL DIVERSITY DATA BASE COMMUNICATION

Natural Diversity Data Base Communication

The applicant and its engineering consultants at SLR have been actively coordinating with the Connecticut Department of Energy and Environmental Protection (CT DEEP) and the Natural Diversity Data Base (NDDB) regarding the proposed species relocation plan. As part of this coordination, the following materials are included in the application package:

- A completed Request for Natural Diversity Data Base State-Listed Species Review Form
- A detailed NDDB Survey Report prepared by SLR
- Correspondence and ongoing coordination with Bill Moorhead of the CT DEEP

The applicant will continue to work closely with the State of Connecticut to secure formal approval of the relocation plan from the NDDB.

CPPU USE ONLY
App #:____________________________
Doc #:____________________________
Check #: No fee required
Program: Natural Diversity Database Endangered Species
Hardcopy _____ **Electronic** _____

Connecticut Department of Energy & Environmental Protection
WILDLIFE DIVISION

Request for Natural Diversity Data Base (NDDB) State Listed Species Review

This form was auto-populated with information provided through the DEEP ezFile portal NDDB review application. **There are no fees associated with NDDB Reviews.**

Part I: Preliminary Screening & Request Type

Before submitting this request, you must review the most current Natural Diversity Data Base "State and Federal Listed Species and Significant Natural Communities Maps" found on the DEEP website. These maps are updated twice a year, usually in June and December.	
This form is being submitted for a:	
☒ *New* NDDB request ☐ *Renewal* of a NDDB Request ***without*** *modifications and within* ***two years*** *of issued NDDB determination* (no attachments required) [*CPPU Use Only - NDDB-Listed Species Determination #* 1736]	☐ *New* **Safe Harbor Determination**; must be associated with an application for a GP for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (Attachment D of this form is required) ☐ *Renewal/Extension* of an existing Safe Harbor Determination ☐ With modifications ☐ Without modifications (no attachments required) [*CPPU Use Only - NDDB-Safe Harbor Determination #* 1736]
Enter NDDB Determination Number for Renewal:	Enter Safe Harbor Determination Number for Renewal/Extension:
1. Does your project utilize federal funds or require a federal permit? ☒ Yes ☐ No If yes, your project may be subject to Federal rules regarding the Northern long-eared bats or other federally listed species. Information on the Northern long-eared bat and the 4-D rule may be found at: http://www.fws.gov/midwest/endangered/mammals/nleb/ Information on other federally listed species and Section 7 consultations may be found at: https://www.fws.gov/newengland/EndangeredSpec-Consultation.htm	

2. Does your project utilize state funding, involve state agency actions, or relate to a CEPA request?

☒ Yes ☐ No

3. Does your project require state permits, licenses, registrations or authorizations? ☒ Yes ☐ No

If yes, list permit type(s): Stormwater Discharge – Construction

If an active enforcement action exists regarding this project, enter number:

If known, enter DEEP analysts reviewing this project:

II: Requester Information

If the requester is a corporation, limited liability company, limited partnership, limited liability partnership, or a statutory trust, it must be registered with the Secretary of the State. If applicable, the name shall be stated **exactly as it is registered with the Secretary of the State. Please note, for those entities registered with the Secretary of the State, the registered name will be the name used by DEEP. This information can be accessed at the Secretary of the State's Business Records Search.* (https://service.ct.gov/business/s/onlinebusinesssearch)

If the requester is an individual, provide the legal name (include suffix) in the following format: First Name; Middle Initial; Last Name; Suffix (Jr, Sr., II, III, etc.).

If there are any changes or corrections to your company/facility or individual mailing or billing address or contact information, please complete and submit the Request to Change company/Individual Information to the address indicated on the form.

1. Requester*

Company Name: SLR INTERNATIONAL CORPORATION | Contact Name: MARLEE ANTILL

Address: 99 REALTY DR | City/Town: CHESHIRE

State: CT | Zip Code: 06410

Business Phone: 2033447887 Ext: | **E-mail: MANTILL@SLRCONSULTING.COM

**By providing this email address you are agreeing to receive official correspondence from the department, at this electronic address, concerning this request. Please remember to check your security settings to be sure you can receive emails from "ct.gov" addresses. Also, please notify the department if your e-mail address changes

a) Requester can best be described as:

☐ Individual ☐ Federal Agency ☐ State agency

☐ Municipality ☐ Tribal ☒ *business entity (* if a business entity complete i through iii):

i) Check type ☐ corporation ☐ limited liability company

☐ limited partnership ☐ limited liability partnership

☐ statutory trust ☐ Other:

ii) Provide Secretary of the State Business ID #: 1282419 This information can be accessed at the Secretary of the State's Business Records Search (https://service.ct.gov/business/s/onlinebusinesssearch)

iii) ☐ Check here if your business is **NOT** registered with the Secretary of the State's office.

b) Acting as (Affiliation), pick one:

☐ Property owner ☐ Consultant ☐ Engineer

☐ Facility owner ☒ Applicant ☐ Biologist

☐ Pesticide Applicator ☐ Other representative:

Part III: Site Information

This request can only be completed for one site. A separate request must be filed for each additional site.

SITE NAME AND LOCATION

Project Name (for use in correspondence): Wake Robin Inn Improvements

If your Project site has a street address, please enter below:

Street Address: 104 Sharon Road

Town(s): Salisbury

If your Project has no street address, please enter a description of the site location:

Location Description:

Town(s):

Size in acres, or site dimensions: 13.33

Describe existing land conditions:

The site is comprised of two parcels: the main 11.15-acre parcel (104 and 106 Sharon Road) contains the existing Wake Robin Inn facilities, including buildings and appurtenances, a paved access road, parking area, maintained lawn, and upland forest with small areas of forested wetland. The project also proposes to incorporate 53 Wells Hill Road, a 2.2-acre parcel located in the northeastern portion of the site, with direct access to Wells Hill Road to the east via an existing gravel driveway. The smaller parcel contains several existing residential structures and maintained lawn, with the remainder of the parcel to the north and west comprised of upland forested bisected by a wetland corridor with a north-flowing watercourse. Land use surrounding the site is comprised of a mix of light residential, open space/forested, and agricultural, with Wononskopomuc Lake located approximately 0.1 mile to the west.

Much of the forested survey area is comprised of steep slopes with exposed rocky soils rated by the Natural Resources Conservation Service (NRCS) as Well Drained (Appendix A, Figure 4). Numerous calcareous bedrock outcroppings also exist within the southern portion of the site. The site generally slopes from south to north, with elevations on site ranging from 780 feet above mean sea level (amsl) in the northern portion of the site to 855 atop forested, rocky outcroppings in the southern portion of the site. Wetland areas exist on site along the eastern site boundary and to the northwest.

Part IV: Project Information

1. **Project Type**:

   Choose Project Category: Construction, Development

   Choose Project Type: Building and Infrastructure Development (including stormwater discharge associate with construction)

   Choose Project Subtype: New Commercial, Industrial, Governmental

2. Brief Project Description:

3. Provide a schedule for all phases of the project including the year, the month that the proposed activity will be initiated and the duration of the activity.

   TBD following state permitting

4. Is the subject activity limited to the maintenance, repair, or improvement of an existing structure within the existing footprint? ☐ Yes ☒ No If yes, add explanation in No. 4 below.

5. Give a detailed description of the activity which is the subject of this request and describe the methods and equipment that will be used. Include a description of steps that will be taken to minimize impacts to any known listed species.

   The subject property, located at 104 and 106 Sharon Road and 53 Wells Hill Road in Salisbury, Connecticut covers approximately 13.4-acre subject site and currently supports the seasonally active Wake Robin Inn, which consists of one primary three-story building, two linear one-story buildings, a standalone garage, parking area, and various appurtenances. The proposed project would expand upon the existing use of the site as a seasonal vacation and retreat destination by renovating/adding on to several existing buildings, replacing some buildings on site, and adding new low-impact recreational opportunities, including walking trails. The proposed improvements also include some roadway updates and additions, new areas of pervious parking, and new stormwater treatment infrastructure comprised of vegetated detention basins.

Standard construction equipment would be utilized as well as construction best management practices (BMPs) including sedimentation and erosion controls, construction phasing, and a time of year restriction for tree clearing will likely be required by USFWS, restricting tree clearing to the inactive period for NLEB, from November 1 – April 14. The Applicant may propose additional measures such as the installation of bat boxes along the southern edge

of the project area, within the proposed tree clearance zone. This conservation measure would support active season bat habitat for roosting and pup rearing that could be used by NLEB.

The proposed activities will have a direct impact to the state-listed species, Carex oligocarpa, identified on site. One growing location overlaps with the site of a proposed event building in the southwest portion of the site while the second growing location is located adjacent to a proposed storage building along the southern site boundary. While these proposed activities will result in direct loss of habitat, the Applicant has proposed a comprehensive relocation plan in Section 4.2 of the attached NDDB Listed Plant Survey Report in order to rehabilitate the onsite population and avoid substantial, long-term impacts to the species resulting from the proposed work.

6. If this is a renewal or extension of an existing Safe Harbor request *with* modifications, explain what about the project has changed.

Part VI: Supporting Documents

Check each attachment submitted as verification that *all* applicable attachments have been supplied with this request form. Label each attachment as indicated in this part (e.g., Attachment A, etc.) and be sure to include the requester's name, site name and the date. **Please note that Attachments A and B are required for all new requests. Attachment C is required for requests associated with: new state or federal permit applications, modifications of existing permits, permit enforcement actions, site management/planning that requires details species recommendations, and state funded projects, state agency activities, and CEPA requests.** Renewals/Extensions with no modifications do not need to submit any attachments. Attachments C and D are supplied at the end of this form.

☒ Attachment A:	**Project Detail Map:** an 8 1/2” X 11” print/copy of the relevant portion of a USGS Topographic Quadrangle Map clearly indicating the exact location of the site.
☒ Attachment B:	**GIS file (for uploaded GIS polygons):** fine scaled map showing site boundary and area of work details on aerial imagery with relevant landmarks labeled. (Site and work boundaries in GIS [ESRI ArcView shapefile, in NAD83, State Plane, feet] format can be substituted for detailed maps, see instruction document)
☒ Attachment C:	**Supplemental Information (attached, DEEP-APP-007C):** Site plans, photographs and biological reports
☐ Attachment D:	**Safe Harbor Report Requirements (attached, DEEP-APP-007D)**

Part VII: Requester Certification

The requester *and* the individual(s) responsible for actually preparing the request must sign this part. A request will be considered incomplete unless all required signatures are provided.

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of the individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief."

Antill Marlee	12/5/2024
Signature of Preparer (a typed name will substitute for a handwritten signature)	Date
Antill Marlee	
Name of Preparer (print or type)	Title (if applicable)
Signature of Preparer (if different than above)	Date
Name of Preparer (print or type)	Title (if applicable)

Note: Please submit the completed Request Form and all Supporting Documents to:

CENTRAL PERMIT PROCESSING UNIT
DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

Or email request to: **deep.nddbrequest@ct.gov**

Attachment C: Supplemental Information and Attachments

1. **Existing & Proposed Conditions**

   If available provide site plans, drawings or imagery showing existing conditions and proposed changes. If not available, describe all natural and man-made features including wetlands, watercourses with direction of flow, fish and wildlife habitat, floodplains and any existing structures potentially affected by the subject activity. Such features should be depicted and labeled on the site plan.

   ☐ **Annotated Site Plan(s) attached**

2. **Photographs** depicting site conditions can be helpful to reviewers. Provide and label photographs, if available.

   ☐ **Site Photographs (optional) attached**

3. **Biological Surveys**

   Has a biologist visited the site and conducted a biological survey to determine the presence of any endangered, threatened or special concern species ☐ Yes ☐ No

   If yes, submit any reports of biological surveys, documentation of the biologist's qualifications, and any NDDB survey forms. Reports should include biologist(s) name, habitat and/or species targeted by survey, plant and animal species observed, dates when surveys were conducted.

   ☐ **Reports of biological surveys attached**

   ☐ **Documentation of biologist's qualifications attached**

   ☐ **NDDB Survey forms for any listed species observations attached**

Attachment D: Safe Harbor Report Requirements

Submit a report, as Attachment D, that synthesizes and analyzes the information listed below. Those providing synthesis and analysis need appropriate qualifications and experience. A request for a safe harbor determination shall include:

1. **Habitat Description and Map(s), including GIS mapping overlays, of a scale appropriate for the site, identifying:**

   - wetlands, including wetland cover types;
   - plant community types;

- topography;
- soils;
- bedrock geology;
- floodplains, if any;
- land use history; and
- water quality classifications/criteria.

2. **Photographs** - The report should include photographs of the site taken from the ground and also all reasonably available aerial or satellite photographs and an analysis of such photographs.

3. **Inspection** - A visual inspection(s) of the site should be conducted, preferably when the ground is visible, and described in the report. This inspection can be helpful in confirming or further evaluating the items noted above.

4. **Biological Surveys** - The report should include all biological surveys of the site where construction activity will take place that are reasonably available to a registrant. A registrant shall notify the Department's Wildlife Division of biological studies of the site where construction activity will take place that a registrant is aware of but are not reasonably available to the registrant.

5. **Based on items #1 through 4 above, the report shall include a Natural Resources Inventory of the site of the construction activity.** This inventory should also include a review of reasonably available scientific literature and any recommendations for minimizing adverse impacts from the proposed construction activity on listed species or their associated habitat.

6. **In addition, to the extent the following is available at the time a safe harbor determination is requested, a request for a safe harbor determination shall include and assess:**

   - Information on Site Disturbance Estimates/Site Alteration information
   - Vehicular Use
   - Construction Activity Phasing Schedules, if any; and
   - Alteration of Drainage Patterns

NDDB State-Listed Plants Survey Report

Wake Robin Inn Proposed Redevelopment
104 & 106 Sharon Road and 53 West Hills Road, Salisbury, CT

ARADEV LLC

352 Atlantic Avenue, Unit 2
Brooklyn, New York 11217

Prepared by:

SLR International Corporation

99 Realty Drive, Cheshire, Connecticut, 06410

SLR Project No.: 141.22100.00001

November 22, 2024

Making Sustainability Happen

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Acronyms and Abbreviations

AMSL	Above Mean Sea Level
BMP	Best Management Practice
CTDEEP	Connecticut Department of Energy and Environmental Protection
E	Endangered
F	Fahrenheit
GPS	Global Positioning System
LOD	Limits of Disturbance
NDDB	Natural Diversity Data Base
NRCS	Natural Resources Conservation Service
SC	Special Concern
SLR	SLR International Corporation
T	Threatened

1.0 Introduction

On behalf of ARADEV LLC (the Applicant), SLR International Corporation (SLR) has consulted the Connecticut Department of Energy and Environmental Protection (CTDEEP) Natural Diversity Data Base (NDDB) program on listed species mapped by NDDB as potentially occurring within the subject property located at 104 and 106 Sharon Road and 53 Wells Hill Road in Salisbury, Connecticut (**Appendix A, Figure 1**). The approximately 13.4-acre subject site (M/B/L 47-02) currently supports the seasonally active Wake Robin Inn, which consists of one primary three-story building, two linear one-story buildings, a standalone garage, parking area, and various appurtenances (**Appendix A, Figure 2**). This report presents the methodology and results of a listed flora survey performed by SLR qualified botanists on June 25 and July 3, 2024. This survey was conducted in response to an NDDB Preliminary Assessment letter for the project dated May 28, 2024 (NDDB Automated Site Assessment 407433177). The Automated Site Assessment presented four species of state-listed plants (one State Endangered, one State Threatened, and two State Special Concern) with the potential to occur within the project parcel (**Table 1**).

The study area subject to this report comprises the limits of disturbance (LOD) for proposed updates to the existing Wake Robin Inn, including expansion of the existing inn building, construction of new cabins, an event barn, a gym and spa, a pool, and associated parking, drives, and pervious gravel walking paths (**Appendix A, Figure 3**). Additional components include a new stormwater management system consisting of open, vegetated stormwater detention basins to be around the site.

This report contains the methodology and results of the June and July 2024 botanical survey for the listed plant species. In summary, one plant species, eastern few-fruited sedge (*Carex oligocarpa*), listed as State Special Concern, was identified on site within the proposed project disturbance limits and is also believed to exist off site to the south. Although proposed ground disturbance will impact the small number of individual plants observed on site, mitigation strategies are proposed within this report to minimize overall impact to the local species' population.

Table 1: State-Listed Plant Species from NDDB Automated Site Assessment
Wake Robin Inn, Salisbury, Connecticut

Scientific Name	Common Name	State Status	Preferred Habitat	Potential Habitat In/Adjacent To Project Area (Y/N)	Potential Impact On Species From Project (Y/N)
Pellaea glabella	Smooth cliff-brake	E	Damp or shaded calcareous rocky slopes, ridges, ledges, high pH cliffs, occasionally roadcuts. Produces spores June, July, September.	Y	N
Asplenium ruta-muraria	Wall-rue spleenwort	T	Sheltered cliffs, seams, and crevices of limestone outcrops. Produces spores in July.	Y	N
Carex formosa	Handsome sedge	SC	Calcareous meadows, woods, thickets, and open swamps; calcareous spring fens; mesic to dry deciduous forests and ravines, moist soil in woods and thickets. Flowers May-June, fruits persist onward.	Y	N
Carex oligocarpa	Eastern few-fruited sedge	SC	Shaded rock ledges, hillsides, rich woods. On marble and traprock. Flowers in June, fruits persist onward.	Y	Y*

E = State Endangered
T = State Threatened
SC = State Special Concern
*Applicant proposes mitigation (described herein) to minimize impacts to the local species' population from proposed project activities.

1.1 Methods

Prior to the survey, the defining physical characteristics and habitat preferences of the four target plant species were reviewed by the surveyors using reliable online and print botanical resources, including Go Botany and Gray's *Manual of Botany*, 8th edition.

On June 25 and July 3, 2024, Marlee Antill, SLR environmental scientist and qualified botanist with experience conducting botanical surveys across the state for these and other similar floral taxa (**Appendix D**), completed a field investigation to determine the presence or absence of the above-listed species and to assess habitat suitability within the project site (**Appendix A, Figures 1 and 2**). Weather conditions were sunny and clear, with air temperatures of approximately 75 degrees F.

The survey was completed using the visual encounter method. Proposed disturbance limits are presented on the attached survey figure (**Appendix A, Figure 3**) as well as the project site plans (**Appendix E**), which included the study area for survey efforts. In many areas, the survey efforts expanded beyond the proposed disturbance limits, including an undeveloped forested slope with rocky outcrops just south of the limits of disturbance on site. A complete floristic inventory within potentially suitable habitat areas for the four species was recorded using a field book and categorized based on vegetation stratum and habitat communities (**Appendix C**). A photographic log was created to document site conditions at the time of the survey (**Appendix B**). The survey was conducted during the known fruiting and/or flowering time for all species listed.

A handheld global positioning system (GPS) with submeter accuracy was utilized throughout the survey to record the survey path. Prior to the site visit, the proposed limits of disturbance for the project were imported to the GPS unit. The boundaries of inland wetlands and watercourses, delineated previously by SLR and others, were also imported to the GPS unit. Based on the preferred habitats of the plant species, survey efforts focused on relatively closed canopy, undisturbed, forested portions of the site, predominantly south of the existing inn, and with rocky outcrops and overall low density of groundcover.

2.0 Site Description

The project survey site comprises approximately 13.35 acres situated between Wells Hill Road to the east and Sharon Road to the west. Primary site access is from Sharon Road to the west, with secondary access via Wells Hill Road. The site is comprised of two parcels: the main 11.15-acre parcel (104 and 106 Sharon Road) contains the existing Wake Robin Inn facilities, including buildings and appurtenances, a paved access road, parking area, maintained lawn, and upland forest with small areas of forested wetland. The project also proposes to incorporate 53 Wells Hill Road, a 2.2-acre parcel located in the northeastern portion of the site, with direct access to Wells Hill Road to the east via an existing gravel driveway. The smaller parcel contains several existing residential structures and maintained lawn, with the remainder of the parcel to the north and west comprised of upland forested bisected by a wetland corridor with a north-flowing watercourse. Land use surrounding the site is comprised of a mix of light residential, open space/forested, and agricultural, with Wononskopomuc Lake located approximately 0.1 mile to the west.

Much of the forested survey area is comprised of steep slopes with exposed rocky soils rated by the Natural Resources Conservation Service (NRCS) as Well Drained (**Appendix A, Figure 4**). Numerous calcareous bedrock outcroppings also exist within the southern portion of the site. The site generally slopes from south to north, with elevations on site ranging from 780 feet above mean sea level (amsl) in the northern portion of the site to 855 atop forested, rocky outcroppings in the southern portion of the site. Wetland areas exist on site along the eastern site boundary and to the northwest; as none of the state-listed species are known to occur in wetland habitats, these areas of the site were a lesser focus during the botanical surveys.

The parcel is located within the 15.7-square-mile Factory Brook subregional watershed, which extends from the Massachusetts border to southern Salisbury. The site drains north and west towards Wononskopomuc Lake and Factory Brook, which outlets from the northeast portion of the lake and flows northeast to Salmon Creek upstream of its confluence with the Housatonic River along the eastern boundary of Salisbury.

3.0 Survey Results

In summary, one of the four target plant species – *Carex oligocarpa* – was observed during the botanical surveys. As depicted on **Appendix A, Figure 2**, *C. oligocarpa* was identified within two locations on site, and other growing sites of the species are believed to exist just off site to the south. The observation sites are located within the southern, sloped hardwood deciduous forested portion of the site, southwest of the existing main inn building and within the project limits of disturbance (described in Section 3.1.1). The number of individuals observed within the three locations was relatively small, with between 1 and 20 plants counted in each separate location.

Carex oligocarpa is distinguished from other *Carex* species by the combination of clump forming, red-purple at the base, sheaths mostly convex at the tip and extended above the base of the leaf, all-staminate terminal spike, 2 to 4 pistillate spikes with 2 to 7 perigynia per spike, pistillate scales with a rough-textured awn often longer than the perigynia, perigynia with up to 59 impressed veins, and the short beak straight and toothless.

While some potentially suitable habitat exists on site for the remaining three species, a comprehensive investigation across the full subject site yielded no observations of these species during their known reproductive period when identification would be the most likely.

3.1 Habitats Surveyed

Potential habitat for all species exists within the proposed limits of disturbance. A description of the habitats surveyed within the project limits and plant species observed within each follows.

3.1.1 Upland Mixed Hardwood/Deciduous Forested Slope with Rocky, Calcareous Outcrops

South of the main inn building, the site has been less recently disturbed and features more rolling topography punctuated by rocky outcroppings. The mid-successional forest occupying the southern portion of the site is connected to the south with other undeveloped/forested and largely open space parcels extending in a contiguous corridor nearly 1.5 miles to Race Track Road. The relatively closed canopy is comprised of mature red maple (*Acer rubrum*), sugar maple (*A. saccharum*), tulip poplar (*Liriodendron tulipifera*), shagbark hickory (*Carya ovata*), red oak (*Quercus rubra*), eastern hemlock (*Tsuga canadensis*), and smaller-diameter American elm (*Ulmus americana*) and black locust (*Robinia pseudoacacia*). Shrubs exist in isolated patches, largely comprised of nonnative Japanese barberry (*Berberis thunbergii*). Groundcover varies between the thinly layered soil atop bedrock outcroppings, to the mossy, exposed rockfaces along steep slopes, and deeper soil deposits with leaf litter in the moderately sloped to flat valleys between hillsides. The high points along ridges and outcrops are vegetated with young tree saplings, Japanese barberry, and herbaceous vegetation, including Virginia-creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), sweet cicily (*Osmorhiza claytonii*), meadow-rue (*Thalictrum thalictroides*), and wood ferns (*Dryopteris* sp.). Dense monocultures of herbaceous vegetation carpet large swaths within the valley bottoms, with Pennsylvania sedge (*Carex pennsylvanica*) occupying deeper shade areas and American hog-peanut (*Amphicarpaea bracteata*) growing in more dappled light. It is along the gently sloping hills below the rocky outcrop faces and above the flatter valleys that *Carex oligocarpa* was observed. These areas feature moderately well-drained loamy soils with little to no exposed bedrock or bare mineral soil.

The larger patch of *C. oligocarpa* was observed approximately 200 feet north of the southern property boundary and approximately 30 feet north of an existing frame garage with recent disturbance from cart and foot traffic along an existing path. The plants were observed growing in a relatively dense clump beneath a patchy canopy of eastern hemlock (*Tsuga canadensis*) and American elm (*Ulmus americana*). The *C. oligocarpa* in this location were growing near several herbaceous species, including eastern woodland sedge (*Carex blanda*), white wood-aster (*Eurybia divaricata*), garlic-mustard (*Alliaria petiolata*), and with some leaf litter among the groundcover.

The second *C. oligocarpa* location on site exists near the toe of slope beneath a rocky outcropping and was observed growing in a small clearing beside a patch of Pennsylvania sedge and near a grouping of red oak and white pine (*Pinus strobus*) saplings. No recent disturbance was observed in this location near the southern property boundary. SLR's survey did not continue off site to the south, although it is assumed that additional suitable *C. oligocarpa* habitat exists off site in this direction.

3.1.2 Early Successional/Disturbed White Pine/Mixed Hardwood/Eastern Hemlock Upland Forest

Compared to the forest in the southern portion of the site, the northern forested area features a relatively evenly sloped topography with fewer bedrock outcroppings. This area displays more evidence of recent disturbance. The upland forest features a higher proportion of evergreen trees, including white pine and eastern hemlock, with deciduous canopy trees, including Norway maple (*Acer platanoides*) and sugar maple, basswood (*Tilia latifolia*), and saplings of white pine and green ash (*Fraxinus pennsylvanica*) in clusters. The shrub stratum is dominated in large part by nonnative species, including Japanese barberry, Morrow's honeysuckle (*Lonicera morrowii*), and garlic-mustard. While some patches of potentially suitable habitat exist for the state-listed NDDB species, in general the shrub understory was found to be too dense to support much herbaceous growth throughout this portion of the site.

3.1.3 Other Ecological Communities

While SLR covered the entire limits of the site during the two survey days, less detailed investigation was performed within the wetland areas on site (which were previously delineated by SLR and described in SLR's 2024 wetland delineation report, available upon request) as well as areas of existing development, including standing structures, open lawn and manicured landscaping, and existing roadway and walking paths. These areas are frequently disturbed and do not provide habitat for the state-listed plants, nor were any of the species (or commonly associated species) observed during the botanical survey work.

3.2 Floristic Inventory

A comprehensive floristic inventory of all observed vegetation within the surveyed habitats described above was collected and categorized based on vegetation stratum (**Appendix C**).

4.0 Proposed Project

4.1 Project Description

The proposed project would expand upon the existing use of the site as a seasonal vacation and retreat destination by renovating/adding on to several existing buildings, replacing some buildings on site, and adding new low-impact recreational opportunities, including walking trails. The proposed improvements also include some roadway updates and additions, new areas of pervious parking, and new stormwater treatment infrastructure comprised of vegetated detention basins. All proposed site improvements are depicted on the attached site plans, titled *Wake Robin Inn Redevelopment*, dated November 6, 2024, and prepared by SLR (**Appendix E**).

The proposed activities will have a direct impact to the state-listed species, *Carex oligocarpa*, identified on site. One growing location overlaps with the site of a proposed event building in the southwest portion of the site while the second growing location is located adjacent to a proposed storage building along the southern site boundary. While these proposed activities will result in direct loss of habitat, the Applicant has proposed a comprehensive relocation plan in Section 4.2 in order to rehabilitate the onsite population and avoid substantial, long-term impacts to the species resulting from the proposed work.

4.2 *Carex oligocarpa* Mitigation/Relocation Plan

As stated above, a listed plant species relocation plan has been designed in order to mitigate for damage or loss of the identified state-listed plants and their habitat within the project area and to ensure the continued local survival of this species.

The intended outcome of this plan is to relocate the plant through its herbaceous material and/or propagules (also referred to as transplanting) to a nearby location with suitable habitat. It is imperative that the chosen relocation site will not be further developed or disturbed and is located where individuals of the species can be monitored in subsequent years for continued survival. SLR's recommended strategy for protection and impact mitigation is outlined below.

4.2.1 Proposed *Carex oligocarpa* Relocation Protocol Overview

SLR recommends that all identified individuals of the state-listed Special Concern species be carefully transplanted to a protected area outside of the project disturbance limits (shown on **Appendix A, Figure 3**) and monitored for survival. The selected transplantation area must resemble as closely as possible the existing plants' locations in terms of elevation, slope, aspect, soil type, shade, and surrounding vegetation type and density. SLR recommends transplanting this species during the late spring, before production of flowering parts and when the soil is warm and conducive for root establishment.

Immediately following transplanting, all relocated individuals shall be adequately watered. Follow-up monitoring and watering may be required in the months following, depending on local precipitation levels.

4.2.1.1 Detailed Proposed Relocation Mitigation Protocol

The following protocol is intended to be completed during late spring (March through April), prior to the commencement of ground-disturbing activities within the listed-species growing locations.

All stages will be performed by a qualified sensitive vegetation management crew and/or under the supervision of a qualified botanist and fully documented (including photos, GPS points, and written observations).

1. The chosen relocation site (depicted in **Appendix A, Figure 3**) occurs outside of the limits of disturbance and shall be physically isolated from the project area with sturdy silt fencing and signage.
2. Existing conditions (photos and mapping points) will be collected within the site(s) chosen for plant relocation. This will include number of individuals of any listed plant species (either positively identified or potentially identified prior to flowering) to be transplanted and a full floristic inventory within the removal boundaries.
3. Hand-digging with a hand trowel will be performed to the maximum depth to collect the full root system of each individual (or small clump) of plants. Individuals will be photographed and counted and placed flat within a safe collection container/tarp in a shaded location. Relocation should occur within the same day as collection and will also utilize hand trowels to dig holes to an appropriate depth to accommodate the root system. A brightly colored, labeled flag will be placed in the ground next to any individual transplants for future identification during the remainder of the growing season.
4. If plants are not relocated and planted immediately, then said plants removed from the soil shall be stored temporarily under shade prior to transplanting.
5. Immediately following transplanting, sufficient water will be provided to the soil around the transplanted individuals. Daily or near daily watering may be required. Watering requirements should be determined by a qualified horticulturist experienced with dry site species management. No plants should be translocated during recognized drought conditions. (If state-listed plants are dug up during a drought or other unfavorable conditions, they must be stored in pots in a controlled environment determined such as a greenhouse and tended by a qualified horticulturist until conditions favor installation on site).
6. Submeter GPS points will be collected to create a translocation map showing the areas of collection and transplanting. Data, including number of individuals/species, will also be recorded with each point.
7. Invasive species will be managed as needed within the relocation area(s) under close supervision by the client's qualified botanist for a maximum of 4 years. Low-impact mechanical methods are highly preferred (such as hand-pulling and use of nonmotorized, hand-operated equipment) to ensure minimal disturbance within the mitigation area.
8. Adaptive management strategies, including seed collection from known reference populations of the listed plant species and/or propagation and planting of these species, will be visited on an as-needed basis and under consultation with NDDB staff. As no evidence of the listed plant species' present occurrence on the project site has yet been identified, it is too soon to determine whether these types of strategies will be either possible or appropriate.

4.2.2 Construction-Phase Protections

The relocation area will be physically separated from the construction limits with sturdy silt fencing installed prior to the listed species relocation and marked with signage indicating a "Sensitive Habitat Area" to avoid. The silt fencing will be checked prior to and during all construction activities, and a qualified botanist shall be on site to monitor construction activities within the vicinity of the transplantation area.

In general, standard construction-phase best management practices (BMPs), including sedimentation and erosion controls, and a comprehensive stormwater management system will provide water quality protections and prevent the migration of construction debris, soil, and toxicants from impacting sensitive habitat areas in the vicinity of the project area.

4.2.3 Long-Term Monitoring and Maintenance

Following plant relocation, SLR recommends 4 years of monitoring and maintenance of the relocation areas. The following section outlines the follow-up surveys, invasive species management recommendations, and annual reporting requirements.

4.2.3.1 Post-Relocation Listed-Species Monitoring Surveys

Listed-species surveys should be performed during the known species' blooming period (June through July). A qualified botanist will complete annual monitoring for all state-listed plants during the appropriate blooming period. During Year 1 post-relocation, baseline data will be collected and presented to NDDB at the end of the growing season (November), reporting on the number of individuals that successfully recruited in the relocation site(s). This data will be accompanied by GPS points/maps, photos, and descriptive information about plant health.

During subsequent monitoring years, if new annual plant recruitment is found to fall below 50 percent of what was surveyed during Year 1 (barring unpredicted meteorological or natural disturbances on site such as extreme drought, wildfire, or storms, which could impact the annual recruitment of the species in a given year), SLR recommends collecting seed from the nearest extant population of the species and adding these propagules to the site. Recruitment of individuals from collected seeds will subsequently be monitored for 3 years from their introduction to the site.

4.2.3.2 Invasive Species Management

Invasive species will be managed as needed within the relocation area(s) under close supervision by the client's qualified botanist for a maximum of 4 years. Low-impact mechanical methods are highly preferred (such as hand-pulling and use of nonmotorized, hand-operated equipment) to ensure minimal disturbance within the mitigation area. Managing and discouraging the growth of invasive species within the relocation sites will be a crucial step to ensuring continued survival and success of the relocated state-listed plants.

The first treatment of invasive species will ideally occur at the start of the growing season to ensure early removal of new growth. Identification of invasive species and total cover within the monitoring sites should be performed by the client's qualified botanist during each monthly botanical survey and reported to the client. If total cover of invasive species exceeds 10 percent of the monitoring site, the client will be responsible for retaining the services of a qualified contractor that can perform the appropriate invasive species management techniques.

4.2.3.3 Annual Reporting

The client will be responsible for submitting an annual report to NDDB following the initial survey and relocation year as well as up to 4 years following the initial year. The annual monitoring report shall be submitted by the end of each year.

Each annual report will contain the following components:

a. Survey information, including identity and qualifications of person(s) performing the surveys, dates and duration of each survey, and meteorological data (seasonal precipitation trends and other factors relevant to plant recruitment and survival)

b. Representative photos of the survey location(s) and of any state-listed species identified

c. Maps identifying the location(s) of surveys and GPS points where state-listed species were observed

d. Full floristic inventory (separated by each date of survey)

e. Details of maintenance activities undertaken on site, including any adaptive management strategies and invasive species removal activities

5.0 Conclusion

On May 28, 2024, SLR submitted a Preliminary NDDB Determination request for the 13.4-acre Wake Robin property in Salisbury. The auto-generated list contained four state-listed plant species.

SLR biologists and qualified botanists performed two site visits in June and July 2024. During the site visits, all areas within the proposed project footprint/limit of disturbance were covered on foot, enabling the biologists to take photos, detailed site notes, and GPS points.

In summary, one state-listed species of Special Concern – Eastern few-fruited sedge (*Carex oligocarpa*) – was observed and documented on site by SLR. Direct disturbance is proposed within the two onsite identified species locations. SLR has prepared a proposed plant relocation strategy to mitigate for loss of these individuals and habitat within the project proposed limits of disturbance.

6.0 Closure

If you have any questions about the information in this report, please do not hesitate to contact either of the undersigned at 203-271-1773.

Sincerely,

SLR International Corporation

Matthew J. Sanford, MS, PWS, RSS
US Manager of Ecology
msanford@slrconsulting.com

Marlee Antill, MS, WPIT
Associate Environmental Scientist
mantill@slrconsulting.com

7.0 References

Fernald, Merritt Lyndon, and Asa Gray. *Gray's Manual of Botany.* 8th (Centennial) edition—Illustrated. ed. New York: American Book Company, 1950.

Magee, Dennis and Harry Ahles. *Flora of the Northeast.* University of Massachusetts Press, 1999.

Native Plant Trust: Go Botany, https://gobotany.nativeplanttrust.org/species/

141.22100.00001.0010.n2224.rpt

Appendix A: Figures

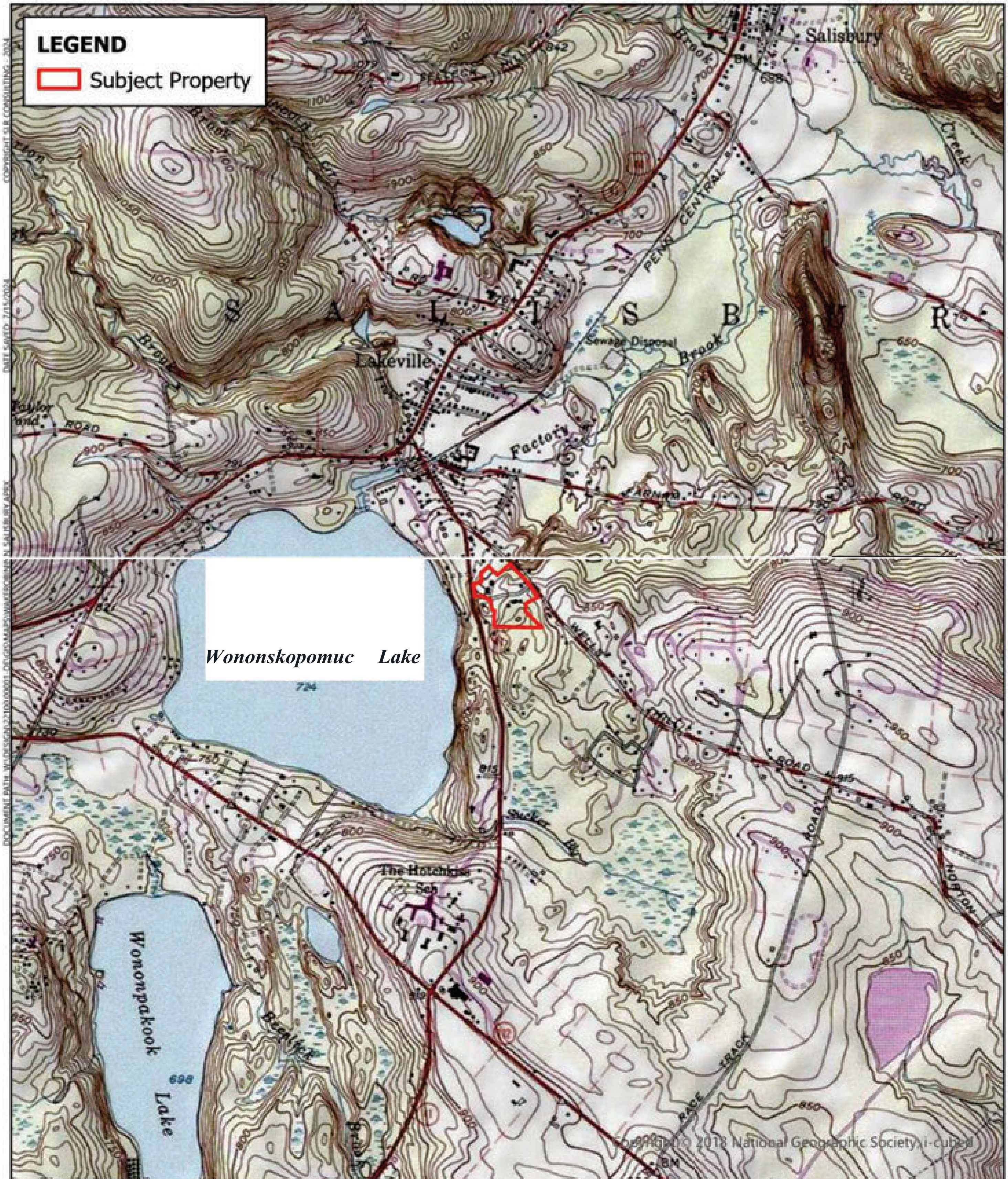
NDDB State NDDB State-Listed Plants Survey Report

Wake Robin Inn Proposed Redevelopment, Salisbury, CT

ARADEV LLC

SLR Project No.: 141.22100.00001

November 22, 2024



¥SLR

99 REALTY DRIVE
CHESHIRE, CT 06410
203.271.1773

USGS LOCUS MAP

WAKE ROBIN INN IMPROVEMENTS
ARADEV LLC
104 & 106 SHARON ROAD
SALISBURY. CONNECTICUT

N

0 2,000
Feet

SCALE 1" = 2,000'
7/16/2024
DATE
141.21759.00001
PROJ. NO.

FIG. 1

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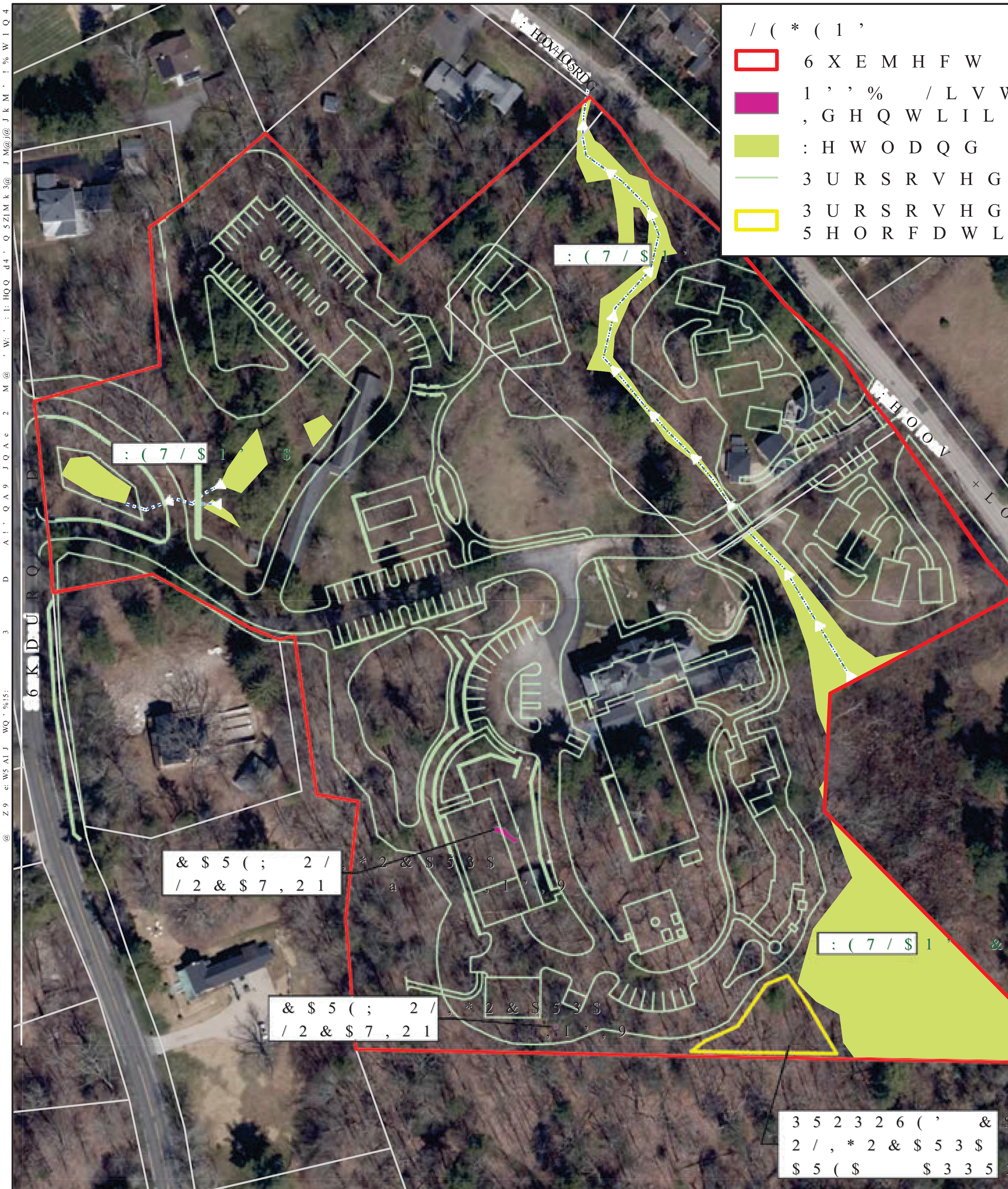
SLR



SLR

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Map Scale: 1:2,480 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0, 35, 70, 140, 210

Feet: 0, 100, 200, 400, 600

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

MAP LEGEND

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

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

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

Water Features
- Streams and Canals

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

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: State of Connecticut, Western Part
Survey Area Data: Version 1, Sep 15, 2023

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

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
8	Mudgepond and Alden soils, extremely stony	0.3	2.5%
90C	Stockbridge loam, 8 to 15 percent slopes	1.1	7.9%
94C	Farmington-Nellis complex, 3 to 15 percent slopes, very rocky	11.0	82.5%
95E	Farmington-Rock outcrop complex, 15 to 45 percent slopes	0.9	7.0%
Totals for Area of Interest		**13.3**	**100.0%**

Appendix B: Photographic Log

NDDB State NDDB State-Listed Plants Survey Report

Wake Robin Inn Proposed Redevelopment, Salisbury, CT

ARADEV LLC

SLR Project No.: 141.22100.00001

November 22, 2024

PHOTOGRAPHIC LOG

Client Name: ARADEV LLC	**Site Location:** Wake Robin Inn, 104 & 106 Sharon Rd, Salisbury, CT	**Project No.** 141.21759.00001

Photo No.	**Date:**
1	7/3/2024

Direction Photo Taken:
N/A

Description:
Carex oligocarpa identified on site.

Photo No.	**Date:**
2	7/3/2024

Direction Photo Taken:
N/A

Description:
Small patch of *C. oligocarpa* located on site, growing with American hog-peanut and white wood-aster.

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
ARADEV LLC	Wake Robin Inn, 104 & 106 Sharon Rd, Salisbury, CT	141.21759.00001

Photo No.	Date:
3	7/3/2024

Direction Photo Taken:
South

Description:
Looking downslope from smaller clump of *C. oligocarpa* on site, in foreground.

Photo No.	Date:
4	7/3/2024

Direction Photo Taken:
North

Description:
North of *C. oligocarpa* location, looking towards main inn building through forested slope.

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
ARADEV LLC	Wake Robin Inn, 104 & 106 Sharon Rd, Salisbury, CT	141.21759.00001

Photo No.	Date:
5	7/3/2024

Direction Photo Taken:
South

Description:
View of larger patch of *C. oligocarpa* identified on site, just north of existing frame garage.

Photo No.	Date:
6	7/3/2024

Direction Photo Taken:
N/A

Description:
C. oligocarpa growing amidst white wood-aster.

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
ARADEV LLC	Wake Robin Inn, 104 & 106 Sharon Rd, Salisbury, CT	141.21759.00001

Photo No.	Date:
7	7/3/2024

Direction Photo Taken:
North

Description:
View from atop a bedrock outcrop in southern portion of the site, looking towards existing main inn building.

Photo No.	Date:
8	7/3/2024

Direction Photo Taken:
Southeast

Description:
Valley bottom with dense carpet of Pennsylvania sedge in southern wooded portion of subject parcel.

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
ARADEV LLC	Wake Robin Inn, 104 & 106 Sharon Rd, Salisbury, CT	141.21759.00001

Photo No.	Date:
9	7/3/2024

Direction Photo Taken:
South

Description:
Front of main inn building with manicured landscaping.

Photo No.	Date:
10	7/3/2024

Direction Photo Taken:
Northwest

Description:
Forested conditions north of existing residence in smaller parcel to the northeast.

PHOTOGRAPHIC LOG

Client Name: ARADEV LLC	**Site Location:** Wake Robin Inn, 104 & 106 Sharon Rd, Salisbury, CT	**Project No.** 141.21759.00001

Photo No. 11	**Date:** 7/3/2024

Direction Photo Taken:
West

Description:
Dense understory in early successional forest occupying northern portion of the site.

Photo No. 12	**Date:** 7/3/2024

Direction Photo Taken:
South

Description:
Invasive species growing atop a bedrock outcrop in the northern portion of the site.

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
ARADEV LLC	Wake Robin Inn, 104 & 106 Sharon Rd, Salisbury, CT	141.21759.00001

Photo No.	Date:
13	7/3/2024

Direction Photo Taken:
N/A

Description:
C. oligocarpa leaf blade with staminate and pistillate spikes.

Photo No.	Date:
14	7/3/2024

Direction Photo Taken:
N/A

Description:
C. oligocarpa full plant with roots.

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
ARADEV LLC	Wake Robin Inn, 104 & 106 Sharon Rd, Salisbury, CT	141.21759.00001

Photo No. 15 **Date:** 7/3/2024

Direction Photo Taken:
N/A

Description:
C. oligocarpa full plant with roots.

Photo No. 16 **Date:** 7/3/2024

Direction Photo Taken:
N/A

Description:
C. oligocarpa leaf blade with staminate and pistillate spikes.

Appendix C: Floristic Inventory

NDDB State NDDB State-Listed Plants Survey Report

Wake Robin Inn Proposed Redevelopment, Salisbury, CT

ARADEV LLC

SLR Project No.: 141.22100.00001

November 22, 2024

NDDB Listed Plant Survey Floristic Inventory (June 25 & July 3, 2024) Wake Robin Inn, Salisbury, Connecticut Weather: Sunny, 75˚F		
Type	Common Name	Latin Name
Trees	tulip poplar	*Liriodendron tulipifera*
	shagbark hickory	*Carya ovata*
	red oak	*Quercus rubra*
	American elm	*Ulmus americana*
	black locust	*Robinia pseudoacacia*
	white pine	*Pinus strobus*
	basswood	*Tilia latifolia*
	eastern hemlock	*Tsuga canadensis*
	green ash	*Fraxinus pennsylvanica*
	red maple	*Acer Rubrum*
	sugar maple	*Acer saccharum*
	Norway maple	*Acer platanoides*
Shrubs and Liannas	winged euonymus	*Euonymus alatus*
	European privet	*Ligustrum vulgare*
	multiflora rose	*Rosa multiflora*
	blue cohosh	*Caulophyllum thalictroides*
	Morrow's honeysuckle	*Lonicera morrowii*
	Japanese barberry	*Berberis thunbergii*
	poison ivy	*Toxicodendron radicans*
	Rhus hirta	*Staghorn sumac*
	Asiatic bittersweet	*Celastrus orbiculatus*
Herbaceous	eastern few-fruited sedge	*Carex oligocarpa*
	eastern woodland sedge	*Carex blanda*
	white wood-aster	*Eurybia divaricata*
	garlic-mustard	*Alliaria petiolata*
	black swallow-wort	*Vincetoxicum nigrum*
	eastern star sedge	*Carex radiata*
	eastern bottle-brush grass	*Elymus hystrix*
	smooth Solomon's seal	*Polygonatum biflorum*
	roundleaf ragwort	*Packera obovata*
	lesser periwinkle	*Vinca minor*
	Jack-in-the-pulpit	*Arisema triphyllum*
	hay-scented fern	*Dennstaedtia punctilobula*
	Christmas fern	*Polystichum acrostichoides*
	sensitive fern	*Onoclea sensibilis*
	goldenrod	*Solidago sp.*
	lady fern	*Athyrium sp.*
	lungwort	*Pulmonaria officinalis*
	ground elder	*Aegopodium podagraria*
	Virginia-creeper	*Parthenocissus quinquefolia*
	sweet cicily	*Osmorhiza claytonii*
	meadow-rue	*Thalictrum thalictroides*
	wood ferns	*Dryopteris sp.*
	Pennsylvania sedge	*Carex pennsylvanica*
	American hog-peanut	*Amphicarpaea bracteata*
	Red clover	*Trifolium pratense*
	Fall panicgrass	*Panicum dichotomiflorum*
	White sweet-clover	*Melilotus albus*
	American pokeweed	*Phytolacca americana*
	Common mugwort	*Artemisia vulgaris*
	Common evening primose	*Oenothera biennis*

Appendix D: Surveyor Qualifications

NDDB State NDDB State-Listed Plants Survey Report

Wake Robin Inn Proposed Redevelopment, Salisbury, CT

ARADEV LLC

SLR Project No.: 141.22100.00001

November 22, 2024

Marlee L. Antill, MS, WPIT

Associate Environmental Scientist | New Haven, CT

Marlee Antill is an Associate Environmental Scientist with a focus in botany and strong background in natural resource management and ecological restoration. She has specific skillsets in vegetation monitoring including performing listed species surveys and conducting site floristic inventories and ecological habitat and invasive species mapping. Marlee also has extensive training and experience in GIS data management and using ArcGIS software to collect, analyze, and communicate spatial data. Marlee has utilized her background in plant taxonomy and ecology to perform wetland delineations, vegetation mapping, rare plant surveys, environmental impact assessments, and peer reviews; formalizing and communicating her results in reports and federal and state permit applications and environmental reviews including NEPA and CEPA. She is a Wetland Professional in Training (WPIT), and currently completing the requirements to become a Professional Wetland Scientist (PWS). She has expertise in United States Army Corps of Engineer (USACE) wetland delineations and has conducted USACE delineations in Connecticut, Massachusetts, Rhode Island, New York, and California.

Years of Experience

3.5 years with the firm | 7 with other firms

Professional Registrations

- Wetland Professional in Training (WPIT)

Education

- MS, Plant Science, California State Polytechnic University, Pomona
- BA, Environmental Studies, University of Vermont

Project Experience

Listed Species Flora & Fauna and Critical Habitat Surveys

Quinnipiac River Linear Trail Extension Phase IIIB, Wallingford, CT
Assisted with CT DEEP NDDB Final Determination request for site work with potential to impact the state endangered flora species false mermaid-weed (*Floerkea proserpinacoides*). Prepared biological survey report including figures demonstrating the survey limits and location of listed species identified, indicating no anticipated impact to the listed plant species by the proposed project.

Stone Bridge Crossing, Cheshire, CT
Botanical surveys completed for endangered, threatened, and special concern flora species of upland and wetland communities including Nuttal's milkwort (*Polygala nuttallii*) and Tuckerman's sedge (*Carex tuckermanii*) and rare natural community sand barren habitat.

Trulieve Growing Facility, Meriden, CT
Coordinated with CT DEEP NDDB program and local officials to develop an approved listed flora survey and relocation plan prior to proposed project on site. Performed surveys resulting in a full floristic inventory on site as well as ecological habitat mapping to identify potential habitat for listed flora, including several species of sedge (genus *Carex*). Supervised the relocation of state-listed sedge to suitable habitat outside of the proposed limits of disturbance.

Barber Cove, Simsbury, CT
Botanical surveys completed for endangered, threatened, and special concern flora species of upland and wetland communities. Prepared vegetative community mapping and summary of findings.

Bozzuto's Inc., 691 West Johnson Avenue, Cheshire, CT
Botanical surveys completed for endangered, threatened, and special concern flora species of upland and wetland communities including Nuttal's milkwort (*Polygala nuttallii*) and Tuckerman's sedge (*Carex tuckermanii*). Prepared vegetative community mapping for 60+-acre site, and summary report of findings.

New Milford Trail Phase I, New Milford, CT
Conducted botanical surveys and habitat mapping along proposed 1.4-mile trail route and surrounding landscape, with specific emphasis on nine (9) listed NDDB species with potential occurrence. One (1) state threatened species, Davis' sedge (*Carex davisii*), was positively identified and mapped adjacent to the project area. Prepared summary of findings and GIS mapping depicting the colony limits of Davis' sedge.

Experience with Other Firms

SWCA Environmental Consultants, Pasadena, CA
As a Project Botanist, responsibilities included performing plant surveys of rare, threatened, and endangered species across the western U.S.; performed wetland delineations and hydrography surveys, determining jurisdictional boundaries and impacts; collected spatial data and created vegetation community maps; and performed habitat assessments determining biological impact to sensitive plant and wildlife taxa.

California Botanic Garden, Claremont, CA
As a Lead Restoration Technician, performed vegetation surveys across the State of California including for state and federal endangered flora species. Collected seed and cuttings and performed nursery propagation for restoration and research.

California State Polytechnic University, Pomona, CA
As Field Crew leader, led teams of up to seven (7) members in systematic botanical surveys across remote and rugged terrain in order to collect detailed and accurate vegetation inventories which provided ground-truthing data for a remote sensing study led by researchers at the NASA Jet Propulsion Laboratory.

US Forest Service, Pacific Southwest Research Station
As a Biological Science Technician (Plants), conducted rare, common, and invasive plant surveys for long-term forest restoration study, performed forest inventory and monitoring, and collected and managed GIS data using a base station, Trimble GPS unit, and ArcGIS software.

Memberships and Associations

- Connecticut Botanical Society, Board of Directors (2023 – Ongoing)
- Society of Wetland Scientists
- Connecticut Association of Wetland Scientists
- New England Native Plant Trust

Additional Training

- Basic Wetland Delineation
- Wilderness First Aid

Publications

- Litle, J., Quon, L. H., **Antill, M.** L., Questad, E. J., & Meyer, W. M. (2019). Vertebrate herbivory on shrub seedlings in California sage scrub: important but understudied interactions. Plant Ecology.
- Questad, Erin & **Antill, Marlee** & Liu, Nanfeng & Stavros, E. & Townsend, Philip & Bonfield, Susan & Schimel, David. (2022). A Camera-Based Method for Collecting Rapid Vegetation Data to Support Remote-Sensing Studies of Shrubland Biodiversity. Remote Sensing. 14. 1933. 10.3390/rs14081933.

Matthew J. Sanford, MS, PWS, RSS

US Manager of Ecology | Cheshire, CT

Matthew Sanford is the firm's Manager of Ecology with experience in the areas of natural resources and specific expertise in vegetation management, invasive species control, GPS resource mapping, GIS modeling, biological inventories, water quality monitoring, watershed planning, vernal pool surveys; wetland delineation, assessment, and functions; inland wetland and tidal wetland impact mitigation; and peer review services. Matt's project experience includes computer modeling and design in ArcGIS and TR-20. He is a Professional Wetland Scientist (PWS) and is a registered soil scientist. He has expertise in United States Army Corps of Engineer (USACE) wetland delineations and has conducted USACE delineations in New York, Connecticut, Vermont, and Massachusetts. He served as Vice President and President of the Connecticut Association of Wetland Scientists (CAWS).

Years of Experience

21 years with the firm | 1 year with other firms

Professional Registrations

- Certified ACOE Wetland Delineator
- Registered Soil Scientist
- Professional Wetland Scientist

Education

- MS, Wetland Biology, Southern Connecticut State University
- BS, Natural Resource Management, University of Connecticut

Relevant Project Experience

Wyckoff Golf Course Property and Waterworks Property, Holyoke, MA
Completed a development feasibility assessment for the existing properties. The feasibility assessment area consisted of approximately 150-acres between the two properties. Environmental tasks included completion of graphical watercourse and bordering vegetated wetland delineations, state listed flora and fauna species survey, and evaluations of existing upland and wetland vegetative communities. The Natural Heritage and Endangered Species Program (NHESP) had reports of the state threatened green rock-cress (*Boechera missouriensis*) located on parts of the Waterworks Property. Surveyed the property using the opportunistic encounter search method and found patches of the green rock-cress in areas not formally identified and/or known by the NHESP. Mapping of the green rock cress colonies was completed and provided to the NHESP database.

Highland Estates and St. Anne's Golf Course, Winsted, CT
Was one of several botanists requested to preform listed plant survey on an approximately 600-acre undeveloped parcel. The team was tasked with finding/identifying critical habitats and/or listed fauna species. Two State-listed special concern species were found on site including American ginseng (*Panax quinquefolis*) and New England sedge (*Carex novea angliae*). The locations of these species were submitted to the Connecticut Department of Energy and Environmental Protection (CTDEEP) Natural Diversity Database Program.

Tariffville Trail, Simsbury, CT
Completed flora survey along proposed pedestrian/bicycle trail along Route 315 and the Farmington River. Listed flora species including Davis sedge (*Carex davisii*) is known to occur within the floodplain areas along the river. A visual encounter survey was completed during the growing season to determine presence of Davis sedge within the project area. Davis sedge was not documented within the project activity area.

One Old Bridge Road, Simsbury, CT
Completed listed plant survey for the following species located along the Farmington River and Hop Brook. Listed flora species including Davis sedge (*Carex davisii*), Virginia waterleaf (*Hydrophyllum virginianum*), and Starry campion (*Silene stellata*). A visual encounter survey was completed during the growing season to determine presence of the listed flora species within the project area. None of the listed flora species were observed within the project activity area.

River Road Drainage and Flooding Improvements, Simsbury, CT
Completed listed plant survey for the following species located along the Farmington River floodplain. Listed flora species including Virginia waterleaf (*Hydrophyllum virginianum*), and Starry campion (*Silene stellata*). A visual encounter survey was completed during the growing season to determine presence of the listed flora species within the project area. None of the listed flora species were observed within the project activity area.

Farmington Heritage Trail, Farmington, CT
Completed flora survey along proposed 2-mile trail route, with specific emphasis on finding CT State-listed special concern tall yellow cinquefoil and sandplain geradia. None of the mapped listed species were found; however, the low frostweed, another state-listed species of concern, was found within the project corridor. Assisted with coordination and correspondence between town and CTDEEP NDDB biologists. SLR botanist was assisted by Lauren Brown – Botanist.

Quinnipiac River Trail, Wallingford, CT
Completed flora survey along proposed trail route, looking specifically for CT endangered species False Mermaid Weed. Prepared summary of findings and GIS mapping depicting the colony limits of False Mermaid Weed. Worked with CTDEEP to find alternative methods for minimizing impacts to the colonies.

Making Sustainability Happen

Gmail

Steven Cohen <scohen087@gmail.com>

FW: Wake Robin Inn - Salisbury CAOL_Mitigation_Relocation_Extract

1 message

Mark Arigoni <marigoni@slrconsulting.com> Tue, Apr 29, 2025 at 4:34 PM
To: Jonathan Marrale <jonathanmarrale@gmail.com>, Steven Cohen <scohen087@gmail.com>

Steven & Jonathon,

The email chain below, along with the attachments, document the continued coordination and responses to requests from CT DEEP NBBD staff. It is our understanding the NDDB staff has approved our proposed relocation plan and is currently reviewing our draft 'Deed Restriction' language and will provide requested revisions or formal acceptance shortly.

-M

Mark Arigoni PLA
US Sector Leader – Built Environment

O 203-271-1773, Ext. 2324
M 860-559-3970
E marigoni@slrconsulting.com

SLR International Corporation
99 Realty Drive, Cheshire, CT, United States 06410

SLR | Follow us on LinkedIn

From: Matthew J. Sanford <msanford@slrconsulting.com>
Sent: Friday, April 25, 2025 12:02 PM
To: Moorhead, William <William.Moorhead@ct.gov>; Mark Arigoni <marigoni@slrconsulting.com>
Cc: DEEP Nddbrequest <DEEP.Nddbrequest@ct.gov>
Subject: RE: Wake Robin Inn - Salisbury CAOL_Mitigation_Relocation_Extract

Bill,

Per your request the applicant has prepared the attached two maps that clearly identifies the conservation/deed restriction area and a draft copy of the deed restriction that will be placed on the subject parcel. The conservation easement/deed restriction will not go into effect into all local approvals have been granted and our client retains ownership of the property. In addition, please note that any revisions or final language within the deed restriction is subject to the further review and approval by counsel and title. Let me know if you need any additional information to process the final determination.

Thanks,

Matthew J. Sanford MS, PWS, RSS

US Manager of Ecology

O 203-271-1773, Ext. 2284

M 203-910-9546

E msanford@slrconsulting.com

SLR International Corporation

99 Realty Drive, Cheshire, CT, United States 06410

SLR | Follow us on LinkedIn

From: Moorhead, William <William.Moorhead@ct.gov>
Sent: Wednesday, April 16, 2025 3:26 PM
To: Matthew J. Sanford <msanford@slrconsulting.com>; Mark Arigoni <marigoni@slrconsulting.com>
Cc: DEEP Nddbrequest <DEEP.Nddbrequest@ct.gov>
Subject: RE: Wake Robin Inn - Salisbury CAOL_Mitigation_Relocation_Extract

Great, Matt, thanks!

Bill Moorhead

Botanist/Plant Community Ecologist

Natural Diversity Data Base

Wildlife Division

Connecticut Department of Energy & Environmental Protection
79 Elm Street, Hartford, CT 06106-5127

p: 860.424.3861 | **c:** 860.876.9393 | william.moorhead@ct.gov

Connecticut Department of Energy & Environmental Protection

Conserving, improving, and protecting our natural resources and environment;
Ensuring a clean, affordable, reliable, and sustainable energy supply.

| portal.ct.gov/DEEP