Borough of Chatham

BOROUGH OF CHATHAM
54 FAIRMOUNT AVENUE
CHATHAM, NJ 07928

Planning Board Regular Meeting
Meeting date: Wednesday, May 6, 2026
Meeting Time: 7:30 PM

PLANNING BOARD MEETING AGENDA

STATEMENT RE: ADEQUATE NOTICE OF MEETING

Pursuant to the requirements of the Open Public Meetings Act, N.J.S.A. 10:4-6 et. seq., adequate notice of this meeting has been provided and published in the Chatham Courier on February 5, 2026 and copies of this agenda were posted on the Municipal Bulletin Board on the main floor of the Municipal Building and filed with the Commission Secretary and the Borough Clerk on January 7, 2026.

ROLL CALL

Mayor Carolyn Dempsey
Borough Administrator Stephen Williams
Council Member Jocelyn Mathiasen
Susan W. Favate, Chair
Thomas Belding
Bruce Harris
William Heap
Susan Robertson
Gregory Xikes
Jonathan Wilcox, 1st Alternate
Sophia Calcaterra-Hull, 2nd Alternate
Vincent Loughlin, Board Attorney

PUBLIC COMMENT

NOTICE OF PUBLIC COMMENT TIME LIMIT

Hearing of citizens during the Public Comment section of the Agenda is an opportunity for any member of the public to be heard about issues which are/are not topics scheduled for Public Hearing tonight. To help facilitate an orderly meeting, and to permit all to be heard, speakers are asked to limit their comments to four minutes.

ADOPTING OF MEETING MINUTES

RESOLUTION # PB 2026-21

BE IT RESOLVED, by the Planning Board of the Borough of Chatham that the minutes from April 1, 2026 meeting are approved as prepared and shall be filed as a permanent record in the Borough Clerk's Office.

APPLICATION RESOLUTIONS

Application No. PB26-03
Corefire Chatham, LLC
246 Main Street, B57, L17 & 19
COREFIRE RESOLUTION Revised 5-6-26.pdf

NEW AND RETURNING APPLICATIONS

PB APPLICATION #26-01 CARRIED TO JUNE 3, 2026 MEETING
AJDM RIVER RD
29, 33, 37, & 39 River Road, B140 L 7.01, 8, 9 & 10
Preliminary and Final Major Site Plan Approval - proposed 4-story mixed use residential building w/100 units and retail space
AJDM Chatham LLC 3-6-26.pdf
1 -Application for Development w. Chk lst A.C.D.pdf
5 - Site Plans - Langan Drawing Set - 2026-01-15.pdf
6 - 2025-10-29 Bound-Topo.pdf
7 - Wetland Inspection Letter_1.15.2026.pdf
8 - Stormwater Report - 2026-01-15.pdf
9 - Traffic Impact 2025-01-15.pdf
10 - Architectural plans Jan 2026.pdf
12 - EIS 1_16_26.pdf
13 - Site Photos.pdf
14 - Morris_County_Land_Development_Review_Application_.pdf
24 - Statement of reasons.pdf
23 - List of Experts.pdf
26 - Loading Discussion.pdf
27 - Trash calcs 1.16.2026.pdf
28 - Stormwater Maintenance Plan 2026-01-15.pdf
29 - Flood Damage Compliance Letter 2026-01-15.pdf
30 - Well Head Compliance Letter 2026-01-15.pdf
31 - _Landscape_Submission Set.pdf
county site plan report.pdf
Planning Board Submission 3.2026 - PH 2.pdf

PENDING BUSINESS

NEW BUSINESS

ADJOURNMENT

BOROUGH OF CHATHAM PLANNING BOARD

RESOLUTION APPROVING A CONDITIONAL USE WITH WAIVER OF SITE PLAN

COREFIRE CHATHAM, LLC
246 MAIN STREET
BLOCK 57, LOTS 17 & 19
BOROUGH OF CHATHAM, NEW JERSEY
APPLICATION # PB-26-03

HEARING: APRIL 1, 2026
RESOLUTION: MAY 6, 2026

WHEREAS, an application having been filed with the Borough of Chatham Planning Board by Corefire Chatham, LLC as applicant as authorized by the owner of the property located at 246 Main Street, Block 57, Lots 17 & 19, in the Borough of Chatham, New Jersey; and

WHEREAS, this property being located in the Community Business-4 (B-4) Zone District, and the applicant in this case being a proposed tenant in a portion of the retail space on the street level of the existing building which has apartment units on the upper stories of this four-story mixed-use building. It is noted by the Planning Board that approval was granted by the Zoning Board in 2019 for a mixed-use building including 4,220 square feet of commercial space, 18 rental units, and 25 onsite parking spaces which are shared amongst the residential and commercial uses on the premises; and

WHEREAS, the applicant is seeking approval for a recreational instructional use of the rental space as a Pilates studio, which is a conditional use in the B-4 Zone District. The applicant is also requesting a waiver of site plan approval as no exterior changes in the building or on the site are being proposed with this application. As set forth in the application, the applicant has been allocated three onsite parking spaces for employees, and the 2019 resolution of the Zoning Board of Adjustment for the property granted a variance for the number of parking spaces on the premises with 51 parking spaces being required and 25 onsite parking spaces being provided and approved by the Zoning Board; and

WHEREAS, the applicant now requesting an approval of its usage of the rental premises as a permitted conditional use with confirmation from the Board that the prior variance for parking requirements on the property previously issued by the Zoning Board of Adjustment is applicable to this application, and with a further waiver of site plan approval from the Board; and

WHEREAS, this case having come on for a hearing before the Borough of Chatham Planning Board at its regularly scheduled meeting of April 1, 2026, at which time a quorum of the Board was present to hear and consider this case, and an opportunity was afforded to members of the public and/or interested persons or parties to ask questions and/or to be heard regarding this case, and a verbatim record of these proceedings was maintained; and

WHEREAS, as a result of this hearing and these proceedings before the Board, the following findings of fact and/or conclusions have been made by the Board:

FINDINGS

1. At the time of hearing, Hilary P. Ulz, Esq. of Dempsey, Dempsey, and Sheehan, Attorneys in Summit, New Jersey appeared to present this case for the applicant. As part of the application materials received the Board acknowledged receipt of site plan drawings prepared by Jarmel Kizel, Architects & Engineers, Inc. and ABC Surveys, LLC, consisting of 13 sheets, last revised October 11, 2023 which have been signed by the Board of Adjustment; as-built Survey plan prepared by Dykstra Walker Design Group, PA, dated May 1, 2024 and revised through September 18, 2025; 11 x 17 inch floor plan drawing consisting of one sheet prepared by GRA Design Studio; Sign plan prepared by Competitive Signs consisting of two sheets, undated; and parking management plan prepared by Michael J. Tobia, PP, dated February 4, 2026. Also acknowledged by the Board and the applicant were review memos and reports dated March 6, 2026 from Robert C. Brightly, PE, PP, CME, of Boswell Engineering, the Planning Board Engineer, and March 24, 2026 from Kendra Lelie, PP, AJCP, ASLA, of Kyle-McManus Associates, the Planning Consultant for the Board.

2. The applicant's attorney in introducing the application advised the Board that the applicant was the lessee of "the ground floor corner space at the building which will be used by the applicant for a Pilates studio. This recreational use is a permitted conditional use under the ordinance. We are also requesting a waiver of site plan approval and will be presenting evidence as to our parking management plan which will demonstrate that there is adequate parking available for this usage of approximately 2,500 square feet of the first floor space and meets the conditional use requirements of the ordinance."

3. As to the waiver of site plan approval requested in this case, Ms. Ulz advised the Board that under the prior Zoning Board of Adjustment resolution from 2019, all of the improvements required by the Board of Adjustment in its resolution had been done. Counsel for the applicant further confirmed that there would be no modifications to the building or any portion of the site requested or undertaken by the applicant other than to install one building-mounted sign which would be in conformance with the Borough regulations.

4. Testimony in support of the application was then provided by Mr. Michael Lauricella, the principal of the applicant. In his testimony he stated he is the owner-operator of the applicant and that his business would occupy a portion of the first floor of the building. He then described for the Board the details for the Pilates studio that he would be operating on the property. He testified by utilizing a slide presentation showing the floor plan for the studio premises he would be using for his business. In response to a question from his attorney, Mr. Lauricella confirmed that he presently has another Pilates studio in Old Tappan, and the studio for this property would be very similar to his existing studio in this other location. In response to further questions from his attorney, Mr. Lauricella stated that the business would principally

operate during the week between the hours of 7:30 am and 11:30 am, and again with appointments commencing on or about 4:30 pm and "done by 7:30 to 8:00 pm, except there would be no Friday night appointments, and 7:30 am to 11:30 am only on weekends." He also confirmed in his testimony that the applicant would have the visitors-customers of the studio by appointment only and that each session would be 45 minutes in length. He stressed that the studio would have no waiting area other than a small couch near the check-in table, and "Typically we will have two employees-instructors at the business, and one of the instructors will sign in the customers. It is typical for the users to come in, register, use the machines, and then leave. We will also have no lockers or showers, and it is not typical for any of our customers or users to linger around the studio after they have finished with their session." In response to a question from Ms. Ulz, he also confirmed that the terms of his lease with the landlord provided for his business to have three parking spaces for their staff. In response to a question from the Board Planner, Ms. Lelie, as to whether there was any retail presence or activity on the property, Mr. Lauricella confirmed that there was a "small counter and retail area where we sell shirts, leggings, and water bottles." He also said in response to a further question, "Our instructors do any sales that take place, there is again no other staff."

5. The applicant's planning expert, Mr. Michael Tobia, then provided testimony to the Board by first describing the applicant's parking management plan. He described his study that he had conducted for the plan to be presented to the Board and reviewed with the Board his visit to the area of the applicant's business and his survey of the parking lots and street parking in this immediate area. After describing the Board of Adjustment's parking variance issued to the owner of the property in 2019, he then confirmed for the Board that in the 2019 approval by the Board of Adjustment, 51 parking spaces were required for the store premises on the first floor, and the apartments in the floors above and a parking variance for the 51 spaces were required and 25 parking spaces was approved. The applicant's planner then advised the Board that the applicant would receive three allocated parking spaces with three other spaces allocated to the other store on the first floor of the building, with the balance of the spaces to continue to be available for the apartments above it. During his testimony Mr. Tobia referred to slides of the parking lot and the parking area allocated to the applicant and the other tenants on the property at the back of the building.

6. Mr. Tobia then used pictures that he displayed on the screen to show the machines that the applicant would have in the studio. He said this number of machines was the same as the other facility that the applicant operated which he explained by saying, "The term 'pilates' means machine assisted exercise, and that is how these machines will function and be utilized in this studio. As the Board can see, there is also no TV or recreational space or waiting area. There are no lockers or showers and no child care and only a small retail area," which Mr. Tobia then located on the screen for the Board. Mr. Tobia had Mr. Lauricella confirm that his testimony about the floor plan and the usage of the property was correct and was the same as

other Pilates studios operated by Corefire in what Mr. Lauricella described as “Old Tappan, Ridgewood, Montclair, and what we will have here in Chatham.”

7. In resuming his testimony about the applicant’s facility, its parking demand, and proper accommodation of parking required by the customers of this facility, Mr. Tobia stressed, “When Corefire is open in the morning A.M. peak hours, there is always a number of empty spaces available in the other parking lots in this area which I have viewed and included in my report. Based upon the maximum use of the machines in this business with the instructors which would be 13 spaces total, I find there is an abundance of parking spaces available, including the lot on Center Street where all of the parking of this business could be met there. This Pilates studio is a good fit here because its maximum use occurs in morning peak hours before lunch when parking is always available in the lots and on the street parking in the immediate area. This usage is also a much better use as far as parking requirements than other retail uses that could be accommodated and located on this property. Further from Monday through Thursday in the 4 pm to 8 pm hours, these are not the peak hours of this business, which is typical of other Pilates or exercise studios. It’s most likely there would only be four to eight machines utilized during the P.M. hours, with again these parking requirements being more than met in this area.” In response to a question from the Board of Mr. Lauricella, he also confirmed that there would be no music or noise levels from the machinery or exercise music being played when the studio is open outside the studio. Mr. Lauricella testified, “We have only a moderate volume of music during the exercise periods, and we have already made arrangements to soundproof our studio.”

8. There was one public comment at the end of the hearing raising concerns about parking in town and questioning the methodology of Mr. Tobia’s report. The Board discussed the concerns with Mr. Tobia and were satisfied.

9. The applicant’s attorney in her summation asked the Board to approve this application based upon the testimony of the applicant and the applicant’s planner with specifics as to the usage of the portion of the existing building for its business and the further evidence and testimony as to the parking management plan of the applicant. Ms. Ulz further emphasized that the applicant would make no changes with the building or any site improvements or on the property overall with the exception of a building mounted conforming sign, which would be subject to a further application as the applicant was advised by the Board before the Borough’s Sign Committee.

CONCLUSIONS

1. The Board finds and concludes that the applicant has made a complete and adequate showing to confirm that the applicant’s Pilates studio which will occupy a portion of the existing first floor of the existing building on the property is a conforming conditional use of the property. The Board further finds and concludes based upon the evidence and testimony and the details of the applicant’s parking management plan and the testimony of the applicant’s

planning expert, Mr. Tobia, that the existing parking variance for the property granted by the Zoning Board of Adjustment in 2019 previously issued for this property remains effective, and that no new parking variance is required for the applicant's use of the property. Also the evidence establishes from the testimony that since there is no exterior work planned for the building on the property by the applicant nor any change in the overall premises other than the further application for a conforming sign for a building mounted sign for the business with no change in the exterior lighting of the premises either to be undertaken by the applicant, that there is sufficient cause for the Board to waive the requirement for further site plan review and approval.

2. The Board further finds and concludes that the testimony of the applicant's principal, the applicant's planning expert, and the detailed plans for the use of the portion of the premises involved in this application demonstrate that the usage of this property as established before the Board in this hearing will allow and permit the usage of this property in an appropriate and well-designed manner that will advance the purposes of the Land Development Ordinance and the Master Plan for the Borough of Chatham by what has been established to be a permitted usage of the property by the applicant. The Board further concludes that the usage of the property that has been proposed and established before the Board by the applicant will be consistent with the character of the existing premises and the neighboring property owners and the Business District in which this property is located, thereby making the Board's approval in this case further fully consistent with the goals and purposes of both the Land Development Ordinance and the Master Plan for the Borough of Chatham.

NOW, THEREFORE, BE IS RESOLVED, that the request of the applicant in this case for the usage of a portion of the existing building on the property for a permitted conditional use under the Borough ordinance, with a further determination by the Board that no parking variance relief is required for the usage as proposed under the prior parking variance approval issued by the Zoning Board of Adjustment for the property and with waiver of site plan review requirements for this usage, in accordance with the plans, evidence, and testimony before the Board in this case, **BE AND HEREBY ARE GRANTED AND APPROVED.** This resolution and the applicant's further use of the property are subject to the following terms, conditions, and requirements:

1. That the approval of the Board is issued subject to the applicant's plans, evidence, and testimony before the Board in this case; and

2. That the approval of the Board is issued subject to the applicant obtaining any and all other required municipal permits or approvals for the applicant's work at the property and/or the further operation of the applicant's business from the premises; and

3. That as the Board has advised the applicant and as the applicant has so stipulated and agreed, there is no signage approval issued by the Board to the applicant in this resolution. The applicant will submit the proposed signage application to the Sign Committee of the Borough of Chatham for their further review, approval, and with the applicant obtaining any further

necessary permit for such signage prior to undertaking the installation of same on the property; and

4. That there shall be no change in the usage of the property or the nature of the business to be undertaken on the premises by the applicant or any successor thereof which would increase any nonconformity at the property or which not be in compliance with the Borough Zoning Ordinances and Requirements without an application being submitted to the appropriate Land Use Board for the Borough of Chatham prior to undertaking such changes on the property for permission to do so.

BOROUGH OF CHATHAM PLANNING BOARD

BY: _____
SUSAN FAVATE, Chair

Date signed: _____

Witnessed by:

_____
STEPHEN WILLIAMS, Board Secretary
Borough of Chatham Planning Board

VOTE ON RESOLUTION

On motion of:

Seconded by:

The vote on the Resolution was as follows:

AYES:

NAYS:

ABSENT:

Adopted and Approved
May 6, 2026
BOROUGH OF CHATHAM PLANNING BOARD

_____
Vanessa L. Nienhouse, Recording Secretary

Dated: May 6, 2026
Prepared by: Vincent K. Loughlin, Esq.

BOSWELL

Western New Jersey
180 Main Street P.O. Box 571
Chester, NJ 07930

O 908 879 6209
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March 6, 2026

via email

Chatham Borough Planning Board
54 Fairmount Avenue
Chatham, New Jersey 07928

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

Dear Mrs. Favate and Members of the Board:

This office is in receipt of the application package submitted in connection with the above referenced project, which includes the following plans and project reports:

- Preliminary and Final Site Plan drawings prepared by Langan Engineering and Environmental Services, LLC, consisting of fourteen (14) sheets dated January 15, 2026.
- Architectural drawings prepared by Minno Wasko Architects and Planners, consisting of ten (10) sheets dated January 16, 2026.
- Landscape plans prepared by Melillo Bauer Carmen Landscape Architecture, consisting of ten (10) sheets, with the first sheet being undated and sheets L-1 through L-9 dated January 15, 2026.
- Boundary and Topographic Survey prepared by Matrix Neworld dated March 15, 2017 and revised through November 5, 2025.
- Stormwater Management Report prepared by Langan Engineering and Environmental Services, LLC dated January 15, 2026.
- Stormwater Maintenance Plan prepared by Langan Engineering and Environmental Services, LLC dated January 15, 2026.
- Traffic Impact Assessment prepared by Dolan & Dean Consulting engineers dated January 15, 2026.
- Community Impact Assessment prepared by Langan Engineering and Environmental Services, LLC dated January 16, 2026.
- Environmental Impact Assessment prepared by Langan Engineering and Environmental Services, LLC dated January 16, 2026.
- Well Head Protection Area Compliance letter prepared by Langan Engineering and Environmental Services, LLC dated January 15, 2026
- Application package with checklists and site photograph booklet.

This application seeks preliminary and final site plan approval, which includes the demolition and removal of the existing structures on the various parcels for the purpose of constructing a four-story,

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

mixed-use development containing 100-unit residential units and ground floor retail spaces. We have the following comments and/or recommendations.

A. General

1. The property in question is located in the Gateway Affordable Housing Overlay 1 District and contains approximately 127,059 square feet or 2.92 acres, excluding the right-of-way of River Road. The properties are presently developed as follows:
   a. Lot 7.01, which contains approximately 36,885.5 square feet, and Lot 8, which contains approximately 15,544 square feet, including the area of the right-of-way, presently contains a large soil stock pile that appears to be placed over the existing asphalt. The property contains other visible asphalt areas used for vehicle parking.
   b. Lot 9 contains approximately 31,159.5 square feet, including the area of the right-of-way and is presently developed with a commercial use, formerly/present Pipe Works, which includes a 1-story masonry building and asphalt and gravel vehicle parking areas.
   c. Lot 10 contains approximately 53,219 square feet, including the area of the right-of-way and is presently developed with a commercial use.
   d. Under Application ZBA #17-13, the Zoning Board of Adjustment approved a site plan and use variance to permit First Student, Inc. to utilize Lots 7.01 and 8 for school bus and vehicle parking, while Lot 10 included school bus and vehicle parking, as well as vehicle maintenance. At the time of the application, Lot 9 was also being leased by First Student, but was prohibited from continuing the use as a condition of approval.
2. The proposed project will combine the above referenced tracts for the construction of a 4-story, mixed use building containing 96 residential apartment units on the upper three floors, 4 residential apartment units on the upper level garage floor, a lower level garage, associated amenity spaces and ground floor retail spaces fronting on River Road.
3. The 100-unit residential component will contain twenty (20) one-bedroom units; fifty-seven (57) 2-bedroom units; and twenty-three (23) 3-bedroom units. The plan indicates a retail area of 2,370 square feet; a storage area of 2,935 square feet and; a lobby/lease area of 9,375 square feet.
4. The project proposes a one-way access driveway loop at the central point of the u-shaped building. Access to the upper-level parking garage, which will contain 88 spaces, is provided off the center access loop. A secondary access driveway is proposed along the left or northeasterly side of the building. This driveway provides access to the open/at grade parking area, which will contain 31 parking spaces. A loading area is provided at the end of the parking aisle, as is access to the lower-level parking garage, which will contain 199 spaces. The garage parking areas are not otherwise connected.

B. Completeness

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

1. *Checklist A, Item 7 requires a letter from the Borough Water and Sewer Department stating that all fees and charges are paid and current.* The application package only includes proof of utilities paid for Lots 9 and 10. Letters from the Borough for utilities paid for Lots 7.01 and 8 should be submitted prior to finalizing any approval by the Board.
2. *Checklist A, Item 8 requires a certificate from the Borough tax collector stating that taxes for the property have been paid and are current.* The certificate included in the application package for Lots 7.01, 8 and 10 indicates that the certification expires on February 11, 2026. A certificate of taxes paid for Lot 9 was not included in the application package submitted to this office. An updated certificate of taxes paid should be submitted for all of the tracts prior to finalizing any approval by the Board.
3. *Checklist A, Item 11 requires submittal of any prior resolutions of approval for the property either by the planning Board or the Zoning Board of Adjustment.* The checklist submitted with the application indicates that this item is not applicable. The Borough Use column indicates that there were two resolutions. It is our understanding that these resolutions are related to the First Student bus company, applications made to the Zoning Board of Adjustment. If available, these resolutions should be submitted to the Board for consideration.
4. *Checklist A, Item 15 requires a copy of any deed restrictions or easements that effect the property be submitted.* The checklist submitted with the application indicates that the checklist item is not applicable. The survey submitted with the application indicates that there is an easement to Jersey Central Power and Light on Lot 7.01, which will cover the amenity area at the rear appendage of the property. Documentation must be provided to the Board, prior to finalizing the approval, to confirm that the proposed improvements are permitted in the easement area.
5. *Checklist C, second part, Item 4 requires standard sheet sizes up to 24 by 36 inches.* The Applicant has requested a waiver to allow plan sheets that are 30 by 42 inches. This office recommends that a waiver be granted based on the size of the tract and scope of the project.
6. *Checklist C, second part, Item 7 and 8 (which are similar) requires a zoning analysis showing required, existing and proposed zoning conditions, variances and design waivers.* The checklist submitted with the application indicates that Item 7 has been provided and that a waiver is requested from Item 8. The January 22, 2026 letter from the Applicant's Attorney, which discusses checklist waivers on page 3, does not address this checklist request. The site plan drawings provide a detailed analysis of the required and proposed condition, but do not include an analysis of existing conditions. While perhaps not as critical on a redevelopment project, we would support a waiver provided a breakdown of the existing lot coverage, by material type, is provided.
7. *Checklist C, second part, Item 13 requires showing the location of all structures, mechanicals and any and all improvements.* The checklist submitted with the application indicates that the

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

item has been submitted. We note that the plans do not show the location of all mechanical equipment; HVAC, standby generators, etc.

8. *Checklist D, Item 3 requires a letter from the Borough Water and Sewer Department stating that all fees and charges are paid and current.* The application package submitted to this office only includes proof of utilities paid for Lots 9 and 10. Letters from the Borough for utilities paid for Lots 7.01 and 8 should be submitted prior to finalizing any approval by the Board.

9. *Checklist D, Item 4 requires a certificate from the Borough tax collector stating that taxes for the property have been paid and are current.* The certificate included in the application package for Lots 7.01, 8 and 10 indicates that the certification expires on February 11, 2026. A certificate of taxes paid for Lot 9 was not included in the application package submitted to this office. An updated certificate of taxes paid should be submitted for all of the tracts prior to finalizing any approval by the Board.

10. *Checklist D, Item 5 requires submittal of any prior resolutions of approval for the property either by the planning Board or the Zoning Board of Adjustment.* The checklist submitted with the application indicates that this item is not applicable. The Borough Use column indicates that there were two resolutions. It is our understanding that these resolutions are related to the First Student bus company, applications made to the Zoning Board of Adjustment. If available, these resolutions should be submitted to the Board for consideration.

11. *Checklist D, Items 6, 7, 8, 9, 11 and 12 requirements for Final Site Plan Approval.* The Applicant has requested a waiver from providing Checklist D Items 6, 7, 8 and 11. Since the application is for preliminary and final site plan approval, the requirements of Checklist D Items 6 through 9 and 11 and 12 should be made a condition of any approval, to be satisfied prior to the issuance of a building permit and or the issuance of a certificate of occupancy, as applicable and determined by the Borough Engineer or the Zoning Official.

12. It is our recommendation that waivers of the above referenced items be granted for completeness only, subject to testimony and submittal of additional documentation as discussed above or as required by the Board and that the application be deemed complete.

C. Site Plan Drawings

1. The signature legend block on sheet CS001 should be revised at the Board's signature item to indicate that the plans have been approved by the Planning Board. The term Chairman should be changed to Chair. Also, the owner's name and signature, as well as the Applicant's Engineer and the Applicant, will need to be completed on any plans submitted to the Board for signature. Further, the term Borough Engineer should be changed to Board Engineer in the codes and ordinance jurisdictional certification item.

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

2. Clarification is required with regard to the building height calculations. When calculated using the ground elevations provided on the grading plan inset on sheet CG101 and the roof elevation of 270.16, we calculate the building height in accordance with the building height definition under §165-10, to be 54.3 feet, where a maximum of 54 feet is permitted.
3. The table of zoning requirements on sheet CS001 should be revised as follows:
   a. A footnote should be added to the minimum lot area item to indicate that the combined lot area indicated excludes the area within the right-of-way (50-feet wide along this section of River Road).
   b. The table should include an item that analyzes the percentage of rooftop appurtenances and mechanical equipment setbacks in accordance with §165-35E(12).
   c. In the guest parking calculation, the 199 required parking space figure should be corrected to 198 spaces.
   d. The minimum car parking space size indicated in the table needs to be clarified. While a depth of 18 feet is indicated, the architectural plans indicate that there are offsets/jogs in the rear wall of both levels of the parking garage. The stall dimension is only provided for the deepest portion, with several parking spaces appearing to have a depth that is less than 18 feet. A design waiver appears to be required.
   e. The table indicates that 21 bicycle parking stations are required; one per every 10 required parking space. The table does not indicate how many bicycles can be parked in the bike room.
   f. A design waiver is required from §165-82B(1) where a landscaped area at least the size of a parking space is required for every ten (10) parking spaces. Three (3) landscaped areas are required at the at grade parking area and none have been provided. The design waiver should be listed.
   g. A design waiver is required from §165-82B(3)(b) where all parking and loading areas and access drivees are required to have granite block curbing. The site plan drawing indicates that the center driveway loop and the at garde parking area are to have concrete curb. It is noted that the driveway for the Ivy project utilized block curb. A design waiver should be listed if concrete curb is proposed.
   h. A variance is required from §165-76.2E(2) where all ground-based mechanical equipment shall be setback a minimum of four feet from any property line and the transformer is set back 3.2 feet from the right, or westerly side yard.
4. Calculations should be provided to demonstrate that the lower-level parking garage is not considered a story above grade, based on the Borough's definition of a walk-out basement, which if classified as a walk-out, is considered a story.

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

5. The index of drawings on sheet CS001 should be revised when submitted to the Board for signature to list the number of sheets in the set and the latest revision date for each of the various professional set of plans.
6. In accordance with the Electric Vehicle Supply/Service Equipment (EVSE) and Make-Ready Parking Spaces requirements, as a condition of preliminary site plan approval and noting that all parking space calculations for EVSE and Make-Ready equipment are to be rounded up to the next full parking space, the following is required for the residential component of the application:
    a. Prepare thirty (30) Make-Ready electric vehicle parking spaces (15% of the required number of off-street parking spaces, rounded up) and install EVSE in at least ten (10) parking spaces (one-third of the 15% requirement, rounded up).
    b. Within 3-years of the date of the issuance of the certificate of occupancy, install EVSE in an additional ten (10) parking spaces (one-third of the original 15% requirement rounded up).
    c. Within 6-years of the date of the issuance of the certificate of occupancy, install EVSE in the final ten (10) parking space (one-third of the original 15% requirement.
    d. At least 5% of the electric vehicle supply equipment must be accessible for people with disabilities. Therefore, two (2) of the required EVSE spaces need to be accessible for drivers with disabilities. The accessible EVSE spaces do not count towards the number of required accessible spaces regulated by ADA.
    e. A parking space prepared with EVSE and Make-Ready equipment shall count as at least two parking spaces for the purpose of complying with the minimum parking space requirement, limited to a reduction of no more than 10 percent of the total required parking. Therefore, with the inclusion of the required electric vehicle parking spaces, it appears that the residential component of the project requires 188 parking spaces.
7. As discussed in the completeness review, a breakdown of the impervious surfaces by material type under both the existing and proposed conditions should be provided.
8. The following comments pertain to the site plan drawing, sheet CS101:
    a. The pavement material within the circular driveway should be indicated. The type of curb proposed along River Road should also be indicated.
    b. The Board may wish to consider, based on the turning exhibits provided on sheet CS102, as well as testimony, whether or not the width of the one-way driveway can be reduced, noting that a 24-foot wide driveway is typical for two-way traffic. With the wide driveway loop, the number and size of the regulatory signs may be appropriate, but could be perceived as sign clutter, or less aesthetic than more decorative enter, exit and one-way signs. The Board's Traffic expert should provide an opinion. *(Note that the plan for the*

driveway loop currently show eight (8) regulatory signs, not including pick-up and drop-off only/no parking signs that will be required.)

c. The driveway loop, as mentioned above, should include a minimum of three (3) no parking, drop-off and pick-up only signs of the same design as the signs placed at the Ivy.

d. The site plan drawing should indicate the location of the bollards proposed on the landscape plan to separate the vehicle pavement from the pedestrian pavement.

e. A sidewalk easement dedicated to the Borough will be required since the proposed sidewalk will be outside of the right-of-way. The easement should be shown and labeled.

f. The Board should consider the sidewalk material proposed between the driveway loop exit and the northeasterly driveway. Presently, the plan calls for pavers within this area, which will extend to the proposed building, and a 5-foot wide concrete sidewalk along the remaining frontage of the property. A portion of the paver sidewalk will be in the Borough's sidewalk easement.

g. The 5-foot wide public/accessible path should be delineated and maintained; not blocked by seating, planters or similar store front accessories.

h. The 90° curb cut-out at the westerly side of the existing E inlet near the entrance driveway should be eliminated and replaced with a 5-foot flared taper to better facilitate street sweeping at the inlet.

i. The plan indicates that the existing fence on the southern, western and eastern property boundary is to remain. Based on the boundary and topographic survey, a significant portion of the fence does not appear to be on the Applicant's property. Testimony on the ownership and condition of the fence should be provided.

9. The sight line triangles shown on the bottom of sheet CS101 do not show existing conditions within the shaded sight line areas. This is particularly a concern at the easterly driveway where the sight line may go through fencing and landscape areas.

10. As indicated in the truck turning exhibits on sheet CS102, the 3-point turnaround maneuver required for garbage and typical moving trucks, while possible, will be tight. Has there been any consideration to extending the K-turn area to the northeast? By adding an additional 10 feet the k-turn area would be closer to the general rule-of-thumb of 2.5 times the length of the truck. Testimony should be provided.

11. The following comments pertain to the grading plan, sheet GC101:

a. While well prepared, the proposed contour lines on the grading plan are generally extended out to the property lines, leaving little room for errors associated with creating the contour lines from surface points. Is there the ability to terminate the grading at 1 to 2

feet from the property line to allow for a typical half-interval variation? Testimony should be provided.

b. Top of curb elevations, as well as the bottom of curb elevations should be provided along River Road. The spot grades provided appear to match the existing profile of the road. A minimum slope of 0.5% should be maintained.

c. Proposed spot grades should be provided at the northerly side of the crosswalk at the easterly driveway to verify a maximum cross slope of 2%.

d. Spot grades, including top and bottom of curb elevations, should be provided at the ADA curb ramps adjacent to the retail portion of the building to demonstrate compliance with the accessibility standards. Also, an additional spot grade should be provided at the end of the ADA stall to demonstrate the slope within the ADA parking area.

e. Grading at the crosswalk in front of the lower-level parking garage is somewhat problematic due to the location of the parking garage access door and the parking garage service doors. Sections of the curb line will have very little to zero slope. It is requested that the Applicant's Engineer take a second look to see if a minimum slope of 0.5% can be maintained along the curb line in order to help prevent potential ponding.

f. An additional grading note should be provided to indicate that the maximum cross slope on any sidewalk shall be 2.0% and the maximum running slope on any sidewalk shall be 5.0%. General note 11 from the site plan sheet regarding ADA requirements should also be included in the grading notes, noting that the grading notes presently skip from Note 9 to Note 12.

12. The following comments are related to the grading and drainage design within the center access driveway loop:

a. The section of driveway pavement between the curb line that runs through the center access driveways and the crosswalk stripes appears to have a cross slope of around 9% to 10% in both locations. The asphalt driveways then need to transition to a maximum cross slope of 2% within the crosswalk before changing again to slopes in excess of 6%. We believe constructing an asphalt driveway to these slopes, in short transitions, will result in much hand work and will be problematic.

b. While the entrance drive at the Ivy does not contain curb, we would recommend maintaining the drop curb for this project to help with the grades. Also, consideration should be given to setting the driveway slope at 2% from the curb to the back edge of the crosswalk.

c. From the back edge of the crosswalk, we would recommend a maximum slope on the access driveway of 5.0%. This will require eliminating the forced low points at proposed catch basins CB-1 and CB-2, which are problematic. The forced low points create the

unnecessary steeper slopes and the inlets appear to catch very little of the driveway in the present locations.

d. Catch basins CB-1 and CB-2 should be moved closer to the proposed crosswalk locations to maximize the area of driveway collected. Also, the minimum pipe size of the drainage run between these catch basins, and subsequently the connecting runs, should be increased to 12-inches. An 8-inch pipe is acceptable for roof leader runs.

e. A 2-foot sump should be indicated for catch basins CB-1 and CB-2.

13. The drainage design includes multiple concentrated discharge points close to the rear property line, as well as a stone chute to handle surface flows from the at grade parking area. The following comments pertain to the stormwater discharge points and are subject to any specific stormwater management comments below or provided separately:

    a. Can the entire (excluding the end transitions) length of the riprap apron at the bottom of the retaining wall at the rear of the property be set at the same elevation, with the same scour hole invert? It appears the 210.20 elevation can reasonably be established across the entire length to help further spread any overflow.

    b. Can a continuous trench drain be placed along the curb line at the end of the parking aisle to collect runoff rather than attempting to have surface flow run over the riprap level area? It should be expected that debris will build up as it is caught in the rocks. The trench drain could be connected to inlets with catch basin sump and discharge at multiple points to the riprap scour hole system along the rear retaining wall. It appears the wall could be extended as necessary.

14. The following comments pertain to the proposed utility connections as shown on sheet CU101 of the plans:

    a. The plan indicates that the gas service will enter the building near the center of the westerly wing at the utility room. The plan does not indicate where the location of the gas meters will be placed. If the meters are to be located on an exterior wall, consideration should be given to placing the meters along the westerly side of the building.

    b. The plan indicates that a transformer will be placed in the westerly side yard and that the electric service will enter the building near the northwest corner at the utility room. The plan does not indicate where the location of the electric meters will be placed. If the meters are to be located on an exterior wall, consideration should be given to placing the meters along the westerly side of the building.

    c. The plan indicates that the domestic and fire service water lines will enter the building near the northeast corner of the westerly wing at the utility room. The plan does not indicate where the location of the water meters will be placed. If the meters are to be

located on an exterior wall, consideration should be given to placing the meters along the easterly side of the westerly wing of the building.

d. The plans do not indicate where the backflow prevention device will be placed. Any backflow prevention system should be located inside the building mechanical room. If an exterior enclosure is required, the location and method of screening should be subject to approval of the Board.

e. The plans indicate that there will be a new sewer lateral installed from each wing of the building. Doghouse type manholes are proposed at each location to facilitate the connection to the existing sanitary sewer in River Road.

f. Consistent with utility note 13, the existing sewer main should be video inspected to determine the location of the existing building sewer laterals in order to properly plug these connections. If there are existing laterals in reasonable proximity to the proposed connection, we would recommend placing the new manholes at these locations in order to minimize openings in the existing sewer main.

15. The following comments pertain to the soil erosion and sediment control plan, sheets CE101 and CE501:

a. A separate leader note should be used to indicate the typical silt sack location since a legend is not shown on the plan.

b. The dimensions indicted on the rock chute detail do not match the plans. The detail indicates an overall chute length of 25.5 feet, with 4-foot level areas at the top and bottom of the chute connected by a 17.5-foot long sloped section, while the plan indicates a chute length of approximately 10 feet. The detail also indicates the sloped/chute portion at a 0.4% slope, while the grading plan indicates a 2.5 to 1 slope, or 40%.

c. Haybales should be added to the various discharge points, or super silt fence installed along the rear property line.

16. The following comments pertain to the lighting plan, sheets LL101 and LL501:

a. The post top fixture 'A' listed in the lighting schedule indicates a color temperature of 3,000K while the IES File column indicates 40K, which refers to a CCT of 4,000K. A maximum of 3,000K should be specified.

b. The at grade parking area is proposed to be lit by three building mounted lights. The plan indicates that the lights will be mounted at a height of 15 feet, which will place the lights basically between and adjacent to the windows of apartment units. The parking lot lighting should be revised to include pole mounted fixtures set below the height of unit windows, fitted with house side shields and or moved to the opposite side of the parking area (with house side shields) and directed to light only the parking area. The sidewalk

may need to be lit with bollards as necessary. Wall sconce type lights may be more appropriate at the garage entrances.

c. The sidewalk area that runs along the westerly side of the building is proposed to be lit by seven building mounted lights. These lights, based on the architectural elevations, will be at differing heights, sometimes above the first apartment floor. Can the sidewalk be lit with bollards and the stairway door with a sconce to eliminate or minimize disturbance to residential units and reflectance off the side of the building?

d. Similarly, the sidewalk that runs along the rear of the building is proposed to be lit with five building mounted lights. While below unit windows, we question whether or not it would be more appropriate to light the sidewalk with bollard or pedestrian scale pole mounted fixtures that could direct light reflectance off the building.

e. With the exception of the 12 round cylinder wall mount fixtures, which appear to have the ability to tilt up to 40°, the lighting plan for the access loop and River Road frontage appears to be similar in design as the main entrance and street frontage as the Ivy. Testimony should be provided to confirm the need for the wall mounted lights. The Board members may wish to confirm through experience and or a sight visit to the Ivy that the lighting plan along the frontage of the property is appropriate in scale.

f. Testimony should be provided with regard to the rear yard patio area, which appears to propose dusk to dawn lighting, with average lighting of close to 2-foot candles, similar to the parking lot. Also, testimony should be provided with regard to the dusk to dawn lighting of the pickleball courts.

17. The following comments pertain to the construction details, sheets CS501 through CS504:

a. The curb detail should be revised to indicate that any curb along River Road requires the following:

- Full depth sawcut of the existing pavement a minimum of 2 feet from the face of curb.
- A 2-foot wide, full depth pavement restoration from the face of curb, to include a 6-inch thick layer of dense graded aggregate; 4-inch thick layer of hot mix asphalt, 19M64 base course and; a 2-inch thick layer of hot mix asphalt, 9.5M64 surface course.
- All pavement restoration items to be in accordance with the NJDOT Standard Specifications.

b. Reconcile the discrepancy between the pedestrian paver details shown on the civil plans and the detail shown on the landscape plan with regard to section materials and thickness.

c. Reconcile the discrepancy between the vehicle paver details shown on the civil plans and the detail shown on the landscape plan with regard to section material and thickness.

d. Reconcile the discrepancy between the concrete sidewalk details shown on the civil plans and the detail shown on the landscape plan with regard to section materials and thickness.

e. Reconcile the discrepancy between the bollard details shown on the civil plans and the detail shown on the landscape plan with regard to section materials and size. If different sized bollards are proposed in different locations, the plans should clarify the locations.

f. The catch basin detail should specify an open bottom, 18-inch by 18-inch minimum. Also, an additional note should be added to indicate that the inlet details shall be in accordance with the NJDOT Standard Specifications and construction details.

g. The size of the drain basin should be indicated and the detail should note that it is applicable to the yard drains shown on the drainage plan.

h. The details for the sanitary sewer manhole should be revised to indicate an "O-ring" flexible watertight rubber gasket joint in accordance with ASTM C443. The detail should indicate that the manhole shall meet the standard specification under ASTM C 478. Also, note 6 should include the requirement to submit all shop drawings to the Borough Engineer as well as the design engineer.

i. The sanitary sewer manhole casting detail should include the terms "Sanitary Sewer, Borough of Chatham and a year." The year on the casting should be as required by the sewer department.

j. The retaining wall detail should include a note indicating that all shop drawings and structural calculations, signed and sealed by a New Jersey licensed engineer shall be submitted to the Building Department and that a building permit will be required for all walls exceeding a height of 4 feet.

k. The detectable warning surface detail should be revised to indicate that the color shall be safety red, which we understand is the color installed at the Ivy project. Also, the warning surface should be the type that is embedded into the concrete surface.

D. Landscape Plans

1. The title page and the title block on each sheet, references BNE Chatham, while the project Applicant and title on the civil drawings reference AJDM Chatham, LLC.

2. The standard signature legends should be added to the first sheet of the landscape plans, which should be part of the approved plans to be submitted to the Board for signature.

3. The leader note on sheet L1 indicating decorative pavers for the detectable warning surface should be removed. The note should reference the details on the civil drawings.

4. A note should be added to sheet L2 to indicate that the 5-foot public sidewalk area is to be maintained in front of the retail portion of the building. The width of the sidewalk should be provided at the proposed seasonal planting strip.

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

5. We defer to the Board's Planner with regard to the proposed landscape plantings.

E. Architectural Drawings

1. The title page references Chatham River Road and the title block on each sheet, references Chatham River Road, Phase II, while the title on the civil drawings references AJDM Chatham, LLC. The project title should be consistent across all plan sets that accompany the application.
2. The standard signature legends should be added to the first sheet of the architectural plans, which should be part of the approved plans to be submitted to the Board for signature.
3. As discussed above, the ADA/wheel chair symbol at the two ADA spaces shown to have EVSE, should be removed. These spaces should be dimensioned in width and include an access aisle to demonstrate that these are accessible EV spaces, as required by the model EV ordinance. Two ADA parking spaces, with an access aisle, should be added to the right of the proposed ADA spaces.
4. Stall and aisle dimensions should be provided for the ADA parking spaces shown on sheets A-01 and A-02. Also, the depth of the parking stalls at the offsets/jogs in the rear wall of both levels of the parking garage should be shown. The access aisles on sheet A-02 should be crosshatched.
5. The plans should confirm whether or not there is an access door to the bike room and the lobby from the bedroom corridor on sheet A-02.
6. Testimony should be provided with regard to how the residential trash rooms will operate and how refuse bins are moved in and out of the building. Testimony should be provided with regard to how refuse from the retail portion of the building will be handled.
7. Testimony should be provided with regard to the orientation of the elevator shown on sheet A-01 at the southeast corner of the lower-level parking garage. Will the three parking spaces block access to the elevator or the service doors? Should the space be reserved for loading/staging for move-ins rather than parking considering that 238 parking spaces are proposed and 207 spaces are required?
8. Testimony should be provided to indicate if any pipe projections, (fire lines, sanitary sewers, ducts or other utilities) will be mounted on the interior walls of the underground parking garage, as well as any bollards that would be required to protect these facilities. Pipe projections and bollards could have an impact on the actual parking stall depth and or width.
9. Testimony should be provided with regard to the storage space shown adjacent to the retail space shown on sheet A-02. Is this space for residential tenant use or retail use?

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

10. Testimony should be provided with regard to the lobby/lease space shown on sheet A-02. Is the lease space for residential tenants or additional retail? Will this space include a package room?
11. Testimony should be provided with regard to the number of bikes that can be stored in the bike room. Will the leases permit E-bike storage?
12. It should be noted that the at grade parking area shown on sheets A-01 and A-02 does not match the civil drawings.

F. Stormwater Management

1. The stormwater report indicates the project will result in a net decrease in impervious surface of 0.10 acres and the plans indicate the project will disturb 3.03 acres. As a result of the amount of disturbance required, the project is considered a major development under the stormwater rules.
2. A portion of the drainage area along River Road is included with Watershed Drainage Area #1 where it appears it is tributary to River Road. Revise accordingly.
3. It is noted the calculated time of concentrations were rounded off in the analysis versus using the calculated time of concentration. The calculated time of concentrations should be utilized.
4. The report indicates a minimum time of concentration of 2.0 minutes was used in the analysis due to program limitations. Minimum time of concentrations are not allowed. The calculated time of concentrations need to be used in the analysis.
5. N.J.A.C. 7:8-5.2(l) indicates "If there is more than one drainage area, the groundwater recharge, stormwater runoff quality, and stormwater runoff quantity standards at N.J.A.C. 7:8-5.4, 5.5, and 5.6 shall be met in each drainage area, unless the runoff from the drainage areas converge onsite and no adverse environmental impact would occur as a result of compliance with any one or more of the individual standards being determined utilizing a weighted average of the results achieved for that individual standard across the affected drainage areas." The analysis utilizes two analysis points for comparison of post developed runoff to existing runoff. Based on the existing site topography, there appear to be at least two analysis points along the front of the property (River Road), located generally at the existing inlet in River Road, and at the northeast property corner where it intersects with River Road. There appear to be at least five to six analysis points located along the rear of the property under existing conditions. The drainage plan which depicts proposed conditions indicates four proposed scour holes and a rock chute that discharges onto the adjacent property to the rear of the site. The analysis needs to account for the various drainage areas that discharge across the property lines at each location versus using a single analysis point at each of the front and rear property lines. Only the portion of the existing runoff area tributary to each point where the proposed runoff discharges across the property lines can be used for comparison purposes.

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

6. Time of concentration flow paths need to be provided for each subarea that drains to the separate analysis points.
7. The boundary and topographic survey depict existing inlets and a gutter behind the two-story masonry building but it is not clear where these structures drain to. Additional information needs to be provided to confirm drainage patterns.
8. The topography and improvements depicted on the boundary and topographic survey are different than what is depicted on the existing watershed area map. For example, there are several areas labeled "timber" that do not appear on the survey. It is unclear whether these "timber" areas impact surface runoff (are these timber curbs?). Clarification is required. It is not clear why the existing watershed area map and the survey are not consistent with each other (outside the stockpile area).
9. The Engineer should provide additional information on what the topography for the existing watershed area map that is used in the analysis is based upon. It is noted the boundary and topographic survey indicate a large soil stockpile that is not reflected on the existing watershed area map.
10. The report indicates the stormwater runoff quantity standards at 7:8-5.6 (b)1. "Demonstrate through hydrologic and hydraulic analysis that for stormwater leaving the site, post-construction runoff hydrographs for the current and projected two-, 10-, and 100-year storm events, as defined and determined pursuant to N.J.A.C. 7:8-5.7(c) and (d), respectively, do not exceed, at any point in time, the pre-construction runoff hydrographs for the same storm events;" are being met. The comparison charts in the stormwater report indicate there is an increase in the stormwater leaving the site for post construction runoff hydrographs when compared to the pre-construction runoff hydrographs, for watershed area #1, for all storm events. In addition, the comparison assumes the existing site runoff leaves the site at one point (the analysis point) along the rear of the property which is not supported by the existing topography or the proposed discharge points. Revise accordingly.
11. Based on the proposed grading, a large portion of the area's tributary to CB-1 and CB-2 will bypass the inlets and drain to River Road. Either the grading needs to be revised, or this needs to be accounted for in the stormwater analysis.
12. The storm sewer tabulation indicates the 100-year storm event is being analyzed but the rainfall intensities are based upon the 25-year storm event. The 100-year storm event should be utilized to ensure design assumptions are being met (to ensure the runoff from a 100-year storm event is being carried to the analysis point verses if the system were designed for a smaller storm event, would there be any overflow that would drain to a different watershed than is being utilized in the runoff quantity analysis).
13. The capacity of the yard drain inlet grates should be provided in the report.
14. Calculations for the roof drainage system need to be provided in the report.

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

15. Review of the stormwater maintenance manual is deferred. Once the stormwater management design is substantially approved, an updated Operation and Maintenance Manual should be prepared for the stormwater management system. The Manual should include the applicable maintenance requirements of the NJDEP BMP Manual. The O&M Manual will need to be recorded on the deed for the property.

G. Other Reports

1. While the Environmental Impact Statement is informative, it appears that the report should address or provide some discussion related to the various monitoring wells noted on the boundary and topographic survey.
2. We defer to the Board and or other Board Experts with regard to the Community Impact Statement.
3. The Traffic Impact Statement has not been reviewed by this office since it is assumed that the Board may retain a traffic expert to provide a review and analysis.
4. The Flood Damage Prevention Compliance letter should be revised to clarify the statement indicating that the project is not subject to the Flood Hazard Area Control Act, by noting that the flood hazard elevation has been consider in accordance with the latest FHA rules by adding 3 feet to the FEMA flood hazard area elevation or 2 feet to the established flood hazard area elevation. (In Riverine areas, you need to determine your local design flood elevation (LDFE) based on the most restrictive of the effective or preliminary data). The statement should confirm the following has been done: Check both NJFHA effective/published mapping & NJFHA delineation on the preliminary FEMA FIRM and add +2-feet. Check both FEMA effective FIRM and FEMA preliminary FIRM 100-year floodplain and add +3-feet.

H. Other Matters

1. It should be determined whether or not the 25-foot wide, half width right-of-way along the River Road frontage is to be dedicated to the Borough for roadway purposes. If the Borough requires the dedication, the site plan should label the area as a proposed dedication for roadway purposes and include the area in square feet and acres. The deed of dedication and the metes and bound description should be subject to the approval of the Borough Attorney and the Borough Engineer.
2. The project will require the merger of Lots 7.01, 8, 9, and 10, Block 140. The new lot number should be assigned by the Borough's Tax Assessor. A deed of merger will be required and should be subject to the approval of the Board Attorney. Metes and bound descriptions should be included and be subject to the review of either this office or the Borough Engineer. A sidewalk easement should be included in the deed. The requirement for maintenance of the stormwater management facilities in accordance with the Stormwater Management Facilities Maintenance Manual should be recorded upon the deed for the property.

Re: AJDM Chatham, LLC
39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Application No. PB -26-01
Our Project No. 26CHP-101

3. The method of connecting the new sewer laterals to the existing sanitary sewer system should be reviewed and approved by the Borough's Sewer and Water Department.
4. A treatment works approval (TWA) will be required from NJDEP since the sewer connection will exceed 8,000 GPDA.
5. The project may require a Bureau of Water Systems Engineering (BWSE) permit from NJDEP for the water service connection.
6. The plans should be reviewed by the appropriate fire official and EMS departments.
7. Approval will be required from the Morris County Soil Conservation District.
8. Approval will be required from the Morris County Planning Board.
9. Documentation should be provided to confirm that the proposed amenities shown within the JCP&L easement are permitted by the beneficiary of the easement area.
10. Any approval should be subject to requiring the Applicant's Engineer prepare a detailed engineering cost estimate for the project in order to establish performance guarantees and inspection escrow. The estimate and bonding requirements should be subject to the approval of the Borough Engineer.
11. The Applicant should be required to enter into a Developer's Agreement with the Borough prior to the start of construction.
12. Prior to the start of construction, a construction phasing and a traffic control plan should be submitted to the Borough for approval by the Borough Engineer and the police department.
13. Any approval should require the submission of an as-built plan prior to the issuance of a certificate of occupancy.

We trust this information is useful to the Board in its consideration of the application. Should you have any questions or need additional information, please do not hesitate to contact this office.

Very truly yours,

Robert C. Brightly, PE, PP, CME
Boswell Engineering

Steven B Bolio, PE, CME
Boswell Engineering

cc: Vincent K. Loughlin, Esq. (via email)
Kendra Lelie, PP, AICP, ASLA (via email)
Derek W. Orth, Esq (via email)
John E. DiGiacinto, PE (via email)
Jack Raker, AIA (via email)

APPLICATION FOR DEVELOPMENT (appendix 1)
[●] Planning Board
[ ] Zoning Board

1. PROPERTY INFORMATION

Address: 33, 29,37, 39 River Road ZONE: (AH-1) GAHO-1
Tax Map Number: 24 Block: 140 Lot: 9, 7.01, 8, 10
Present use:
Lot 9 -Commercial Use, Lot 10 - vacant office building, Lot 8 and 7.01 vacant / storage

Has there been any previous application involving these premises by the applicant or any prior owner of the property
( ) Yes [attach copies] (●) No ( ) Unknown [if unsure file OPRA with the Clerk's Office]
If yes, nature of application, date and determination: _____

Does the applicant own adjacent Property ( ) Yes (●) No If yes, address of property: _____

Restrictions, covenants, easements, association by-laws, existing or proposed on the property:
( ) Yes [attach copies] (●) No ( ) Proposed

**** Is the property in the Historic District? ( ) Yes (●) No If yes the application will need to be reviewed by the Historic Preservation Commission prior to being heard by the Board.**

2. APPLICANT INFORMATION

Name: AJDM Chatham, LLC
Address: 16 Microlab Rd, Ste A
City/State/Zip: Livingston, NJ 07039
Phone #: 973-992-2443 Email: jschwartz@bnerealestate.com
Applicant is a(n): ( ) Individual ( ) Partnership (●) Corporation

CONTACT FOR APPLICATION

Name: Jonathan Schwartz - AJDM
Address: 16 Microlab Rd, Ste A
City/State/Zip: Livingston, NJ 07039
Phone #: 973-220-7110 Email: jschwartz@bnerealestate.com

3. DISCLOSURE STATEMENT

Pursuant to N.J.S.A. 40:55D-48.1, the names and addresses of persons owning 10% of the stock in a corporate application of 10% interest in any partnership application bust be disclosed. In accordance with N.J.S.A. 40:55D-48.2 that disclosure requirement applies to any corporation of partnership which owns more than 10% interest in the applicant followed up in the chain of ownership until the names and addresses of the non-corporate stockholders and partners exceeding the 10% of ownership criterion have been disclosed. (Attach pages as necessary to comply)

Name: Jonathan Schwartz Address: 16 Microlab Rd. Ste A, Livingston NJ 07039 Interest: _____
Name: Howard Schwartz Address: 16 Microlab Rd. Ste A, Livingston NJ 07039 Interest: _____
Name: David Pantirer Address: 16 Microlab Rd. Ste A, Livingston NJ 07039 Interest: _____
Name: Marc Pantirer Address: 16 Microlab Rd. Ste A, Livingston NJ 07039 Interest: _____
Name: Larry Pantirer Address: 16 Microlab Rd. Ste A, Livingston NJ 07039 Interest: _____
Alan Pines 16 Microlab Rd. Ste A, Livingston NJ 07039
Andrew Friedman 343 Mt. Pleasant Ave. , Livingston NJ 07039

APPLICATION FOR DEVELOPMENT continued

4. OWNER'S INFORMATION

If the Owner is other than the applicant, provide the following information:

Owner's Name: SPF Properties, LLC for lot 9 , All others are owned by AJDM who is applicant

Address: 33 River Road, Chatham, NJ 07928 Phone # 973-635-3111

5. APPLICANT'S ATTORNEY (Corporations must be represented by an attorney)

Name: Inglesino - Taylor - attny:Derek W. Orth

Address: 600 Parsippany Road, Suite 204

City/State/Zip: Parsippany, NJ 07054-3715

Phone #: (973) 947-7111 Email: DOrth@itfirm.law

6. APPLICANT'S ENGINEER

Name: Langan - John DiGiacinto

Address: 300 Kimball Drive 4th Floor

City/State/Zip: Parsippany, NJ 07054-2172

Phone #: 973.560.4554 Email: jdigiacinto@langan.com

7. APPLICANT'S ARCHITECT

Name: Mino - Wasko - Jack Raker

Address: 204 North Union Street, Suite 1

City/State/Zip: Lambertville, NJ 08530

Phone #: 609-397-9009 x 115 Email: jraker@minnowasko.com

NATURE OF THE APPLICATION (check all applicable items)

( ) Conceptual subdivision plan
( ) Minor subdivision
( ) Major subdivision, preliminary
( ) Major subdivision, final
( ) Amendment to approved plat
( ) Lot line adjustment
( ) Conditional use
( ) Use variance
( ) Variance, residential fence or deck
( ) Variance, other residential
( ) Variance other (non-residential)
( ) Zone change
( ) Conceptual site plan
(●) Site plan, approval, preliminary residential
( ) Site plan, approval, preliminary non-residential
(●) Site plan approval, final
( ) Amendments to approved site plans
( ) Change of permitted use with waiver of site plan
( ) Wireless telecommunications application
( ) Appeal from administrative decision
( ) Interpretation of zoning ordinance

9. BRIEF DESCRIPTION OF PROJECT: Indicate type of improvement, alteration, structure, or use proposed; describe all structures, improvements, and uses now on the property. For any non-residential, business, or commercial use provide hours of operation, number of employees. Number of parking spaces, intention to sell or rent, and another information important for consideration:

Demolition of 2 existing buildings and construction of proposed 4-story mixed use residential building with 100 units, 2370 sf of retail, 207 parking spaces in garage and 31 at grade spaces

10. DOES THE APPLICANT COMPLY WITH ALL REQUIREMENTS OF THE ZONE: If not, state violation, article, section and variance requested and state principal points on which the variance request is made. Use a separate sheet if necessary. Attach any letter or document from the Zoning Official or any other office of the Borough of Chatham which has been issued to you regarding this property.

The plan complies with requirements of the zone.

11. LIST ANY OTHER LICENSES, PERMITS OR OTHER APPROVALS REQUIRED BY MUNICIPAL, COUNTY, STATE OR FEDERAL LAW AND THE STATUS OF EACH.

Morris county planning board filed with this application, NJDEP TWA (Sewer) and Water extension to filed upon approval

I hereby affirm that all of the above and statements contained in the papers submitted herewith are true.

Signature of the Applicant: Jonathan Schwartz **Date:** 1-14-2026

IF THE APPLICATION IS SUBMITTED BY ANYONE OTHER THAN THE OWNER, THE OWNER MUST EXECUTE THE CONSENT FORM. (appendix 1A)

BOROUGH OF CHATHAM, NEW JERSEY
LAND DEVELOPMENT CHECKLIST
AS AUTHORIZED UNDER N.J.S.A. 40:55d-10.3

CHECKLIST A – GENERAL REQUIREMENTS FOR ALL APPLICATIONS FOR DEVELOPMENT

***This checklist shall not be applicable to Requests for Interpretation, appeals of a Decision of a Borough Official, or Change of Permitted Use with Request for Waiver of Site Plan. Checklists E and F are required for those applications.**

Items	**Checklist A General Requirements**	**submitted**	**Borough use**
1	Completed and signed application for development	X	
2	Permission to Enter Applicant's Property (appendix 1H)	X	
3	Owner's consent when owner is not the applicant (appendix 1A)	X	
4	applicable checklist(s)	X	
5	Payment of application fee and escrow	X	
6	Property survey, signed and sealed by land surveyor or engineer, must be dated within 5 years from the date of the application and must show all current improvements and conditions on the property, including the location of all fences, decks, etc.,	X	
7	Letter from Borough water and Sewer Department that all fees and charges are paid and current. (appendix 1C)	X	
8	Certificate from Borough Tax Collector that taxes for the property have been paid (current date) (appendix 1D)	X	
9	Certified list of all property owners with 200 feet of the property from Borough's Tax assessors' office (appendix 1E)	X	
10	Photographs of the property from the front, back and both sides (please label what the pictures are)	X	
11	Copies of any prior resolutions of approval for this property from either the Planning Board or Zoning Board of Adjustment	na	
12	Copies of any letters or notices received from any Borough official, office, board, or agency	X	
13	List of any witness or experts who will be presenting testimony or reports regarding this application – Name, address, and phone number (attach any of said reports to your application)	X	
14	Copies of any and all approvals received from any other governmental agency, and if any permits have been issued attached hereto full and complete copes of any and all such notices documents, approvals, or permits.	X	
15	Copies of any deed restrictions or easements that affect the property	NA	
16	Proposed notice to affected property owners and/ or to be published for hearing	X	
17	Statement of reasons why the application is necessary and all facts and information that would support an approval	X	

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BOROUGH OF CHATHAM, NEW JERSEY
LAND DEVELOPMENT CHECKLIST
AS AUTHORIZED UNDER N.J.S.A. 40:55d-10.3

CHECKLIST C – PLAN REQUIREMENTS FOR ALL APPLICATIONS FOR DEVELOPMENT INCLUDING CONCEPTUAL SITE PLAN AND/OR SUBDIVISION REVIEW PRELIMINARY SITE PLAN OR SUBDIVISION APPROVAL. THIS CHECKLIST SHALL BE USED FOR ALL VARIANCES (NOT COVERED IN CHECKLIST B)

Items	**Checklist C - General Requirements**	**submitted**	**Borough use**
1	Floor Plans for each floor of the building or structure with clearly displayed dimensions of all rooms, perimeters.	X	
2	Building facades of elevations for all ides of the building or structure with roof height measurements included.	X	
3	Written statement of reasons why variance (s) is/are necessary	NA	
4	If any lighting is proposed, location, mounting height, fixture type, and description of such lighting in detail.	X	
5	Statement as to any existing structure of improvement that will be removed from the property as part of the installation of the deck and/or fence now being proposed.	NA	

Items	**For Subdivision and Preliminary Site Plan** **Plan Details Required**	**submitted**	**Borough use**
1	Plans neat and accurate, with consecutive numbering and descriptive label §165-162 (A)(1)	X	
2	Identification block §165-162 (A)(2)	X	
3	Plans certified with identity of preparer with dates of preparation and revision §165-162 (A)(3) and §165-162 (A)(4)	X	
4	Standard sheet sizes; 8x13 inches, 15 by 21 inches, or 24 by 36 inches §165-162 (A)(1)	W	
5	Proper scale §165-162 (A)(6)	X	
6	Key Map, North arrow on each page, reference meridian, 200' list of property owners with names and addresses §165-162 (A)(7), (A)(8), (A)(9)	X	
7	Zoning analysis showing requir3ed, existing, and proposed zoning conditions, variances and design waivers identified §165-162 (A)(10),	X	
8	Show exiting a proposed zoning conditions, variances and design waivers identified §165-162 (A)(11)	W	
9	Show existing and proposed additional floor area for each floor, basement, attic, porch area and garage area, and proposed additional floor area for the basement and each floor and attic §165-162 (A)(12)	X	
10	Signature block with necessary signatures on first page of plans§165-162 (A)(13)	X	
11	Dimensions in feet and inches, area values in square feet, ratios in percent to two decimal places §165-162 (B)(1)	X	
12	Width, depth, and height dimensions in feet and inches §165-162 (B)(2)	X	
	Continued on next page		

Items	**For Subdivision and Preliminary Site Plan** **Plan Details Required continued**	**submitted**	**Borough use**
13	Proposed location and size of all structures, mechanicals, and any and all improvements §165-162 (B)(3)	X	
14	Bearing and dimensions of boundary lines and angle between intersecting lines, in degrees, minutes, and seconds §165-162 (B)(4)	X	
15	Indication of any reference corners and location dimensions and kind of each permanent property monument §165-162 (B)(5)	X	
16	Location of Zoning District boundaries within 200 feet or development §165-162 (B)(6)	X	
17	Location of Municipal boundary lines within 200 feet of development §165-162 (B)(7)	X	
18	Proposed front, side, and rear yard setbacks, and second story overhanging setbacks, distances in feet to two decimal places §165-162 (B)(8)	X	
19	Lot frontage, width, depth and area §165-162 (B)(9)	X	
20	Any street or roadway access and proposed directions of travel §165-162 (B)(10)	X	
21	Location and size (width and depth) of base height, from the original ground elevation to top element §165-162 (B)(11)	X	
22	Location, size, materials, method of attachment, and description of any signs, in accordance with Article XIII §165-162 (B)(12)	X	
23	Location, size, and description of any exterior lighting, with direction of illumination, power, and candlepower diagram, showing conformance with Section §165-162 (B)(13)	X	
24	Location, size and description of all existing and proposed utilities §165-162 (B)(14)	X	
25	Floor plans and gross floor area (both total and footprint) §165-162 (B)(15)	X	
26	Façade (elevation) drawings of proposed and existing buildings §165-162 (B)(16)	X	
27	Spot elevations (at building corners) and first floor building elevation §165-162 (B)(17)	X	
28	Fences and walls – height, locations, dimensions, setbacks, materials §165-162 (B)(18)	X	
29	Curbing, sidewalks, driveways, loading area §165-162 (B)(19)	X	
30	Refuse Storage – locations, type, dimensions, proposed enclosures, volume of storage §165-162 (B)(20)	X	
31	Existing and proposed public improvements, easements, rights of way, and restrictions of record, with accurate metes and bounds descriptions for same §165-162 (B)(21)	X	
32	Depiction of any existing natural features on the property and within 200 feet of each boundary line §165-162 (B)(22)	X	
33	Wetlands, wetlands delineations and buffers, water courses, conservation areas and easements, well heads, floodplain area, underground tanks and other environmental items §165-162 (B)(23)	X	
34	Stormwater management structure, dry wells, culverts, outlets and other details for stormwater drainage and management §165-162 (B)(24)	X	
	Continued on next page		

Items	For Subdivision and Preliminary Site Plan Plan Details Required continued	submitted	Borough use
35	Steep slopes, contours, elevations, and calculations in accordance with Section §165-14 (D)(2), §165-14 (D)(3), §165-14 (G); §165-162 (B)(25)	X	
36	Loading and unloading area(s) §165-162 (B)(26)	X	
37	Parking layout plan accordance with Section 165-163 § 165-162 (B)(27)	X	
38	Existing trees depiction for trees 8 inches and over in diameter at 3' above ground elevation § 165-162 (B)(28)	X	
39	Landscaping plan in accordance with Section 165-163 § 165-162 (B)(29)	X	
40	Soil erosion and sediment control plan § 165-162 (B)(30)	X	

Items	Other Requirements for Subdivision and Preliminary Site Plan	submitted	Borough use
42	Written environmental statement including all documentation outline in §165-161 (B)	X	
43	Wetlands – written statement, report and/or documentation §165-161 (B)(23)	X	
44	Stormwater management addressed in accordance with §165-161 (B)	X	
45	Traffic impact study in accordance with §165-163 (B)	X	
46	Parking management report in accordance with §165-161 (C)	X	
47	Documentation showing compliance with Well Head Protection Areas (Article IX) and Flood Damage prevention (Article XI)	X	
48	Written statement describing requests and basis for all Checklist waivers	X	

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BOROUGH OF CHATHAM, NEW JERSEY
LAND DEVELOPMENT CHECKLIST
AS AUTHORIZED UNDER N.J.S.A. 40:55D-10.3

CHECKLIST D – REQUIREMENTS FOR FINAL SITE PLAN AND/OR FINAL MINOR OR MAJOR SUBDIVISION

Items	Checklist D Requirements	submitted	Borough use
1	Completed and signed application form and Checklist D	X	
2	Payment of Application filing fees and escrows	X	
3	Letter from Borough water and Sewer Department that all fees and charges are paid and current. (appendix 1C)	X	
4	Certificate from Borough Tax Collector that taxes for the property have been paid (current date) (appendix 1D)	X	
5	All prior resolutions of approval for this property	NA	
6	Copies of any and all approvals received from any other governmental agency, and if any permits have been issued attached hereto full and complete copes of any and all such notices documents, approvals, or permits.	W	
7	Written certification regarding improvements are installed in accordance with preliminary plan approval; if changes have occurred, documentation that no new variance or waiver relief is required and that the Zoning Officer administratively approved the changes	W	
8	Statement from Borough Engineer regarding utilities and drainage, improvements, inspections, and performance guarantees §165-161 (C)	W	
9	Applicant's written certification regarding any unfinished or incomplete improvements, proof of payment and satisfaction of all bonding requirements as required by the Borough Engineer and Ordinances §165-161 (C)(10(	X	
10	Engineering plans, architectural details and drawings in accordance with sections 165-162 and 165-163 and Checklist C	X	
11	As-built survey in accordance with Sections 165-163 (A) and 165-161 (C)	W	
12	Any document, plan, or other items required, as required by preliminary approval	X	
13	Written statement describing requests and basis for any Checklist waivers	X	

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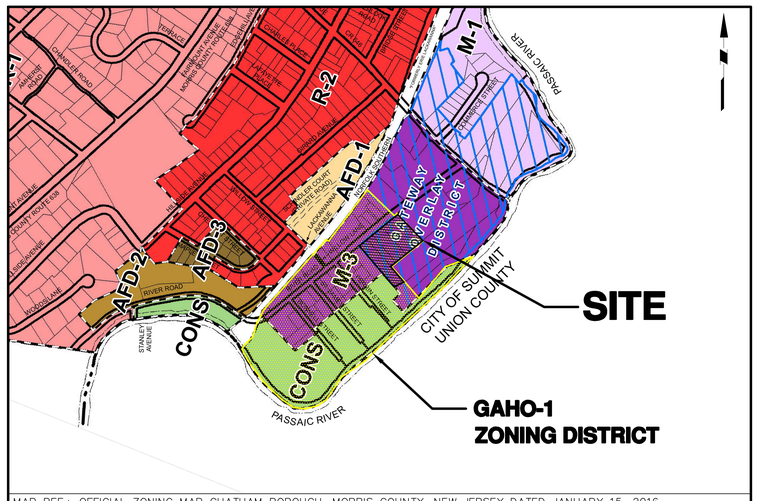
PRELIMINARY AND FINAL SITE PLAN APPLICATION

AJDM CHATHAM, LLC

29, 33, 37 & 39 RIVER ROAD

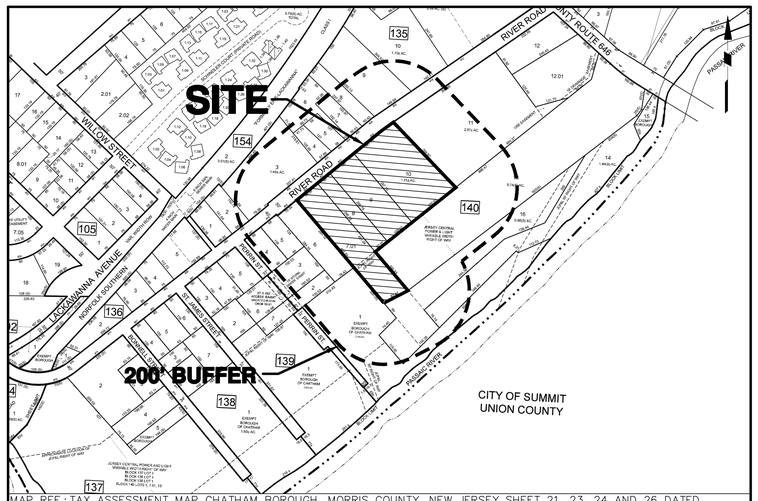
BLOCK NO. 140, LOT NO. 7.01, 8, 9, & 10

BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY



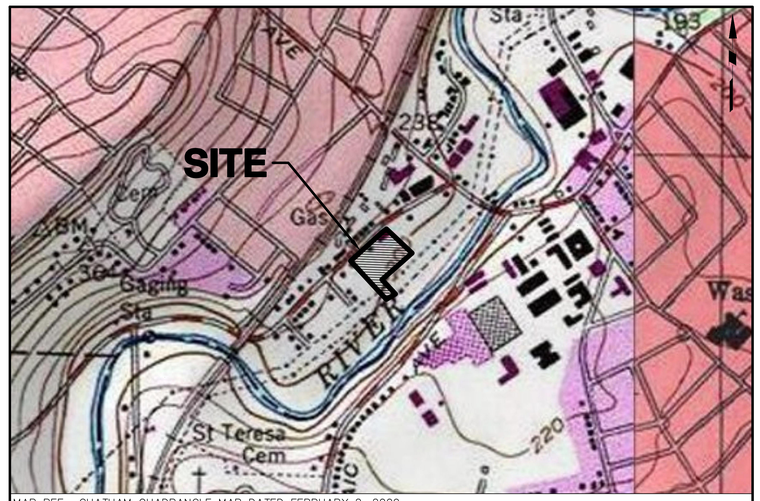
MAP REF.: OFFICIAL ZONING MAP CHATHAM BOROUGH, MORRIS COUNTY, NEW JERSEY DATED JANUARY 15, 2016.

ZONING MAP SCALE: 1" = 500'



MAP REF.: TAX ASSESSMENT MAP CHATHAM BOROUGH, MORRIS COUNTY, NEW JERSEY SHEET 21, 23, 24 AND 26 DATED JANUARY 30, 2015.

TAX MAP SCALE: 1" = 200'



MAP REF.: CHATHAM QUADRANGLE MAP DATED FEBRUARY 2, 2009

KEY MAP SCALE: 1" = 500'

CERTIFIED 200 FT PROPERTY OWNER'S LIST

Block No_Lot No	Acres	Property Location	Owner Name	Mailing Address
135_11.01	4.565	2 RIVER RD	CHATHAM RIVER ROAD URBAN RENEWAL LL	16 MICROLAB RD STE A LIVINGSTON, NJ 07039
135_3	0	38 RIVER RD	CHATHAM RIVER ROAD REALTY LLC	38 RIVER RD CHATHAM, NJ 07928
135_4	0.1492	34 RIVER RD	CHATHAM HOLDINGS LLC CHATHAM TWN TA	34 RIVER RD CHATHAM, NJ 07928
135_5	0.1691	32 RIVER RD	LAWSON REALTY LLC	32 RIVER RD CHATHAM, NJ 07928
135_6	0.3903	REAR 34 RIVER RD	CHATHAM HOLDINGS, LLC	34 RIVER RD CHATHAM, NJ 07928
135_7	0.1756	30 RIVER RD	CHATHAM HOLDINGS LLC	34 RIVER RD CHATHAM, NJ 07928
135_8	0.2801	28 RIVER RD	RIVER ROAD TEAM LLC	16 MICROLAB RD SUITE A LIVINGSTON, NJ 07039
140_10	1.1135	29 RIVER RD	AJDM CHATHAM LLC	16 MICROLAB RD STE A LIVINGSTON, NJ 07039
140_11	2.37	15 RIVER RD	CHATHAM PROJECT, LLC	1 STATION PL STAMFORD, CT 069026800
140_13	4.616	7 WATCHUNG AVE	KAMIK LLC ROTONDI	P O BOX 1407 SUMMIT NJ 07902
140_16	1.6478	3 WATCHUNG AVE	S ROTONDI & SONS HOLDINGS INC	27 BLUEBERRY HILL RD NEWTON, NJ 07860
140_7.01	0	39 RIVER RD	AJDM CHATHAM LLC	16 MICROLAB RD STE A LIVINGSTON, NJ 07039
140_8	0.3283	37 RIVER RD	AJDM CHATHAM LLC	16 MICROLAB RD STE A LIVINGSTON, NJ 07039
140_9	0.6589	33 RIVER RD	SPF PROPERTIES LLC	33 RIVER RD CHATHAM, NJ 07928
135_2	0.2217	48 RIVER RD	RUBIN, JERRY	48 RIVER RD CHATHAM, NJ 07928
140_1	2.183	21 PERRIN ST	BOROUGH OF CHATHAM	MUNICIPAL BUILDING CHATHAM, NJ 07928
140_14	1.0021	3 WATCHUNG AVE	ROTONDI, ANGELO G	P.O. BOX 1407 SUMMIT, NJ 07901
140_2	0.1722	11 PERRIN ST	LIBERO/UMBERTO FUSCO HOLDING LLC	55 RIVER RD CHATHAM, NJ 07928
140_3	0.3444	9 PERRIN ST	LIBERO/UMBERTO FUSCO HOLDING LLC	55 RIVER RD CHATHAM, NJ 07928
140_4	0.2045	47 RIVER RD	ZECCA, ORESTE & IMMACOLATA	47 RIVER RD CHATHAM, NJ 07928
140_5	0.2045	45 RIVER RD	FUSCHETTO VINCENZO	45 FAIRVIEW AVE NEW PROVIDENCE, NJ 07974
140_6	0.5151	35 RIVER RD	LIBERO/UMBERTO FUSCO HOLDING LLC	55 RIVER RD CHATHAM, NJ 07928

Plan of (short descriptive of project) AJDM CHATHAM, LLC
Street Address 29, 33, 37 AND 39 RIVER ROAD
Block 140 Lot 7.01, 8, 9 AND 10 Tax Map No. 24
Zone GATEWAY AFFORDABLE HOUSING OVERLAY 1 Scale 1" = 20'
Applicant name AJDM CHATHAM, LLC
I CONSENT to the filing of this plan with the PLANNING Board of the Borough of Chatham

Landowner (Lots 7.01, 8, and 10) Date signed

Landowner (Lot 9) Date signed
Name/title

Applicant Date signed
Name/title
I HEREBY CERTIFY that I have prepared this Plan and that all dimensions and information are correct.

Name Date signed

Title and License Number
I HAVE REVIEWED this Plan and certify that it meets all codes and ordinances under my jurisdiction.

Borough Engineer Date signed
To be signed after the issuance of a construction permit: I HEREBY CERTIFY that all the required improvements have been installed or a bond posted in compliance with all applicable codes and ordinances.

Borough Engineer Date signed
These plans have been approved by the Board of the Borough of Chatham by Resolution entered on

Chairman Date signed
Name
Witness to Chairman's signature

Administrative Secretary Date signed
Name

AJDM CHATHAM, LLC - ZONING TABLE
BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY
BLOCK NO. 140, LOT NOS 7.01, 8, 9 AND 10
ZONING DISTRICT: GATEWAY AFFORDABLE HOUSING OVERLAY 1 (GAHO-1) DISTRICT

CODE SECTION	DESCRIPTION	REQUIRED / PERMITTED	PROPOSED	VARIANCE / DESIGN WAIVER REQUIRED
BOROUGH OF CHATHAM CODE				
USE REQUIREMENTS				
§ 165-35-C	PERMITTED PRINCIPAL USES	MIXED-USE DEVELOPMENT INCLUDING INCUSIONARY MULTIFAMILY RESIDENTIAL UNITS PROVIDED: THE MINIMUM AFFORDABLE HOUSING SET-ASIDE IS MET. ALL AFFORDABLE HOUSING UNITS PRODUCED COMPLY WITH THE BOROUGHS AFFORDABLE HOUSING ORDINANCE. USES PERMITTED TO BE MIXED WITH MULTIFAMILY RESIDENTIAL UNITS MAY INCLUDE THE FOLLOWING: ART GALLERIES, ARTISAN WORKSHOP, BREWERY, BREWPUB, BUSINESS SERVICES CHILD-CARE CENTERS, COMMUNITY CENTER, CONVENIENCE STORE FINANCIAL INSTITUTIONS INCLUDING BANKS, INDOOR COMMERCIAL RECREATIONFITNESS CLUB, LIVEWORK LOFTS, MUSEUM, OFFICE, PERSONAL SERVICES, PUBLIC OPEN SPACE, PUBLIC PURPOSE USE, RECREATIONAL INSTRUCTION, RESTAURANTS, RETAIL SERVICES, RETAIL TRADE, THEATER. INCLUSIONARY MULTIFAMILY DWELLINGS PROVIDED: THE MINIMUM AFFORDABLE HOUSING SET-ASIDE IS MET. ALL AFFORDABLE HOUSING UNITS PRODUCED COMPLY WITH THE BOROUGH'S AFFORDABLE HOUSING ORDINANCE.	INCLUSIONARY MULTIFAMILY RESIDENTIAL RETAIL	NO
§ 165-35-D	PERMITTED ACCESSORY USES	ACCESSORY USES ON THE SAME LOT WITH AND CUSTOMARILY INCIDENTAL TO ANY OF THE ABOVE PERMITTED USES, SURFACE PARKING AREA AND GARAGES, OUTDOOR DRINKING AND EATING ESTABLISHMENTS, ROOF DECK.	COMPLIES	NO
§ 165-35-E-13	AFFORDABLE HOUSING REQUIREMENTS	ALL DEVELOPMENTS WITH A RESIDENTIAL COMPONENT WILL DELIVER AN ON-SITE AFFORDABLE HOUSING SET-ASIDE OF 15% FOR RENTAL UNITS AND 20% FOR FOR-SALE UNITS. ALL AFFORDABLE UNITS CREATED SHALL FULLY COMPLY WITH THE UNIFORM HOUSING AFFORDABILITY CONTROLS, N.J.A.C. 5:80-26.1 ET SEQ. ("UHAC"), INCLUDING BUT NOT LIMITED TO THE REQUIRED BEDROOM AND INCOME DISTRIBUTION, WITH THE SOLE EXCEPTION THAT 13% OF THE AFFORDABLE UNITS WITHIN EACH BEDROOM DISTRIBUTION SHALL BE REQUIRED TO BE RESTRICTED FOR VERY-LOW-INCOME HOUSEHOLDS EARNING 30% OR LESS OF THE MEDIAN INCOME PURSUANT TO THE FAIR HOUSING ACT, N.J.S.A. 52:27D-301 ET SEQ. ("FHA"). AT LEAST 50% OF THE AFFORDABLE UNITS WITHIN EACH BEDROOM DISTRIBUTION SHALL BE AFFORDABLE TO LOW-INCOME HOUSEHOLDS, INCLUSIVE OF THE AT LEAST 13% OF UNITS AFFORDABLE TO VERY-LOW-INCOME HOUSEHOLDS.	COMPLIES	NO
BULK REGULATIONS (DEVELOPMENT STANDARDS)				
§ 165-35-E-1	MINIMUM LOT AREA	15,000 SF	127,059 SF (2.92 ACRES)	NO
§ 165-35-E-2	MAXIMUM UNIT DENSITY	35 DWELLING UNITS/ACRE (2.92 ACRES) * 35 DWELLING UNITS/ACRE) = 102 DWELLING UNITS	100 DWELLING UNITS	NO
§ 165-35-E-3	MINIMUM FRONT YARD SETBACK	10 FEET	11.25 FEET	NO
§ 165-35-E-4	MAXIMUM FRONT YARD SETBACK	20 FEET	11.25 FEET	NO
§ 165-35-E-5	MINIMUM SIDE YARD SETBACK	10 FEET	14.62 FEET	NO
§ 165-35-E-6	MINIMUM REAR YARD SETBAK	15 FEET	20.34 FEET	NO
§ 165-35-E-7	MAXIMUM HEIGHT	54 FEET	53.93 FEET	NO
§ 165-35-E-8	MAXIMUM STORIES	FOUR STORIES	FOUR STORIES	NO
§ 165-35-E-9	MAXIMUM IMPERVIOUS COVERAGE	85%	84.23%	NO
§ 165-35-E-10	MAXIMUM BUILDING COVERAGE	75%	50.56%	NO

ZONING TABLE NOTES:
1. ZONING REQUIREMENTS OBTAINED FROM § 165 OF THE BOROUGH OF CHATHAM CODE AND THE RESIDENTIAL SITE IMPROVEMENT STANDARDS (N.J.A.C. 5:21).

2. BUILDING HEIGHT CALCULATIONS (REFER TO INSET ON GRADING PLAN):
FINISHED FLOOR ELEVATION: 224.83
TOP OF ROOF ELEVATION: 224.83 + 45.33 = 270.16
MINIMUM EXISTING GROUND ELEVATION AT CORNER OF BUILDING: 209.32 (SOUTHEAST CORNER)
MAXIMUM EXISTING GROUND ELEVATION AT CORNER OF BUILDING: 223.14 (NORTHEAST CORNER)
MINIMUM VERTICAL DISTANCE FROM TOP OF ROOF TO EXISTING GROUND ELEVATION AT CORNER OF BUILDING: 270.16 - 209.32 = 60.84 FEET
MAXIMUM VERTICAL DISTANCE FROM TOP OF ROOF TO EXISTING GROUND ELEVATION AT CORNER OF BUILDING: 270.16 - 223.14 = 47.02 FEET

BUILDING HEIGHT = AVERAGE OF MAXIMUM AND MINIMUM VERTICAL DISTANCES = (60.84 + 47.02) / 2 = 53.93 FEET

3. REFER TO PLANS PREPARED BY OTHERS FOR EVALUATION OF ARCHITECTURAL, SIGNAGE, AND LANDSCAPE ZONING REQUIREMENTS.

AJDM CHATHAM, LLC - ZONING TABLE
BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY
BLOCK NO. 140, LOT NOS 7.01, 8, 9 AND 10
ZONING DISTRICT: GATEWAY AFFORDABLE HOUSING OVERLAY 1 (GAHO-1) DISTRICT

CODE SECTION	DESCRIPTION	REQUIRED / PERMITTED	PROPOSED	VARIANCE / DESIGN WAIVER REQUIRED
BOROUGH OF CHATHAM CODE				
PARKING REQUIREMENTS				
RSIS § 5:21-4.14 (gl 4. § 165-25 A.	MINIMUM OF-STREET PARKING SPACE REQUIREMENTS	RESIDENTIAL: 1-BEDROOM GARDEN APARTMENT: (20 UNITS) * (1.0 SPACES/UNIT) = 36 SPACES 2-BEDROOM GARDEN APARTMENT: (67 UNITS) * (2.0 SPACES/UNIT) = 114 SPACES 3-BEDROOM GARDEN APARTMENT: (23 UNITS) * (2.1 SPACES/UNIT) = 48 SPACES TOTAL RESIDENTIAL: 36 + 114 +48 = 198 SPACES INCLUDING PROVISIONS FOR GUEST PARKING (0.5 SPACES PER DWELLING UNIT). GUEST PARKING MUST EITHER BE PROVIDED FOR ON STREET OR IN COMMON PARKING AREAS. 100 UNITS * 0.5 SPRUNIT = 50 SPACES (INCLUDED IN THE 199 REQUIRED PARKING SPACES) RETAIL: 4 SPACES FOR EVERY 1,000 SQUARE FEET OF GFA (2,370 SF GFA) * (4 SPACES / 1,000 SF GFA) = 9 SPACES TOTAL: 198 + 9 = 207 SPACES	RESIDENTIAL: 207 PARKING SPACES IN GARAGE (ALL COMMON PARKING AREA SPACES) RETAIL: 31 PARKING SPACES IN EASTERN PARKING LOT TOTAL: 207+ 31 = 238 SPACES (DOES NOT INCLUDE ELECTRIC VEHICLE PARKING CREDITS)	NO
§ 165-82-A-3	MINIMUM PARKING SETBACK REQUIREMENTS	NO PARKING OF VEHICLES SHALL BE PERMITTED IN LANDSCAPED, LAWN OR SIDEWALK AREAS; NOR, AS TO GARDEN APARTMENT DWELLING UNITS, IN FIRE LANES, BUFFER AREAS OR WITHIN FIVE FEET FROM ANY PROPERTY LINE.	COMPLIES MINIMUM SETBACK TO PROPERTY LINE: 7.58 FEET	NO
RSIS § 5:21-4.15	MINIMUM CAR PARKING STALL DIMENSIONS	9 FEET WIDE BY 18 FEET LONG	9 FEET WIDE BY 18 FEET LONG	NO
§ 165-82-A-5	BICYCLE PARKING	ONE BICYCLE PARKING SPACE SHALL BE PROVIDED FOR EVERY 10 REQUIRED OFF-STREET PARKING SPACES BASED ON 207 REQUIRED SPACES, 21 BICYCLE PARKING SPACES REQUIRED	TO COMPLY. BIKE PARKING PROPOSED INSIDE BUILDING.	NO
§ 165-33	MINIMUM OFF-STREET LOADING REQUIREMENTS	EACH NONRESIDENTIAL ACTIVITY EXCEEDING 10,000 SF GFA SHALL PROVIDE ONE OFF-STREET LOADING AND UNLOADING SPACE WITH ADEQUATE INGRESS AND EGRESS FROM STREETS. EACH SPACE SHALL BE AT LEAST 15 FEET BY 40 FEET RETAIL SPACE IS LESS THAN 10,000 SF - NO LOADING REQUIRED	ONE LOADING ZONE 19 FEET BY 60 FEET	NO
P.L. 2021, c. 171	MINIMUM ELECTRIC VEHICLE PARKING REQUIREMENTS	RESIDENTIAL: PREPARE AS MAKE-READY PARKING SPACES AT LEAST 15 % OF THE REQUIRED OFF-STREET PARKING SPACES AND INSTALL EVSE IN AT LEAST ONE-THIRD OF THE 15% OF MAKE-READY PARKING SPACES. 0.15 * 198 = 30 REQUIREMENT: 30 MAKE-READY INCLUDING 10 INSTALL RETAIL: INSTALL AT LEAST ONE MAKE-READY PARKING SPACE IF THERE WILL BE 50 OR FEWER OFF-STREET PARKING SPACES REQUIREMENT: 1 MAKE-READY (BASED ON 9 REQUIRED SPACES)	RESIDENTIAL: 30 MAKE-READY INCLUDING 10 INSTALL RETAIL: 1 INSTALL	NO
FENCE REQUIREMENTS				
§ 165-30-E-3-G-5	MAXIMUM FENCE HEIGHT	FENCING ALONG THE PERIMETER OF REAR AND SIDE YARDS SHALL NOT EXCEED 6 FEET IN HEIGHT.	6 FEET	NO
LIGHTING REQUIREMENTS				
§165-78.C.(2).b	MAXIMUM HEIGHT OF LIGHT FIXTURES	15 FEET FOR RESIDENTIAL STRUCTURES 12 FEET FOR WALKWAYS	FREESTANDING FIXTURES: 11.5 FEET BUILDING MOUNTED LIGHT FIXTURES FOR WALKWAYS: 12 FEET BUILDING MOUNTED LIGHT FIXTURES FOR PARKING LOT: 15 FEET	NO
§165-78.D.1.C	PARKING LOT LIGHTING REQUIREMENTS	MINIMUM HORIZONTAL ILLUMINANCE: 0.2 FC AVERAGE HORIZONTAL ILLUMINANCE: 1.0 FC AVERAGE TO MINIMUM: 5:1 MAXIMUM TO MINIMUM: 20:1 MINIMUM VERTICAL ILLUMINANCE: 0:1	MINIMUM HORIZONTAL ILLUMINANCE: 0.4 FC AVERAGE HORIZONTAL ILLUMINANCE: 1.8 FC AVERAGE TO MINIMUM: 4.5:1 MAXIMUM TO MINIMUM: 15:1 MINIMUM VERTICAL ILLUMINANCE: 0:3	NO

PUBLIC UTILITIES TO BE NOTIFIED

- BELL ATLANTIC, 540 BROAD STREET, NEWARK, NJ 07102
- ONE VERIZON WAY, BASKING RIDGE, NJ 07920
- OPTIMUM, 461 ROUTE 10 EAST, LEDGEWOOD, NJ 07852
- PSE&G, MANAGER - CORPORATE PROPERTIES, 80 PARK PLAZA, T6B, NEWARK NJ 07102
- JCP&L, ATTN; CRAIG MANDEL, JCP&L REAL ESTATE, 300 MADISON AVE, P O BOX 1911, MORRISTOWN, NJ 07960-1911

AT LEAST 3 DAYS PRIOR TO ANY EXCAVATION OR CONSTRUCTION ACTIVITY CONTACT "CALL BEFORE YOU DIG" 1-(800)-272-1000

No.	Description	Date
	Revisions	

Signature 01/15/2026 Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE-39238

DRAWING INDEX

PROJECT CONTACTS:

APPLICANT:
AJDM CHATHAM, LLC
16 MICROLAB ROAD, SUITE A
LIVINGSTON, NJ 07039
(973) 992-2443

OWNER (LOTS 7.01, 8, AND 10):
AJDM CHATHAM, LLC
16 MICROLAB ROAD, SUITE A
LIVINGSTON, NJ 07039
(973) 992-2443

OWNER (LOT 9):
SFP PROPERTIES, LLC
33 RIVER ROAD
CHATHAM, NJ 07928

ATTORNEY:
INGLESINO TAYLOR
600 PARSIPPANY ROAD, SUITE 204
(973) 947-7111

CIVIL ENGINEER/LIGHTING DESIGNER:
LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, LLC.
300 KIMBALL DRIVE
PARSIPPANY, NJ 07054
(973) 560-4900

SURVEYOR:
MATRIX NEW WORLD ENGINEERINF, LAND SURVEYING AND LANDSCAPE ARCHITECTURE, P.C.
442 STATE ROUTE 35
EATONTOWN, NJ 07724
(732) 588-2999

LANDSCAPE ARCHITECT:
MELILLO BAUER CARMAN
LANDSCAPE ARCHITECTURE
200 UNION AVENUE
BRIELLE, NJ 08730
(732) 528-0664

ARCHITECT:
MINNO & WASKO ARCHITECTS AND PLANNERS
204 NORTH UNION STREET, SUITE 1
LAMBERTVILLE, NJ 08530
(609) 397-9009

LANGAN
Langan Engineering and Environmental Services, LLC.
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: COVER SHEET

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No. CS001

Project No. 101324801

Date: 1/15/2026 Time: 11:32 User: gchieff Style Table: Langan.stb Layout: CS001 Document Code: 101324801-0101-CS001-0101

GENERAL NOTES

1. THESE PLANS REPRESENT OVERALL SITEWORK IMPROVEMENTS REQUIRED FOR PROJECT CONSTRUCTION. THE WORK TO BE PERFORMED IS SHOWN ON THE DRAWINGS AND IS DESCRIBED IN THE CONTRACT SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION; AS SUCH, THESE PLANS DO NOT COMPLETELY REPRESENT ALL SPECIFIC SITE DETAILS OF INSTALLATION REQUIRED FOR SITEWORK CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL IMPROVEMENTS REQUIRED TO ACHIEVE CONSTRUCTION DEPICTED ON THESE PLANS.

2. THE CONTRACTOR SHALL ACCEPT THE SITE AS IS. THE CONTRACTOR SHALL ASSESS CONDITIONS, AND THE KIND, QUALITY AND QUANTITY OF WORK REQUIRED. THE OWNER MAKES NO GUARANTEE IN REGARD TO THE ACCURACY OF ANY AVAILABLE INFORMATION WHICH WAS OBTAINED DURING INVESTIGATIONS. THE CONTRACTOR SHALL MAKE A THOROUGH SITE INSPECTION IN ORDER TO FIELD CHECK EXISTING SITE CONDITIONS, CORRELATE CONDITIONS WITH THE DRAWINGS AND RESOLVE ANY POSSIBLE CONSTRUCTION CONFLICTS WITH THE OWNER AND ENGINEER PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL MAKE ADDITIONAL TOPOGRAPHIC SURVEYS AS DEEMED NECESSARY, PROVIDED THEY ARE COORDINATED WITH THE OWNER. ANY CONDITIONS DETERMINED BY THE CONTRACTOR THAT DIFFER FROM THE INFORMATION SHOWN ON THE DRAWINGS THAT ARE NOT BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER PRIOR TO THE START OF WORK SHALL NOT BE CONSIDERED GROUNDS FOR ADDITIONAL PAYMENT OR CHANGES TO THE CONTRACT DURATION, OR ANY OTHER CLAIMS AGAINST THE OWNER OR OWNER'S ENGINEER.

3. THE CONTRACTOR SHALL, WHEN HE/SHE DEEMS NECESSARY, PROVIDE WRITTEN REQUESTS FOR INFORMATION (RFI) TO THE OWNER AND ENGINEER PRIOR TO THE CONSTRUCTION OF ANY SPECIFIC SITEWORK ITEM. THE (RFI) SHALL BE IN A FORM ACCEPTABLE TO OWNER AND ENGINEER AND SHALL ALLOW FOR A MINIMUM OF TWO WORK DAYS OR ADDITIONAL REASONABLE TIME FOR A WRITTEN REPLY. RFI SHALL BE NUMBERED CONSECUTIVELY BY DATE SUBMITTED. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITEWORK ITEMS CONSTRUCTED DIFFERENTLY THAN INTENDED OR AS DEPICTED ON THE PLANS

4. INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, GRATE ELEVATIONS, BUILDING FINISHED FLOOR ELEVATIONS, ETC.) MAY BE FOUND IN MORE THAN ONE LOCATION ON THE DRAWINGS. CONTRACTOR SHALL SPECIFICALLY REVIEW ALL PLANS, PROFILES AND ANY INFORMATION/DATA TABLES FOR CONSISTENCY PRIOR TO CONSTRUCTION. ANY INCONSISTENCIES OR DISCREPANCIES THAT ARE FOUND SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER'S ENGINEER IN WRITING PRIOR TO CONSTRUCTION.

5. THERE ARE ADDITIONAL NOTES, SPECIFICATIONS AND REQUIREMENTS CONTAINED ON SHEETS THROUGHOUT THE PLAN SET AND AVAILABLE REFERENCES TO SPECIFICATIONS FROM APPLICABLE GOVERNING AUTHORITIES AND INDUSTRY STANDARDS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN, REVIEW AND ADHERE TO ALL APPLICABLE REQUIREMENTS.

6. CONTRACTOR IS SPECIFICALLY CAUTIONED THAT ALL CONSTRUCTION STAKEOUT FOR THIS PROJECT MUST BE COMPLETED FROM THE SITE SPECIFIC SURVEY CONTROL (HORIZONTAL AND VERTICAL) UPON WHICH THE DESIGN IS BASED. THE CONTRACTOR SHOULD NOT RELY ON OR RE-ESTABLISH SURVEY CONTROL BY GPS OR OTHER METHODS FOR USE IN CONSTRUCTION STAKEOUT OR ANY OTHER PURPOSE FOR THIS PROJECT. ANY DISCREPANCIES BETWEEN THE EXISTING HORIZONTAL OR VERTICAL DATA SHOWN ON THESE DRAWINGS AND THAT ENCOUNTERED IN THE FIELD MUST BE REPORTED TO THE DESIGN TEAM PRIOR TO CONSTRUCTION FOR RESOLUTION.

7. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL DRAINAGE AND UTILITY STRUCTURES AND MANUFACTURED PRODUCTS TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO COMMENCING WITH CONSTRUCTION.

8. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS AND DETAILS CONTIGUOUS TO THE BUILDING, INCLUDING BUILDING ENTRANCES, STAIRWAYS, UTILITY PENETRATIONS, CONCRETE DOOR PADS, BOLLARDS, ETC.

9. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS.

10. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.

11. CONTRACTOR TO CONFIRM ALL ADA WORK IS PERFORMED IN ACCORDANCE WITH THE LATEST STANDARD AND REGULATIONS PER APPLICABLE BOROUGH OF CHATHAM, MORRIS COUNTY, STATE OF NEW JERSEY AND FEDERAL CODES.

PROPOSED PARKING PARKING SUMMARY

REQUIREMENT:

RESIDENTIAL:
RESIDENTIAL SITE IMPROVEMENT STANDARDS (RSIS)
(20) 1-BR UNITS * 1.8 SPACES/UNIT = 36 SPACES
(57) 2-BR UNITS * 2 SPACES/UNIT = 114 SPACES
(23) 3-BR UNITS * 2.1 SPACES/UNIT = 48 SPACES
36 + 114 + 48 = 198 SPACES

RETAIL:
2,370 * 4 SPACES/1000 SF GFA = 9 SPACES

TOTAL: 198 + 9 = 207 SPACES

PROPOSED:

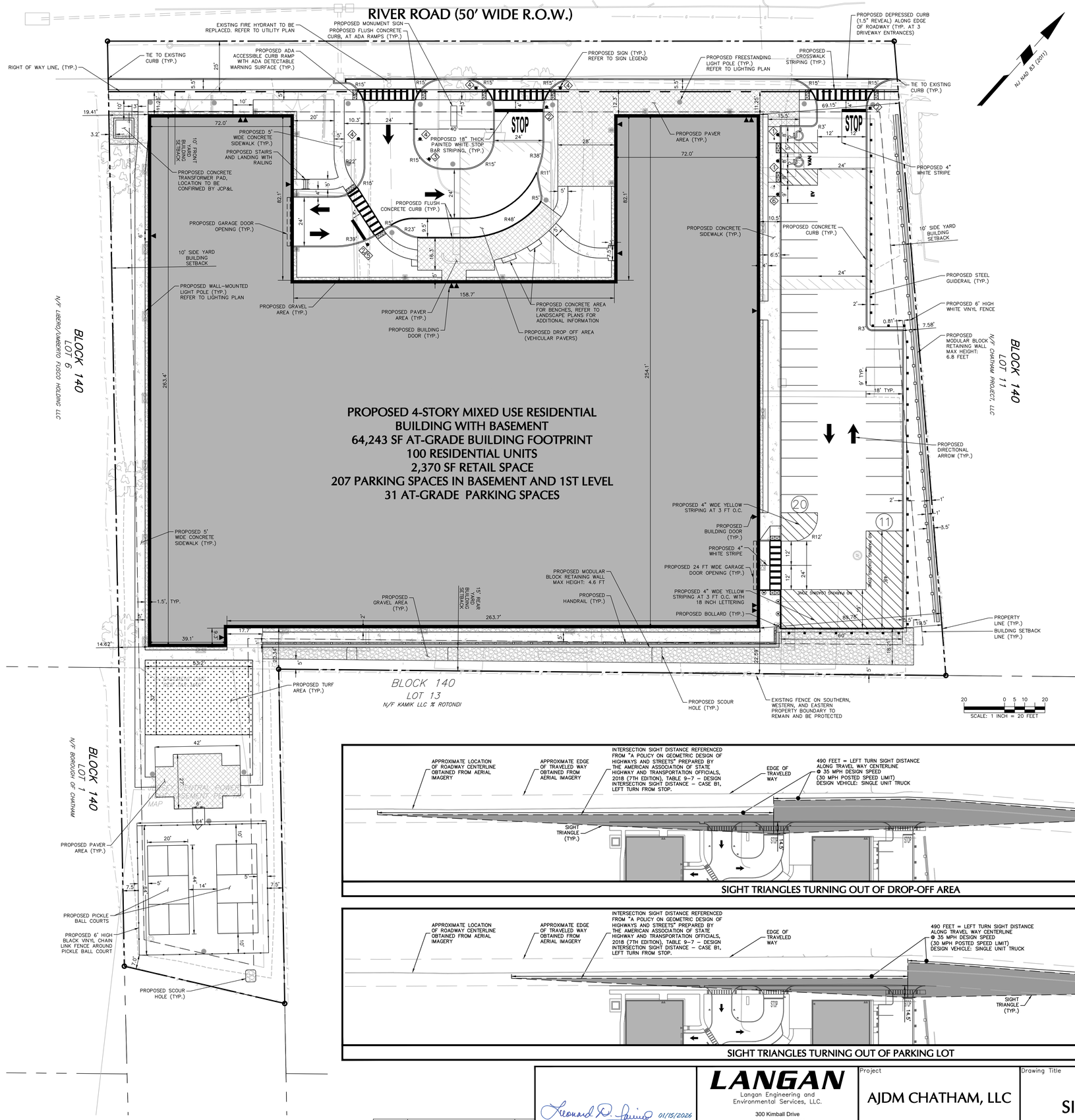
RESIDENTIAL:
207 SPACES PROPOSED IN BASEMENT AND 1ST LEVEL GARAGES

RETAIL:
31 SPACES PROPOSED IN EASTERN PARKING LOT

TOTAL: 207 + 31 = 238 SPACES

NOTES:

1. **BASED ON FIELD INSPECTION CONDUCTED BY A LANGAN WETLAND SCIENTIST ON 15 JANUARY 2026, NO WETLANDS OR STREAMS WERE IDENTIFIED ON THE SUBJECT PROPERTY.**
2. **ALL EXISTING SITE IMPROVEMENTS WITHIN THE PROPOSED LIMIT OF DISTURBANCE SHALL BE REMOVED UNLESS OTHERWISE NOTED.**



SIGN LEGEND

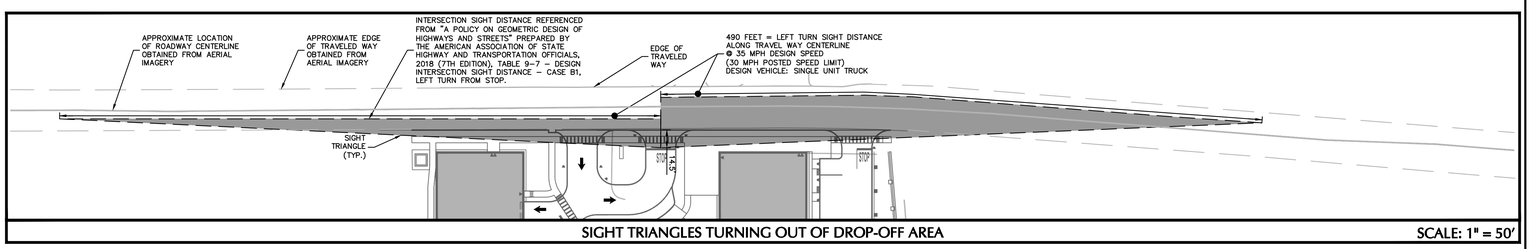
RESERVED PARKING R7-8 12"X18"	STOP R1-1 30"X30" 2	ONE WAY R6-1R 36"X12" 3	
VAN ACCESSIBLE R7-8P 18"X9"			
PENALTY $250-1ST OFFENSE SUBSEQUENT OFFENSES $500 NO ALLOW OF PLEA TO COMMUNITY SERVICE TOW-AWAY ZONE R7-8P 10"X12" 1	DO NOT ENTER R5-1 30"X30" 4	ONLY R3-5R 24"X30" 5	CHARGING STATION ELECTRIC CAR PARKING ONLY CUSTOM 12"X18" 6

NOTES:

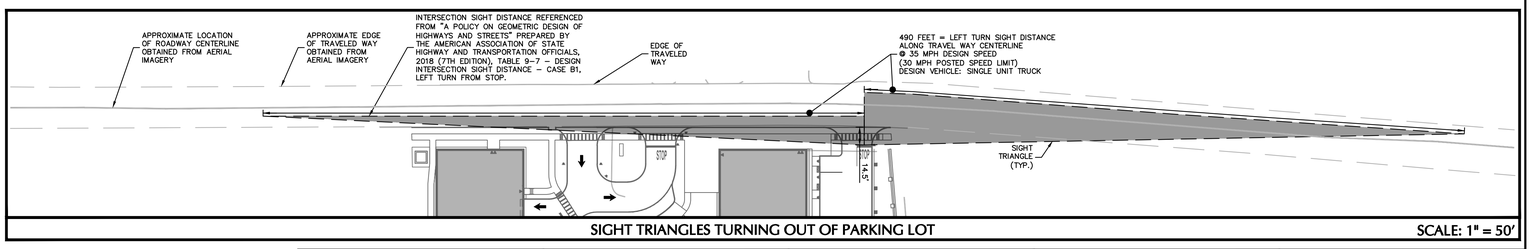
1. UNLESS OTHERWISE NOTED, ALL PROPOSED SIGNAGE TO CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) FOR SIZE, LEGEND, AND PLACEMENT. ACCESSIBLE PARKING SIGNS SHALL CONFORM TO ALL ADA AND LOCAL REQUIREMENTS.
2. 'VAN ACCESSIBLE' SIGNAGE TO BE PLACED AT PARKING SPACES DESIGNATED AS 'VAN ACCESSIBLE' SPACES.

LEGEND

- PROPERTY LINE
- PROPOSED BUILDING
- PROPOSED CONCRETE CURB
- PROPOSED FLUSH OR DEPRESSED CONCRETE CURB REFER TO PLAN FOR LOCATIONS
- PROPOSED CONCRETE SIDEWALK
- PROPOSED GRAVEL AREA
- PROPOSED SIGN (SEE SIGN LEGEND)
- PROPOSED BUILDING DOOR
- (16) PROPOSED PARKING COUNT
- PROPOSED TRAFFIC STRIPING



SIGHT TRIANGLES TURNING OUT OF DROP-OFF AREA



SIGHT TRIANGLES TURNING OUT OF PARKING LOT

NOTES:

1. EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A PLAN TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 140 LOTS 7.01, 8, 9, AND 10, BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD, DATED 15 MARCH 2017, LAST REVISED 5 NOVEMBER 2025.
2. PROPOSED BUILDING FOOTPRINT OBTAINED FROM A CAD FILE TITLED "2026-BNE_Chatham-Submission_Package" PROVIDED BY MINNO WASKO ON 12 JANUARY 2026.
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4. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

Date	Description	No.
Revisions		

Leonard D. Savino 01/15/2026
Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE-39238

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NJ Certificate of Authorization No. 24GA27996400

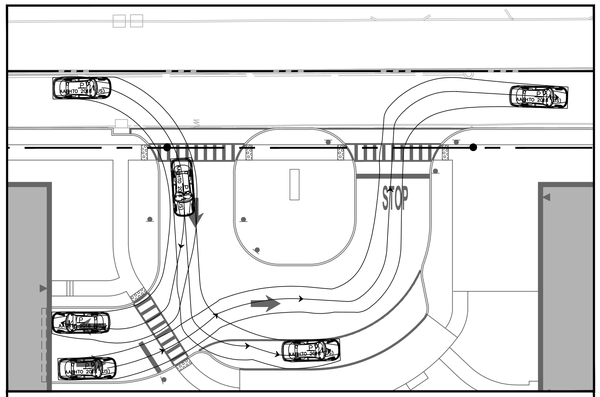
Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: SITE PLAN

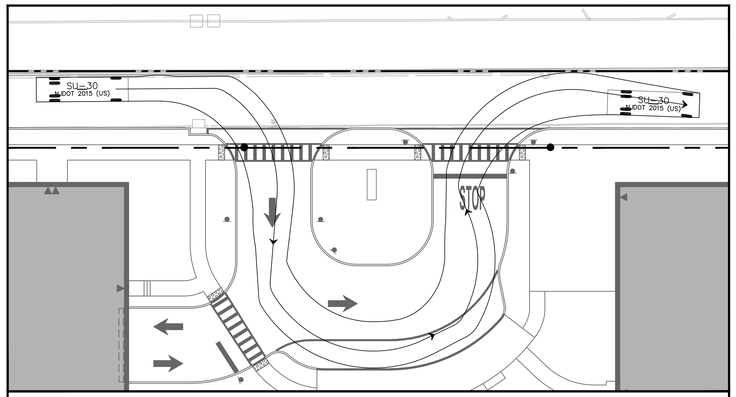
Project No.	Drawing No.
101324801	CS101
Date: 1/15/2026	
Drawn By: GC	
Checked By: JD	

Project No. 101324801

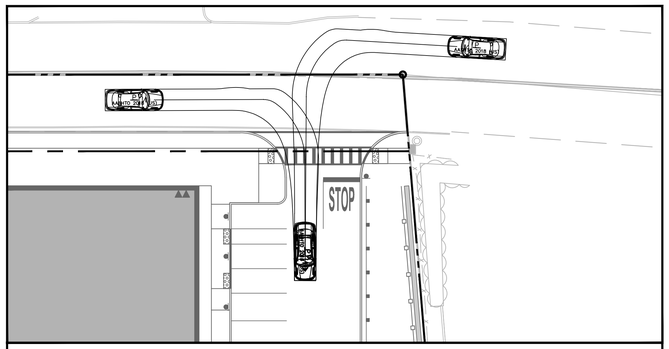
Date: 1/15/2026 Time: 12:22 User: gchieff Style Table: Langan.stb Layout: CS101 Document Code: 101324801-0101-CS101-0101



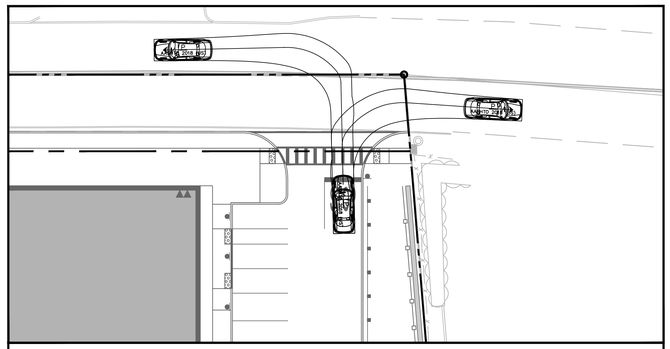
PASSENGER VEHICLE DROP OFF/GARAGE ENTRANCE CIRCULATION



SU-30 CIRCULATING FRONT DROP OFF AREA



PASSENGER VEHICLE ENTERING EASTERN PARKING LOT



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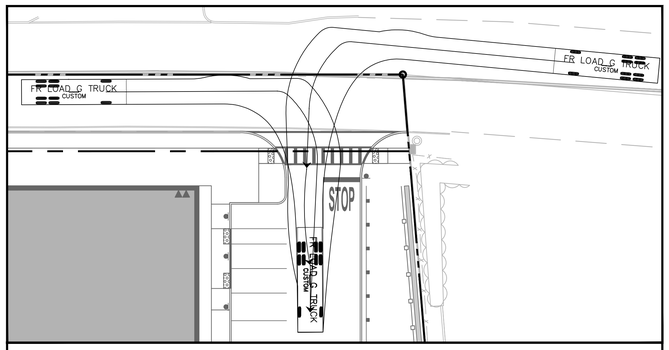
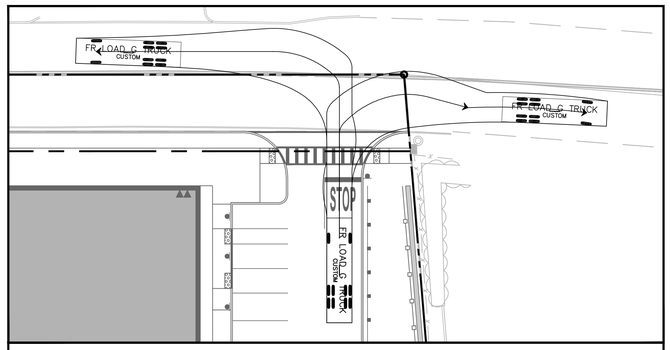


GARBAGE TRUCK ENTERING EASTERN PARKING LOT



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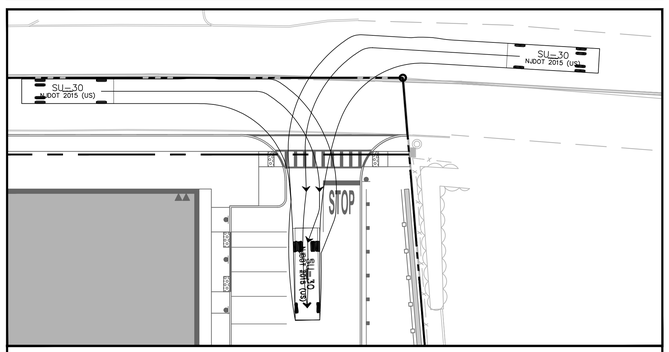

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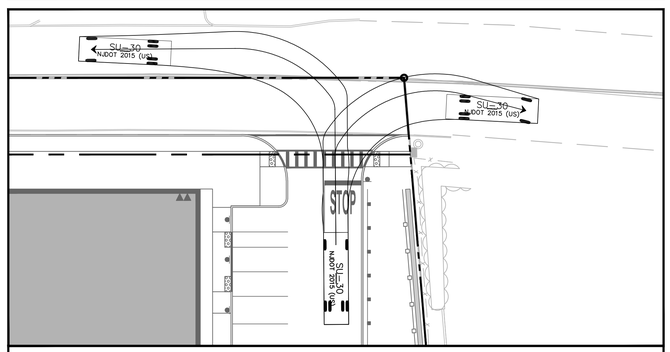

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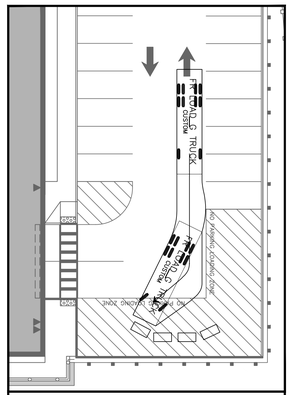
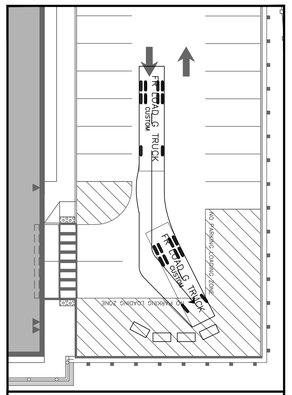
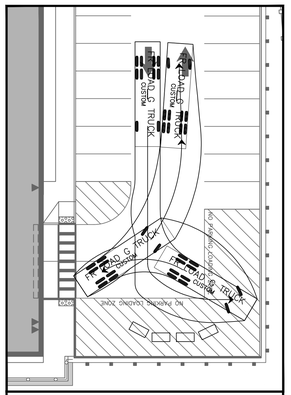


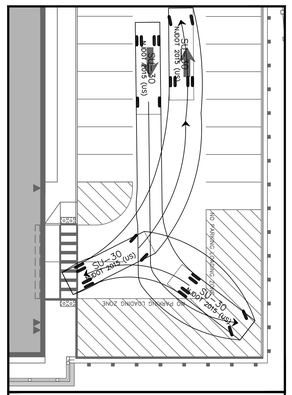
GARBAGE TRUCK DUMPSTER PICK UP MANEUVER 1



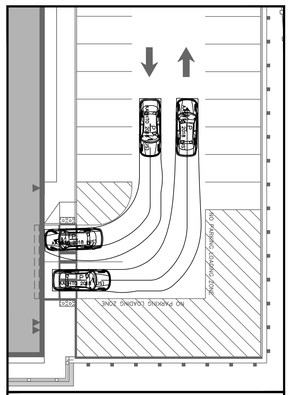
GARBAGE TRUCK DUMPSTER PICK UP MANEUVER 2



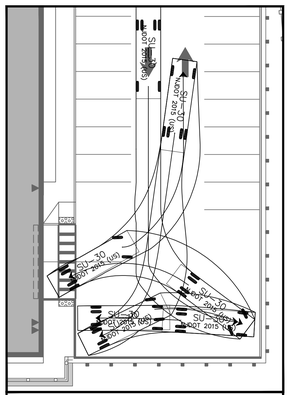
GARBAGE TRUCK K TURN



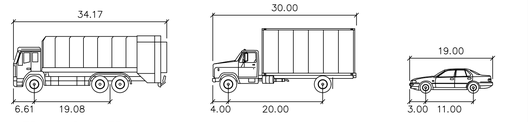
SU-30 K TURN



PASSENGER VEHICLE ENTERING/EXITING SOUTH EAST GARAGE



SU-30 REVERSE INTO LOADING ZONE



20 0 5 10 20
SCALE IN FEET

NOTES:

1. EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A PLAN TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 140 LOTS 7.01, 8, 9, AND 10, BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD, DATED 15 MARCH 2017, LAST REVISED 5 NOVEMBER 2025.
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Revisions		

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Signature Date
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T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project
AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
TRUCK CIRCULATION PLAN

Project No.	Drawing No.
101324801	CS102
Date: 1/15/2026	
Drawn By: GC	
Checked By: JD	

GRADING AND DRAINAGE NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE SHEET CE101 FOR EROSION CONTROL MEASURES.
2. SET PIPES AND STRUCTURES TO ELEVATIONS AND GRADES SHOWN ON THE DRAWINGS.
3. MINIMUM DEPTH OF COVER FOR ALL STORM SEWER PIPES IS 2 FEET OR AS SPECIFIED BY THE MANUFACTURER.
4. ALL CONCRETE DRAINAGE STRUCTURES SHALL BE PRECAST IN ACCORDANCE WITH NJDOT SPECIFICATIONS, UNLESS OTHERWISE NOTED.
5. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
6. ALL CONCRETE DRAINAGE STRUCTURES SHALL HAVE NO SUMP AND SHALL BE PLACED ON 6 INCHES OF COURSE AGGREGATE.
7. CATCH BASIN AND MANHOLE STRUCTURES ARE NOT SHOWN TO SCALE.
8. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS AND SIZES OF ALL ROOF LEADERS AND COORDINATE WITH PROPOSED STORMWATER SYSTEM PRIOR TO INSTALLATION.
9. ALL ROOF DRAINS TO BUILDING SHALL BE BROUGHT TO FIVE FEET OUTSIDE THE BUILDING LIMITS BY THE SITE CONTRACTOR AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT THE END. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF PIPING WITHIN FIVE FEET OF BUILDING AND CONNECTION OF BUILDING LATERALS TO SITE DRAINAGE SYSTEM.
12. CLEANOUTS SHALL BE PROVIDED FLUSH AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
13. CONTRACTOR SHALL PROVIDE 24"x24"x6" THICK CONCRETE APRON AT ALL CLEANOUTS OUTSIDE OF BUILDING UNLESS MUNICIPAL REQUIREMENTS DICTATE OTHERWISE.
14. THE CONTRACTOR SHALL FLUSH AND CLEAN ALL EXISTING ON-SITE STORM PIPING AND STRUCTURES THAT ARE TO REMAIN WITHIN THE LIMITS OF WORK OR AS INDICATED ON THE PLANS.
15. COMPACTION CRITERIA FOR FILL PLACED IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA IS GIVEN ELSEWHERE (INCLUDING GEOTECHNICAL REPORT):

FILL AREA	% OF MAXIMUM MODIFIED PROCTOR DRY DENSITY
BUILDING FOOTINGS	95%
BUILDING FOOTPRINT, PAVEMENT, SIDEWALKS, AND ROADWAYS	95%
LANDSCAPED AREAS	92%
TRENCH BACKFILL	95%

16. PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
17. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO BE UNSATISFACTORY BY OWNER'S ENGINEER AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THAN BEST SUBGRADE MATERIAL ON SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS-SECTION AND SHALL NOT RUT OR WEAVE WHEN LOADED WITH A FULL DUMP TRUCK.
18. STORMWATER PIPES CONFLICTING WITH THE PROPOSED SITE IMPROVEMENTS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
19. ALL PROPOSED STORM DRAINAGE PIPING SHALL BE TEMPORARILY PROTECTED WITH REQUIRED MINIMUM COVER FOR CONSTRUCTION.
20. ALL PROPOSED STORM DRAINAGE TO BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
21. PIPE LENGTHS SHOWN REPRESENT PLANAR LENGTHS MEASURED FROM CENTER-OF-STRUCTURE TO CENTER-OF-STRUCTURE.
22. PLAN AND PROFILE STRUCTURES ARE SYMBOLS THAT ARE PROVIDED FOR REFERENCE, AND ARE NOT TO BE USED AS THE BASIS FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL DRAINAGE, SANITARY, AND UTILITY STRUCTURES TO ENGINEER.
23. HDPE PIPING SHALL CONFORM TO AASHTO M 294 AND IS TYPE S (SMOOTH INTERIOR WITH ANNULAR CORRUGATIONS) WITH GASKETED WATER-TIGHT JOINTS.
24. RCP PIPING SHALL CONFORM TO A.S.T.M SPECIFICATIONS C76-81 CLASS III.
25. ABBREVIATIONS:
BC = BOTTOM OF CURB
BW = LAWN/SIDEWALK ELEVATION AT BOTTOM OF WALL
CB = CATCH BASIN
FES = FLARED END SECTION
GR = GRATE ELEVATION
HP = HIGH POINT
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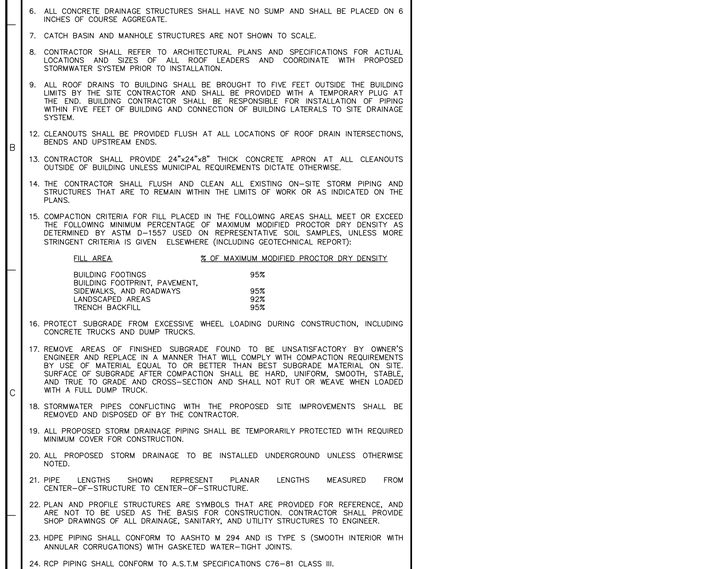
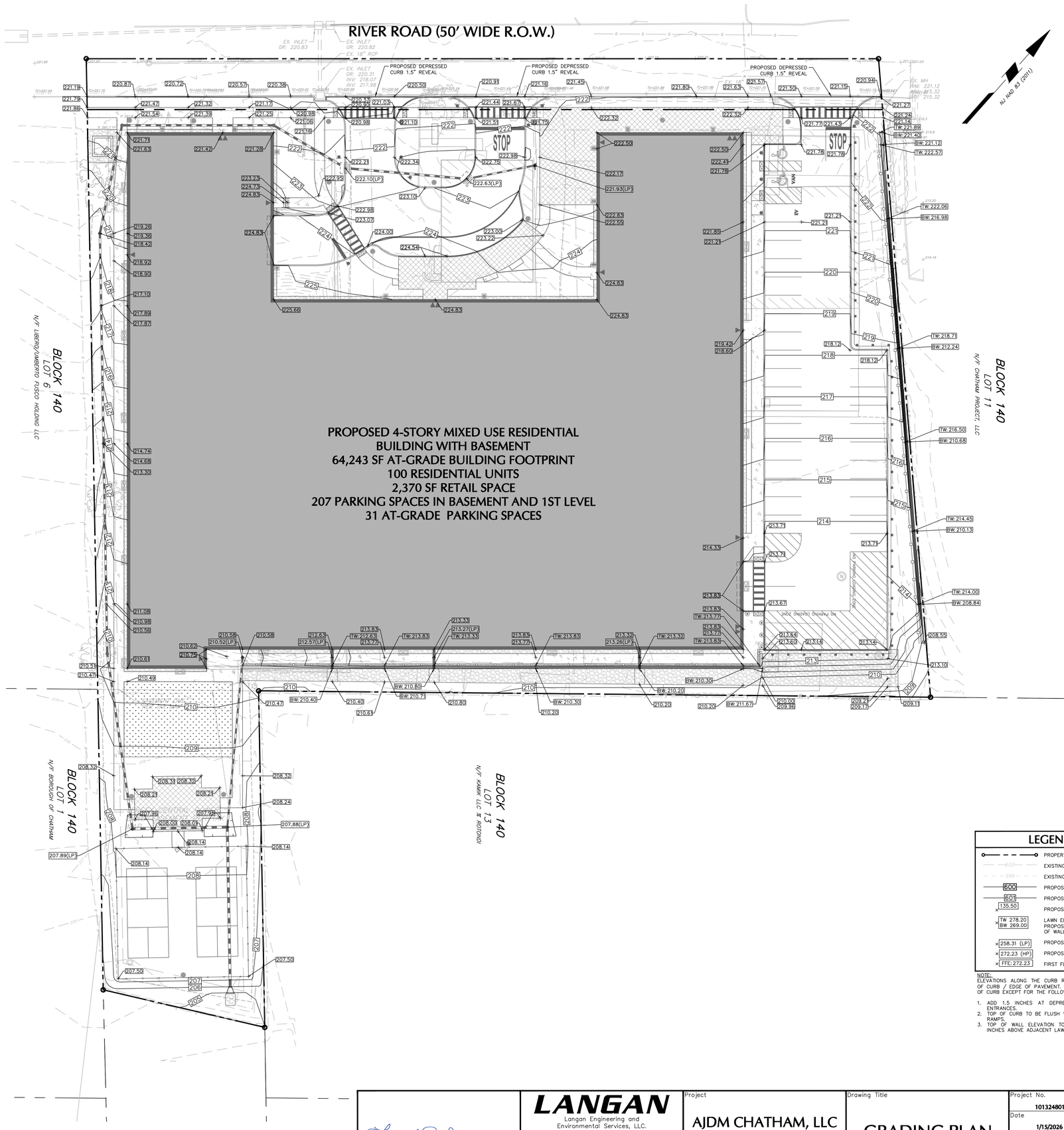
ID = INLINE DRAIN
INV = INVERT
LF = LINEAR FEET
MH = MANHOLE
PVC = POLYVINYL CHLORIDE
RCP = REINFORCED CONCRETE PIPE
RIM = RIM ELEVATION
RL = ROOF LEADER
TC = TOP OF CURB
TW = LAWN ELEVATION AT TOP OF WALL
YD = YARD DRAIN



NOTES:

1. EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A PLAN TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 140 LOTS 7.01, 8, 9, AND 10, BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD, DATED 15 MARCH 2017, LAST REVISED 5 NOVEMBER 2025.
2. PROPOSED BUILDING FOOTPRINT OBTAINED FROM A CAD FILE TITLED "2026-BNE_Chatham-Submission_Package" PROVIDED BY MINNO WASKO ON 12 JANUARY 2026.
3. THE MERIDIAN OF THE SURVEY IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 83 (2011).
4. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).



LEGEND

	PROPERTY LINE
600	EXISTING MAJOR CONTOUR
599	EXISTING MINOR CONTOUR
600	PROPOSED MAJOR CONTOUR
601	PROPOSED MINOR CONTOUR
135.50	PROPOSED SPOT ELEVATION
TW 278.20 BW 269.00	LAWN ELEVATION AT PROPOSED TOP/BOTTOM OF WALL
258.31 (LP)	PROPOSED LOW POINT
272.23 (HP)	PROPOSED HIGH POINT
FFE: 272.23	FIRST FLOOR ELEVATION

NOTE:
ELEVATIONS ALONG THE CURB REFERENCE THE BOTTOM OF CURB / EDGE OF PAVEMENT. ADD 6 INCHES FOR TOP OF CURB EXCEPT FOR THE FOLLOWING:

1. ADD 1.5 INCHES AT DEPRESSED CURB DRIVEWAY ENTRANCES.
2. TOP OF CURB TO BE FLUSH WITH PAVEMENT AT ADA RAMPS.
3. TOP OF WALL ELEVATION TO BE A MINIMUM OF 4 INCHES ABOVE ADJACENT LAWN ELEVATION.

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

Date	Description	No.
Revisions		

Leonard D. Savino 01/15/2026
Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE-39238

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NJ Certificate of Authorization No. 24GA27996400

Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: GRADING PLAN

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD
Drawing No. CG101

Project No. 101324801

GRADING AND DRAINAGE NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE SHEET CE101 FOR EROSION CONTROL MEASURES.
2. SET PIPES AND STRUCTURES TO ELEVATIONS AND GRADES SHOWN ON THE DRAWINGS.
3. MINIMUM DEPTH OF COVER FOR ALL STORM SEWER PIPES IS 2 FEET OR AS SPECIFIED BY THE MANUFACTURER.
4. ALL CONCRETE DRAINAGE STRUCTURES SHALL BE PRECAST IN ACCORDANCE WITH NJDOT SPECIFICATIONS, UNLESS OTHERWISE NOTED.
5. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
6. ALL CONCRETE DRAINAGE STRUCTURES SHALL HAVE NO SUMP AND SHALL BE PLACED ON 6 INCHES OF COURSE AGGREGATE.
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8. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS AND SIZES OF ALL ROOF LEADERS AND COORDINATE WITH PROPOSED STORMWATER SYSTEM PRIOR TO INSTALLATION.
9. ALL ROOF DRAINS TO BUILDING SHALL BE BROUGHT TO FIVE FEET OUTSIDE THE BUILDING LIMITS BY THE SITE CONTRACTOR AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT THE END. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF PIPING WITHIN FIVE FEET OF BUILDING AND CONNECTION OF BUILDING LATERALS TO SITE DRAINAGE SYSTEM.
12. CLEANOUTS SHALL BE PROVIDED FLUSH AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
13. CONTRACTOR SHALL PROVIDE 24"x24"x8" THICK CONCRETE APRON AT ALL CLEANOUTS OUTSIDE OF BUILDING UNLESS MUNICIPAL REQUIREMENTS DICTATE OTHERWISE.
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15. COMPACTION CRITERIA FOR FILL PLACED IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA IS GIVEN ELSEWHERE (INCLUDING GEOTECHNICAL REPORT):

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16. PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
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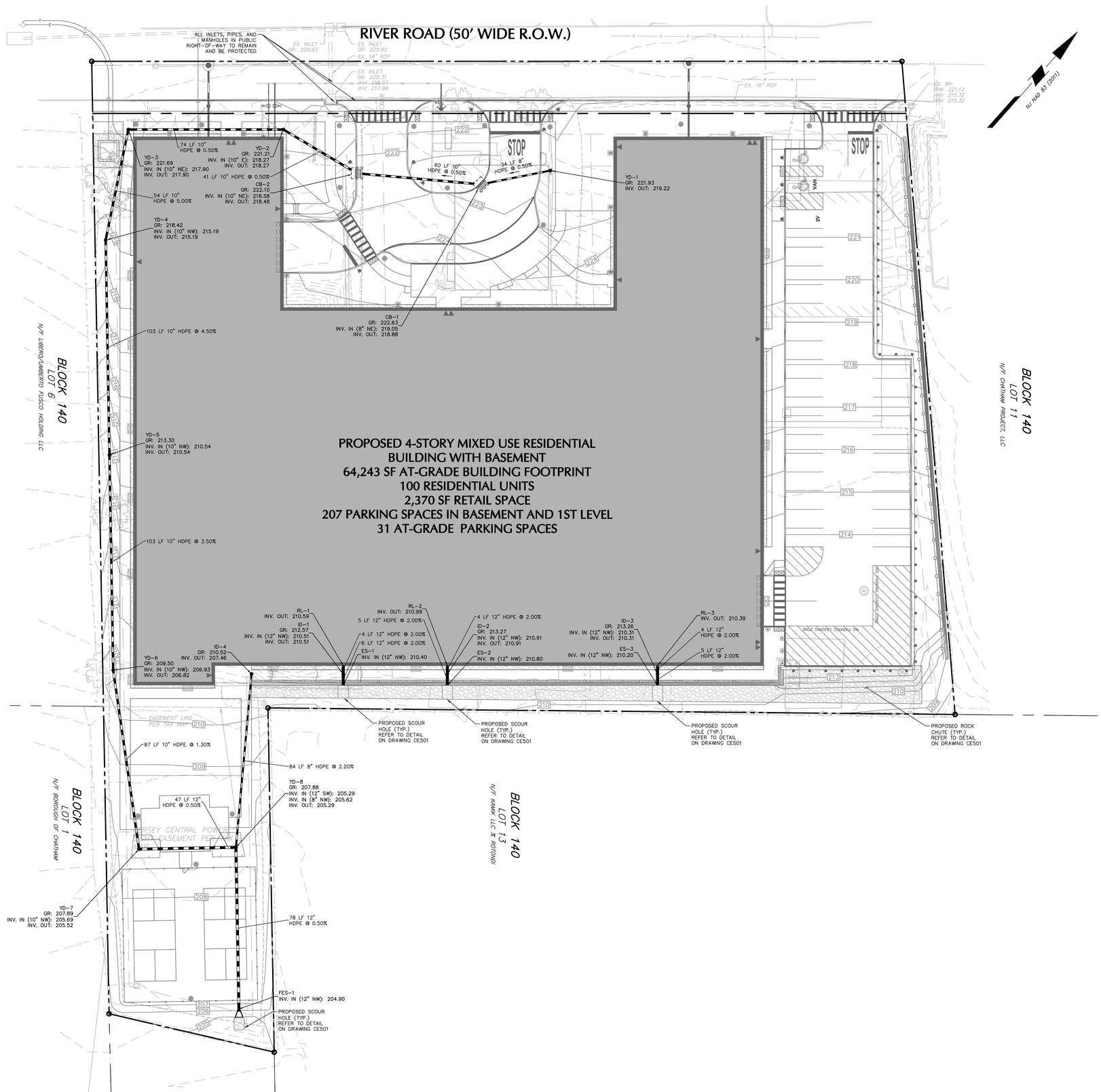

DRAINAGE STRUCTURE SCHEDULE

BNE Chatham 2	
Structure ID	**Structure Type**
CB-1	NJDOT TYPE B CATCH BASIN
CB-2	NJDOT TYPE B CATCH BASIN
ES-1	12" HDPE END SECTION THRU RETAINING WALL
ES-2	12" HDPE END SECTION THRU RETAINING WALL
ES-3	12" HDPE END SECTION THRU RETAINING WALL
YD-1	8" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-2	12" NYLOPLAST DRAIN WITH SOLID COVER
YD-3	12" NYLOPLAST DRAIN WITH SOLID COVER
YD-4	12" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-5	12" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-6	12" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-7	15" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-8	15" NYLOPLAST DRAIN WITH STANDARD GRATE
ID-1	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
ID-2	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
ID-3	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
ID-4	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
FES-1	12" HDPE FLARED END SECTION

Note:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION.

LEGEND

- PROPERTY LINE
- 600 EXISTING MAJOR CONTOUR
- 599 EXISTING MINOR CONTOUR
- 600 PROPOSED MAJOR CONTOUR
- 601 PROPOSED MINOR CONTOUR
- PROPOSED DRAINAGE PIPE
- PROPOSED CATCH BASIN
- PROPOSED DRAINAGE MANHOLE
- PROPOSED FLARED END SECTION

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

NOTES:
1. EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A PLAN TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 140 LOTS 7.01, 8, 9, AND 10, BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD, DATED 15 MARCH 2017, LAST REVISED 5 NOVEMBER 2025.
2. PROPOSED BUILDING FOOTPRINT OBTAINED FROM A CAD FILE TITLED "2026-BNE_Chatham-Submission_Package" PROVIDED BY MINNO WASKO ON 12 JANUARY 2026.
3. THE MERIDIAN OF THE SURVEY IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 83 (2011).
4. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

Date	Description	No.
Revisions		

Leonard D. Savino 01/15/2026
Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE-39238

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Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: DRAINAGE PLAN

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No. CG102

UTILITY NOTES

GENERAL

1. SEE ARCHITECTURAL & MEP DRAWINGS FOR SERVICE LATERAL SIZING AND CONNECTION LOCATIONS.
2. ALL SITE UTILITY CONSTRUCTION SHALL BE COORDINATED WITH STORMWATER AND ROOF LEADER DRAINAGE CONSTRUCTION (REFER TO DRAWINGS CG102). RESOLUTION OF ANY POTENTIAL UTILITY CONFLICTS TO BE DETERMINED IN THE FIELD.
3. ALL UTILITY CONSTRUCTION TO BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES AND SHALL CONFORM WITH THEIR REQUIREMENTS.
4. CONCRETE ENCASEMENT WILL BE REQUIRED AT UTILITY CROSSINGS WHERE VERTICAL AND/OR HORIZONTAL SEPARATION DOES NOT MEET APPLICABLE STANDARDS.
5. IT IS SPECIFICALLY NOTED THAT INFORMATION RELATED TO ELEVATIONS AND PROPOSED UTILITIES (SUCH AS ROADWAY GRADES, INVERT ELEVATIONS, RIM ELEVATIONS, GRATE ELEVATIONS, BUILDING FINISHED FLOOR ELEVATION, ETC.) MAY BE FOUND IN MORE THAN ONE LOCATION ON THE DRAWINGS. CONTRACTOR SHALL SPECIFICALLY REVIEW ALL PLANS, PROFILES, AND ANY INFORMATION/DATA TABLES FOR CONSISTENCY PRIOR TO CONSTRUCTION. ANY INCONSISTENCIES OR DISCREPANCIES THAT ARE FOUND SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE OWNER'S ENGINEER IN WRITING REQUESTING CLARIFICATION PRIOR TO CONSTRUCTION.
6. SITE DISTURBANCE SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED AND ALL GOVERNING AGENCIES HAVE BEEN NOTIFIED BY THE CONTRACTOR.
7. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL NEW JERSEY ONE-CALL AND THE APPROPRIATE UTILITY COMPANIES TO REQUEST EXACT FIELD-LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS IN A MANNER WHICH WILL NOT NEGATIVELY AFFECT ANY EXISTING USERS OF THESE UTILITIES.
8. THE CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS, AND INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
9. CONTRACTOR SHALL REFER TO ARCHITECTURAL & MEP PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRY POINTS, INCLUDING SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ROOF LEADERS, ELECTRICAL, TELEPHONE, AND GAS SERVICE. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND ASSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE REGULATORY AGENCY AS TO LOCATION AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
10. ALL REQUIRED UTILITIES SERVING THE BUILDINGS SHALL BE COORDINATED AND CONSTRUCTED TO WITHIN FIVE FEET OF EACH BUILDING UTILITY ENTRANCE AND PLUGGED AND MARKED UNLESS OTHERWISE NOTED. ANY NECESSARY EXTENSIONS, RELOCATIONS, OR CORRECTIONS WITHIN FIVE FEET OF THE BUILDING NECESSARY TO COMPLETE CONNECTION OF UTILITIES TO THE BUILDINGS SHALL BE MADE BY THE BUILDING CONTRACTOR. THE BUILDING CONTRACTOR SHALL MAKE THE FINAL CONNECTION BETWEEN THE BUILDING SYSTEMS AND THE SITE LATERALS.
11. THE CONTRACTOR MUST NOTIFY THE BOROUGH OF CHATHAM A MINIMUM OF 72 HOURS PRIOR TO CONSTRUCTION, UNLESS FURTHER ADVANCE NOTICE IS REQUIRED BY THE BOROUGH.
12. UNLESS OTHERWISE NOTED, ALL PROPOSED UTILITIES SHALL BE UNDERGROUND.
13. ALL ABANDONED UTILITY LINES AND STRUCTURES SHALL BE COMPLETELY REMOVED AND CAPPED/PLUGGED AT THE MAIN IN ACCORDANCE WITH THE UTILITY COMPANY OR LOCAL AUTHORITY REQUIREMENTS.
14. TRENCH DEPTH REQUIREMENTS MEASURED FROM FINISHED GRADE OR PAVED SURFACE SHALL MEET THE FOLLOWING REQUIREMENTS WHEN NOT SPECIFIED BY GOVERNING CODES, ORDINANCES, OR AUTHORITIES.
    A. WATER MAINS: MINIMUM 4-FT OF COVER SHALL BE PROVIDED OVER THE PROPOSED WATER MAINS.
    B. SANITARY SEWER: DEPTHS, ELEVATIONS, AND GRADES AS INDICATED ON DRAWINGS.
    C. ELECTRICAL CONDUITS: 24 INCHES MINIMUM TO TOP OF CONDUIT OR AS SPECIFIED BY THE UTILITY COMPANY REQUIREMENTS.
    D. TV CONDUITS: 18 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY THE UTILITY COMPANY.
    E. TELEPHONE CONDUITS: 18 INCHES MINIMUM TO TOP OF CONDUIT OR AS REQUIRED BY THE UTILITY COMPANY.
    F. GAS MAINS AND SERVICE: 36 INCHES MINIMUM TO TOP OF PIPE OR AS REQUIRED BY THE UTILITY COMPANY.

WATER SUPPLY NOTES:

1. ALL WATER CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE LOCAL GOVERNING AUTHORITY REQUIREMENTS.
2. ALL EXISTING WATER LATERALS WITHIN THE SITE FROM FORMER BUILDINGS SHALL BE TERMINATED AT THE MAIN AND CURB SHUT-OFFS SHALL BE REMOVED. EXISTING WATER SERVICE LINES SHALL BE PHYSICALLY REMOVED UNLESS NOTED OTHERWISE. CONTRACTOR SHALL NOTIFY OWNER'S ENGINEER PRIOR TO REMOVAL OF ANY WATER LINE.
3. THE CONTRACTOR MUST VERIFY THE LOCATION, SIZE, AND SERVICEABILITY OF THE EXISTING WATER MAINS PRIOR TO BEGINNING ANY SITE OR BUILDING CONSTRUCTION.
4. ALL WATER MAINS SHALL BE CLASS 52, CEMENT-LINED DUCTILE IRON PIPE WITH RUBBER RING JOINT, BELL AND SPIGOT TYPE.
5. ALL FITTINGS UP TO AND INCLUDING 12-INCH DIAMETER SHALL BE RATED FOR 250 PSI OR GREATER AND ALL FITTINGS OVER 16-INCH DIAMETER SHALL BE RATED FOR 150 PSI.
6. THE MINIMUM SEPARATION BETWEEN THE CLOSEST TWO POINTS OF THE WATER AND SEWER MAIN IS TEN FEET (10') HORIZONTAL OR EIGHTEEN INCHES (18") VERTICAL. CONCRETE PIPE ENCASEMENTS WILL BE REQUIRED WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED. LATERAL SEPARATION SHALL BE AS REQUIRED BY LOCAL CODE.
7. THRUST BLOCKS SHALL BE PROVIDED AT ALL BENDS, TEES, ELBOWS, PLUGS, AND FIRE HYDRANTS.
8. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE AND SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
9. ALL GATE VALVES SHALL OPEN BY TURNING IN A COUNTER-CLOCKWISE (LEFT) DIRECTION AND SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
10. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
11. BACKFLOW PREVENTION DEVICES FOR DOMESTIC AND FIRE SERVICE CONNECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL AUTHORITY.
12. ALL NEW WATER LINES SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C600, OR LOCAL REQUIREMENTS, WHICHEVER IS MORE RESTRICTIVE.
13. ALL NEW WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651, OR LOCAL REQUIREMENTS, WHICHEVER IS MORE RESTRICTIVE.
14. CONTRACTOR SHALL NOTIFY THE BOROUGH OF CHATHAM AT LEAST 72 HOURS PRIOR TO WET TAP INSTALLATION.

SANITARY SEWER NOTES:

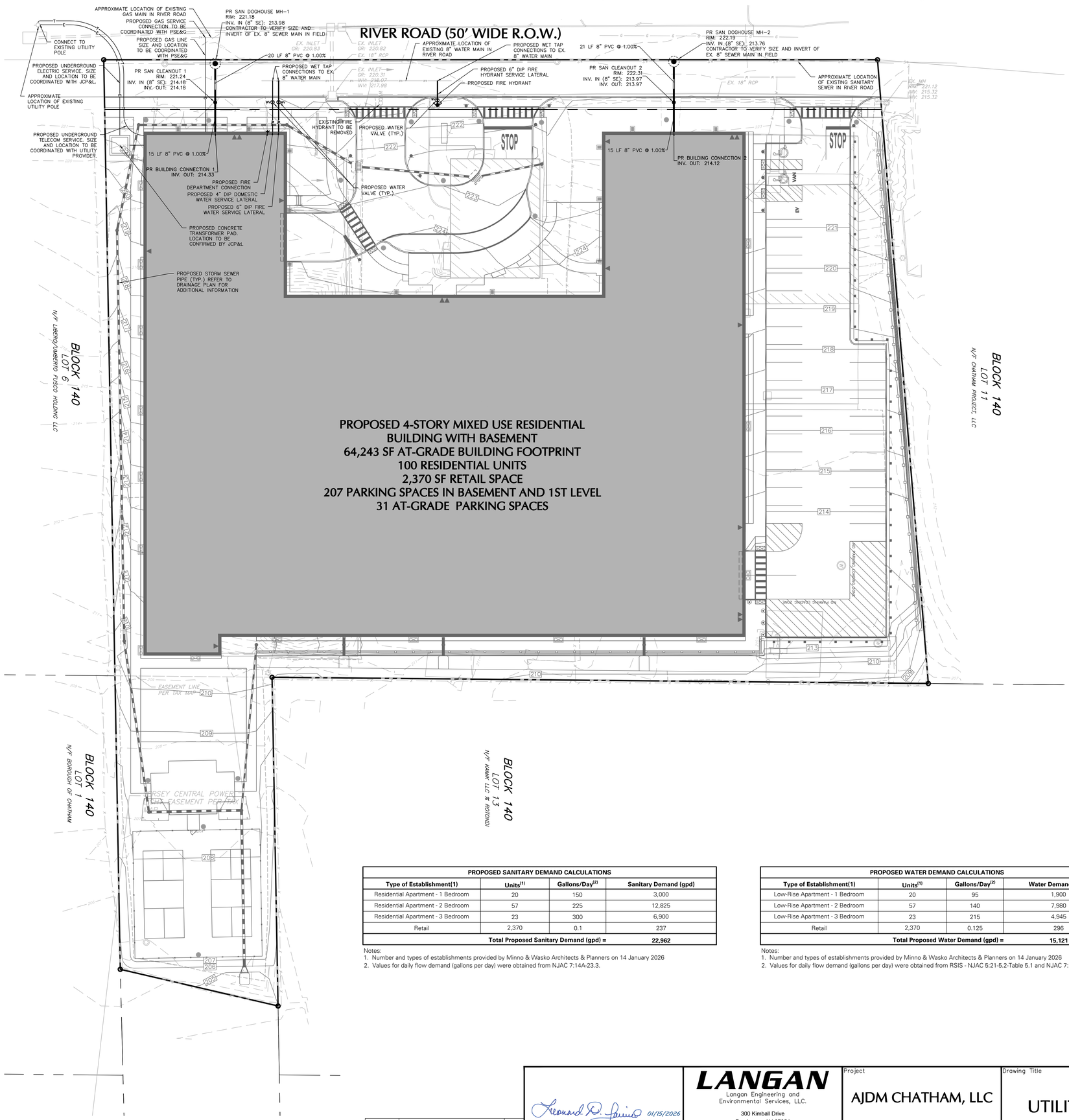
1. ALL SEWER CONSTRUCTION SHALL BE COMPLETED IN ACCORDANCE WITH THE LOCAL AUTHORITY.
2. WITH THE EXCEPTION OF THE TIE-IN SEWER, EXISTING ON-SITE SANITARY SEWER LINES SERVICING THE SITE SHALL BE PHYSICALLY REMOVED UNLESS NOTED OTHERWISE. CONTRACTOR TO NOTIFY OWNER'S ENGINEER PRIOR TO REMOVAL OF ANY SEWER PIPE.
3. THE CONTRACTOR MUST VERIFY THE LOCATION, SIZE, AND SERVICEABILITY OF THE EXISTING SANITARY SEWER MAINS PRIOR TO BEGINNING ANY SITE OR BUILDING CONSTRUCTION.
4. THE SEWER CONTRACTOR SHALL CONSTRUCT THE SANITARY SEWER LINES TO WITHIN 5 FEET OF THE PROPOSED BUILDING LIMITS WHERE THE LINE SHALL BE PLUGGED AND MARKED.
5. ALL MATERIALS USED AND ALL CONSTRUCTION METHODS EMPLOYED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR THE GOVERNING LOCAL MUNICIPAL UTILITY AUTHORITY.
6. MATERIAL OF GRAVITY SANITARY PIPES SHALL BE SDR 35 PVC. ALL CONSTRUCTION METHODS EMPLOYED SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR THE GOVERNING LOCAL MUNICIPAL UTILITY AUTHORITY.
7. WHERE LESS THAN 18" OF VERTICAL AND 10' OF HORIZONTAL CLEARANCE IS PROVIDED BETWEEN THE SANITARY SEWER AND OTHER UTILITIES, THE SEWER SHALL BE ENCASED IN 6 INCHES OF 4,500 PSI CONCRETE ON ALL FOUR SIDES AND SHALL EXTEND 10 FEET BEYOND CROSSING IN BOTH DIRECTIONS. DUCTILE IRON PIPE MAY BE UTILIZED IN PLACE OF CONCRETE ENCASEMENT PER NJAC 7:14A 23.6.b.4.
8. WHEN SANITARY LATERALS TIE DIRECTLY INTO MANHOLES, AN APPROPRIATE OPENING WITH AN "A-LOK" OR APPROVED EQUAL JOINT SHALL BE PRECAST IN THE MANHOLE WALL. ALL MAINS SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH THE LOW PRESSURE AIR TEST METHOD OR AS OTHERWISE SPECIFIED BY LOCAL AUTHORITY OR PROJECT SPECIFICATIONS.

ELECTRIC, TELEPHONE, AND GAS NOTES:

1. ELECTRIC, TELEPHONE AND GAS LOCATIONS SHOWN ON PLAN ARE PRELIMINARY. FINAL LOCATION SHALL BE COORDINATED WITH UTILITY COMPANY PRIOR TO CONSTRUCTION.
2. CONTRACTOR TO COORDINATE GAS MAIN, ELECTRIC, AND TELEPHONE INSTALLATION WITH APPROPRIATE UTILITY COMPANIES.
3. ALL GAS WORK AND OTHER ASSOCIATED APPURTENANCES SHALL BE IN CONFORMANCE WITH APPLICABLE LOCAL COUNTY, STATE, AND FEDERAL GUIDELINES AND REQUIREMENTS.
4. ALL ELECTRICAL WORK, TRANSFORMER PAD, AND ASSOCIATED APPURTENANCES SHALL BE IN CONFORMANCE WITH APPLICABLE LOCAL, COUNTY, STATE, AND FEDERAL GUIDELINES AND REQUIREMENTS.

NOTES:

1. EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A PLAN TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 140 LOTS 7.01, 8, 9, AND 10, BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD, DATED 15 MARCH 2017, LAST REVISED 5 NOVEMBER 2025.
2. PROPOSED BUILDING FOOTPRINT OBTAINED FROM A CAD FILE TITLED "2026-BNE_Chatham-Submission_Package" PROVIDED BY MINNO WASKO ON 12 JANUARY 2026.
3. THE MERIDIAN OF THE SURVEY IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 83 (2011).
4. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).



PROPOSED SANITARY DEMAND CALCULATIONS			
Type of Establishment(1)	Units(1)	Gallons/Day(2)	Sanitary Demand (gpd)
Residential Apartment - 1 Bedroom	20	150	3,000
Residential Apartment - 2 Bedroom	57	225	12,825
Residential Apartment - 3 Bedroom	23	300	6,900
Retail	2,370	0.1	237
Total Proposed Sanitary Demand (gpd) =			22,962

Notes:
1. Number and types of establishments provided by Minno & Wasko Architects & Planners on 14 January 2026
2. Values for daily flow demand (gallons per day) were obtained from NJAC 7:14A-23.3.

PROPOSED WATER DEMAND CALCULATIONS			
Type of Establishment(1)	Units(1)	Gallons/Day(2)	Water Demand (gpd)
Low-Rise Apartment - 1 Bedroom	20	95	1,900
Low-Rise Apartment - 2 Bedroom	57	140	7,980
Low-Rise Apartment - 3 Bedroom	23	215	4,945
Retail	2,370	0.125	296
Total Proposed Water Demand (gpd) =			15,121

Notes:
1. Number and types of establishments provided by Minno & Wasko Architects & Planners on 14 January 2026
2. Values for daily flow demand (gallons per day) were obtained from RSIS - NJAC 5:21-5.2-Table 5.1 and NJAC 7:10-12.6-Table 5.1

LEGEND

- PROPERTY LINE
- PROPOSED SANITARY SEWER PIPE
- PROPOSED SANITARY SEWER MANHOLE
- PROPOSED SANITARY SEWER CLEANOUT
- W — PROPOSED WATER PIPE
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- E — PROPOSED ELECTRIC CONDUIT
- T — PROPOSED TELECOMMUNICATIONS CONDUIT
- G — PROPOSED GAS PIPE

SCALE: 1 INCH = 20 FEET

Date	Description	No.
Revisions		

Leonard D. Savino 01/15/2026
Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE-39238

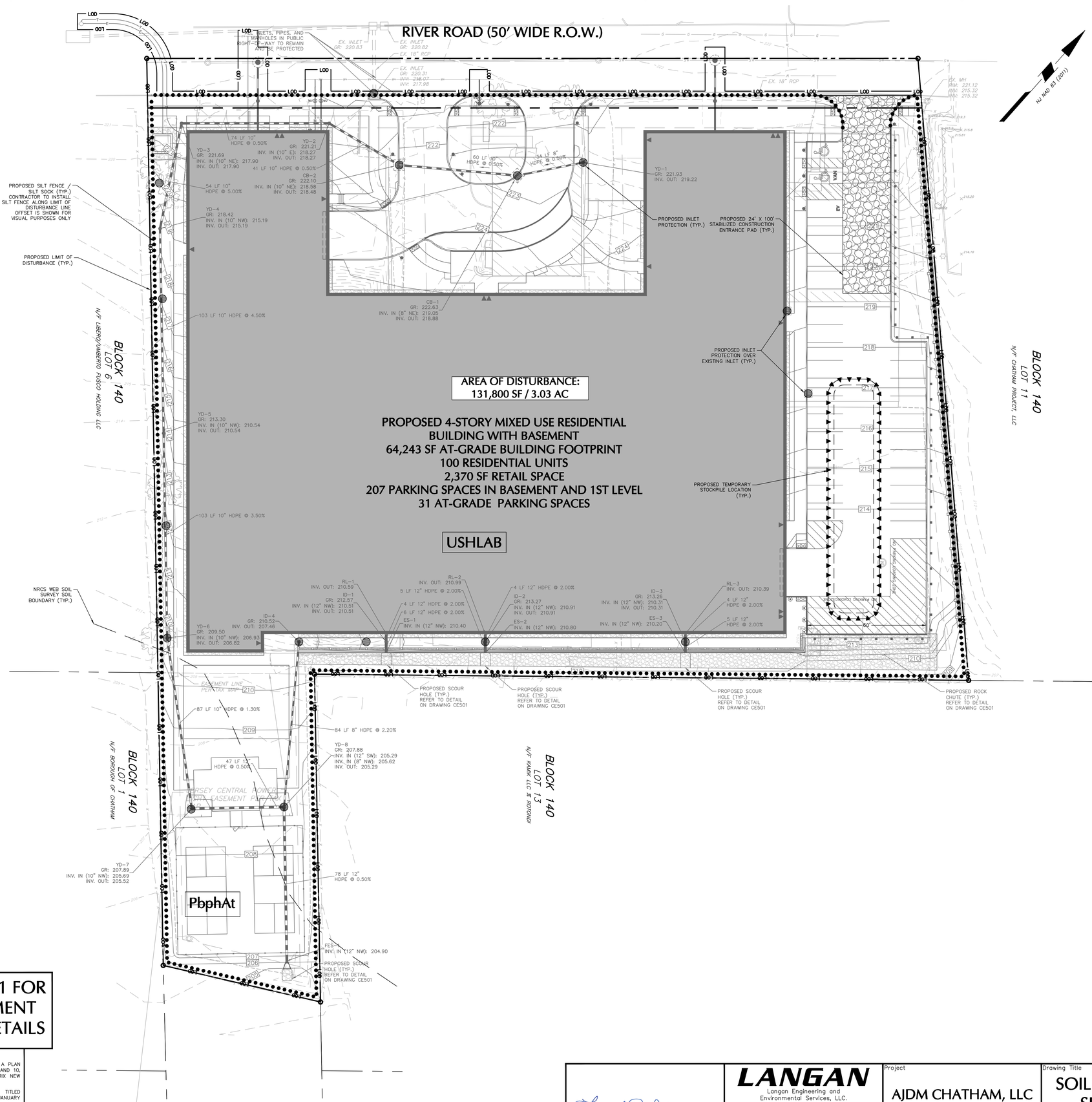
LANGAN
Langan Engineering and Environmental Services, LLC.
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: UTILITY PLAN

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No. CU101



SOIL LEGEND

USHALB	URBAN LAND – HALEDON COMPLEX
PbpAt	PARSIPPANY SILT LOAM

LEGEND

- PROPERTY LINE
- 600 EXISTING MAJOR CONTOUR
- 599 EXISTING MINOR CONTOUR
- 600 PROPOSED MAJOR CONTOUR
- 601 PROPOSED MINOR CONTOUR
- PROPOSED SILT FENCE
- PROPOSED INLET PROTECTION
- PROPOSED STOCKPILE
- PROPOSED CONSTRUCTION ENTRANCE
- LOD LIMIT OF DISTURBANCE

SCALE: 1 INCH = 20 FEET

REFER TO DRAWING CE501 FOR SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

NOTES:

1. EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A PLAN TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 140 LOTS 7.01, 8, 9, AND 10, BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD, DATED 15 MARCH 2017, LAST REVISED 5 NOVEMBER 2025.
2. PROPOSED BUILDING FOOTPRINT OBTAINED FROM A CAD FILE TITLED "2026-BNE_Chatham-Submission_Package" PROVIDED BY MINNO WASKO ON 12 JANUARY 2026.
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4. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

Date	Description	No.
Revisions		

Leonard D. Savino 01/15/2026
Signature Date
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NJ Certificate of Authorization No. 24GA27996400

Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: SOIL EROSION & SEDIMENT CONTROL PLAN

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

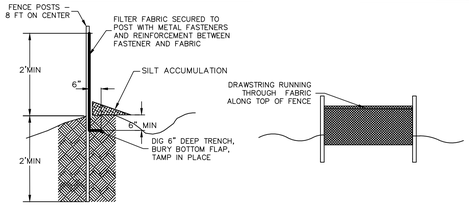
Drawing No. CE101

Date: 1/15/2026 Time: 11:21 User: gchieff Style Table: Langan.stb Layout: CE101 Document Code: 101324801-0101-CE101-0101

Project No. 101324801

SOIL EROSION AND SEDIMENT CONTROL NOTES

1. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, AND WILL BE IN PLACE PRIOR TO ANY MAJOR SOIL DISTURBANCE OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
2. ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN FOURTEEN (14) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW OR HAY AND TACKED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS. SEE NOTE 22 BELOW.
3. PERMANENT VEGETATION IS TO BE ESTABLISHED ON EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCH IS TO BE USED FOR PROTECTION UNTIL VEGETATION IS ESTABLISHED. SEE NOTE 23 BELOW.
4. IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS (STEEP SLOPES, SANDY SOILS, WET CONDITIONS) SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN ACCORDANCE WITH NOTE 22 BELOW.
5. TEMPORARY DIVERSION BERMS ARE TO BE INSTALLED ON ALL CLEARED ROADWAYS AND EASEMENT AREAS. SEE THE DIVERSION DETAIL.
6. PERMANENT SEEDING AND STABILIZATION TO BE IN ACCORDANCE WITH THE "STANDARD FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION". SPECIFIED RATES AND LOCATIONS SHALL BE ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN.
7. THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SO THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
8. ALL SEDIMENTATION STRUCTURES (SILT FENCE, INLET FILTERS, AND SEDIMENT BASINS) WILL BE INSPECTED AND MAINTAINED DAILY.
9. STOCKPILES SHALL NOT BE LOCATED WITHIN 50' OF A FLOODPLAIN, SLOPE, DRAINAGE FACILITY, OR ROADWAY. ALL STOCKPILES BASES SHALL HAVE A SILT FENCE PROPERLY ENTRENCHED AT THE TOE OF SLOPE.
10. A STABILIZED CONSTRUCTION ACCESS WILL BE INSTALLED, WHENEVER AN EARTHEN ROAD INTERSECTS WITH A PAVED ROAD. SEE THE STABILIZED CONSTRUCTION ACCESS DETAIL AND CHART FOR DIMENSIONS.
11. ALL NEW ROADWAYS WILL BE TREATED WITH SUITABLE SUB BASE UPON ESTABLISHMENT OF FINAL GRADE ELEVATIONS.
12. PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
13. BEFORE DISCHARGE POINTS BECOME OPERATIONAL, ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED AS REQUIRED.
14. ALL DEWATERING OPERATIONS MUST BE DISCHARGED DIRECTLY INTO A SEDIMENT FILTER AREA. THE FILTER SHOULD BE COMPOSED OF A FABRIC OR APPROVED MATERIAL SEE THE DEWATERING DETAIL.
15. ALL SEDIMENT BASINS WILL BE CLEANED WHEN THE CAPACITY HAS BEEN REDUCED BY 50%. A CLEAN OUT ELEVATION WILL BE IDENTIFIED ON THE PLAN AND A MARKER INSTALLED ON THE SITE.
16. DURING AND AFTER CONSTRUCTION, THE APPLICANT WILL BE RESPONSIBLE FOR THE MAINTENANCE AND UPKEEP OF THE DRAINAGE STRUCTURES, VEGETATION COVER, AND ANY OTHER MEASURES DEEMED APPROPRIATE BY THE DISTRICT. SAID RESPONSIBILITY WILL END WHEN COMPLETED WORK IS APPROVED BY THE MORRIS COUNTY SOIL CONSERVATION DISTRICT.
17. ALL TREES OUTSIDE THE DISTURBANCE LIMIT INDICATED ON THE SUBJECT PLAN OR THOSE TREES WITHIN THE DISTURBANCE AREA WHICH ARE DESIGNATED TO REMAIN AFTER CONSTRUCTION ARE TO BE PROTECTED WITH TREE PROTECTION DEVICES. SEE THE TREE PROTECTION DETAIL.
18. THE MORRIS COUNTY SOIL CONSERVATION DISTRICT MAY REQUEST ADDITIONAL MEASURES TO MINIMIZE ON SITE OR OFF SITE EROSION PROBLEMS DURING CONSTRUCTION.
19. THE MORRIS COUNTY SOIL CONSERVATION DISTRICT MUST BE NOTIFIED, IN WRITING, AT LEAST 48 HOURS PRIOR TO ANY LAND DISTURBANCE, AND A PRE-CONSTRUCTION MEETING HELD.
20. CONTRACTOR TO SET UP A MEETING WITH THE INSPECTOR FOR PERIODIC INSPECTIONS OF THE TEMPORARY SEDIMENT BASIN PRIOR TO AND DURING ITS CONSTRUCTION.
21. TOPSOIL STOCKPILE PROTECTION
    A) APPLY GROUND LIMESTONE AT A RATE OF 90 LBS PER 1000 SQ. FT.
    B) APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS. PER 1000 SQ. FT.
    C) APPLY PERENNIAL RYEGRASS SEED AT 1 LB. PER 1000 SQ. FT.
    D) MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 90 LBS. PER 1000 SQ. FT.
    E) APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.
    F) PROPERTY ENTRENCH A SILT FENCE AT THE BOTTOM OF THE STOCKPILE.
22. TEMPORARY STABILIZATION SPECIFICATIONS
    A) APPLY GROUND LIMESTONE AT A RATE OF 90 LBS PER 1000 SQ. FT.
    B) APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS. PER 1000 SQ. FT.
    C) APPLY PERENNIAL RYEGRASS SEED AT 1 LB. PER 1000 SQ. FT.
    D) MULCH DISTURBED SOIL WITH STRAW OR HAY AT A RATE OF 90 LBS. PER 1000 SQ. FT.
    E) APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.
23. PERMANENT STABILIZATION SPECIFICATIONS
    A) APPLY TOPSOIL TO A DEPTH OF 5 INCHES (UNSETTLED).
    B) APPLY GROUND LIMESTONE AT A RATE OF 90 LBS PER 1000 SQ. FT. AND WORK FOUR INCHES INTO SOIL.
    C) APPLY FERTILIZER (10-20-10) AT A OF RATE 11 LBS. PER 1000 SQ. FT.
    D) APPLY HARD FESCUE SEED AT 2.7 LBS. PER 1000 SQ. FT. AND CREEPING RED FESCUE SEED AT 0.7 LBS PER 1000 SQ. FT. AND PERENNIAL RYEGRASS SEED AT 0.25 LBS PER 1000 SQ. FT.
    E) MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 90 LBS. PER 1000 SQ. FT.
    F) APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.
24. 48 HOURS PRIOR TO ANY SOIL DISTURBANCE, NOTICE IN WRITING, SHALL BE GIVEN TO THE MORRIS COUNTY SOIL CONSERVATION DISTRICT AND A PRE-CONSTRUCTION MEETING HELD.

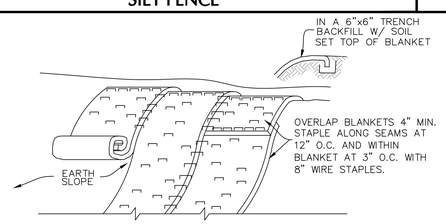


REQUIREMENTS FOR SILT FENCE:

1. FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM DIAMETER THICKNESS OF 1½ INCHES.
2. A METAL FENCE WITH 6 INCH OR SMALLER OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED. FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENTS AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.
3. A GEOTEXTILE FABRIC RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POSTS USING A SYSTEM CONSISTING OF OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS, ETC.) PLACED BETWEEN THE FASTENER AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

REF: THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (LAST REVISED JULY 2017) NOT TO SCALE

SILT FENCE

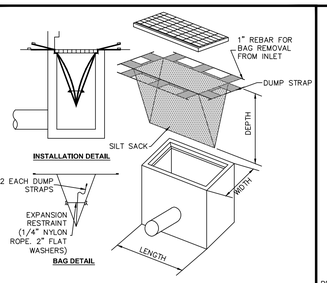


NOTES:

1. STABILIZE PREPARED EARTHEN SLOPE WITH A BIODEGRADABLE NATURAL FIBER NETTING. APPROVED TYPES ARE AS FOLLOWS:
   – C350 – NORTH AMERICAN GREEN #1-800-772-2040
   – ECOCOIR 9000 – EASTERN PRODUCTS, INC. #1-201-234-5050
   – ERO-MAT V125C – EROSION CONTROL TECH. #1-800-245-0551
2. SEED SLOPE PRIOR TO INSTALLING EROSION CONTROL NETTING.
3. AFTER NETTING IS INSTALLED, PLANT GROUND-COVER, TREES & FORSYTHIA THROUGH SLITS CUT IN FABRIC.
4. THE MINIMUM REQUIRED LOCATIONS FOR TEMPORARY SLOPE STABILIZATION ARE SHOWN ON DRAWING CE101 – SOIL EROSION AND SEDIMENT CONTROL PLAN. THE CONTRACTOR IS RESPONSIBLE FOR STABILIZING ALL EXISTING AND PROPOSED SLOPES ON THE PROJECT SITE. DEPENDENT ON SITE CONDITIONS, ADDITIONAL LOCATIONS FOR TEMPORARY SLOPE STABILIZATION MAY BE REQUIRED.

NOT TO SCALE

TEMPORARY SLOPE STABILAZATION

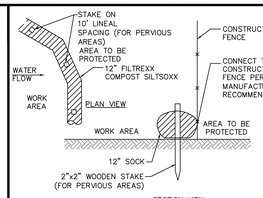


REQUIREMENTS FOR INLET PROTECTION:

1. IN ALL CASES, INLET PROTECTION SHOULD NOT COMPLETELY CLOSE OFF THE INLET.
2. THE PROTECTION DEVICE WILL BE DESIGNED TO CAPTURE OR FILTER RUNOFF FROM THE 1 YEAR, 24 HOUR STORM EVENT AND SHALL SAFELY CONVEY HIGHER FLOWS DIRECTLY INTO THE STORM SEWER SYSTEM.
3. INSPECTIONS SHALL BE FREQUENT.
4. MAINTENANCE, REPAIR, AND REPLACEMENT SHALL BE MADE PROMPTLY, AS NEEDED.
5. THE BARRIER SHALL BE REMOVED WHEN THE AREA DRAINING TOWARD THE INLET HAS BEEN STABILIZED.

NOT TO SCALE

SILT SACK INLET PROTECTION



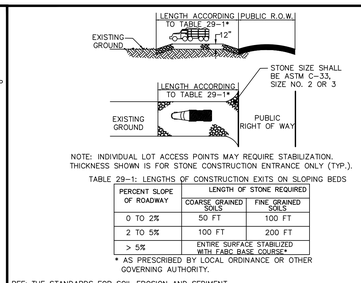
SECTION VIEW

NOTES:

1. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED DESIGN GUIDELINES.
2. FOR PERVIOUS AREA INSTALLATIONS, STAKES SHALL BE INSTALLED THROUGH THE MIDDLE OF THE SEDIMENT CONTROL ON 10 FT CENTERS. IN THE EVENT STAKING IS NOT POSSIBLE, SUCH AS WHEN SEDIMENT CONTROL IS USED ON PAVEMENT, HEAVY CONCRETE BLOCKS SHALL BE USED BEHIND THE SEDIMENT CONTROL TO HELP STABILIZE DURING RAINFALL/RUNOFF EVENTS
3. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.
4. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES ½ THE ABOVE-GROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.
5. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.
6. IN IMPERVIOUS AREAS, SILT SOCK TO BE PLACED AGAINST FENCE AND SECURED WITH CONCRETE BLOCKS OR SAND BAGS PLACED 10 FEET ON CENTER.
7. DETAIL PROVIDED BY FILTREXX.

NOT TO SCALE

SILT SOCK IN PAVEMENT AREAS (FILTREXX COMPOST SILT SOCK)



NOTE: INDIVIDUAL LOT ACCESS POINTS MAY REQUIRE STABILIZATION. THICKNESS SHOWN IS FOR STONE CONSTRUCTION ENTRANCE ONLY (TYP.).

TABLE 29-1: LENGTHS OF CONSTRUCTION EXITS ON SLOPING BEDS

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COARSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2 TO 5%	100 FT	200 FT
> 5%	ENTIRE SURFACE STABILIZED WITH FABRIC BASE COURSE*	

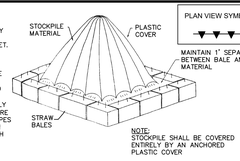
* AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

REF: THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY (LAST REVISED JULY 2017). NOT TO SCALE

STABILIZED CONSTRUCTION ENTRANCE

NOTES:

1. DISTURBED AREAS SHALL BE MULCHED WITH STRAW OR HAY IF THE FALL SEEDING PERIOD CANNOT BE SUCCESSFULLY MET.
2. MULCH TO BE APPLIED AT A RATE OF 1.5 TO 2 TONS PER ACRE. TACK MATERIAL TO BE CUTBACK ASPHALT-RAPID CURING (RC-70, PC-250 AND RC-800) OR MEDIUM CURING (MC-250 OR MC-800). APPLY 0.4 GAL/S.Y. OR 194 GAL/ACRE ON FLAT AREAS AND ON SLOPES LESS THAN 8 FEET HIGH. ON SLOPES 8 FEET OR MORE HIGH USE .075 GAL/S.Y. OR 363 GAL/ACRE.



NOT TO SCALE

TEMPORARY SOIL / CONSTRUCTION DEBRIS STOCKPILE

MORRIS COUNTY SOIL CONSERVATION DISTRICT DUST CONTROL NOTES

THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:

MULCHES – SEE STANDARD FOR STABILIZATION WITH MULCHES ONLY (PG. 5-1).

VEGETATIVE COVER – SEE STANDARD FOR TEMPORARY VEGETATIVE COVER (PG. 7-1), PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION (PG. 4-1), AND PERMANENT STABILIZATION WITH SOD (PG. 6-1).

SPRAY-ON ADHESIVE – ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS.

MATERIAL	WATER DILUTION	TYPE OF NOOZLE	APPLY GALLONS/ACRE
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN IN WATER	4:1	FINE SPRAY	300
POLYACRYLAMIDE (PAM) SPRAY ON POLYACRYLAMIDE (PAM) DRY SPRAY	APPLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS. MAY ALSO BE USED AS AN ADDITIVE TO SEDIMENT BASINS TO FLOCCULATE AND PRECIPITATE SUSPENDED COLLOIDS. SEE SEDIMENT BASIN STANDARD (PG. 26-1)		
ACIDULATED SOY BEAN SOAP STICK	NONE	COARSE SPRAY	1200

TILLAGE – TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, AND SPRING-TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

SPRINKLING – SITE IS SPRINKLED UNTIL THE SURFACE IS WET.

BARRIERS – SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRATE WALLS, BALES OF HAY, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

CALCIUM CHLORIDE – SHALL BE IN THE FORM OF LOOSE, DRY GRANULATES OF FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOIST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS, OR ACCUMULATION AROUND PLANTS.

STONE – COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

CONSTRUCTION NOTES

1. CONTRACTOR TO COORDINATE STAGING AREAS, TRAILER LOCATION AND TEMPORARY STOCKPILE LOCATIONS WITH OWNER.
2. INLET SEDIMENT PROTECTION REQUIREMENTS SHALL NOT BE LIMITED TO STRUCTURES LOCATED WITHIN THE LIMITS OF WORK. ANY AND ALL INLETS WHICH COULD BE AFFECTED BY RUNOFF SHALL BE PROTECTED.
3. CONTRACTOR MAY ELECT TO PROVIDE HAY BALES OR ALTERNATIVE MEANS OF INLET SEDIMENT PROTECTION TO EXISTING INLETS. ALL ALTERNATIVES MUST BE APPROVED BY THE MORRIS COUNTY SOIL CONSERVATION DISTRICT AND SHALL CONFORM TO THE REQUIREMENTS OF NJ STANDARDS FOR S.E.S.C., LATEST REVISION. COPIES OF DETAIL AND APPROVAL TO BE PROVIDED TO THE OWNER AND OWNER'S REPRESENTATIVE.
4. THE PROJECT SITE IS LOCATED WITHIN THE METROPOLITAN PLANNING AREA PA-1 AND HAS BEEN PREVIOUSLY DEVELOPED. THIS QUALIFIES AS AN "URBAN REDEVELOPMENT AREA" WHICH IS EXEMPT FROM SUBSOIL DECOMPACTION AS LISTED UNDER ITEM #6 ON PAGE 19-2 OF THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY

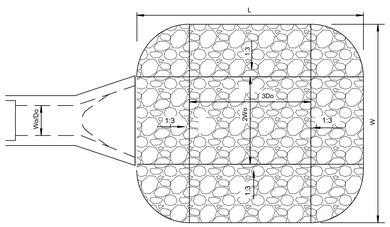
ESTIMATED TOTAL PROJECT DURATION 52 WEEKS

SEQUENCE OF CONSTRUCTION

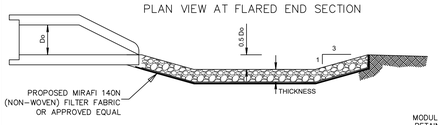
CONSTRUCTION ACTIVITY	DURATION
1. NOTIFY THE MORRIS COUNTY SOIL CONSERVATION DISTRICT IN WRITING AT LEAST 48 HOURS PRIOR TO ANY PROJECT PRE-CONSTRUCTION MEETING OR SITE DISTURBANCES.	———
2. INSTALL A STABILIZED CONSTRUCTION ENTRANCE PAD CONSISTING OF 2 ½" WASHED STONE 12" DEEP AT THE CONSTRUCTION ENTRANCE IMMEDIATELY AFTER THE INITIAL DISTURBANCES AS PER STANDARDS ON DRAWINGS. SITE TRAFFIC SHOULD ONLY USE THESE AREAS FOR INGRESS AND EGRESS.	1 DAY
3. EQUIP ALL CATCH BASINS WITH FILTER FABRIC INLET PROTECTION IMMEDIATELY UPON START OF CONSTRUCTION, AS SHOWN.	1 WEEK
4. PLACE AND MAINTAIN THE SEDIMENT BARRIERS AS SHOWN ON THE PLAN.	1 WEEK
5. DEMOLISH EXISTING BUILDINGS AND SURFACE MATERIALS.	4 WEEKS
6. ROUGH GRADE THE SITE (MAINTAIN SEDIMENT BARRIERS).	4 WEEKS
7. RE-INSTALL SEDIMENT BARRIERS AS NECESSARY TO MAINTAIN EROSION PROTECTION AFTER REGRADING.	1 WEEK
8. CONSTRUCT STORMWATER CONVEYANCE SYSTEM. INSTALL SEDIMENT CONTROL MEASURES AROUND INLETS.	4 WEEKS
9. INSTALL REMAINING SITE UTILITIES CONCURRENTLY WITH STORM SEWERS AND STRUCTURES.	———
10. INSTALL SUBBASE MATERIAL IN CONCRETE AND ASPHALT PAVEMENT AREAS. AS AREAS ARE STABILIZED, REMOVE TEMPORARY SEDIMENT BARRIERS.	1 WEEK
11. CONSTRUCT CURBS AND SIDEWALKS.	3 WEEKS
12. INSTALL PAVEMENT BASECOURSE.	3 WEEKS
13. CONSTRUCT BUILDING.	25 WEEKS
14. FINAL GRADING OF SITE AND PAVEMENT TOPCOURSE.	3 WEEKS
15. ALL SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL ALL IMPROVEMENTS TO THE SITE ARE COMPLETE AND THE ROADS AND PARKING AREAS ARE PAVED.	———
16. PLANT ALL LANDSCAPED AREAS AS INDICATED ON THE LANDSCAPING PLAN AND REMOVE ALL TEMPORARY SEDIMENT CONTROL MEASURES.	2 WEEKS
17. CLEAN ALL SITE DRAINAGE STRUCTURES AND PIPES OF SILT AND DEBRIS, DOWNSTREAM/OFF-SITE DRAINAGE FACILITIES SHALL BE INSPECTED AND CLEANED OF SILT AND DEBRIS RESULTING FROM SITE CONSTRUCTION PRIOR TO FINAL TURNOVER.	———
18. NOTIFY THE MORRIS COUNTY COUNTY SOIL CONSERVATION DISTRICT AT THE COMPLETION OF CONSTRUCTION.	———

AJDM CHATHAM, LLC. SCOUR HOLE SUMMARY TABLE

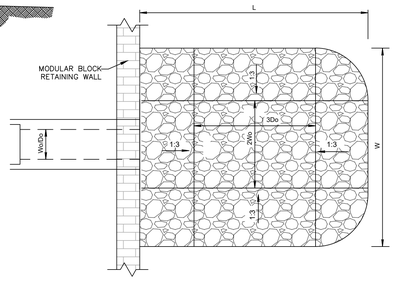
STRUCTURE NO.	PIPE DIAMETER, Do (IN.)	TOTAL LENGTH L (FT.)	LENGTH AT BOTTOM OF HOLE, 3Do (FT.)	WIDTH AT BOTTOM OF HOLE, 2Wo (FT.)	TOTAL WIDTH, W (FT.)	d50 (IN.)	DEPTH, 0.5Do (IN.)	THICKNESS (IN.)
FES-1	12	6	3	2	5	6	6	12
ES-1	12	6	3	2	5	6	6	12
ES-2	12	6	3	2	5	6	6	12
ES-3	12	6	3	2	5	6	6	12



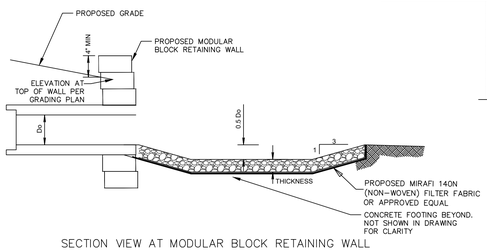
PLAN VIEW AT FLARED END SECTION



SECTION VIEW AT FLARED END SECTION



PLAN VIEW AT MODULAR BLOCK RETAINING WALL



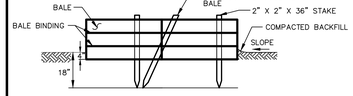
SECTION VIEW AT MODULAR BLOCK RETAINING WALL

NOT TO SCALE

NOTES:

1. THE TOP OF THE SCOUR HOLE SHALL BE AT THE SAME ELEVATION AT THE UP AND DOWNSTREAM ENDS AND THE BOTTOM OF THE SCOUR HOLE SHALL BE AT 0% SLOPE.
2. THE INDICATED d50, APRON LENGTH, WIDTH AND THICKNESS HAS BEEN DESIGNED IN ACCORDANCE WITH THE NEW JERSEY SOIL EROSION AND SEDIMENT CONTROL STANDARDS.
3. SCOUR HOLE STONE SHALL BE ANGULAR STONE THAT IS APPROXIMATELY RECTANGULAR SHAPE. THE RIPRAP SHALL BE COMPOSED OF A WELL-GRADED MIXTURE SUCH THAT 50% OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE D50 SIZE. A WELL-GRADED MIXTURE AS USED HEREIN IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZES, BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHALL BE 1.5 TIMES THE D50 SIZE. THE D75 SIZE (DIAMETERS OF RIPRAP OF WHICH 75% OF THE MIXTURE IS FINER BY WEIGHT) SHOULD BE 1.25 TIMES THE D50 AND THE D15 (DIAMETERS OF RIPRAP OF WHICH 15% OF THE MIXTURE IS FINER BY WEIGHT) SHOULD BE 0.5 TIMES THE D50 SIZE.
4. PROVIDE SHOP DRAWINGS FOR SCOUR HOLE STONE, FILTER FABRIC, FLARED END SECTION, AND MODULAR BLOCK RETAINING WALL FOR REVIEW AND APPROVAL.
5. MODULAR BLOCK RETAINING WALL SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A NJ-LICENSED STRUCTURAL ENGINEER.

SCOUR HOLE



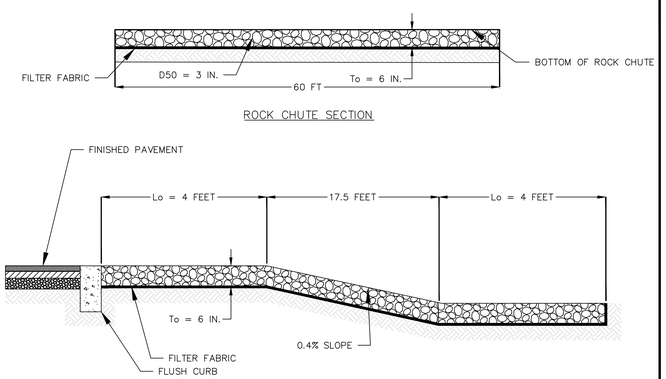
NOTES:

1. STRAW BALE BARRIERS SHOULD NOT BE USED FOR MORE THAN 3 MONTHS.
2. STRAW BALE BARRIERS MUST BE PLACED AT LEVEL GRADES. BOTH ENDS OF THE BARRIER MUST BE EXTENDED AT LEAST 8 FEET UPSLOPE AT 45° TO MAINTAIN BARRIER ALIGNMENT.
3. SEDIMENT MUST BE REMOVED WHERE ACCUMULATIONS REACH 1/3 THE ABOVE GROUND HEIGHT OF THE BARRIER.
4. ANY SECTION OF STRAW BALE BARRIER WHICH HAS BEEN UNDERMINED OR TOPPED MUST BE IMMEDIATELY REPLACED WITH A ROCK FILTER OUTLET. SEE ROCK FILTER OUTLET DETAIL.
5. BALES SHALL BE SECURELY ANCHORED IN PLACE BY TWO STAKES OR RE-BARS DRIVEN THROUGH EACH BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD PREVIOUSLY LAID BALE TO FORCE BALES TOGETHER.

MAINTENANCE:
INSPECT ONCE EVERY WEEK OR AFTER EVERY STORM EVENT. HAYBALE BARRIERS WILL BE REMOVED WHEN CLOGGED WITH SEDIMENTS. MATERIALS MUST BE WASHED COMPLETELY FREE OF ALL FOREIGN MATERIALS OR NEW HAYBALE BARRIERS MUST BE USED TO REBUILD THE BARRIER.

NOT TO SCALE

STRAW BALE BARRIERS



NOTE:

ROCK CHUTES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY.

	d50	Lo	To
ROCK CHUTE 1	3 INCHES	4 FEET	6 INCHES

N.T.S.

ROCK CHUTE DETAIL

No.	Description	Date

Revisions

Leonard D. Savino 01/15/2026
Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE-39238

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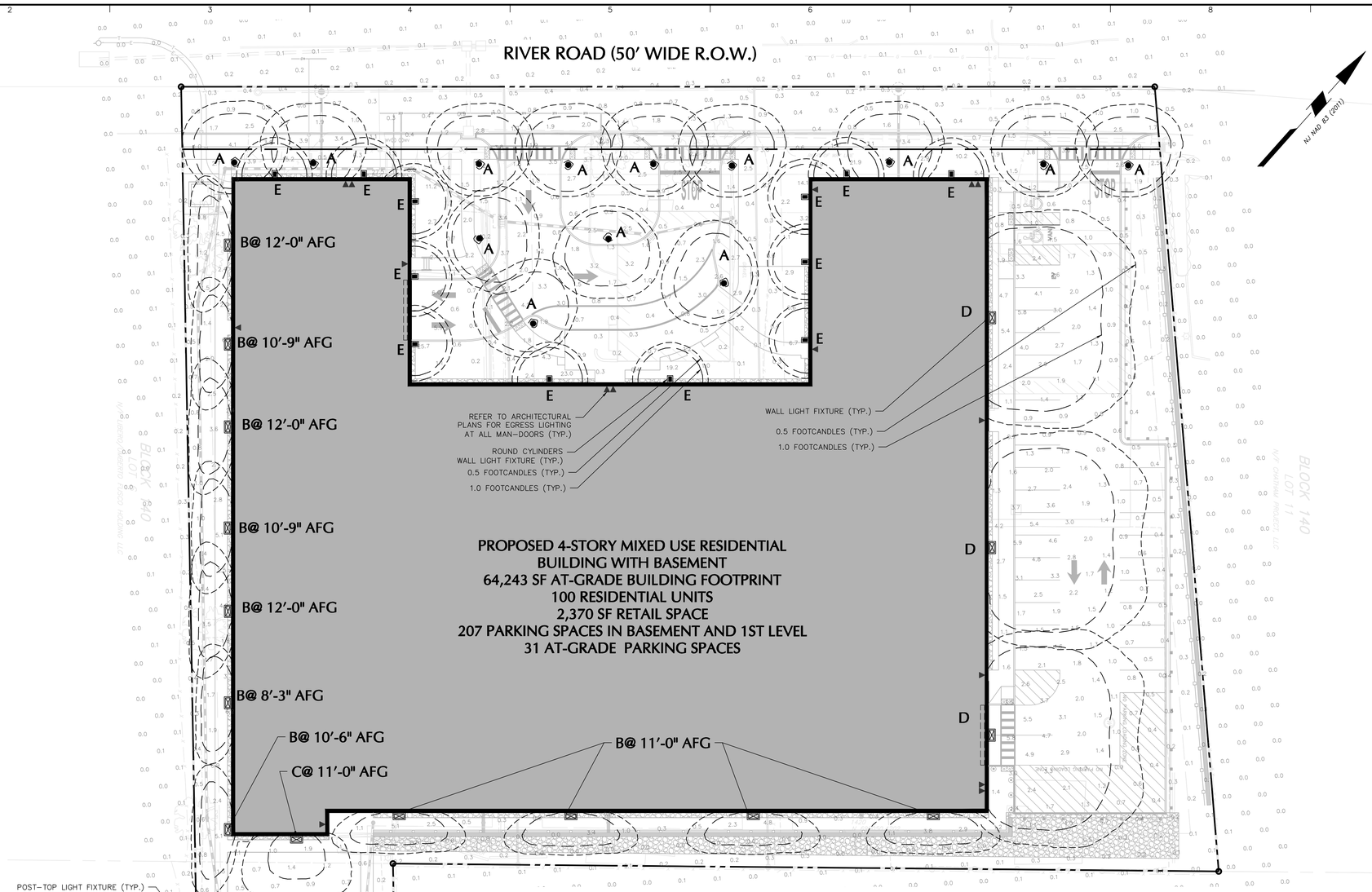
Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By BMW

Drawing No. CE501



SITE LIGHTING SCHEDULE

SYMBOL	KEY	QTY.	FIXTURE MANUFACTURER	FIXTURE MODEL	FIXTURE DESCRIPTION	HEIGHT AT TOP OF FIXTURE	HEIGHT OF LIGHT SOURCE	LAMP	OPTICS	WATTAGE	COLOR/ TEMPERATURE	INITIAL LAMP LUMENS	LIGHT LOSS FACTOR (LLF)	IES FILE	FIXTURE CATALOGUE NO.	POLE MANUFACTURER	POLE DESCRIPTION	POLE LENGTH	POLE CATALOGUE NO.
●	A	17	SPITZER LIGHTING	PTU POST-TOP URBAN	POST-TOP LIGHT FIXTURE COLOR - BLACK	11'-6"	11'-2"	LED	TYPE TS WITH HSS	40W	3000K	11,570	0.90	PTU-N-40L-U-40K-T5-HSS.ies	PTU-N-40L-VOLTS-30K-T5-BL-PUT-N-HSS	SPITZER LIGHTING	ARTP ROUND STEEL TOP MOUNT POLE	9'-6"	ARTP-411-9.5-BK
▭	B	11	LITHONIA LIGHTING	DSXW1	WALL LIGHT FIXTURE COLOR - BLACK	AS SHOWN ON PLAN	3" BELOW HEIGHTS NOTED	LED	TYPE T2S	12W	3000K	1,967	0.90	DSXW1-P1-30K-T2S.ies	DSXW1-LED-P1-30K-70CRI T2S-VOLTS-SRM-DBLXD	N/A			
▭	C	1	LITHONIA LIGHTING	DSXW1	WALL LIGHT FIXTURE COLOR - BLACK	AS SHOWN ON PLAN	3" BELOW HEIGHTS NOTED	LED	TYPE TFTM	15W	3000K	2,161	0.90	DSXW1-P2-30K-TFTM.ies	DSXW1-LED-P2-30K-70CRI TSFTM-VOLTS-SRM-DBLXD				
▭	D	3	LITHONIA LIGHTING	DSXW2	WALL LIGHT FIXTURE COLOR - BLACK	15'-0" ABOVE FFE	14'-9" ABOVE FFE	LED	TYPE TFTM	104W	3000K	13,634	0.90	DSXW2-P7-30K-TFTM.ies	DSXW2-LED-P7-30K-70CRI TFTM-VOLTS-SRM-DBLXD				
■	E	12	GOTHAM ARCHITECTURAL LIGHTING	IVO 6"	ROUND CYLINDERS WALL MOUNT COLOR - BLACK	12'-0" ABOVE FFE	11'-9" ABOVE FFE	LED	60D	58W	3000K	5,030	0.90	IVO6CYL WC D 60LM 30K 80CRI 60D L12/L18/L21 P GR LD.ies	IVO6CYL-WC-D-60LM-30K-80CRI-60D-VOLTS-L12-JBX-DN-P-AR-LD-DBL				

NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING VOLTAGES AND ELECTRICAL LAYOUTS.
2. CONTRACTOR TO CONFIRM CONTROLS SYSTEM REQUIRED BY THE OWNER AND MEP PER CODE. BID PRICING SHALL INCLUDE CONTROL SYSTEM.
3. THE HOURS OF OPERATION WILL BE FROM DUSK TO DAWN, UNLESS STATED OTHERWISE.

STATISTICS

DESCRIPTION	AVG.	MAX.	MIN.	MAX./MIN.	AVG./MIN.
ENTRY ROUNDABOUT	1.8 FC	6.0 FC	0.4 FC	15.0:1	4.5:1
PARKING LOT	1.7 FC	5.8 FC	0.4 FC	14.5:1	4.3:1

NOTE: LIGHT PHOTOMETRY AND CALCULATIONS FOR EXISTING AND ADJACENT LIGHTING TO REMAIN ARE NOT INCLUDED IN THE ABOVE STATISTICS.

BOROUGH OF CHATHAM, NJ - ORDINANCE COMPLIANCE CHART

SECTION	REQUIREMENT	PROPOSED	COMPLIANCE
§ 165-78.C.2.b.	THE MAXIMUM HEIGHT OF A LIGHT FIXTURE SHALL BE 15 FEET FOR RESIDENTIAL STRUCTURES, AND A MAXIMUM HEIGHT OF A LIGHT FIXTURE SHALL BE 12 FEET FOR WALKWAYS.	ALL FREESTANDING LIGHT FIXTURES ARE 11'-6" IN HEIGHT. BUILDING MOUNTED LIGHT FIXTURES FOR WALKWAYS ONLY ARE 12 FEET IN HEIGHT. BUILDING MOUNTED LIGHT FIXTURES FOR PARKING LOT ARE 15 FEET IN HEIGHT.	COMPLIES
§ 165-78.D.1.C.	LIGHT SOURCES SHALL BE SHIELDED LIGHT FIXTURES	FREESTANDING LIGHTS FIXTURES ARE SHIELDED.	COMPLIES
§ 165-78.D.5.	PARKING LOT: MINIMUM HORIZONTAL ILLUMINACE - 0.2 FC AVERAGE HORIZONTAL ILLUMINANCE - 1.0 FC AVERAGE TO MINIMUM - 5:1 MAXIMUM TO MINIMUM - 20:1 MINIMUM VERTICAL ILLUMINANCE - 0:1	MINIMUM HORIZONTAL ILLUMINACE - 0.4 FC AVERAGE HORIZONTAL ILLUMINANCE - 1.8 FC AVERAGE TO MINIMUM - 4.5:1 MAXIMUM TO MINIMUM - 15.0:1 MINIMUM VERTICAL ILLUMINANCE - 0:3	COMPLIES

NOTES:
1. EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A PLAN TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 140 LOTS 7.01, 8, 9, AND 10, BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD, DATED 15 MARCH 2017, LAST REVISED 5 NOVEMBER 2025.
2. PROPOSED BUILDING FOOTPRINT OBTAINED FROM A CAD FILE TITLED "2026-BNE_Chatham-Submission_Package" PROVIDED BY MINNO WASKO ON 12 JANUARY 2026.
3. THE MERIDIAN OF THE SURVEY IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 83 (2011).
4. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

NOTE: REFER TO SHEET LL501 FOR LIGHTING NOTES & DETAILS.

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

Date	Description	No.
Revisions		

Signature DANIEL BADGLEY Date
PROFESSIONAL LICENSED LANDSCAPE ARCHITECT
LICENSE NO. 21AS00097700

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NJ Certificate of Authorization No. 24GA27996400

Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: LIGHTING PLAN

Project No. 101324801
Date 1/15/2026
Drawn By GR
Checked By DB

Drawing No. LL101

LIGHTING NOTES:

GENERAL

1. POINT–BY–POINT CALCULATIONS PROVIDED WITHIN HAVE BEEN PREPARED IN ACCORDANCE TO IESNA STANDARDS AND IN CONSIDERATION OF THE VARIABLES WITHIN THESE NOTES AND SITE LIGHTING SCHEDULE. THE VALUES SHOWN ON THE PLANS ARE NOT AN INDICATION OF THE INITIAL LIGHT INTENSITIES OF THE LAMPS. THESE VALUES ARE AN APPROXIMATION OF THE MAINTAINED INTENSITIES DELIVERED TO THE GROUND PLANE USING INDUSTRY STANDARD LIGHT LOSS FACTORS (LLF) WHICH COVER LAMP DEGRADATION AND NATURAL BUILDUP/ DIRT DEGRADATION ON THE FIXTURE LENS. THE LIGHTING PLAN IS DESIGNED WITH AN INDUSTRY STANDARD LLF IN ACCORDANCE WITH GUIDANCE AS PROVIDED BY IESNA. MINOR VARIATIONS IN TOPOGRAPHY, PHYSICAL OBSTRUCTIONS, AMBIENT OR ADJACENT LIGHT SOURCES AND/OR OTHER POTENTIAL IMPACTS HAVE NOT BEEN INCLUDED IN THESE CALCULATIONS. THEREFORE, AS–BUILT LIGHT INTENSITIES MAY VARY, IN EITHER DIRECTION, FROM WHAT IS EXPLICITLY PORTRAYED WITHIN THESE DRAWINGS.NO GUARANTEE OF LIGHT LEVELS IS EXPRESSED OR IMPLIED BY THE POINT BY POINT CALCULATIONS SHOWN ON THESE PLANS.
2. LIGHT LEVEL POINT SPACING IS 10 FT. LEFT TO RIGHT AND 10 FT. TOP TO BOTTOM. POINT BY POINT CALCULATIONS ARE BASED ON THE LIGHT LOSS FACTOR AS STATED IN THE LIGHTING SCHEDULE.

COMPLIANCE

3. ALL SITE LIGHTING RELATED WORK AND MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AUTHORITY REQUIREMENTS.
4. LIGHTING LAYOUT COMPLIES WITH THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) SAFETY STANDARDS FOR LIGHT LEVELS.

COORDINATION

5. CONTRACTOR TO COORDINATE POWER SOURCE WITH LIGHT FIXTURES TO ENSURE ALL SITE LIGHTING IS OPERATING EFFECTIVELY, EFFICIENTLY AND SAFELY.
6. REFER TO ELECTRIFICATION PLAN FOR PROVIDING ADEQUATE POWER FOR SITE LIGHTING.
7. CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
8. INSTALLATION OF ALL LIGHTING FIXTURES, POLES, FOOTINGS, AND FEEDER CABLE TO BE COORDINATED WITH ALL SITE WORK TRADES TO AVOID CONFLICT WITH FINISHED AND PROPOSED WORK.
9. CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND FEEDER CABLE FOR EXTERIOR LIGHTING WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING EXCAVATIONS.

POLES AND FOOTINGS

10. PROVIDE A CONCRETE BASE FOR EACH LIGHT POLE AT THE LOCATIONS INDICATED ON THE CONSTRUCTION DRAWINGS AND/OR IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS RELATING DIRECTLY TO CAST–IN–PLACE CONCRETE. THE USE OF ALTERNATE LIGHTING FOUNDATIONS, SUCH AS PRECAST, MAY CHANGE THE SIZING AND REINFORCEMENT REQUIREMENTS FROM THOSE SHOWN ON THESE PLANS. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO ORDERING ANY SUBSTITUTED PRODUCTS.
11. CONTRACTOR SHALL EXAMINE AND VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO SUPPORT LOADS EXERTED UPON THE FOUNDATIONS DURING EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNSATISFACTORY CONDITIONS.
12. POLE FOUNDATIONS SHALL NOT BE POURED IF FREE STANDING WATER IS PRESENT IN EXCAVATED AREA.
13. ALL POLES SHALL BE EQUIPPED WITH FACTORY INSTALLED VIBRATION DAMPENERS.

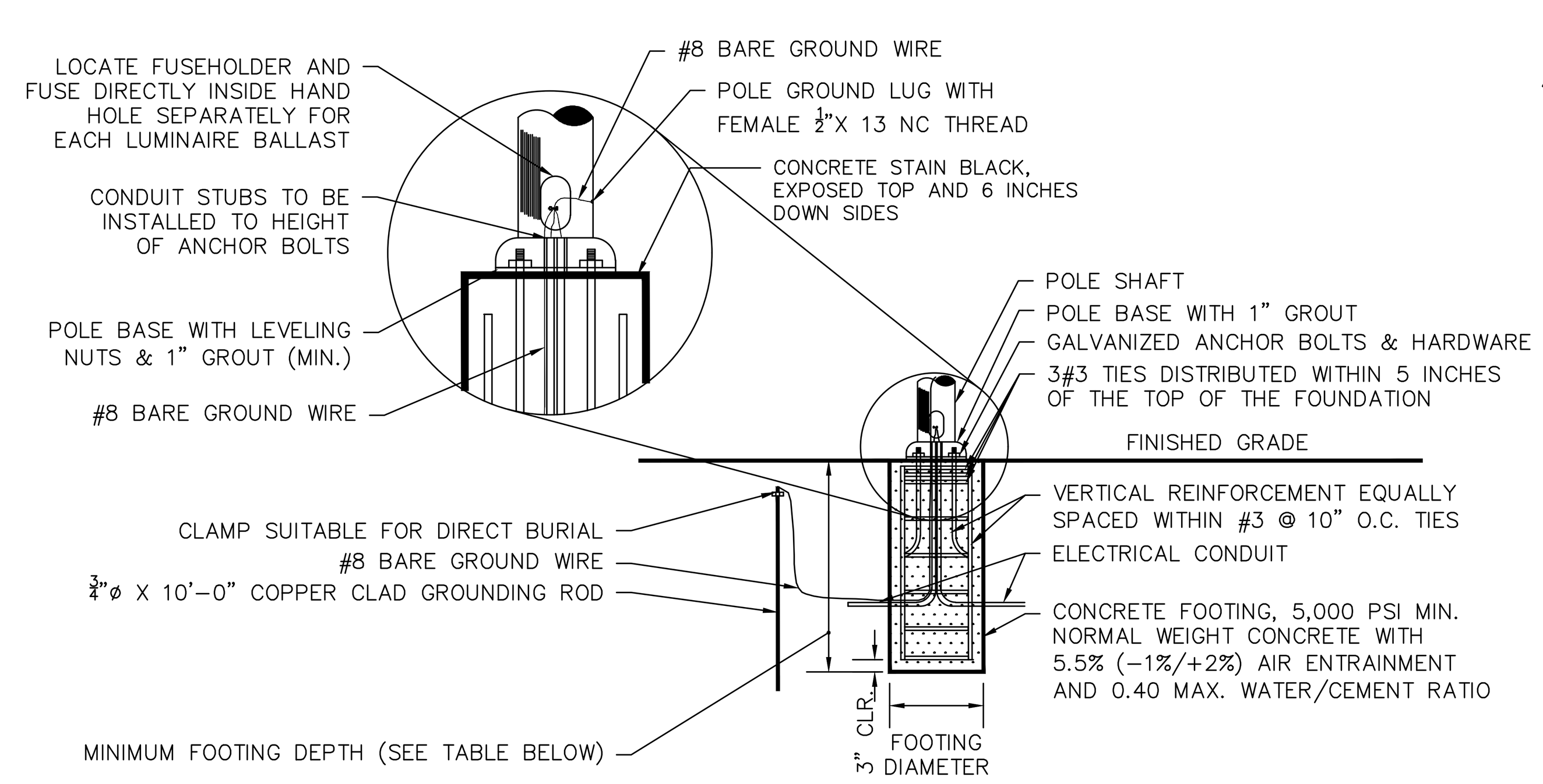
WALL MOUNTED FIXTURES

14. CONTRACTOR TO COORDINATE INSTALLATION OF ALL THE WALL MOUNTED FIXTURES AND ELECTRICAL CONNECTIONS TO SITE STRUCTURE(S) WITH BUILDING MEP, ARCHITECT, AND/OR OWNER.
15. INSTALLATION AND ELECTRICAL CONNECTIONS FOR WALL MOUNTED FIXTURES TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, UTILITY AND SITE PLANS AND TO BE IN ACCORDANCE WITH ALL APPLICABLE CODES.

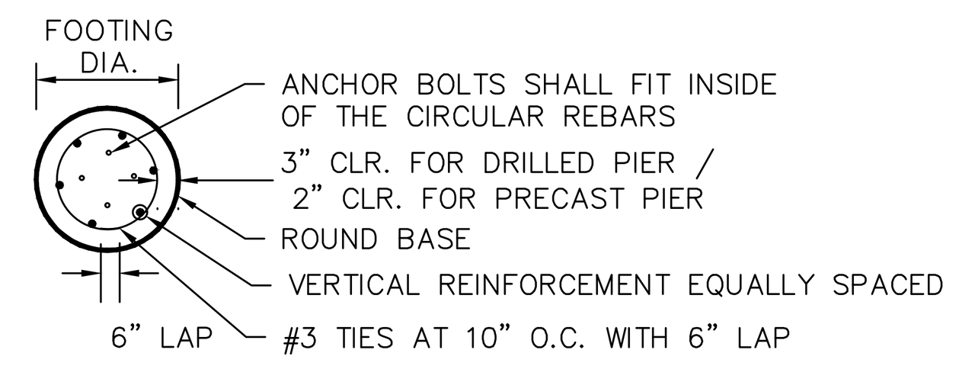
ADJUSTMENT AND INSPECTION

16. CONTRACTOR TO OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR IMPROPER CONNECTIONS AND OPERATION.
17. CONTRACTOR TO AIM AND ADJUST ALL LUMINAIRES TO PROVIDE ILLUMINATION LEVELS AND DISTRIBUTION AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT AND/OR OWNER.
18. CONTRACTOR TO CONFIRM THAT LIGHT FIXTURES, TILT ANGLE AND AIMING MATCH SPECIFICATIONS ON THE PLANS.

ALTERNATES WILL NOT BE ACCEPTED

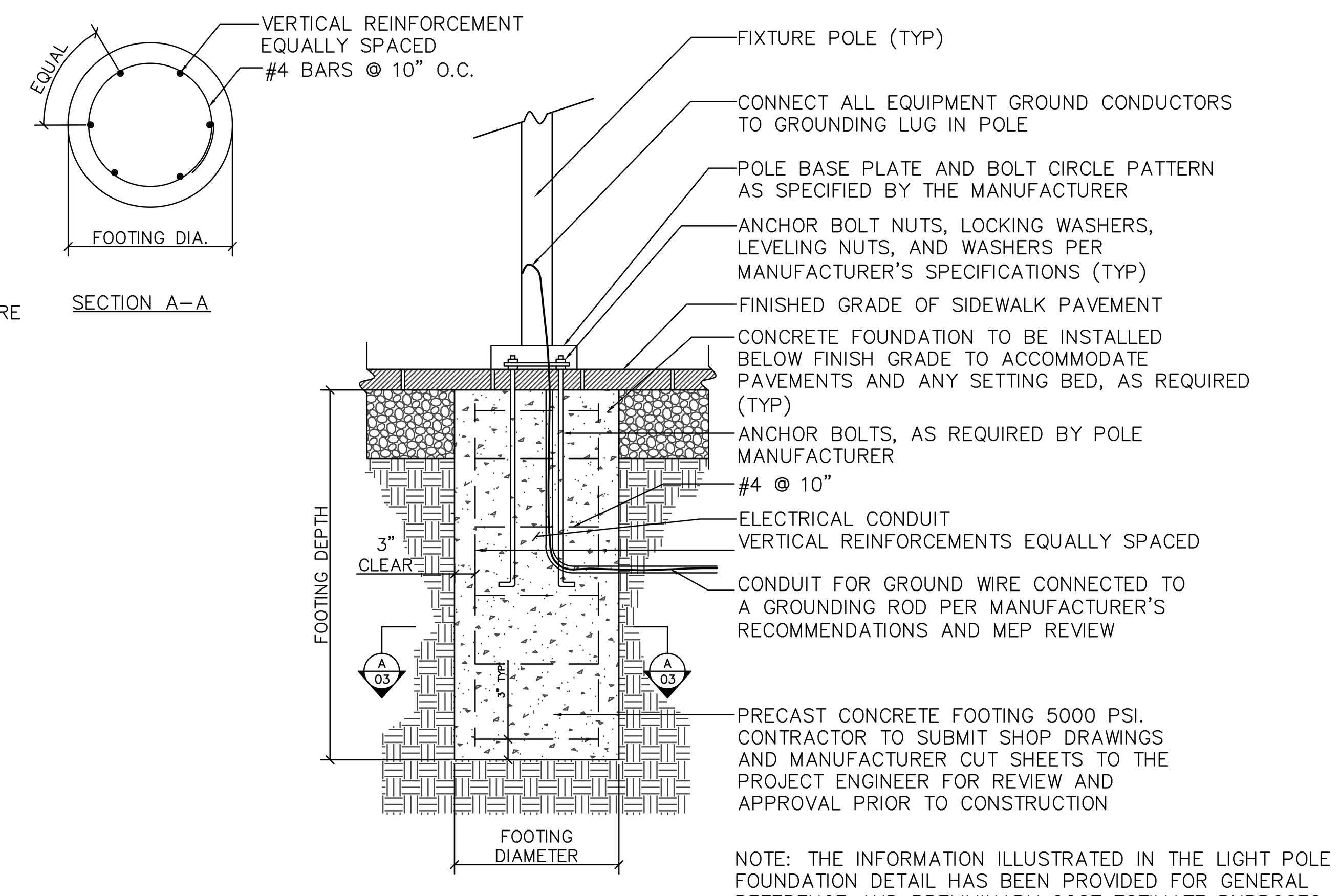


POLE BASE SECTION IN LANDSCAPE AREAS



PLAN

MOUNTING HEIGHT	FOOTING DEPTH	FOOTING DIAMETER	EXPOSED HEIGHT "H"	VERTICAL REINFORCEMENT
11'–6"	4'–6"	2'–0"	0'–0"	6#5 BARS



ON SIDEWALK PAVEMENT

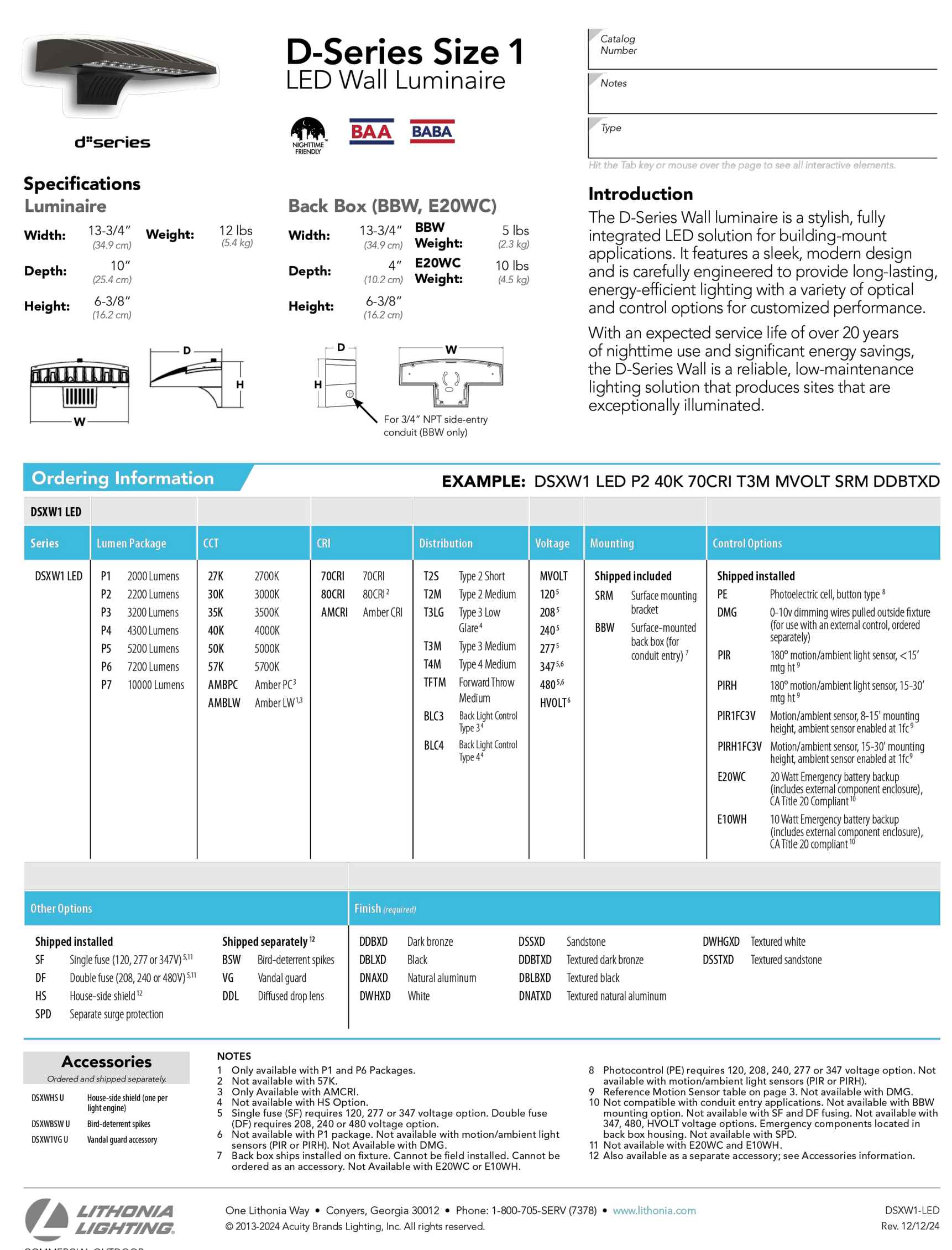
NOTE: THE INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAILED BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURERS RECOMMENDATIONS.

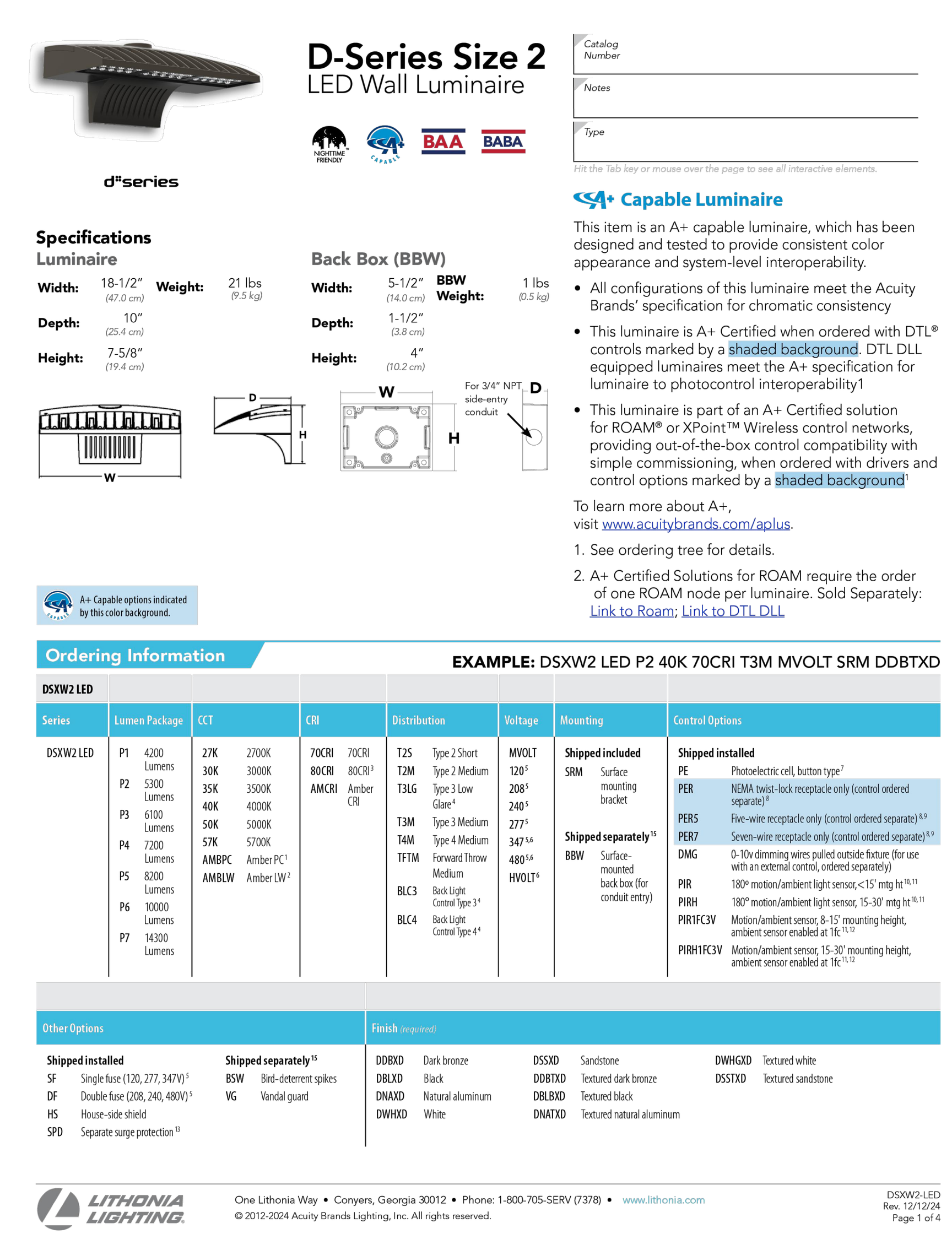
NOTES:

1. SHAFT CAP, ARMS, BASE FLANGE, ANCHOR BOLTS, LEVELING NUTS, CONNECTION HARDWARE, BOLT COVERS, HANDHOLE COVER, AND BOLT CIRCLE TEMPLATE SHALL BE FURNISHED BY POLE MANUFACTURER.
2. EACH STANDARD TO BE PROTECTED AGAINST LIGHTNING WITH AN INTERCONNECTED GROUND ROD. THIS ROD SHALL BE BONDED PER SECTION NUMBER 250–86, N.E.C.
3. CONCRETE WORK SHALL COMPLY WITH THE REQUIREMENT OF ACI 318. CAST–IN–PLACE SHALL HAVE UNCONFINED COMPRESSIVE STRENGTH OF AT LEAST 5,000 PSI AT 28–DAYS. DEFORMED REINFORCEMENT BARS SHALL CONFORM TO ASTM A615, GRADE 60.
4. CONTRACTOR TO ENSURE CONCRETE POLE BASES ARE POURED / PLACED ABSOLUTELY VERTICAL & LEVEL.
5. IF POLE BASE IS CAST–IN–PLACE, POLE BASE SHALL BE ONE CONTINUOUS POUR. EXPOSED PORTION OF POLE BASE SHALL BE HAND–RUBBED SMOOTH.
6. CONTRACTOR TO COMPACT SUBGRADE AROUND POLE BASE PER EARTHWORK SPECIFICATIONS / GEOTECH REPORT.
7. CONTRACTOR TO CONFIRM GROUNDING DESIGN WITH MEP.

THE INFORMATION ILLUSTRATED IN THE LIGHT POLE FOUNDATION DETAIL HAS BEEN PROVIDED FOR GENERAL REFERENCE AND PRELIMINARY COST ESTIMATE PURPOSES. LIGHT POLE FOUNDATIONS SHOULD BE DESIGNED AND DETAILED BY A LICENSED STRUCTURAL ENGINEER BASED ON EXISTING SOIL CONDITIONS, LOCAL DESIGN STANDARDS AND MANUFACTURERS RECOMMENDATIONS.

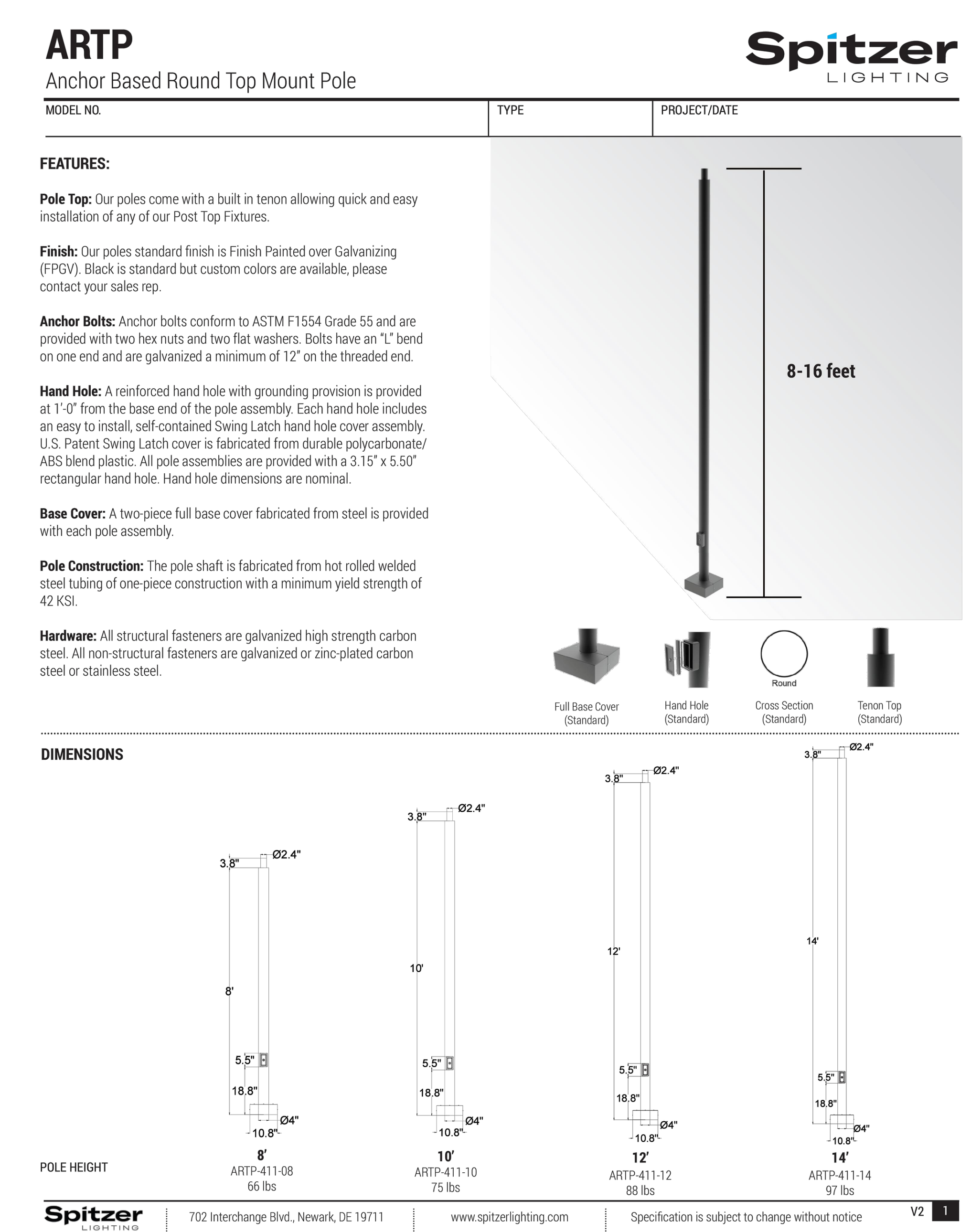
LIGHT POLE BASE NTS





WALL LIGHT FIXTURES NTS

POST-TOP LIGHT FIXTURE NTS



POST-TOP LIGHT POLE NTS

NOTES:

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4. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

Date	Description	No.
	Revisions	

Signature: 01/15/2026
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PROFESSIONAL ENGINEER N.J. Lic No. GE–39238

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NJ Certificate of Authorization No. 24GA27996400

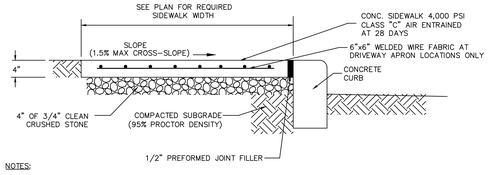
Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: LIGHTING NOTES & DETAILS

Project No. 101324801
Date 1/15/2026
Drawn By GR
Checked By DB

Drawing No. LL501

Project No. 101324801



NOTES:

1. THE FORMS AND DIVIDERS SHALL BE OF STEEL OR WOOD AND OF SUFFICIENT STRENGTH TO RESIST SPRINGING OUT OF SHAPE; DEPTH OF FORMS SHALL BE AT LEAST THE THICKNESS OF CONCRETE AS SPECIFIED ON THIS DRAWING.
2. WALK SHALL BE OF MONOLITHIC CONSTRUCTION FOUR (4) INCHES THICK. TRANSVERSE SURFACE GROOVES MUST BE PROVIDED FOR AT RIGHT ANGLES TO THE SIDEWALK AND AT INTERVALS EQUAL TO WIDTH OF THE SIDEWALK.
3. AFTER THE CONCRETE IS PLACED IT SHALL BE TAMPED, SCREEDED AND FINISHED TO TRUE GRADE AND SURFACE. THE FINISH SHALL BE MADE WITH A WOOD FLOAT, FOLLOWED BY A BRUSHING WITH A WET SOFT HAIR BRUSH TO A NEAT WORKMANLIKE SURFACE.
4. TRANSVERSE EXPANSION JOINTS 1/2 INCH WIDE SHALL BE PROVIDED AT INTERVALS OF NOT LESS THAN 16 FEET AND FILLED WITH PREFORMED BITUMINOUS CELLULAR TYPE JOINT FILLER. SCORE LINES SHALL BE EVERY FOUR (4) FEET OR TO MATCH EXISTING ADJACENT SIDEWALK.
5. LONGITUDINAL JOINTS 1/2 INCH WIDE SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALKS AND SHALL BE FILLED WITH PREFORMED BITUMINOUS TYPE FILLER.

1 CONCRETE SIDEWALK

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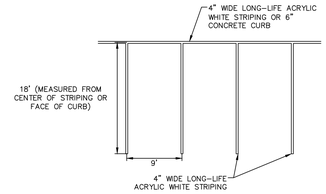

2 STANDARD CAR PARKING STRIPING

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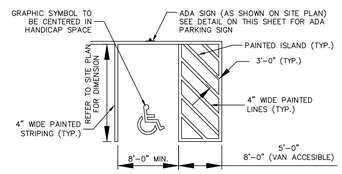
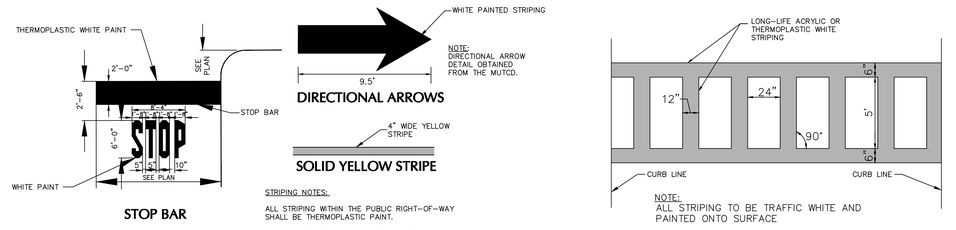


NOTES:

1. REFER TO SITE PLAN FOR DIMENSIONS OF EACH PROPOSED ADA PARKING STALL.
2. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE F, PAINT SHALL BE APPLIED AS SPECIFIED BY THE MANUFACTURER.
3. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN DISABILITIES ACT AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION.
4. THE MINIMUM DIMENSIONS ARE SHOWN. STATE REGULATORS MAY REQUIRE LARGER DIMENSIONS.
5. APPLY 2 COATS OF TRAFFIC PAINT. ALLOW FOR MINIMUM CURE TIME OF 24 HOURS BETWEEN APPLICATIONS.
6. SYMBOLS & PARKING STALL STRIPING TO BE PAINTED BLUE.

3 ACCESSIBLE PARKING STALL STRIPING

NTS



STOP BAR

STRIPING NOTES:

ALL STRIPING WITHIN THE PUBLIC RIGHT-OF-WAY SHALL BE THERMOPLASTIC PAINT.

ALL ON-SITE STRIPING MAY BE PAINTED LONG LIFE ACRYLIC OR THERMOPLASTIC.

DIRECTIONAL ARROW DETAIL OBTAINED FROM THE MUTCD.

NOTE:
ALL STRIPING TO BE TRAFFIC WHITE AND PAINTED ONTO SURFACE

4 PAVEMENT MARKINGS

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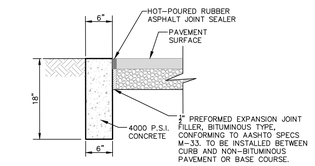


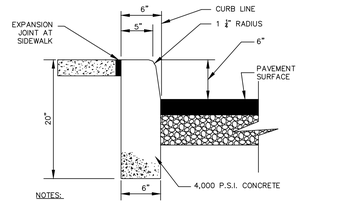
NOTES:

1. CONCRETE TO TEST 4,000 P.S.I. MINIMUM ON 28 DAY TEST. AIR ENTRAINMENT 4% TO 7%, SLUMP TO BE 3" MAXIMUM.
2. TRANSVERSE JOINTS 1/2" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS JOINT FILLER.
3. EXPOSED CONCRETE SURFACE IS TO BE RUBBED TO PROVIDE SMOOTH FINISHED SURFACE.

5 FLUSH CONCRETE CURB

***FLUSH CONCRETE CURB TO BE PROVIDED AT ALL ADA RAMPS**

NTS

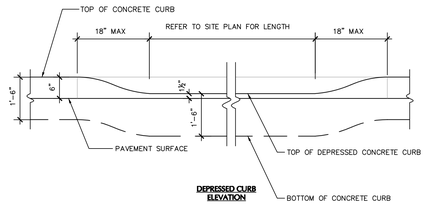


NOTES:

1. CONCRETE TO TEST 4,000 P.S.I. MINIMUM ON 28 DAY TEST. AIR ENTRAINMENT 4% TO 7%, SLUMP TO BE 3" MAXIMUM.
2. TRANSVERSE JOINTS ½" WIDE SHALL BE INSTALLED IN THE CURB 20'-0" APART AND SHALL BE FILLED WITH PREFORMED BITUMINOUS JOINT FILLER, RECESSED 1/4" FROM THE FRONT FACE AND TOP OF THE CURB. EXPANSION JOINTS ALSO BE INSTALLED WHERE THE CURB IS ADJACENT TO SIDEWALKS AND CATCH BASINS.
3. EXPOSED CONCRETE SURFACE IS TO BE RUBBED TO PROVIDE SMOOTH FINISHED SURFACE.
4. CURB REVEAL TO BE 1.5" AT DEPRESSED CURB/DRIVEWAY ENTRANCES LOCATIONS.

6 6" CONCRETE CURB

NTS



DEPRESSED CURB ELEVATION

7 DEPRESSED CONCRETE CURB ELEVATION

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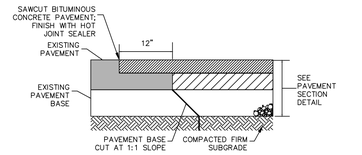
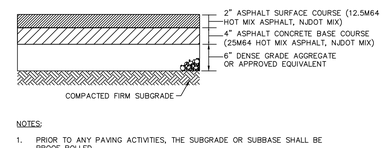


NOTE:
1. CONTRACTOR TO INSTALL TACK COAT ON ALL BUTT EDGES OF EXISTING PAVEMENT.

8 SAWCUT AND JOINT SECTION

NTS

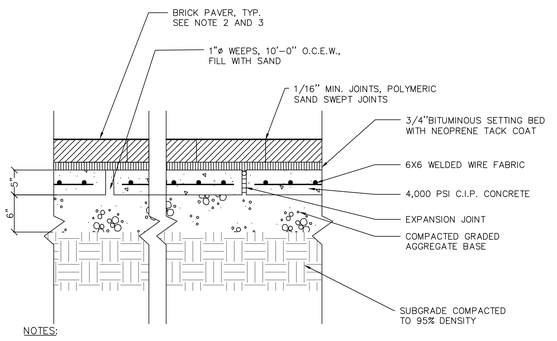


NOTES:

1. PRIOR TO ANY PAVING ACTIVITIES, THE SUBGRADE OR SUBBASE SHALL BE PROOF ROLLED.
2. PAVING BASECOURSE SHALL BE CONSTRUCTED IN LAYERS NOT LESS THAN 2 INCHES AND NOT MORE THAN 5 INCHES THICK PER LIFT.
3. ALL AREAS TO BE PAVED SHALL BE PROOFROLLED WITH EITHER A SMOOTH ROLLER HAVING A MINIMUM STATIC DRUM WEIGHT OF 5-TONS OR A FULLY LOADED TANDEM DUMP TRUCK. ANY SOFT AREAS SHALL BE REMOVED AND REPLACED WITH CLEAN, GRANULAR, FREE-DRAINING SOIL. FILL SHALL BE PLACED IN LOOSE LIFTS NOT TO EXCEED 12-INCHES AND SHALL BE COMPACTED TO AT LEAST 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-1557.

9 ASPHALT PAVEMENT

NTS



NOTES:

1. EXPANSION JOINTS TO BE INSTALLED AT ALL CURB LINES AND VERTICAL ELEMENTS.
2. PAVER STRIP ALONG MILLBURN AVENUE AND ESSEX STREET TO MATCH EXISTING RED BRICK PAVERS ON WEST SIDE OF ESSEX STREET AND NORTH SIDE OF MILLBURN AVENUE WEST OF THE PROJECT SITE. CONTRACTOR TO PROVIDE BRICK SAMPLES FOR SELECTION AND APPROVAL BY TOWNSHIP.
3. PEDESTRIAN PAVER WALKWAY LOCATED WITHIN THE PROJECT SITE SHOULD REFER TO LANDSCAPE DRAWINGS FOR PAVER MATERIAL AND PATTERN.

10 PEDESTRIAN PAVER

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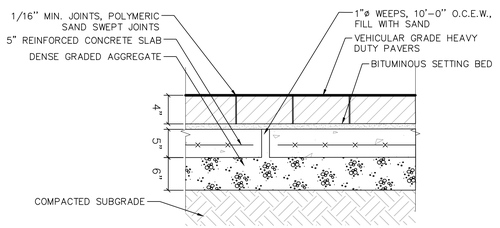

NOTES:

1. REFER TO LANDSCAPE DRAWINGS FOR PAVER MATERIAL AND PATTERN STYLE.

11 VEHICULAR PAVER

NTS

NOTES:

1. ACCESSIBLE PARKING SIGN SHALL CONFORM WITH CURRENT STATE AND LOCAL CODES AND REGULATIONS.
2. ADD A "VAN ACCESSIBLE" SIGN WHERE APPLICABLE BETWEEN RESERVED PARKING SIGN AND PENALTY SIGN.
3. ALL SIGNS AND PAVEMENT STRIPING SHALL BE IN COMPLIANCE WITH THE CURRENT MUTCD.

12 ACCESSIBLE PARKING SIGN

NTS

TYPICAL SIGN POST

NOTES:

1. ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS".
2. ALL POSTS SHALL BE EMBEDDED 4'-2" MINIMUM BELOW GRADE.
3. ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH CURRENT A.S.T.M. SPECIFICATION A123-78 (OR LATEST REVISED).
4. POSTS MAY BE STEEL, ALUMINUM, OR TWO-PIECE U-POST.
5. SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBERS AS SHOWN ON THIS DETAIL AND SITE PLAN.
6. BOLTS SHALL NOT PROTRUDE MORE THAN ¾" BEYOND THE NUT WHEN TIGHT BUT SHALL ENGAGE ALL THREADS IN THE NUT.
7. ALL TRAFFIC AND PEDESTRIAN SIGNAGE AND LOCATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ALL CURRENT AMENDMENTS.
8. EDGE OF SIGNS SHALL BE PLACED A MINIMUM OF 2 FEET FROM EDGE OF SIGN PANEL TO CURB OR EDGE OF PAVEMENT/TRAVEL WAY.

13 TRAFFIC SIGN POST

NTS

No.	Description	Date
	Revisions	

Leonard D. Savino 01/15/2026
Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE-39238

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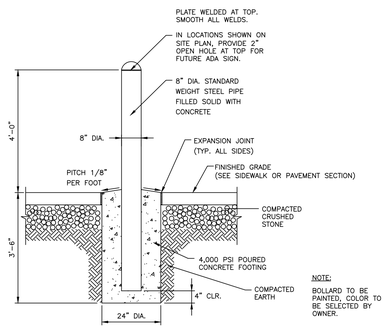
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
CONSTRUCTION DETAILS I

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By BMW

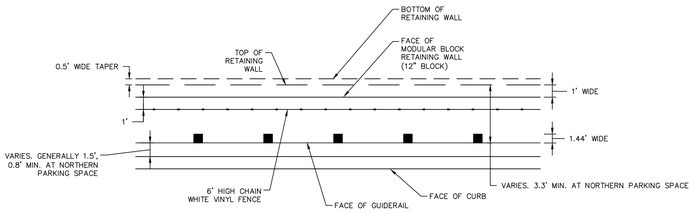
Drawing No. CS501

Project No. 101324801
Date: 1/15/2026 Time: 11:14 User: gchieff Style Table: Langan.stb Layout: CS501 Document Code: 101324801-0101-CS501-0101



1 8" DIA. BOLLARD

NTS



NOTES:

1. MINIMUM DISTANCE FROM FACE OF GUIDERAIL TO BACK OF CURB IS 0.8' AS NOTED ON SITE PLAN.

2 CURB, GUIDERAIL, FENCE & WALL SETBACK DETAIL

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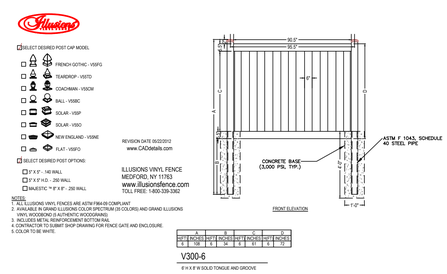

3 6-FT HIGH WHITE VINYL FENCE

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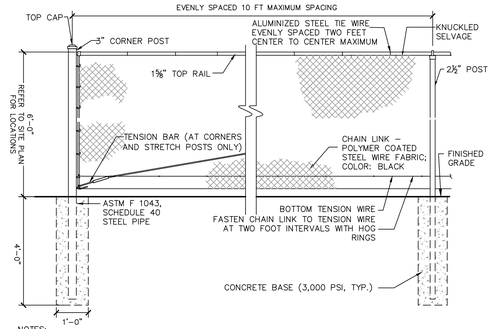
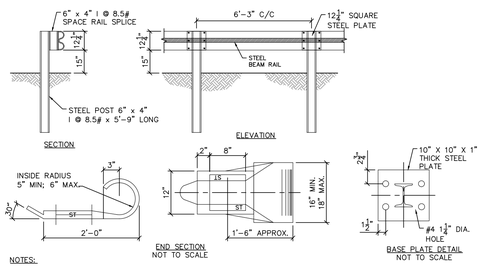


NOTES:

1. COORDINATE FINAL FENCE FABRICATION, INCLUDING ELEVATION/PROFILE, GRADES AND REQUIREMENTS.
2. SUBMIT SHOP DRAWINGS SHOWING FABRICATED FENCES FOR REVIEW AND APPROVAL.
3. SUBMIT SHOP DRAWINGS FOR VINYL FENCE, VINYL FENCE GATE, AND BOARD ON BOARD FENCE FOR REVIEW AND APPROVAL.

4 6' HIGH CHAIN LINK FENCE

NTS



NOTES:

1. GUIDE RAIL SHALL BE CLASS A, TYPE 1, CONFORMING TO CURRENT AASHTO SPECIFICATIONS.
2. GUIDE RAIL LAPS TO BE IN DIRECTION OF TRAFFIC FLOW.

5 STEEL GUIDE RAIL

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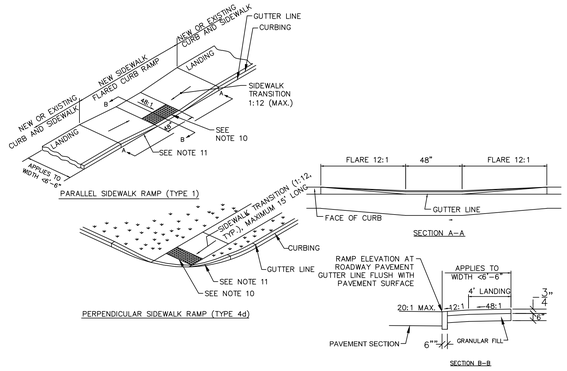

PROJECT SPECIFIC NOTES

1. CONTRACTOR TO REFER TO SITE PLAN DRAWING FOR PROJECT SPECIFIC LAYOUT.
2. CURB ALONG FLUSH LANDING AND FLARES TO BE CONCRETE.
3. REFER TO GRADING PLAN DRAWING FOR PROJECT SPECIFIC GRADES.

GENERAL NOTES FOR SIDEWALK RAMPS:

1. MAXIMUM SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE SIDEWALK RAMP OR ACCESSIBLE ROUTE SHOULD NOT EXCEED 20:1.
2. CARE SHALL BE TAKEN TO ASSURE UNIFORM GRADE ON THE RAMP, FREE OF SAGS AND ABRUPT GRADE CHANGES.
3. SIDEWALK RAMPS SHALL HAVE A COARSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP. THE SURFACE ALONG ACCESSIBLE ROUTES SHALL BE STABLE, FIRM AND SLIP RESISTANT IN COMPLIANCE WITH ADA SECTION 4.5.
4. PERPENDICULAR SIDEWALK RAMPS AT MARKED CROSSINGS SHALL BE WHOLLY CONTAINED WITHIN THE MARKINGS, EXCLUDING ANY FLARED SIDES.
5. REMOVAL OF EXISTING SIDEWALK FOR NEW RAMP INSTALLATIONS SHALL BE TO THE NEAREST EXPANSION/CONTRACTION JOINT OR DUMMY JOINT. 12:1 MAY NOT BE ACHIEVABLE DUE TO SIDEWALK GRADE. IN RECOGNITION OF THIS, A MINIMUM LIMIT OF 15' FOR A PARALLEL RAMP SHALL BE USED. REMOVAL SHALL NOT BE FURTHER THAN 2' FROM THE PROPOSED RAMP UNLESS DIRECTED BY THE ENGINEER.
6. EXPANSION JOINTS IN CONCRETE SHALL MATCH THOSE IN ADJACENT SIDEWALKS BUT IN NO CASE SHALL THE SPACING BETWEEN EXPANSION JOINTS EXCEED 12' UNLESS OTHERWISE NOTED.
7. TRANSITION TO FULL HEIGHT CURB. INSTALL STONE CURBING IF ADJACENT CURBING IS STONE. INSTALL CONCRETE CURBING IF ADJACENT CURBING IS CONCRETE OR BITUMINOUS.
8. INSTALL THE EDGE OF THE DETECTABLE WARNING 6" FROM THE EDGE OF ROAD (ALONG THE BACK OF CURB).
9. TO PERMIT WHEELCHAIR WHEELS TO ROLL BETWEEN DOMES, ALIGN DOMES ON A SQUARE GRID. IN THE DIRECTION OF PEDESTRIAN TRAVEL.
10. PROVIDE SHOP DRAWINGS FOR THE DETECTABLE WARNING STRIP FOR REVIEW AND APPROVAL. THE TILE SHALL CONFORM TO THE DIMENSIONS SHOWN ON THE PLANS. THE PREFABRICATED WARNING STRIP SHALL BE CAST-IN-PLACE IN THE CONCRETE CURB RAMP.
11. RADIAL DETECTABLE WARNING STRIPS TO BE PROVIDED AT LOCATIONS INDICATED ON PLANS.
12. THE BOTTOM OF THE RAMP SHALL MEET THE GUTTER LINE AT THE CURB FACE.

6 ACCESSIBLE CONCRETE CURB RAMP

***DETECTABLE WARNING SURFACE TO BE PROVIDED AT ALL ADA ACCESSIBLE RAMPS**

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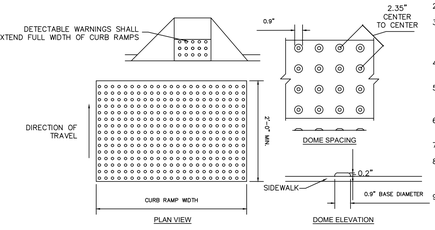

NOTES:

1. DETECTABLE WARNINGS SHALL BE CONSTRUCTED PER MANUFACTURER'S SPECIFICATIONS.
2. WIDTH OF DETECTABLE WARNING AREA SHALL BE FULL WIDTH OF RAMP.
3. LENGTH OF DETECTABLE WARNING AREA SHALL BE MINIMUM 2 FEET REGARDLESS OF SECTION WIDTH. FOR CURB RAMPS, THE DETECTABLE WARNING SHALL EXTEND THE FULL DEPTH OF THE RAMP AND COMPLY WITH ADAAG 4.29.2 AND PROWAG REQUIREMENTS.
4. DETECTABLE WARNING AREA CAN BE SQUARE WHERE USED IN A CURB RADIUS.
5. DETECTABLE WARNING DOMES SHALL BE ALIGNED ON A SQUARE GRID PARALLEL ALIGNMENT IN THE PREDOMINANT DIRECTION OF OF TRAVEL TO PERMIT WHEELS TO TRAVEL BETWEEN DOMES.
6. DETECTABLE WARNING DOMES SHALL BE PLACED SO THE EDGE NEAREST THE CURB IS 6 INCHES TO 8 INCHES FROM CURB LINE.
7. MAT EDGES SHALL BE BEVELED TO ELIMINATE TRIP HAZARD.
8. DETECTABLE WARNING COLOR SHALL CONTRAST WITH ADJOINING SURFACES. CONTRACTOR SHALL SUBMIT SHOP DRAWING FOR "SAFETY YELLOW" OR APPROVED EQUAL.
9. CONTRACTOR SHALL OBTAIN LOCAL AUTHORITY, OWNER'S ENGINEER, AND OWNER'S APPROVAL FOR COLOR AND MANUFACTURER PRIOR TO INSTALLATION.

7 ADA DETECTABLE WARNING SURFACE

***DETECTABLE WARNING SURFACE TO BE PROVIDED AT ALL ADA ACCESSIBLE RAMPS**

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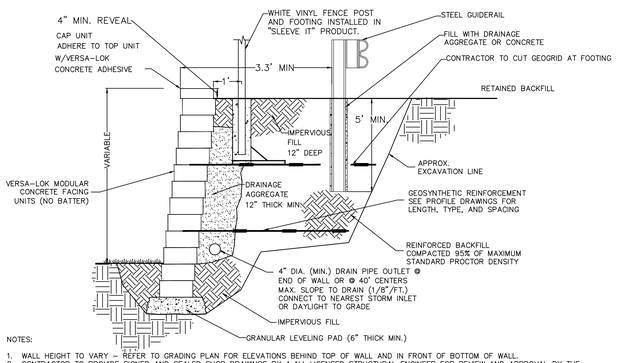

NOTES:

1. WALL HEIGHT TO VARY – REFER TO GRADING PLAN FOR ELEVATIONS BEHIND TOP OF WALL AND IN FRONT OF BOTTOM OF WALL.
2. CONTRACTOR TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS BY A NJ-LICENSED STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL BY THE OWNER'S ENGINEER. SHOP DRAWINGS SHALL INCLUDE CALCULATIONS AND A PLAN AND PROFILE VIEW VERIFYING THE TOP OF WALL BLOCK IS A MINIMUM OF 4 INCHES ABOVE THE PROPOSED GRADE BEHIND THE WALL.
3. ALL RETAINING WALL CONSTRUCTION SHALL BE INSPECTED BY A NJ-LICENSED PROFESSIONAL ENGINEER.
4. CONTRACTOR TO PROVIDE SIGNED AND SEALED SHOP DRAWINGS BY A NJ-LICENSED STRUCTURAL ENGINEER FOR FENCE EMBEDMENT IN RETAINING WALL FOR REVIEW AND APPROVAL BY THE OWNER'S ENGINEER.

8 TYPICAL MODULAR BLOCK RETAINING WALL DETAIL

NTS

Date	Description	No.
	Revisions	

Leonard D. Savino 01/15/2026
Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE-39238

LANGAN
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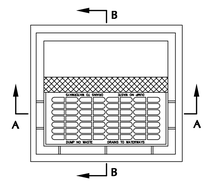
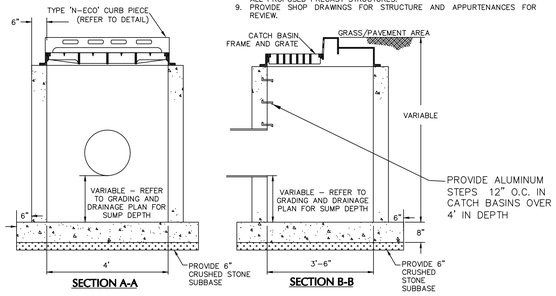


GENERAL NOTES

1. THE PRECAST MANUFACTURER IS RESPONSIBLE FOR STRUCTURAL DESIGN OF ALL PROPOSED PRECAST STRUCTURES. CONTRACTOR MUST PROVIDE SHOP DRAWINGS FOR REVIEW.
2. FOOTER AND INVERT TO BE NJDOT CLASS "C" CONCRETE.
3. IF WALL CONSTRUCTION OTHER THAN CONCRETE THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
4. CASTING TO BE CAMPBELL FOUNDRY NO. 2618 OR EQUIVALENT WITH TYPE N – ECO CURB PIECE.
5. PROVIDE ALUMINUM ALCO STEPS 606176 12" O.C. IN CATCH BASIN OVER 4' IN DEPTH. MAX. DIST. BETWEEN BOTTOM STEP AND BOTTOM OF INLET SHALL BE 18".
6. WHEN ADDITIONAL DEPTH IS SCHEDULED WALLS BELOW THE DEPTH OF 8'–0" MEASURED FROM THE INLET GUTTER TO INVERT, SHALL BE 12" THICK. IF CONCRETE OR DOUBLE BLOCK IF BLOCK. THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND TO 12" IN DEPTH.
7. SHALL MEET NJDOT STANDARDS AND H20 LOADING.
8. PRECAST MANUFACTURER IS RESPONSIBLE FOR STRUCTURAL DESIGN OF ALL PROPOSED PRECAST STRUCTURES.
9. PROVIDE SHOP DRAWINGS FOR STRUCTURE AND APPURTENANCES FOR REVIEW.



1 TYPE 'B' CATCH BASIN WITH CURB PIECE

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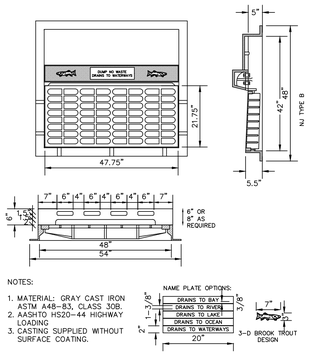
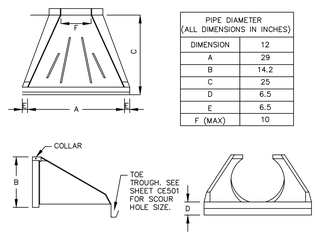


NOTES:

1. MATERIAL: GRAY CAST IRON ASTM A48–83, CLASS 30B.
2. AASHTO HS20–44 HIGHWAY LOADING
3. CASTING SUPPLIED WITHOUT SURFACE COATING.

2 CURB INLET WITH BICYCLE SAFE GRATE AND TYPE 'N-ECO' CURB PIECE

NTS



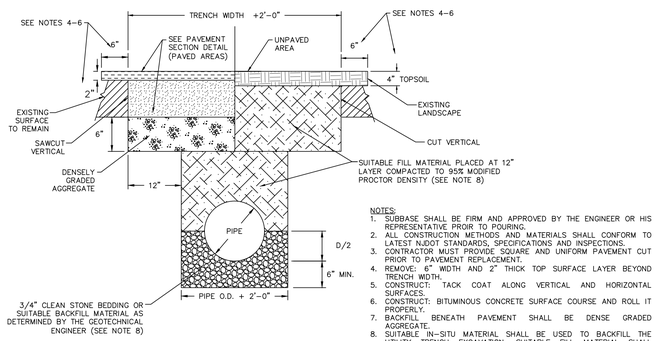
PIPE DIAMETER (ALL DIMENSIONS IN INCHES)	
DIMENSION	12
A	29
B	14.2
C	25
D	6.5
E	6.5
F (MAX)	10

NOTES:

1. PROVIDE SHOP DRAWINGS REVIEW AND APPROVAL.
2. THE HDPE FLARED END SECTIONS SHALL BE IN ACCORDANCE WITH ADS'S HDPE FLARED END SECTION SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.

3 HDPE FLARED END SECTION

NTS

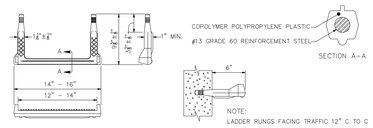


NOTES:

1. SUBBASE SHALL BE FIRM AND APPROVED BY THE ENGINEER OR HIS REPRESENTATIVE PRIOR TO POURING.
2. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO LATEST NJDOT STANDARDS, SPECIFICATIONS AND INSPECTIONS.
3. CONTRACTOR MUST PROVIDE SQUARE AND UNIFORM PAVEMENT CUT PRIOR TO PAVEMENT REPLACEMENT.
4. REMOVE: 6" WIDTH AND 2" THICK TOP SURFACE LAYER BEYOND TRENCH WIDTH.
5. CONSTRUCT: TACK COAT ALONG VERTICAL AND HORIZONTAL SURFACES.
6. CONSTRUCT: BITUMINOUS CONCRETE SURFACE COURSE AND ROLL IT PROPERLY.
7. BACKFILL BENEATH PAVEMENT SHALL BE DENSE GRADED AGGREGATE.
8. SUITABLE IN–SITU MATERIAL SHALL BE USED TO BACKFILL THE UTILITY TRENCH EXCAVATION. SUITABLE FILL MATERIAL SHALL CONSIST OF SAND AND GRAVEL MIXTURE HAVING A MAXIMUM PARTICLE SIZE OF 4 INCHES. ALL IMPORTED FILL MATERIAL MUST MEET THE DEFINITION OF CLEAN FILL DESCRIBED IN NJDEP'S "ALTERNATIVE AND CLEAN FILL GUIDANCE FOR SRP SITES" DATED DECEMBER 2011.

4 PIPE INSTALLATION AND PAVEMENT RESTORATION

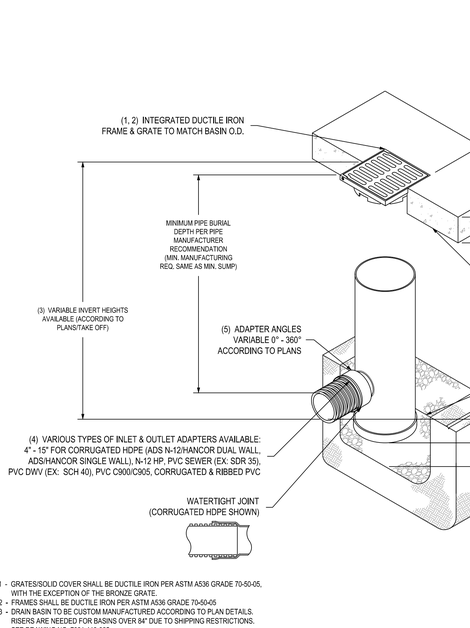
NTS



REF: NEW JERSEY DEPARTMENT OF TRANSPORTATION DETAIL (CD–602–1.5)

5 COPOLYMER PLASTIC LADDER RUNG

NTS



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1599CGP	7001-110-207
STANDARD	MEETS H-20	1599CGS	7001-110-208
SOLID COVER	MEETS H-20	1599CGC	7001-110-209
PEDESTRIAN BRONZE	N/A	1599CGPB	7001-110-210
DOME	N/A	1599CGD	7001-110-211
DROP IN GRATE	LIGHT DUTY	1501DI	7001-110-073

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

NOTES:

1. DETAIL OBTAINED FROM ADS WEBSITE.
2. PROVIDE SHOP DRAWINGS REVIEW AND APPROVAL.
3. REFER TO DRAINAGE STRUCTURE SCHEDULE ON CG102 FOR GRATE OPTIONS FOR EACH YARD DRAIN.

6 NYLOPLAST DRAIN BASIN

NTS

Date	Description	No.
Revisions		

Leonard D. Savino 01/15/2026
Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE–39238

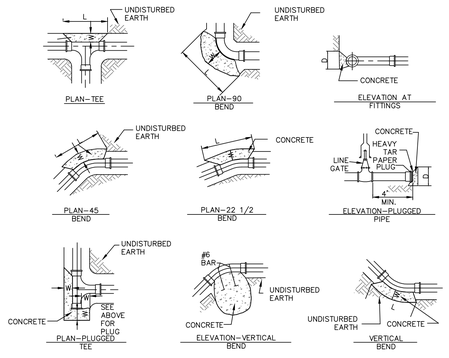
LANGAN
Langan Engineering and Environmental Services, LLC.
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project
AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
CONSTRUCTION DETAILS III

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By BMW

Drawing No. CS503



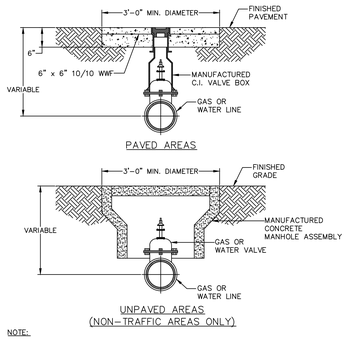
THRUST BLOCK SCHEDULE									
PIPE	TEE		22 1/2°		45°		90°		W
SIZE	L	D	L	D	L	D	L	D	
6"	18"	15"	15"	12"	15"	12"	15"	15"	21"
8"	2'	18"	18"	12"	18"	12"	2'	18"	2'
12"	3'	2'	2'	12"	2'	12"	3'	2'	28"
16"	4'	2.5'	2'	12"	2.33	15"	4'	2.5'	31"
20"	5.25	3'	2'	18"	3'	2'	5.24	3'	33"
24"	7.5'	3'	3'	18"	4'	2.5'	7.5'	3'	3'

BASIS:
2,500 LB/SQ.FT. SOIL RESISTANCE 100 PSI
WATER PRESSURE CORRECTION FACTORS
FOR OTHER SOILS:

SOFT CLAY	4
SAND	2
SAND & GRAVEL	1.33
SHALE	0.4

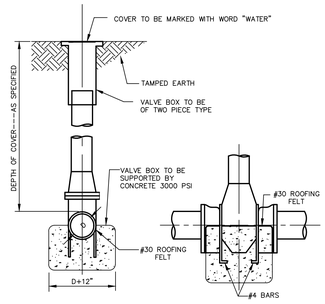
NOTES:
1. IF SOFT MATERIALS ARE ENCOUNTERED, THE THRUST BLOCKS SIZES SHALL BE ADJUSTED ACCORDINGLY.
2. CONCRETE TO BE 4000 PSI.

1 THRUST BLOCKS
NTS

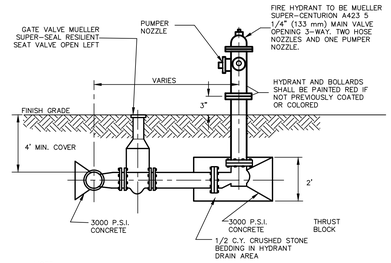


NOTE:
WORD "WATER" OR "GAS" CAST INTO CENTER OF CAST IRON CAP OR CONCRETE LID.

2 WATER VALVE BOX
NTS

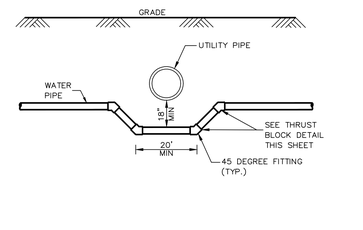


3 GATE VALVE
NTS



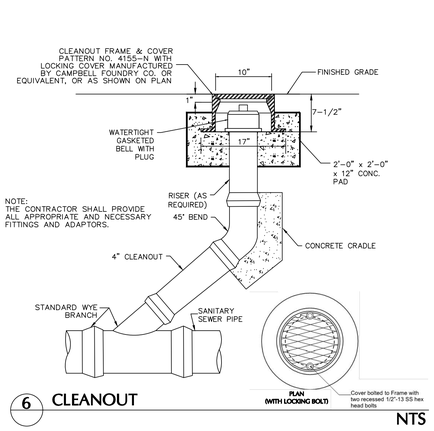
NOTE:
1. TYPE OF HYDRANT TO BE MUELLER SUPER–CENTURION A423.
2. ALL PUMPER NOZZLES TO BE INSTALLED FACING TRAVELED WAY.
3. FIRE HYDRANT THREADS TO COMPLY WITH BOROUGH OF CHATHAM. CONTRACTOR TO PROVIDE FIRE HYDRANT ACCESSORY SUBMITTAL TO THE BOROUGH FOR REVIEW AND APPROVAL.

4 FIRE HYDRANT DETAIL
NTS

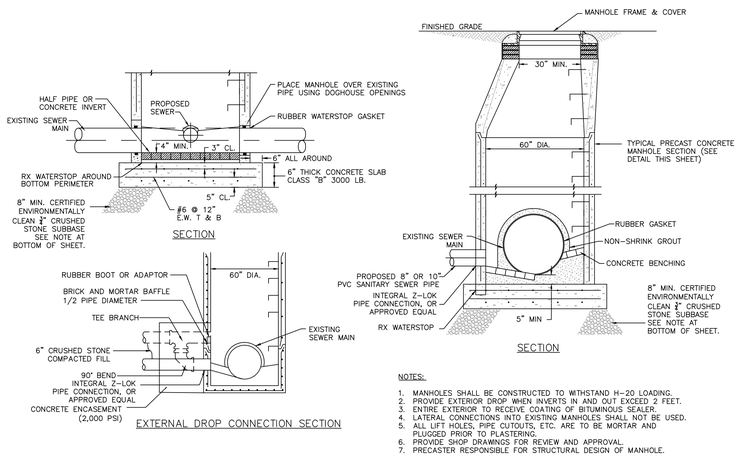


NOTE:
1. ONE FULL LENGTH OF WATER PIPE SHOULD BE CENTERED UNDER THE CROSS PIPE SO THAT ALL JOINTS WILL BE AS FAR FROM THE CROSSING AS POSSIBLE.

5 DEPRESSED WATER LINE
NTS

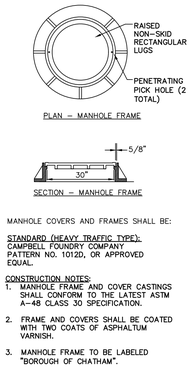


6 CLEANOUT
NTS



NOTES:
1. MANHOLES SHALL BE CONSTRUCTED TO WITHSTAND H–20 LOADING.
2. PROVIDE EXTERIOR DROP WHEN INVERTS IN AND OUT EXCEED 2 FEET.
3. ENTIRE EXTERIOR TO RECEIVE COATING OF BITUMINOUS SEALER.
4. LATERAL CONNECTIONS INTO EXISTING MANHOLES SHALL NOT BE USED.
5. ALL LIFT HOLES, PIPE CUTOUTS, ETC. ARE TO BE MORTAR AND PLUGGED PRIOR TO PLASTERING.
6. PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL.
7. PRECASTER RESPONSIBLE FOR STRUCTURAL DESIGN OF MANHOLE.

8 DOGHOUSE SANITARY SEWER MANHOLE AND EXTERNAL DROP CONNECTION
NTS



MANHOLE COVERS AND FRAMES SHALL BE:

STANDARD (HEAVY TRAFFIC TYPE):
CAMPBELL FOUNDRY COMPANY
PATTERN NO. 10120, OR APPROVED EQUAL.

CONSTRUCTION NOTES:
1. MANHOLE FRAME AND COVER CASTINGS SHALL CONFORM TO THE LATEST ASTM A–48 CLASS 30 SPECIFICATION.
2. FRAME AND COVERS SHALL BE COATED WITH TWO COATS OF ASPHALTUM VARNISH.
3. MANHOLE FRAME TO BE LABELED "BOROUGH OF CHATHAM".

5 MANHOLE FRAME AND COVER
NTS

Date	Description	No.
Revisions		

Leonard D. Savino 01/15/2026
Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE–39238

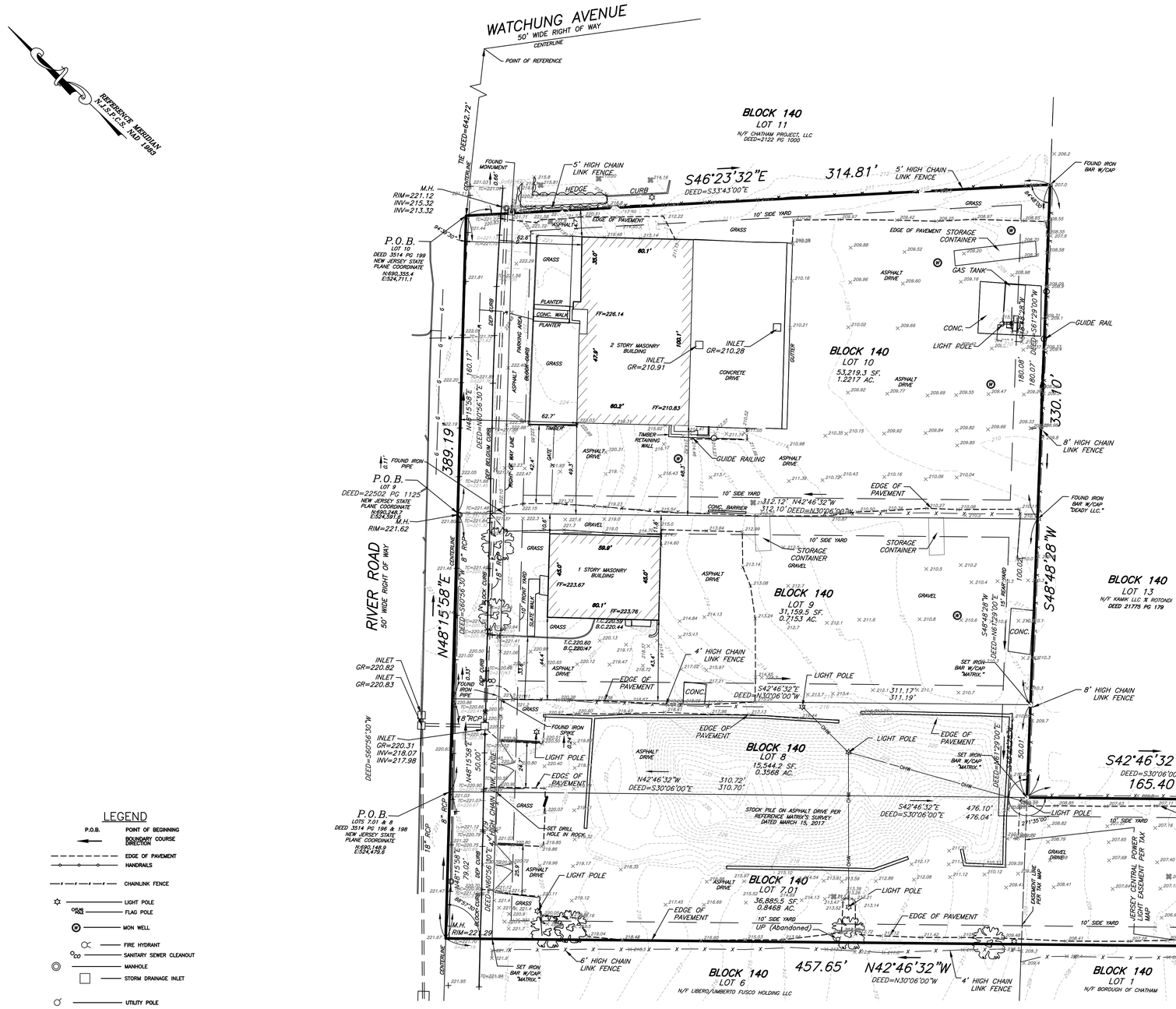
LANGAN
Langan Engineering and Environmental Services, LLC.
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No: 24GA27996400

Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: CONSTRUCTION DETAILS IV

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By BMW

Drawing No. CS504



SOURCE: BING MAP

KEY MAP

LEGEND

- P.O.B. — POINT OF BEGINNING
- BOUNDARY COURSE DIRECTION
- EDGE OF PAVEMENT
- HANDRAILS
- CHAINLINK FENCE
- LIGHT POLE
- FLAG POLE
- MON WELL
- FIRE HYDRANT
- SANITARY SEWER CLEANOUT
- MANHOLE
- STORM DRAINAGE INLET
- UTILITY POLE
- GUY ANCHOR
- GAS VALVE
- X TW=0.00 — TOP OF WALL
- X BW=0.00 — BOTTOM OF WALL
- X 4.3 — SPOT GRADE
- X FF — FINISHED FLOOR GRADE
- X TC=0.00 — TOP OF CURB
- X BC=0.00 — BOTTOM OF CURB
- CURB LINE
- DEPRESSED CURB
- CENTERLINE OF ROAD

GRAPHIC SCALE
30 20 10 0 30 60 90

DEED REFERENCES:

1. LOT 6, DEED BOOK 21510 PAGE 1463
2. LOT 7.01, DEED BOOK 3514 PAGE 196
3. LOT 7.02, DEED BOOK 21775 PAGE 181
4. LOT 8, DEED BOOK 3514 PAGE 198
5. LOT 9, DEED BOOK 22502 PAGE 1125
6. LOT 10, DEED BOOK 3514 PAGE 199
7. LOT 11, DEED BOOK 6142 PAGE 266
8. LOT 13, DEED BOOK 21775 PAGE 177

NOTES:

1. KNOWN AND DESIGNATED AS TAX MAP LOTS 7.01, 8, 9, AND 10, BLOCK 140 AS SHOWN ON THE CURRENT TAX ASSESSMENT MAPS OF THE BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY, TAX SHEET No. 22.
2. VERTICAL DATUM – NAVD 1988; BASED ON GPS OBSERVATIONS BY MATRIX NEW WORLD ON AUGUST 12, 2013 AND REFERRING TO LEICA SMARTNET CONTINUOUSLY OPERATING REFERENCE STATION (CORS) NETWORK, NATIONAL GEODETIC SURVEY MONUMENT: CORS STATION "NJ12", (PID–AJ3348)
3. THE EXISTING CONDITIONS SHOWN HEREON IS BASED ON A FIELD SURVEY PREFORMED BY MATRIX NEW WORLD ON DECEMBER 7, 2016. UPDATED ON SEPTEMBER 29, 2025
4. LOT AND ROAD RIGHT–OF–WAY LINES SHOWN HEREON OUTSIDE THE BOUNDARY OF THE SUBJECT PROPERTY IS A GRAPHICAL REPRESENTATION OF EXISTING LOT LINES BASED ON TAX MAP INFORMATION.
5. MATRIX NEW WORLD MAKES NO GUARANTEES THAT ALL UNDERGROUND UTILITIES ARE SHOWN HEREON AND THAT THE EXACT LOCATIONS OF THE UNDERGROUND UTILITIES INDICATED ON THIS SURVEY ARE APPROXIMATE. ALL UTILITY LOCATIONS MUST BE VERIFIED WITH THE PROPER UTILITY COMPANIES PRIOR TO DESIGN, EXCAVATION OR CONSTRUCTION.
6. SUBJECT TO THE RIGHTS AND RESTRICTIONS OF ALL EASEMENTS BEING WITHIN AND/OR CROSSING THE SURVEYED BOUNDS AS SHOWN, IF ANY.
7. SUBJECT TO ROAD RIGHT–OF–WAY, ALL EASEMENTS, ORDINANCES, COVENANTS AGREEMENTS AND/OR RESTRICTIONS OF RECORD, IF ANY.
8. SUBJECT TO SUB–SURFACE CONDITIONS AND/OR ENCROACHMENTS, IF ANY.

NO.	DESCRIPTION	DATE:	BY:	APR:
2	UPDATED BOUNDARY AND TOPOGRPAHIC SURVEY	11.05.25	JV	SM
1	UPDATED BOUNDARY AND TOPOGRPAHIC SURVEY	10.09.25	JV	SM

REVISIONS

DESIGNED BY: CML/HZ/JV
REVIEWED BY: SM
RELEASED BY: RSM

R. STEPHEN MONCRIEF JR., P.L.S
NEW JERSEY PROFESSIONAL LAND SURVEYOR
LICENSE NO. 24GS04321600

11/05/2025
DATE

MATRIXNEWORLD
A TRUE ENVIRONMENTAL COMPANY
Matrix New World Engineering, Land Surveying and Landscape Architecture, P.C.
26 Columbia Turnpike
Florham Park, New Jersey 07932
Tel: 973-240-1800
Fax: 973-240-1618
www.mnwe.com
NEW JERSEY CERTIFICATE OF AUTHORIZATION No. 24GA27992300

BOUNDARY & TOPOGRAPHIC SURVEY

BLOCK 140 LOTS 7.01, 8, 9 AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY, NEW JERSEY

PROJECT NUMBER: 25-0730
DATE: MARCH. 15, 2017
SCALE: 1"=30'

SHEET 1 OF 1

15 January 2026

Planning Board
Borough of Chatham
54 Fairmount Avenue
Chatham, NJ 07928

Re: Wetlands Statement
AJDM Chatham, LLC
29, 33, 37, and 39 River Road
Block No. 140, Lots 7.01, 8, 9, and 10
Borough of Chatham, Morris County, New Jersey
Langan Project No.: 101324801

Dear Board Members:

In compliance with the Borough of Chatham requirements, Langan Engineering and Environmental Services, LLC (Langan) wetland field staff visited the above-referenced site, in connection with the current redevelopment application, to investigate the potential presence of regulated freshwater wetland areas.

Our field staff visited the site on 15 January 2026 to investigate the potential presence of regulated features according to the New Jersey Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A). We did not observe any areas on-site that exhibited the necessary conditions (hydrology, vegetation, and soil conditions) to indicate the presence of a regulated wetland or water feature.

Sincerely,
Langan Engineering and Environmental Services, LLC

John E. DiGiacinto, P.E.
Senior Project Manager

Gregg Woodruff, PP, AICP, LEED-AP
Principal / Sustainability Leader

cc: Tom Witherel and Chuck Thomas – AJDM Chatham, LLC
Derek Orth – Inglesino Taylor

STORMWATER MANAGEMENT REPORT

AJDM Chatham LLC
29, 33, 37, and 39 River Road
Block 140, Lots 7.01, 8, 9 and 10
Borough of Chatham, Morris County, New Jersey

Prepared For:

Applicant
AJDM Chatham, LLC
16 Microlab Road
Suite A
Livingston, NJ 07039

Prepared By:

Langan Engineering & Environmental Services, LLC
300 Kimball Drive
Parsippany, New Jersey 07054

Leonard D. Savino, PE
New Jersey P.E. License Number GE-39238

15 January 2026
101324801
NJ Certificate of Authorization No. 24GA27996400

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF DRAWINGS

CG101	Grading Plan
CG102	Drainage Plan
CG201	Existing Watershed Area Map
CG202	Proposed Watershed Area Map
CG203	Proposed Inlet Catchment Area Map
CS503	Construction Details III

LIST OF APPENDICES

Appendix A	Existing Stormwater Discharge Calculations
Appendix B	Proposed Stormwater Discharge Calculations
Appendix C	Stormwater Conveyance System Calculations
Appendix D	Stormwater Outlet Protection Calculations

EXECUTIVE SUMMARY

The proposed stormwater management and conveyance systems for the project have been designed in accordance with the New Jersey Department of Environmental Protection (NJDEP) stormwater rules (NJAC 7:8), the Morris County Soil Conservation District and the Borough of Chatham stormwater regulations.

The proposed development includes the following improvements:

- Demolition of two existing masonry buildings;
- A new 4-story mixed-use residential building with an at-grade building footprint of approximately 64,000 square feet, 2,370 square feet of retail space, and 100 residential units;
- A new at-grade parking lot, sidewalks, and amenity area with landscaping and lighting improvements; and,
- New stormwater conveyance system and utility infrastructure to support the development.

The proposed development will disturb more than one acre of land and is therefore defined as a "major development" per the municipal and NJDEP stormwater regulations. In accordance with these regulations the proposed stormwater management design is required to address stormwater quantity, stormwater quality, and groundwater recharge requirements. Stormwater quantity is addressed through the decrease of impervious area and demonstration that the post-construction runoff hydrographs for the current and projected 2-, 10-, and 100-year storm events do not exceed the preconstruction runoff hydrographs for the same storm events. Stormwater quality requirements are not required because the project results in a net decrease of 1.79 acres of regulated motor-vehicle surface. Additionally, the site is previously developed and located within an Urban Redevelopment Area per NJAC 7:8-1.2, and is therefore exempt from groundwater recharge requirements.

The proposed stormwater management system includes a subsurface collection system consisting of catch basins, manholes, yard drains, and pipes designed to convey stormwater runoff from the 100-year storm event.

By implementing the stormwater management measures identified above and as documented in the results of the detailed calculations provided in this report, the stormwater management design is in accordance with the municipal, NJDEP, Morris County Soil Conservation District, and Borough of Chatham stormwater requirements.

1.0 INTRODUCTION

This report addresses the engineering design of the stormwater management and conveyance system for the proposed AJDM Chatham, LLC mixed-use residential project in the Borough of Chatham, New Jersey. The proposed stormwater management system is designed in accordance with the:

- New Jersey Department of Environmental Protection (NJDEP) stormwater rules (NJAC 7:8);
- New Jersey Stormwater Best Management Practices (BMP) Manual;
- New Jersey Standards for Soil Erosion and Sediment Control; and,
- Borough of Chatham Stormwater Management and Control Ordinance (Article XIV).

2.0 PROJECT DESCRIPTION

2.1 Existing Site Description

The site is located at 29, 33, 37, and 39 River Road in the Borough of Chatham, Morris County, New Jersey. The ±2.92-acre property is identified as Block 140, Lots 7.01, 8, 9, and 10 (see Figure 1 – Site Location Map). Site features consist of two masonry buildings, gravel and asphalt parking areas, and minimal lawn and landscape areas. The property is bound by River Road on the north, a self-storage property on the east and landscape supply properties on the south and west

The site topography is relatively sloped with existing surface elevations ranging from elevation 222 (NAVD 88) at the northwest corner of the property to elevation 205 at the southwest corner of the property. Slopes within the site are generally 2 to 10%. The majority of the site stormwater runoff from the project site flows overland to the southern property boundary and towards the Passaic River. The remainder of the site stormwater runoff flows overland to an existing stormwater conveyance system in River Road.

2.2 Subsurface Conditions

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey (see Figure 2 – NRCS Web Soil Survey), the soils in the project area consist of the following:

- Urban land-Haledon Complex, 3 to 8 percent slopes; Hydrologic Soil Group (HSG) C;
- Parsippany Silt Loam, sandy loam substratum, 0 to 3 percent slopes; Hydrologic Soil Group (HSG) D.

For Urban land-Haledon complex, the Web Soil Survey also reports depth to groundwater as 6 to 18 inches and depth to a restrictive soil layer as 16 to 30 inches. For Parsippany silt loam, sandy loam substratum, the Web Soil Survey also reports depth to groundwater as 0 to 12 inches and depth to a restrictive soil layer as more than 80 inches.

2.3 Floodplain

Based on a review of Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map

(FIRM) for Morris County, Map Number 34027C0432F, Community Panel Number 3403380432F, Preliminary Date 17 November 2025, the subject property and associated site improvements are outside of the flood hazard area. See Figure 3 – FEMA Flood Insurance Rate Map.

2.4 Proposed Development

The proposed development at the site will consist of the following improvements:

- Demolition of two existing masonry buildings and all existing site improvements within the property;
- A new 4-story mixed-use residential building with an at-grade building footprint of approximately 64,000 square feet, including 2,370 square feet of retail space, 100 residential units, and a two-floor parking garage;
- A new at-grade parking lot, sidewalks, and amenity area with landscaping and lighting improvements; and,
- New stormwater conveyance system and utility infrastructure to support the development.

The proposed design will reduce the impervious and regulated motor-vehicle surface areas for the 2.92 +/- acre site. The following table summarizes the changes between the existing and proposed conditions.

Table 1 – Surface Type Comparison

Surface Type	Existing	Proposed	Change
Impervious Surface	2.56 Acres (88%)	2.45 Acres (84%)	- 0.11 Acres (4%)
Motor-Vehicle Surface	2.23 Acres (76%)	0.44 Acres (15%)	- 1.79 Acres (61%)

3.0 STORMWATER MANAGEMENT

The proposed project results in a disturbance of approximately 3 acres of land. Therefore, this project is considered a major development as defined by the NJDEP stormwater rules (NJAC 7:8) and the municipal stormwater regulations. Projects that are defined as major developments are required to design stormwater management systems that address:

- Stormwater quantity;
- Stormwater quality;
- Groundwater recharge; and,
- Nonstructural measures.

The following sections provide additional detail regarding each of the stormwater-design regulations.

3.1 Stormwater Quantity Management

Design Criteria

The proposed stormwater management design complies with NJAC 7:8-5.6(b)1 which requires that post construction runoff hydrographs for the current and projected 2-year, 10-year and 100-year storm events must not exceed, at any point in time, the pre-construction runoff hydrograph for the same storm events.

The following current and future storms were analyzed using the NOAA precipitation data and the current and future adjustment factors required per N.J.A.C. 7:8-5.7:

Table 2 - Current Precipitation Adjustment

Frequency of Storms	NOAA Rainfall Depth (inches)	Current Precipitation Adjustment Factor	Current Rainfall Depth (inches)
2-year	3.44	1.01	3.47
10-year	5.23	1.03	5.39
100-year	8.74	1.06	9.26

Table 3 – Future Precipitation Adjustment

Frequency of Storms	NOAA Rainfall Depth (inches)	Future Precipitation Adjustment Factor	Future Rainfall Depth (inches)
2-year	3.44	1.23	4.23
10-year	5.23	1.28	6.69
100-year	8.74	1.46	12.76

Rainfall depths were obtained from published NOAA rainfall frequency records and are shown on Figure 4 – NOAA Atlas 14 24-Hour Rainfall Data. Based on the project's location, the stormwater analysis uses a 24-hour NOAA Type D cumulative rainfall distribution. Refer to Figure 5 – NOAA Type D Rainfall Distribution.

Design Methodology

This study was prepared using methods contained in the USDA Natural Resource Conservation Service National Engineering Handbook (NEH), Part 630 - Hydrology to analyze the pre- and post-development rainfall runoff rates and volumes. The watershed was simulated as a series of contributing subareas, channel reaches, and inflow and outflow structures. A value for area, curve number (CN), and time of concentration (Tc) were calculated for each contributing subarea.

The curve number (CN) is a land-sensitive coefficient that determines the relationship between total rainfall depth and direct storm runoff. Based on the coverage of soil groups and land use in the

watershed, separate CN were determined for impervious and pervious areas for each sub-area for existing and proposed conditions. To calculate the CN, the soils within the watershed are divided into hydrologic soil groups (HSG) A, B, C and D using published available resources such as the USDA's Web Soil Survey. The HSG determines the soils runoff potential with "A" soils having the lowest runoff potential and "D" soils having the greatest runoff potential. As documented in Section 2.2 above, Urban land-Haledon Complex soils are classified as HSG "C", and Parsippany Silt Loam soils are classified as HSG "D".

The time of concentration (Tc) is defined as the time for runoff to travel from the hydraulically most distant point in the watershed to a point of interest. Values of the time of concentration were determined for existing and proposed conditions based on land cover and slope of the flow path using methods outlined in NEH Part 630. The minimum Tc used in this analysis is two minutes due to software limitations.

Existing Runoff Discharges

The existing site was divided into two watersheds based on existing drainage patterns and discharge points. Each existing watershed was modeled as separate pervious and impervious watersheds and then hydraulically combined. See Drawing CG201 – Existing Watershed Area Map for additional details on the individual watersheds.

Existing peak runoff rates are summarized in Table 4 (for current and future rainfall data) below:

Table 4 – Existing Peak Discharges – Current and Future Rainfall

Watershed	Area (ac)	2-Year (cfs)		10-Year (cfs)		100-Year (cfs)	
	Existing	Current	Future	Current	Future	Current	Future
Watershed 1	2.75	8.68	10.74	13.91	17.46	24.48	34.04
Watershed 2	0.17	0.45	0.57	0.76	0.99	1.43	2.03

Refer to Appendix A for Tc calculation sheets, CN calculation sheets and supporting hydrologic calculations for the existing runoff analysis.

Proposed Watershed Areas

The proposed development has been modeled as two watersheds similar to the existing conditions. See Drawing CG202 – Proposed Watershed Area Map for additional details on the individual watersheds.

The proposed peak runoff rates for the site are summarized in Table 5 (for current and future rainfall data) below:

Table 5 – Proposed Peak Discharges – Current and Future Rainfall							
Watershed	**Area (ac)**	**2-Year (cfs)**		**10-Year (cfs)**		**100-Year (cfs)**	
	Proposed	**Current**	**Future**	**Current**	**Future**	**Current**	**Future**
Watershed 1	2.75	8.56 *(8.68)*	10.60 *(10.74)*	13.75 *(13.91)*	17.29 *(17.46)*	24.31 *(24.48)*	33.87 *(34.04)*
Watershed 2	0.17	0.45 *(0.45)*	0.57 *(0.57)*	0.76 *(0.76)*	0.99 *(0.99)*	1.43 *(1.43)*	2.03 *(2.03)*

Note: Existing peak discharge rates are shown in italics.

As documented in the results summarized in Table 5, the proposed discharges do not exceed the existing discharges for this project. Refer to Appendix B for Tc calculation sheets, CN calculation sheets and supporting hydrologic calculations for the proposed runoff analysis. A numerical comparison of the pre- vs. post-development hydrographs is also provided in Appendix B. Minor exceedances that occur in Watershed 1 shortly after the peak of the hydrograph are due to the slight increase in pervious area that is proposed for the project. These exceedances are less than 0.5 cfs and are considered de-minimis.

3.2 Stormwater Quality Standards

Design Criteria

The NJDEP and Borough of Chatham stormwater regulations require water-quality measures if a net increase in excess of ¼ acre of regulated motor-vehicle surface area is proposed. The proposed improvements will result in a 1.79-acre net decrease in regulated motor-vehicle surface area; therefore, the water-quality requirements are not required.

Trash and Waste

In order to prevent trash and floatables from entering the stormwater conveyance system, all Type B catch basin will be fitted with "Eco" curb pieces. Smaller openings on the curb pieces prevent cans and plastic bottles from entering catch basins. The curb piece and grate also educate the public to the detriments of pollution with messages permanently cast into their surfaces stating, "DUMP NO WASTE DRAINS TO WATERWAYS."

Grates on the proposed nyloplast structures have small inlet openings that prevent large trash and debris from entering the storm conveyance system. On-site maintenance personnel will collect litter throughout the site on an on-going basis.

3.3 Groundwater Recharge

The site is previously developed and located within the Metropolitan Planning Area (PA1), which is an Urban Redevelopment Area per NJAC 7:8-1.2. Therefore, the project is exempt from groundwater recharge requirements (refer to Figure 6 – NJ State Planning Area Map).

3.4 Non-Structural Stormwater Management Strategies

Nonstructural strategies were analyzed and implemented to the maximum extent practical for this project.

As per NJAC 7:8, there are nine nonstructural strategies to be evaluated. Below is a summary of how these strategies were implemented in the design of the stormwater management system:

1. Protect areas that provide water quality or are susceptible to erosion.
    a. Soil erosion control measures, such as silt fence, are proposed to contain sediment loss during construction. Areas of disturbance not to be paved shall be seeded or otherwise landscaped.
2. Minimize, break up and/or disconnect impervious surfaces.
    a. The site development plan includes proposed impervious surfaces, such as parking lots, roof, and sidewalk areas. The flow from the impervious surfaces is broken up and disconnected to the greatest extent practicable.
3. Maximize protection of natural drainage features and vegetation.
    a. No natural drainage features exist within the disturbed area.
4. Minimize decrease in time of concentration.
    a. The reduction in the time of concentration has been minimized to the maximum extent practical. The proposed time of concentration is equal to the existing time of concentration for both watersheds.
5. Minimize land disturbance, clearing and grading.
    a. Land disturbance is limited to the area of the site required to construct the project.
6. Minimize soil compaction.
    a. The existing features are primarily compacted soil and paved areas. Minimization of soil compaction has been provided to the greatest extent possibly by specifying the use of light-weight equipment.
7. Provide low maintenance vegetation.
    a. Native vegetation has been proposed for landscaped areas.
8. Provide vegetated conveyance systems.
    a. Discharge points from the site will be stabilized in accordance with the NJ Standards for Soil Erosion and Sediment Control. Open-channel conveyance systems are not feasible for this development.
9. Provide pollutant source controls.
    a. The project will reduce regulated motor vehicle surface by 1.79 acres.

3.5 Proposed Stormwater Conveyance

Design Criteria

The on-site subsurface storm-sewer collection system is designed to convey the 100-year storm.

Design Methodology

The storm-sewer system was analyzed using the Rational Method for estimating runoff for the 100-year design storm. The site was divided into subareas, each contributing runoff to an individual catch basin inlet or roof drain. Values for area, time of concentration, and runoff coefficient (C) were calculated for each contributing subarea (refer to Drawing CG203 – Proposed Inlet Catchment Area Map).

Values of time of concentration were chosen based on land cover and slope of the flow path from the hydraulically most distant point in the subarea to the appropriate inlet. In accordance with Chapter 5 of the BMP Manual, the minimum time of concentration used for Rational Method computations is ten minutes. The average runoff coefficient is the ratio relating the amount of runoff to the amount of precipitation receive. Runoff coefficients were based on values included on Figure 7 – Runoff Coefficients. Rainfall intensities were taken from the intensity-duration-frequency curve for the Borough of Chatham using NOAA (refer to Figure 8 - NOAA IDF Data).

Storm Collection System

The runoff from the site will be collected using an underground storm system consisting of catch basins, manholes and pipes. The pipes were appropriately sized, so the hydraulic grade line (HGL) elevation did not exceed the rim/grate elevations at each structure. Detailed design calculations for the on-site stormwater collection system are included in Appendix C of this report.

4.0 SOIL EROSION AND SEDIMENT CONTROL

Soil-erosion and sediment-control measures have been designed and located within the project site to minimize the amount of sediment carried by stormwater runoff during and after construction of the project. The soil-erosion and sediment-control design was completed in accordance with the NJ Standards for Soil Erosion and Sediment Control and include the following design measures:

- Inlet protection;
- Silt fence;
- Stabilized construction entrances; and,
- Conduit outlet protection (rock chutes and scour holes).

Refer to Appendix D for supporting calculations.

5.0 Stormwater Maintenance Plan

The stormwater management systems for the proposed development area are intended to collect and convey stormwater runoff. Regular maintenance procedures are required to verify the consistent and proper operation of the stormwater management facilities and prevent problems and malfunctions. The maintenance program provides the stormwater maintenance procedures for the site, which can be found under separate cover.

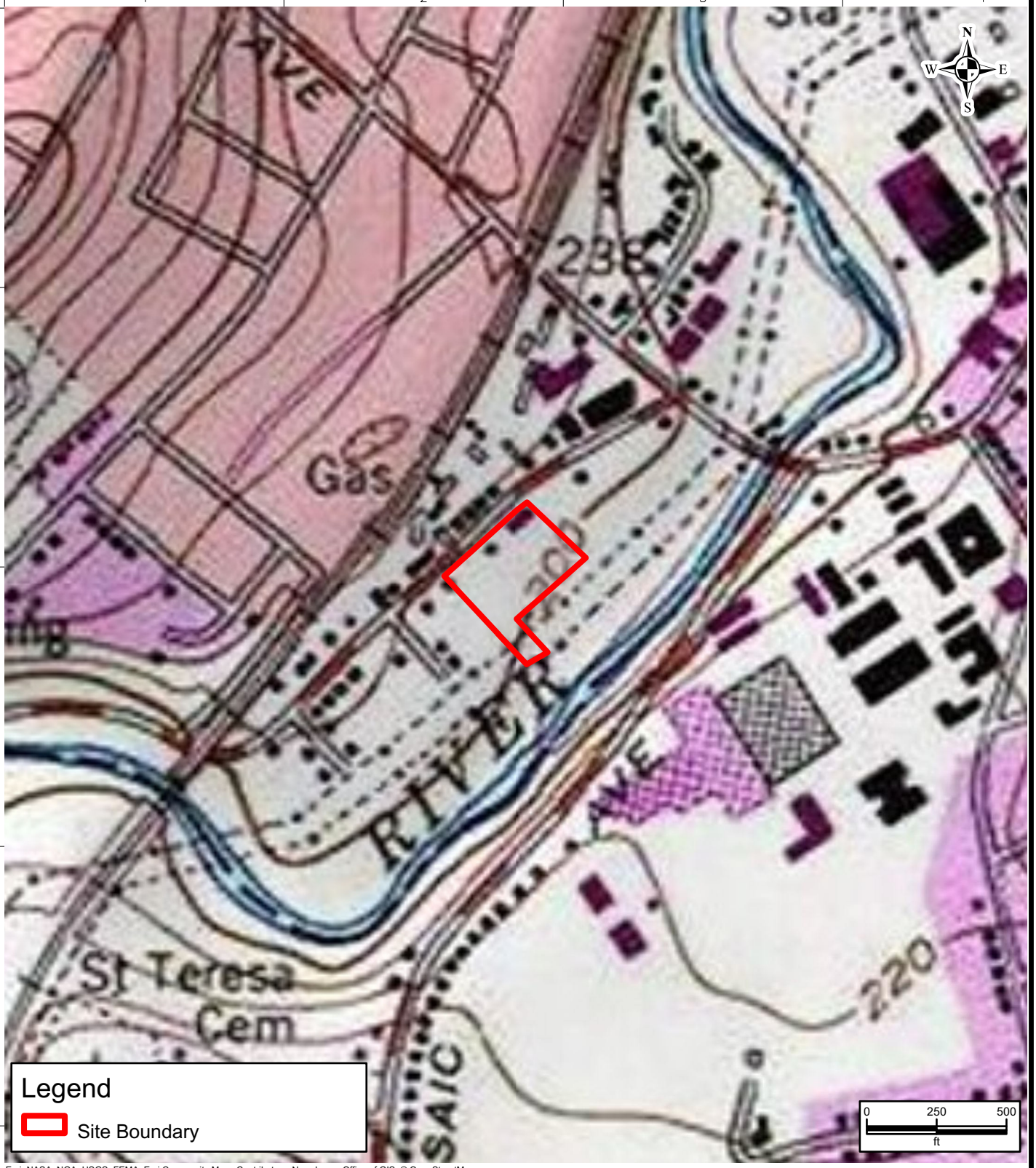
6.0 CONCLUSION

The post-construction runoff hydrographs for the 2-, 10-, and 100-year current and future storm events do not exceed, at any point in time, the pre-construction runoff hydrographs. Stormwater quality requirements are not required because the project results in a net decrease of 1.79 acres of regulated motor-vehicle surface. Additionally, the site is previously developed and located within an Urban Redevelopment Area per NJAC 7:8-1.2, and therefore, is exempt from groundwater recharge requirements. The proposed stormwater conveyance systems have been designed to safely and effectively convey the 100-year storm. Therefore, the engineering design of the stormwater management systems has been prepared in accordance with the municipal and the NJDEP stormwater rules.

7.0 REFERENCES

1. Hydrology Studio 2026 v 3.0.0.41.
2. Stormwater Studio 2026 v 3.0.0.40.
3. National Engineering Handbook Part 630 Hydrology, USDA Natural Resources Conservation Service Publication, last revised March 2020.
4. New Jersey Stormwater Best Management Practices Manual, New Jersey Department of Environmental Protection, Division of Watershed Management, April 2004, revised July 2023.
5. New Jersey Stormwater Management Rules (N.J.A.C. 7:8), last revised July 2023.
6. Borough of Chatham Stormwater Management and Control Ordinance (Article XIV).
7. The Standards for Soil Erosion and Sediment Control in New Jersey, New Jersey Department of Agriculture, revised July 2017.

FIGURES



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Project
AJDM CHATHAM, LLC
29, 33, 37, AND 39 RIVER ROAD
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

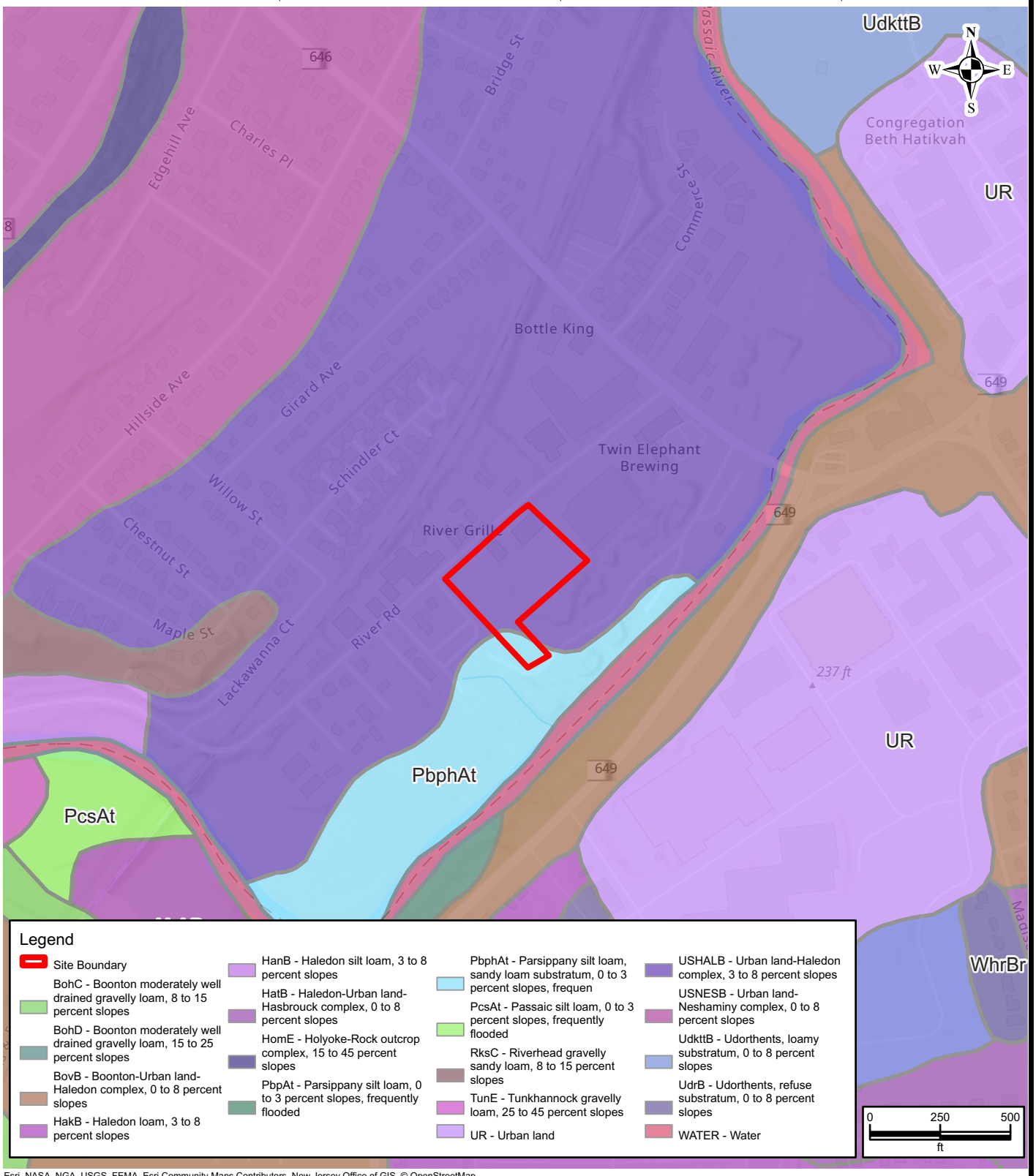
Drawing Title
SITE LOCATION MAP

Project No.	101324801
Date	1/15/2026
Drawn By	GC
Checked By	JD

Drawing No.
FIG 1

LANGAN
Project No. 101324801

Date: 1/8/2026 Time: 11:57 User: bwild Style Table: Langan.stb Layout: Layout1 Document Code: 101324801-0502-CS101-0101



Legend

- Site Boundary
- BohC - Boonton moderately well drained gravelly loam, 8 to 15 percent slopes
- BohD - Boonton moderately well drained gravelly loam, 15 to 25 percent slopes
- BovB - Boonton-Urban land-Haledon complex, 0 to 8 percent slopes
- HakB - Haledon loam, 3 to 8 percent slopes
- HanB - Haledon silt loam, 3 to 8 percent slopes
- HatB - Haledon-Urban land-Hasbrouck complex, 0 to 8 percent slopes
- HomE - Holyoke-Rock outcrop complex, 15 to 45 percent slopes
- PbpAt - Parsippany silt loam, 0 to 3 percent slopes, frequently flooded
- PbphAt - Parsippany silt loam, sandy loam substratum, 0 to 3 percent slopes, frequen
- PcsAt - Passaic silt loam, 0 to 3 percent slopes, frequently flooded
- RksC - Riverhead gravelly sandy loam, 8 to 15 percent slopes
- TunE - Tunkhannock gravelly loam, 25 to 45 percent slopes
- UR - Urban land
- USHALB - Urban land-Haledon complex, 3 to 8 percent slopes
- USNESB - Urban land-Neshaminy complex, 0 to 8 percent slopes
- UdkttB - Udorthents, loamy substratum, 0 to 8 percent slopes
- UdrB - Udorthents, refuse substratum, 0 to 8 percent slopes
- WATER - Water

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MORRIS COUNTY NEW JERSEY

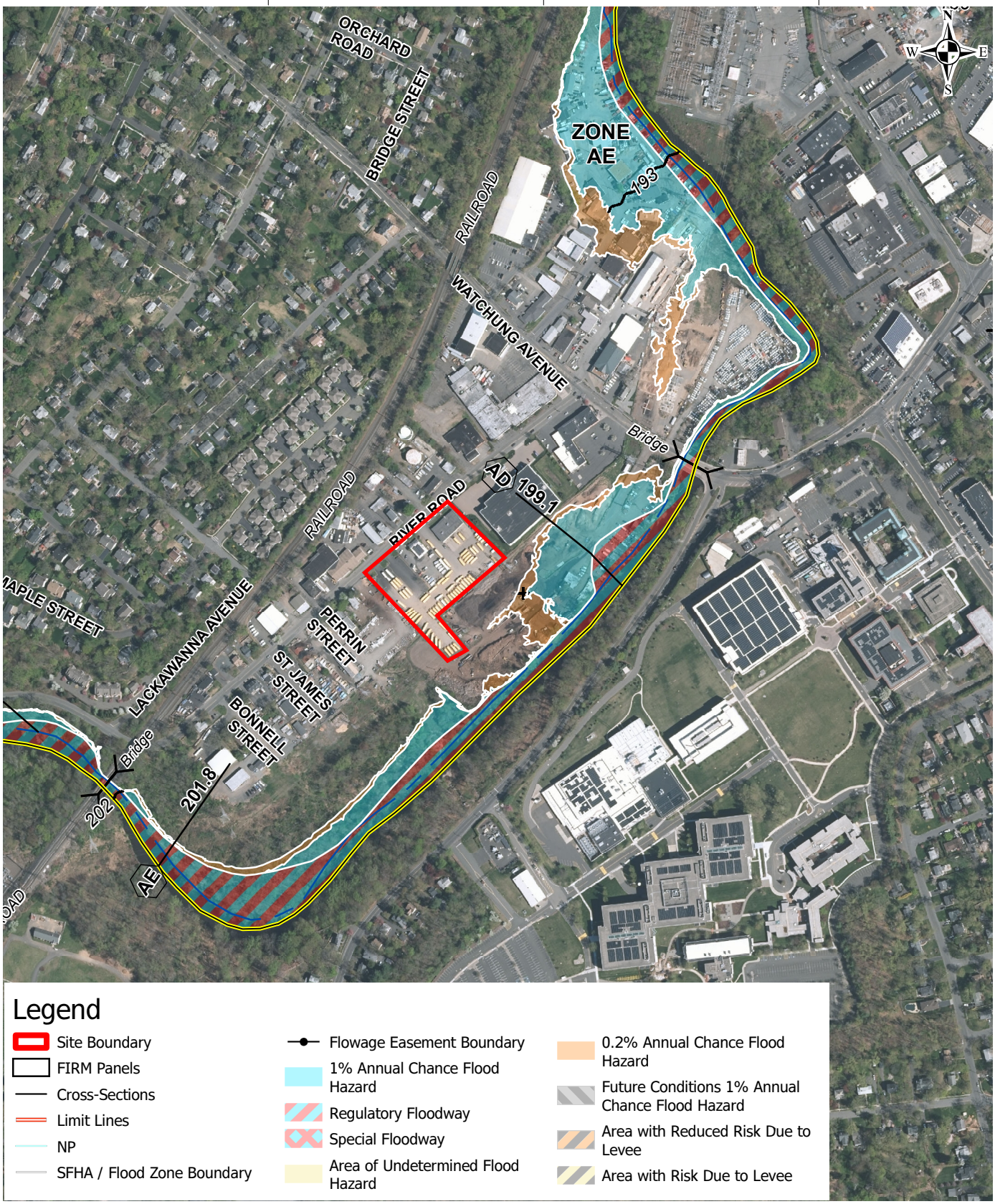
Drawing Title
NRCS WEB SOIL SURVEY MAP

Project No.	101324801
Date	1/15/2026
Drawn By	GC
Checked By	JD

Drawing No.
FIG 2

LANGAN
Project No. 101324801

Date: 1/8/2026 Time: 11:57 User: bwild Style Table: Langan.stb Layout: Layout1 Document Code: 101324801-0502-CS101-0101



Legend

- Site Boundary
- FIRM Panels
- Cross-Sections
- Limit Lines
- NP
- SFHA / Flood Zone Boundary
- Flowage Easement Boundary
- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee

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MORRIS COUNTY NEW JERSEY

Drawing Title
FEMA FLOOD INSURANCE RATE MAP

Project No.	101324801
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Checked By	JD

Drawing No.
FIG 3

LANGAN
Project No. 101324801

Date: 1/8/2026 Time: 11:57 User: bwild Style Table: Langan.stb Layout: Layout1 Document Code: 101324801-0502-CS101-0101

NOAA Atlas 14, Volume 2, Version 3
Location name: Chatham, New Jersey, USA*
Latitude: 40.7283°, Longitude: -74.3824°
Elevation: 218 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

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	0.335 (0.307-0.369)	0.400 (0.366-0.439)	0.475 (0.433-0.521)	0.527 (0.480-0.579)	0.592 (0.536-0.649)	0.637 (0.575-0.698)	0.680 (0.611-0.746)	0.720 (0.643-0.789)	0.769 (0.680-0.844)	0.804 (0.707-0.885)
10-min	0.536 (0.491-0.590)	0.640 (0.586-0.703)	0.758 (0.691-0.832)	0.840 (0.765-0.923)	0.940 (0.852-1.03)	1.01 (0.912-1.11)	1.08 (0.968-1.18)	1.14 (1.02-1.25)	1.21 (1.07-1.33)	1.26 (1.11-1.39)
15-min	0.670 (0.613-0.737)	0.803 (0.735-0.882)	0.956 (0.872-1.05)	1.06 (0.967-1.17)	1.19 (1.08-1.30)	1.28 (1.15-1.40)	1.36 (1.22-1.49)	1.43 (1.28-1.57)	1.52 (1.35-1.67)	1.58 (1.39-1.74)
30-min	0.916 (0.838-1.01)	1.11 (1.01-1.22)	1.36 (1.24-1.49)	1.54 (1.40-1.69)	1.76 (1.59-1.93)	1.92 (1.73-2.10)	2.08 (1.87-2.28)	2.22 (1.99-2.44)	2.42 (2.14-2.65)	2.55 (2.25-2.81)
60-min	1.14 (1.04-1.26)	1.39 (1.27-1.53)	1.74 (1.58-1.91)	2.00 (1.82-2.19)	2.34 (2.12-2.56)	2.60 (2.34-2.85)	2.86 (2.57-3.13)	3.12 (2.78-3.42)	3.46 (3.06-3.80)	3.72 (3.27-4.10)
2-hr	1.40 (1.27-1.54)	1.70 (1.55-1.88)	2.16 (1.96-2.38)	2.51 (2.27-2.77)	3.00 (2.70-3.31)	3.41 (3.05-3.75)	3.82 (3.39-4.20)	4.25 (3.75-4.68)	4.86 (4.23-5.36)	5.34 (4.61-5.89)
3-hr	1.56 (1.43-1.73)	1.90 (1.74-2.11)	2.42 (2.20-2.68)	2.82 (2.56-3.11)	3.37 (3.04-3.72)	3.82 (3.42-4.21)	4.28 (3.81-4.72)	4.77 (4.21-5.25)	5.44 (4.75-6.00)	5.98 (5.17-6.61)
6-hr	2.01 (1.84-2.22)	2.45 (2.23-2.70)	3.10 (2.82-3.41)	3.63 (3.29-3.98)	4.38 (3.94-4.80)	5.02 (4.48-5.49)	5.69 (5.04-6.22)	6.42 (5.62-7.01)	7.46 (6.44-8.16)	8.33 (7.11-9.12)
12-hr	2.51 (2.30-2.78)	3.06 (2.79-3.37)	3.89 (3.54-4.29)	4.60 (4.17-5.04)	5.63 (5.06-6.16)	6.52 (5.81-7.11)	7.49 (6.59-8.16)	8.56 (7.44-9.33)	10.1 (8.66-11.0)	11.5 (9.66-12.5)
24-hr	2.84 (2.63-3.09)	3.44 (3.18-3.74)	4.40 (4.07-4.79)	5.23 (4.82-5.68)	6.47 (5.92-7.02)	7.54 (6.85-8.18)	8.74 (7.86-9.47)	10.1 (8.95-10.9)	12.1 (10.5-13.1)	13.8 (11.9-15.1)
2-day	3.36 (3.09-3.66)	4.06 (3.74-4.43)	5.18 (4.77-5.64)	6.12 (5.62-6.66)	7.49 (6.84-8.15)	8.66 (7.85-9.42)	9.93 (8.93-10.8)	11.3 (10.1-12.4)	13.4 (11.7-14.7)	15.1 (13.0-16.7)
3-day	3.53 (3.26-3.84)	4.27 (3.94-4.65)	5.42 (5.00-5.90)	6.38 (5.87-6.94)	7.77 (7.11-8.44)	8.94 (8.13-9.72)	10.2 (9.20-11.1)	11.6 (10.3-12.6)	13.6 (11.9-14.9)	15.3 (13.3-16.8)
4-day	3.70 (3.43-4.02)	4.48 (4.15-4.87)	5.67 (5.24-6.16)	6.65 (6.12-7.22)	8.06 (7.38-8.73)	9.23 (8.41-10.0)	10.5 (9.48-11.4)	11.8 (10.6-12.9)	13.8 (12.2-15.1)	15.4 (13.5-17.0)
7-day	4.38 (4.07-4.75)	5.26 (4.88-5.70)	6.53 (6.06-7.07)	7.59 (7.02-8.20)	9.09 (8.36-9.84)	10.3 (9.45-11.2)	11.7 (10.6-12.7)	13.1 (11.8-14.2)	15.1 (13.4-16.5)	16.8 (14.7-18.4)
10-day	5.03 (4.69-5.42)	6.01 (5.60-6.48)	7.36 (6.85-7.93)	8.46 (7.85-9.11)	10.0 (9.25-10.8)	11.3 (10.4-12.2)	12.6 (11.5-13.6)	14.0 (12.7-15.2)	16.0 (14.3-17.4)	17.6 (15.6-19.3)
20-day	6.81 (6.39-7.27)	8.08 (7.58-8.63)	9.63 (9.04-10.3)	10.9 (10.2-11.6)	12.5 (11.7-13.4)	13.8 (12.8-14.8)	15.1 (14.0-16.2)	16.4 (15.1-17.7)	18.2 (16.6-19.6)	19.6 (17.7-21.2)
30-day	8.47 (8.01-8.97)	10.0 (9.46-10.6)	11.7 (11.1-12.4)	13.0 (12.2-13.7)	14.7 (13.8-15.5)	15.9 (15.0-16.9)	17.2 (16.1-18.2)	18.4 (17.1-19.5)	19.9 (18.5-21.3)	21.1 (19.4-22.6)
45-day	10.8 (10.2-11.3)	12.6 (12.0-13.3)	14.6 (13.8-15.4)	16.1 (15.2-16.9)	17.9 (16.9-18.9)	19.3 (18.2-20.4)	20.7 (19.5-21.9)	22.0 (20.6-23.3)	23.6 (22.0-25.1)	24.8 (23.0-26.4)
60-day	12.9 (12.3-13.6)	15.1 (14.4-15.9)	17.3 (16.4-18.2)	18.9 (18.0-19.9)	20.9 (19.8-22.0)	22.4 (21.2-23.6)	23.7 (22.4-25.0)	25.0 (23.6-26.4)	26.5 (24.9-28.1)	27.6 (25.8-29.3)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

https://hdsc.nws.noaa.gov/pfds/pfds_printpage.html?lat=40.7283&lon=-74.3824&data=depth&units=english&series=pds

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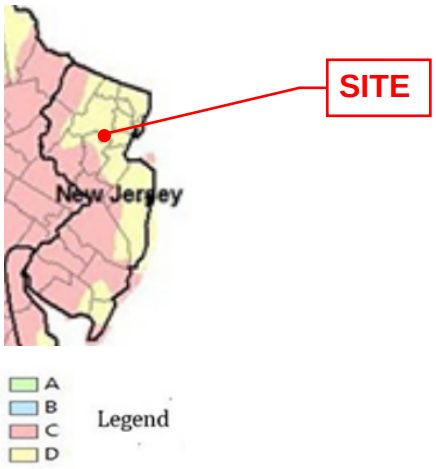
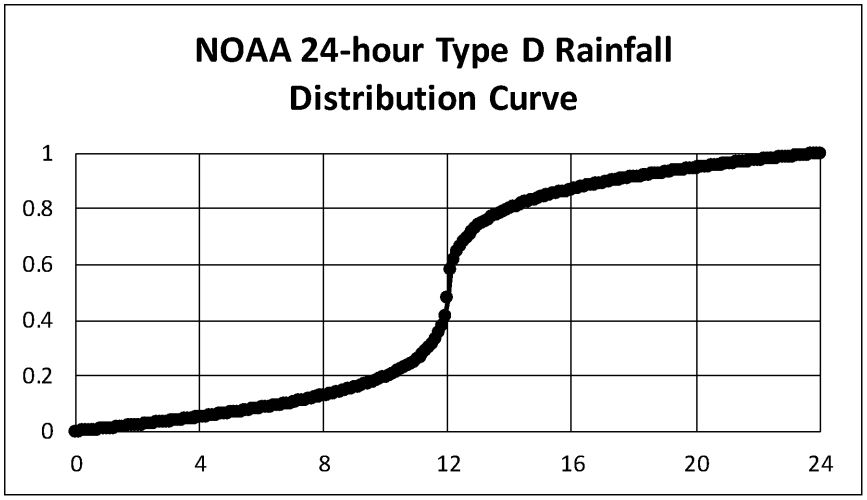
MORRIS COUNTY NEW JERSEY

Drawing Title: NOAA ATLAS 14 24-HOUR RAINFALL DATA

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No. FIG 4





Type D

Time (hrs)	Cumulative Rainfall (%)	Time (hrs)	Cumulative Rainfall (%)	Time (hrs)	Cumulative Rainfall (%)	Time (hrs)	Cumulative Rainfall (%)	Time (hrs)	Cumulative Rainfall (%)	Time (hrs)	Cumulative Rainfall (%)
0	0.0000	4	0.05246	8	0.12977	12	0.47909	16	0.87023	20	0.94754
0.1	0.0011	4.1	0.054	8.1	0.13246	12.1	0.58346	16.1	0.87288	20.1	0.94907
0.2	0.0022	4.2	0.05555	8.2	0.13519	12.2	0.61972	16.2	0.87547	20.2	0.95059
0.3	0.00332	4.3	0.05711	8.3	0.13796	12.3	0.64585	16.3	0.87803	20.3	0.95209
0.4	0.00445	4.4	0.05869	8.4	0.14079	12.4	0.6649	16.4	0.88054	20.4	0.95359
0.5	0.00559	4.5	0.06027	8.5	0.14365	12.5	0.683	16.5	0.883	20.5	0.95507
0.6	0.00674	4.6	0.06187	8.6	0.14656	12.6	0.69644	16.6	0.88542	20.6	0.95655
0.7	0.0079	4.7	0.06347	8.7	0.14952	12.7	0.70887	16.7	0.8878	20.7	0.95801
0.8	0.00907	4.8	0.06509	8.8	0.15252	12.8	0.72028	16.8	0.89013	20.8	0.95946
0.9	0.01025	4.9	0.06672	8.9	0.15556	12.9	0.73067	16.9	0.89242	20.9	0.9609
1	0.01145	5	0.06836	9	0.15865	13	0.74005	17	0.89466	21	0.96233
1.1	0.01265	5.1	0.07001	9.1	0.1619	13.1	0.7484	17.1	0.89686	21.1	0.96374
1.2	0.01387	5.2	0.07167	9.2	0.1653	13.2	0.75618	17.2	0.89901	21.2	0.96515
1.3	0.0151	5.3	0.07335	9.3	0.16887	13.3	0.76338	17.3	0.90112	21.3	0.96654
1.4	0.01634	5.4	0.07503	9.4	0.17259	13.4	0.77	17.4	0.90318	21.4	0.96793
1.5	0.01759	5.5	0.07673	9.5	0.17647	13.5	0.77604	17.5	0.9052	21.5	0.9693
1.6	0.01885	5.6	0.07843	9.6	0.18051	13.6	0.7815	17.6	0.90717	21.6	0.97066
1.7	0.02012	5.7	0.08015	9.7	0.1847	13.7	0.7868	17.7	0.9091	21.7	0.97201
1.8	0.0214	5.8	0.08188	9.8	0.18906	13.8	0.79195	17.8	0.91099	21.8	0.97335
1.9	0.0227	5.9	0.08362	9.9	0.19357	13.9	0.79693	17.9	0.91283	21.9	0.97468
2	0.024	6	0.08537	10	0.19824	14	0.80176	18	0.91463	22	0.976
2.1	0.02532	6.1	0.08717	10.1	0.20307	14.1	0.80643	18.1	0.91638	22.1	0.9773
2.2	0.02665	6.2	0.08901	10.2	0.20805	14.2	0.81094	18.2	0.91812	22.2	0.9786
2.3	0.02799	6.3	0.0909	10.3	0.2132	14.3	0.8153	18.3	0.91985	22.3	0.97988
2.4	0.02934	6.4	0.09283	10.4	0.2185	14.4	0.81949	18.4	0.92157	22.4	0.98115
2.5	0.0307	6.5	0.0948	10.5	0.22396	14.5	0.82353	18.5	0.92327	22.5	0.98241
2.6	0.03207	6.6	0.09682	10.6	0.23	14.6	0.82741	18.6	0.92497	22.6	0.98366
2.7	0.03346	6.7	0.09888	10.7	0.23662	14.7	0.83113	18.7	0.92665	22.7	0.9849
2.8	0.03485	6.8	0.10099	10.8	0.24382	14.8	0.8347	18.8	0.92833	22.8	0.98613
2.9	0.03626	6.9	0.10314	10.9	0.2516	14.9	0.8381	18.9	0.92999	22.9	0.98735
3	0.03767	7	0.10534	11	0.25995	15	0.84135	19	0.93164	23	0.98855
3.1	0.0391	7.1	0.10758	11.1	0.26933	15.1	0.84444	19.1	0.93328	23.1	0.98975
3.2	0.04054	7.2	0.10987	11.2	0.27972	15.2	0.84748	19.2	0.93491	23.2	0.99093
3.3	0.04199	7.3	0.1122	11.3	0.29113	15.3	0.85048	19.3	0.93653	23.3	0.9921
3.4	0.04345	7.4	0.11458	11.4	0.30356	15.4	0.85344	19.4	0.93813	23.4	0.99326
3.5	0.04493	7.5	0.117	11.5	0.317	15.5	0.85635	19.5	0.93973	23.5	0.99441
3.6	0.04641	7.6	0.11946	11.6	0.3351	15.6	0.85921	19.6	0.94131	23.6	0.99555
3.7	0.04791	7.7	0.12197	11.7	0.35415	15.7	0.86204	19.7	0.94289	23.7	0.99668
3.8	0.04941	7.8	0.12453	11.8	0.38028	15.8	0.86481	19.8	0.94445	23.8	0.99779
3.9	0.05093	7.9	0.12712	11.9	0.41654	15.9	0.86754	19.9	0.946	23.9	0.9989
										24	1.0000

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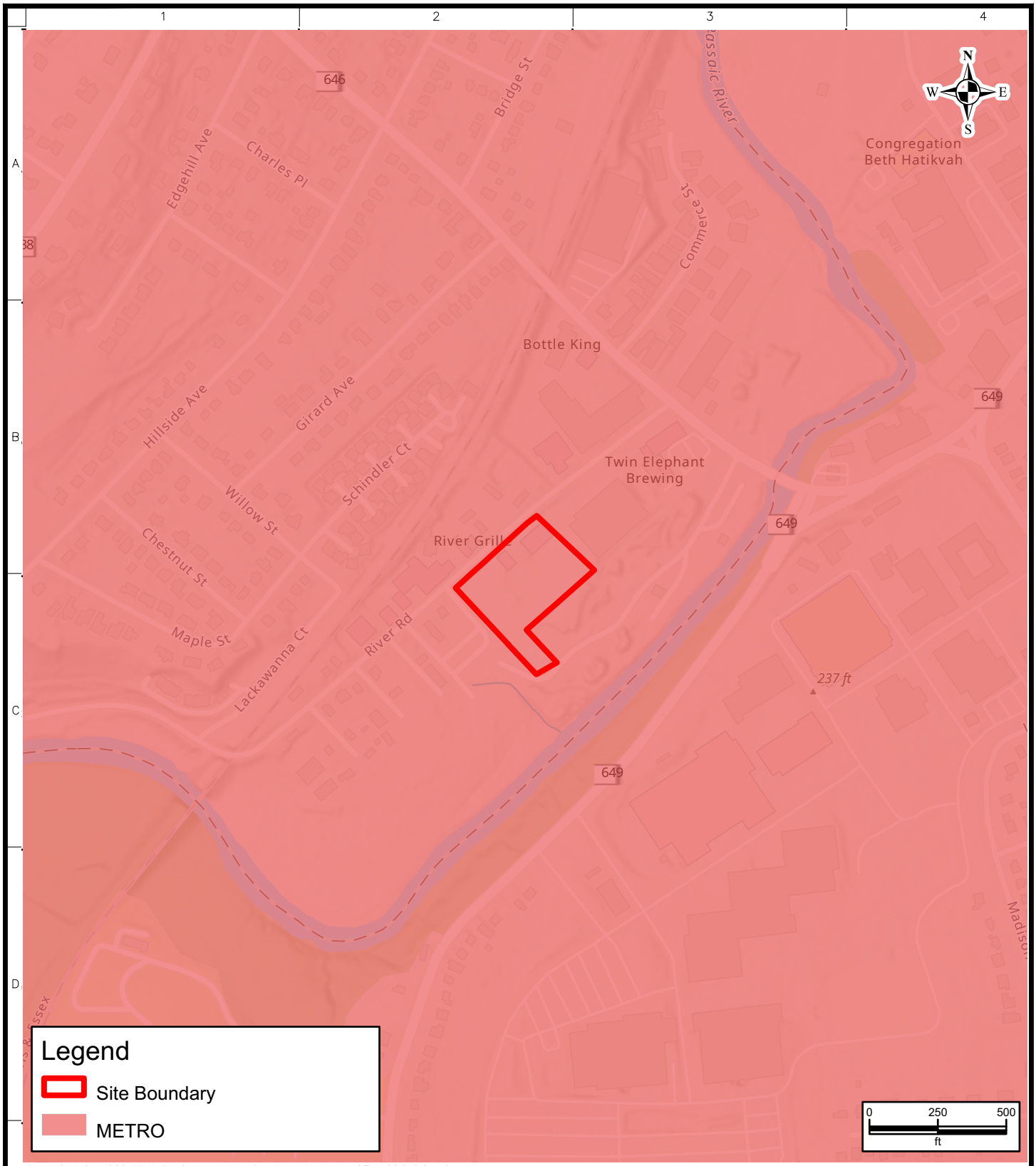
Project
AJDM CHATHAM, LLC
29, 33, 37, AND 39 RIVER ROAD
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
NOAA TYPE D RAINFALL DISTRIBUTION

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No.
FIG 5



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Drawing Title
NJ STATE PLANNING AREAS MAP

Project No.	101324801
Date	1/15/2026
Drawn By	GC
Checked By	JD

Drawing No.
FIG 6

LANGAN

Project No. 101324801

Date: 1/8/2026 Time: 11:57 User: bwild Style Table: Langan.stb Layout: Layout1 Document Code: 101324801-0502-CS101-0101

Land Use	Description	Hydrologic Soils Group			
		A	B	C	D
Cultivated Land	without conservation treatment	0.49	0.67	0.81	0.88
	with conservation treatment	0.27	0.43	0.67	0.67
Pasture or Range Land	poor condition	0.38	0.63	0.78	0.84
Meadow	good condition	---	0.25	0.51	0.65
	good condition	---	---	0.41	0.61
Wood or Forest Land	thin stand, poor cover, no mulch	---	0.34	0.59	0.70
	good cover	---	---	0.45	0.59
Open Spaces, Lawns, Parks, Golf Courses, Cemeteries					
Good Condition	grass cover on 75% or more	---	0.25	0.51	0.65
Fair Condition	grass cover on 50% to 75%	---	0.45	0.63	0.74
Commercial and Business Area	85% impervious	0.84	0.90	0.93	0.96
Industrial Districts	72% impervious	0.67	0.81	0.88	0.92
Residential	average % impervious				
Average Lot Size (acres)					
1/8	65	0.59	0.76	0.86	0.90
1/4	38	0.29	0.55	0.70	0.80
1/3	30	---	0.49	0.67	0.78
1/2	25	---	0.45	0.65	0.76
1	20	---	0.41	0.63	0.74
Paved Areas	parking lots, roofs, driveways, etc.	0.99	0.99	0.99	0.99
Streets and Roads	paved with curbs & storm sewers	0.99	0.99	0.99	0.99
	Gravel	0.57	0.76	0.84	0.88
	dirt	0.49	0.69	0.80	0.84

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Drawing Title
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Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No.
FIG 7

NOAA Atlas 14, Volume 2, Version 3
Location name: Chatham, New Jersey, USA*
Latitude: 40.7283°, Longitude: -74.3824°
Elevation: 218 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley

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	4.02 (3.68-4.43)	4.80 (4.39-5.27)	5.70 (5.20-6.25)	6.32 (5.76-6.95)	7.10 (6.43-7.79)	7.64 (6.90-8.38)	8.16 (7.33-8.95)	8.64 (7.72-9.47)	9.23 (8.16-10.1)	9.65 (8.48-10.6)
10-min	3.22 (2.95-3.54)	3.84 (3.52-4.22)	4.55 (4.15-4.99)	5.04 (4.59-5.54)	5.64 (5.11-6.19)	6.07 (5.47-6.64)	6.47 (5.81-7.09)	6.82 (6.10-7.48)	7.27 (6.44-7.99)	7.57 (6.66-8.33)
15-min	2.68 (2.45-2.95)	3.21 (2.94-3.53)	3.82 (3.49-4.20)	4.25 (3.87-4.67)	4.76 (4.32-5.22)	5.11 (4.62-5.60)	5.44 (4.89-5.96)	5.73 (5.12-6.28)	6.09 (5.40-6.69)	6.33 (5.56-6.97)
30-min	1.83 (1.68-2.02)	2.22 (2.03-2.44)	2.72 (2.48-2.98)	3.07 (2.79-3.37)	3.52 (3.19-3.86)	3.84 (3.47-4.21)	4.16 (3.73-4.56)	4.45 (3.97-4.88)	4.83 (4.28-5.31)	5.11 (4.49-5.62)
60-min	1.14 (1.04-1.26)	1.39 (1.27-1.53)	1.74 (1.58-1.91)	2.00 (1.82-2.19)	2.34 (2.12-2.56)	2.60 (2.34-2.85)	2.86 (2.57-3.13)	3.12 (2.78-3.42)	3.46 (3.06-3.80)	3.72 (3.27-4.10)
2-hr	0.698 (0.634-0.770)	0.851 (0.774-0.939)	1.08 (0.979-1.19)	1.26 (1.14-1.39)	1.50 (1.35-1.65)	1.70 (1.52-1.88)	1.91 (1.70-2.10)	2.13 (1.87-2.34)	2.43 (2.12-2.68)	2.67 (2.30-2.95)
3-hr	0.520 (0.474-0.576)	0.634 (0.578-0.701)	0.804 (0.731-0.890)	0.938 (0.850-1.04)	1.12 (1.01-1.24)	1.27 (1.14-1.40)	1.43 (1.27-1.57)	1.59 (1.40-1.75)	1.81 (1.58-2.00)	1.99 (1.72-2.20)
6-hr	0.336 (0.306-0.371)	0.408 (0.372-0.450)	0.517 (0.470-0.569)	0.605 (0.548-0.665)	0.732 (0.657-0.802)	0.838 (0.747-0.916)	0.950 (0.840-1.04)	1.07 (0.939-1.17)	1.25 (1.08-1.36)	1.39 (1.19-1.52)
12-hr	0.208 (0.190-0.230)	0.253 (0.231-0.280)	0.322 (0.294-0.355)	0.381 (0.345-0.418)	0.467 (0.419-0.510)	0.541 (0.481-0.590)	0.621 (0.547-0.676)	0.710 (0.617-0.774)	0.842 (0.718-0.917)	0.954 (0.802-1.04)
24-hr	0.118 (0.109-0.128)	0.143 (0.132-0.155)	0.183 (0.169-0.199)	0.217 (0.200-0.236)	0.269 (0.246-0.292)	0.314 (0.285-0.340)	0.364 (0.327-0.394)	0.419 (0.372-0.455)	0.502 (0.439-0.547)	0.574 (0.494-0.627)
2-day	0.069 (0.064-0.076)	0.084 (0.077-0.092)	0.107 (0.099-0.117)	0.127 (0.116-0.138)	0.155 (0.142-0.169)	0.180 (0.163-0.196)	0.206 (0.186-0.225)	0.235 (0.209-0.257)	0.278 (0.243-0.306)	0.314 (0.271-0.347)
3-day	0.049 (0.045-0.053)	0.059 (0.054-0.064)	0.075 (0.069-0.081)	0.088 (0.081-0.096)	0.107 (0.098-0.117)	0.124 (0.112-0.134)	0.141 (0.127-0.154)	0.160 (0.143-0.175)	0.188 (0.165-0.206)	0.211 (0.184-0.233)
4-day	0.038 (0.035-0.041)	0.046 (0.043-0.050)	0.059 (0.054-0.064)	0.069 (0.063-0.075)	0.083 (0.076-0.090)	0.096 (0.087-0.104)	0.109 (0.098-0.118)	0.123 (0.110-0.134)	0.143 (0.126-0.157)	0.160 (0.140-0.176)
7-day	0.026 (0.024-0.028)	0.031 (0.029-0.033)	0.038 (0.036-0.042)	0.045 (0.041-0.048)	0.054 (0.049-0.058)	0.061 (0.056-0.066)	0.069 (0.063-0.075)	0.077 (0.070-0.084)	0.090 (0.079-0.098)	0.099 (0.087-0.109)
10-day	0.020 (0.019-0.022)	0.025 (0.023-0.027)	0.030 (0.028-0.033)	0.035 (0.032-0.037)	0.041 (0.038-0.044)	0.047 (0.043-0.050)	0.052 (0.047-0.056)	0.058 (0.052-0.063)	0.066 (0.059-0.072)	0.073 (0.064-0.080)
20-day	0.014 (0.013-0.015)	0.016 (0.015-0.017)	0.020 (0.018-0.021)	0.022 (0.021-0.024)	0.026 (0.024-0.027)	0.028 (0.026-0.030)	0.031 (0.029-0.033)	0.034 (0.031-0.036)	0.037 (0.034-0.040)	0.040 (0.036-0.044)
30-day	0.011 (0.011-0.012)	0.013 (0.013-0.014)	0.016 (0.015-0.017)	0.018 (0.017-0.019)	0.020 (0.019-0.021)	0.022 (0.020-0.023)	0.023 (0.022-0.025)	0.025 (0.023-0.027)	0.027 (0.025-0.029)	0.029 (0.026-0.031)
45-day	0.009 (0.009-0.010)	0.011 (0.011-0.012)	0.013 (0.012-0.014)	0.014 (0.014-0.015)	0.016 (0.015-0.017)	0.017 (0.016-0.018)	0.019 (0.018-0.020)	0.020 (0.019-0.021)	0.021 (0.020-0.023)	0.022 (0.021-0.024)
60-day	0.008 (0.008-0.009)	0.010 (0.009-0.011)	0.012 (0.011-0.012)	0.013 (0.012-0.013)	0.014 (0.013-0.015)	0.015 (0.014-0.016)	0.016 (0.015-0.017)	0.017 (0.016-0.018)	0.018 (0.017-0.019)	0.019 (0.017-0.020)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

https://hdsc.nws.noaa.gov/pfds/pfds_printpage.html?lat=40.7283&lon=-74.3824&data=intensity&units=english&series=pds

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Project: AJDM CHATHAM, LLC
29, 33, 37, AND 39 RIVER ROAD
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: NOAA IDF DATA

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No. FIG 8

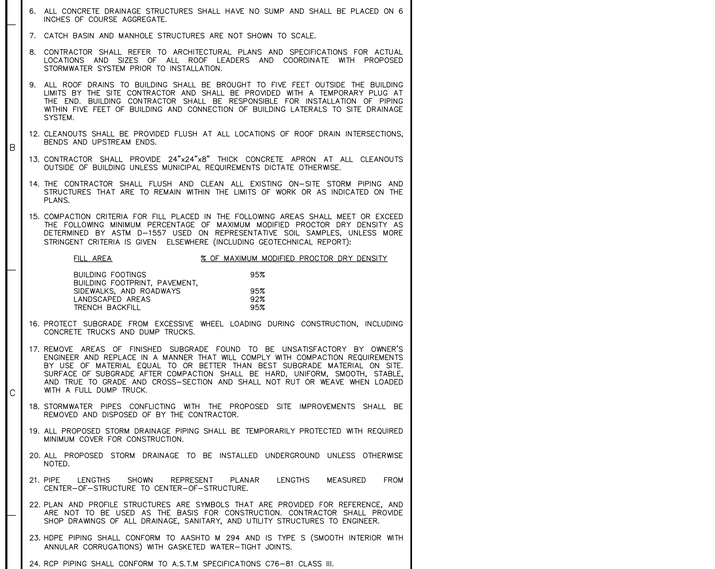
DRAWINGS

GRADING AND DRAINAGE NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE SHEET CE101 FOR EROSION CONTROL MEASURES.
2. SET PIPES AND STRUCTURES TO ELEVATIONS AND GRADES SHOWN ON THE DRAWINGS.
3. MINIMUM DEPTH OF COVER FOR ALL STORM SEWER PIPES IS 2 FEET OR AS SPECIFIED BY THE MANUFACTURER.
4. ALL CONCRETE DRAINAGE STRUCTURES SHALL BE PRECAST IN ACCORDANCE WITH NJDOT SPECIFICATIONS, UNLESS OTHERWISE NOTED.
5. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
6. ALL CONCRETE DRAINAGE STRUCTURES SHALL HAVE NO SUMP AND SHALL BE PLACED ON 6 INCHES OF COURSE AGGREGATE.
7. CATCH BASIN AND MANHOLE STRUCTURES ARE NOT SHOWN TO SCALE.
8. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS AND SIZES OF ALL ROOF LEADERS AND COORDINATE WITH PROPOSED STORMWATER SYSTEM PRIOR TO INSTALLATION.
9. ALL ROOF DRAINS TO BUILDING SHALL BE BROUGHT TO FIVE FEET OUTSIDE THE BUILDING LIMITS BY THE SITE CONTRACTOR AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT THE END. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF PIPING WITHIN FIVE FEET OF BUILDING AND CONNECTION OF BUILDING LATERALS TO SITE DRAINAGE SYSTEM.
12. CLEANOUTS SHALL BE PROVIDED FLUSH AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
13. CONTRACTOR SHALL PROVIDE 24"x24"x6" THICK CONCRETE APRON AT ALL CLEANOUTS OUTSIDE OF BUILDING UNLESS MUNICIPAL REQUIREMENTS DICTATE OTHERWISE.
14. THE CONTRACTOR SHALL FLUSH AND CLEAN ALL EXISTING ON-SITE STORM PIPING AND STRUCTURES THAT ARE TO REMAIN WITHIN THE LIMITS OF WORK OR AS INDICATED ON THE PLANS.
15. COMPACTION CRITERIA FOR FILL PLACED IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA IS GIVEN ELSEWHERE (INCLUDING GEOTECHNICAL REPORT):

FILL AREA	% OF MAXIMUM MODIFIED PROCTOR DRY DENSITY
BUILDING FOOTINGS	95%
BUILDING FOOTPRINT, PAVEMENT, SIDEWALKS, AND ROADWAYS	95%
LANDSCAPED AREAS	92%
TRENCH BACKFILL	95%

16. PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
17. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO BE UNSATISFACTORY BY OWNER'S ENGINEER AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THAN BEST SUBGRADE MATERIAL ON SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS-SECTION AND SHALL NOT RUT OR WEAVE WHEN LOADED WITH A FULL DUMP TRUCK.
18. STORMWATER PIPES CONFLICTING WITH THE PROPOSED SITE IMPROVEMENTS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
19. ALL PROPOSED STORM DRAINAGE PIPING SHALL BE TEMPORARILY PROTECTED WITH REQUIRED MINIMUM COVER FOR CONSTRUCTION.
20. ALL PROPOSED STORM DRAINAGE TO BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
21. PIPE LENGTHS SHOWN REPRESENT PLANAR LENGTHS MEASURED FROM CENTER-OF-STRUCTURE TO CENTER-OF-STRUCTURE.
22. PLAN AND PROFILE STRUCTURES ARE SYMBOLS THAT ARE PROVIDED FOR REFERENCE, AND ARE NOT TO BE USED AS THE BASIS FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL DRAINAGE, SANITARY, AND UTILITY STRUCTURES TO ENGINEER.
23. HDPE PIPING SHALL CONFORM TO AASHTO M 294 AND IS TYPE S (SMOOTH INTERIOR WITH ANNULAR CORRUGATIONS) WITH GASKETED WATER-TIGHT JOINTS.
24. RCP PIPING SHALL CONFORM TO A.S.T.M SPECIFICATIONS C76-81 CLASS III.
25. ABBREVIATIONS:
    BC = BOTTOM OF CURB
    BW = LAWN/SIDEWALK ELEVATION AT BOTTOM OF WALL
    CB = CATCH BASIN
    FES = FLARED END SECTION
    GR = GRATE ELEVATION
    HP = HIGH POINT
    HDPE = HIGH DENSITY POLYETHYLENE
    ID = INLINE DRAIN
    INV = INVERT
    LF = LINEAR FEET
    MH = MANHOLE
    PVC = POLYVINYL CHLORIDE
    RCP = REINFORCED CONCRETE PIPE
    RIM = RIM ELEVATION
    RL = ROOF LEADER
    TC = TOP OF CURB
    TW = LAWN ELEVATION AT TOP OF WALL
    YD = YARD DRAIN



EXISTING GRADE INSET FOR BUILDING HEIGHT CALCULATION SCALE: 1" = 50'

NOTES:

1. EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A PLAN TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 140 LOTS 7.01, 8, 9, AND 10, BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD, DATED 15 MARCH 2017, LAST REVISED 5 NOVEMBER 2025.
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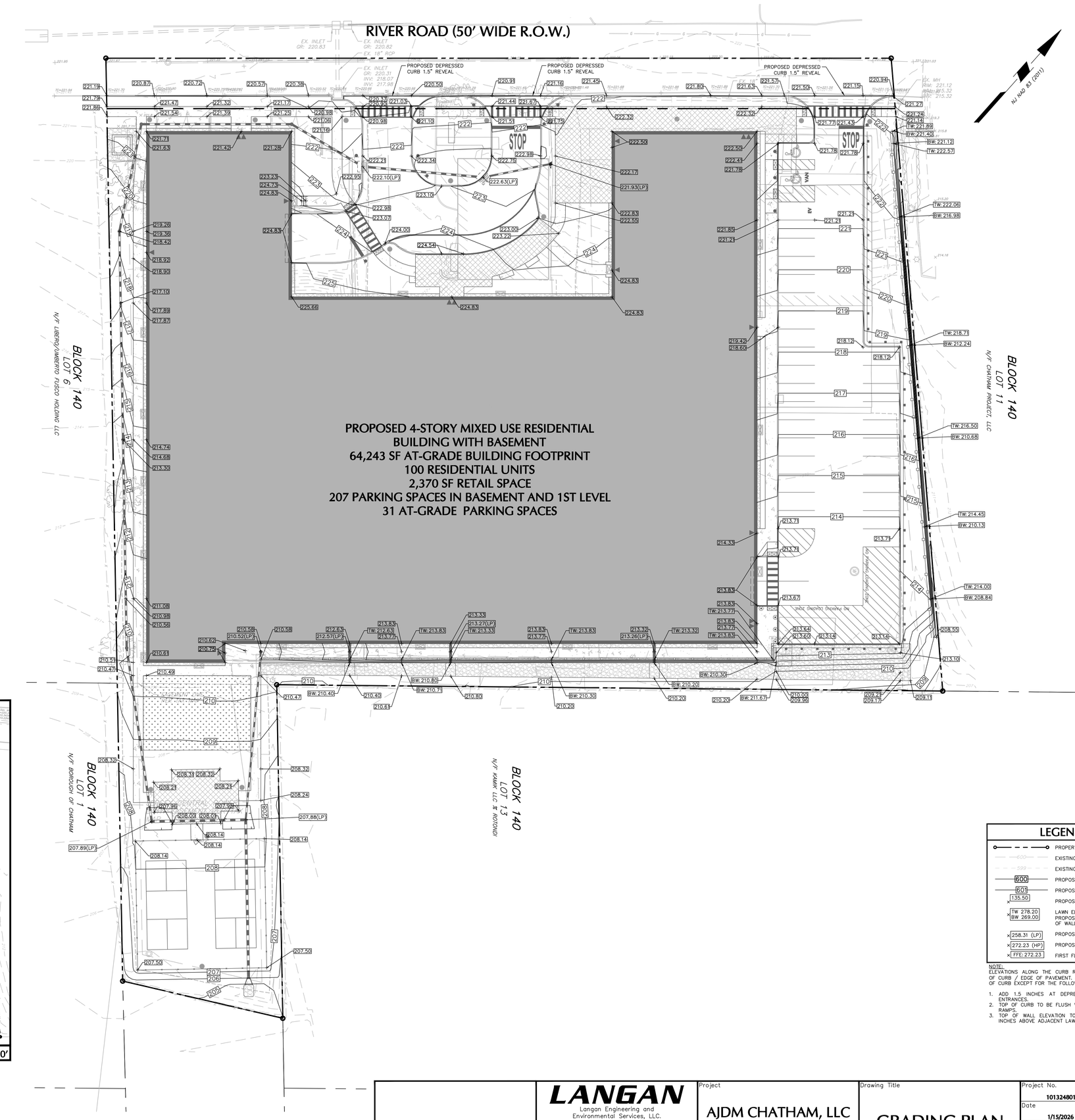

LEGEND

PROPERTY LINE	
600	EXISTING MAJOR CONTOUR
599	EXISTING MINOR CONTOUR
600	PROPOSED MAJOR CONTOUR
601	PROPOSED MINOR CONTOUR
135.50	PROPOSED SPOT ELEVATION
TW 278.20 BW 269.00	LAWN ELEVATION AT PROPOSED TOP/BOTTOM OF WALL
258.31 (LP)	PROPOSED LOW POINT
272.23 (HP)	PROPOSED HIGH POINT
FFE: 272.23	FIRST FLOOR ELEVATION

NOTE:
ELEVATIONS ALONG THE CURB REFERENCE THE BOTTOM OF CURB / EDGE OF PAVEMENT. ADD 6 INCHES FOR TOP OF CURB EXCEPT FOR THE FOLLOWING:

1. ADD 1.5 INCHES AT DEPRESSED CURB DRIVEWAY ENTRANCES.
2. TOP OF CURB TO BE FLUSH WITH PAVEMENT AT ADA RAMPS.
3. TOP OF WALL ELEVATION TO BE A MINIMUM OF 4 INCHES ABOVE ADJACENT LAWN ELEVATION.

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

Date	Description	No.
	Revisions	

Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE-39238

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NJ Certificate of Authorization No. 24GA27996400

Project
AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
GRADING PLAN

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No. CG101

Date: 1/15/2026 Time: 10:10 User: gchieff Style Table: Langan.stb Layout: CS101 Document Code: 101324801-0101-CG101-0101

GRADING AND DRAINAGE NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE SHEET CE101 FOR EROSION CONTROL MEASURES.
2. SET PIPES AND STRUCTURES TO ELEVATIONS AND GRADES SHOWN ON THE DRAWINGS.
3. MINIMUM DEPTH OF COVER FOR ALL STORM SEWER PIPES IS 2 FEET OR AS SPECIFIED BY THE MANUFACTURER.
4. ALL CONCRETE DRAINAGE STRUCTURES SHALL BE PRECAST IN ACCORDANCE WITH NJDOT SPECIFICATIONS, UNLESS OTHERWISE NOTED.
5. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
6. ALL CONCRETE DRAINAGE STRUCTURES SHALL HAVE NO SUMP AND SHALL BE PLACED ON 6 INCHES OF COURSE AGGREGATE.
7. CATCH BASIN AND MANHOLE STRUCTURES ARE NOT SHOWN TO SCALE.
8. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS AND SIZES OF ALL ROOF LEADERS AND COORDINATE WITH PROPOSED STORMWATER SYSTEM PRIOR TO INSTALLATION.
9. ALL ROOF DRAINS TO BUILDING SHALL BE BROUGHT TO FIVE FEET OUTSIDE THE BUILDING LIMITS BY THE SITE CONTRACTOR AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT THE END. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF PIPING WITHIN FIVE FEET OF BUILDING AND CONNECTION OF BUILDING LATERALS TO SITE DRAINAGE SYSTEM.
12. CLEANOUTS SHALL BE PROVIDED FLUSH AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
13. CONTRACTOR SHALL PROVIDE 24"x24"x8" THICK CONCRETE APRON AT ALL CLEANOUTS OUTSIDE OF BUILDING UNLESS MUNICIPAL REQUIREMENTS DICTATE OTHERWISE.
14. THE CONTRACTOR SHALL FLUSH AND CLEAN ALL EXISTING ON-SITE STORM PIPING AND STRUCTURES THAT ARE TO REMAIN WITHIN THE LIMITS OF WORK OR AS INDICATED ON THE PLANS.
15. COMPACTION CRITERIA FOR FILL PLACED IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA IS GIVEN ELSEWHERE (INCLUDING GEOTECHNICAL REPORT):

FILL AREA	% OF MAXIMUM MODIFIED PROCTOR DRY DENSITY
BUILDING FOOTINGS	95%
BUILDING FOOTPRINT, PAVEMENT, SIDEWALKS, AND ROADWAYS	95%
LANDSCAPED AREAS	92%
TRENCH BACKFILL	95%

16. PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
17. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO BE UNSATISFACTORY BY OWNER'S ENGINEER AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THAN BEST SUBGRADE MATERIAL ON SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS-SECTION AND SHALL NOT RUT OR WEAVE WHEN LOADED WITH A FULL DUMP TRUCK.
18. STORMWATER PIPES CONFLICTING WITH THE PROPOSED SITE IMPROVEMENTS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
19. ALL PROPOSED STORM DRAINAGE PIPING SHALL BE TEMPORARILY PROTECTED WITH REQUIRED MINIMUM COVER FOR CONSTRUCTION.
20. ALL PROPOSED STORM DRAINAGE TO BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
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TW = LAWN ELEVATION AT TOP OF WALL
YD = YARD DRAIN

DRAINAGE STRUCTURE SCHEDULE

BNE Chatham 2

Structure ID	Structure Type
CB-1	NJDOT TYPE B CATCH BASIN
CB-2	NJDOT TYPE B CATCH BASIN
ES-1	12" HDPE END SECTION THRU RETAINING WALL
ES-2	12" HDPE END SECTION THRU RETAINING WALL
ES-3	12" HDPE END SECTION THRU RETAINING WALL
YD-1	8" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-2	12" NYLOPLAST DRAIN WITH SOLID COVER
YD-3	12" NYLOPLAST DRAIN WITH SOLID COVER
YD-4	12" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-5	12" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-6	12" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-7	15" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-8	15" NYLOPLAST DRAIN WITH STANDARD GRATE
ID-1	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
ID-2	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
ID-3	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
ID-4	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
FES-1	12" HDPE FLARED END SECTION

Note:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION.

NOTES:

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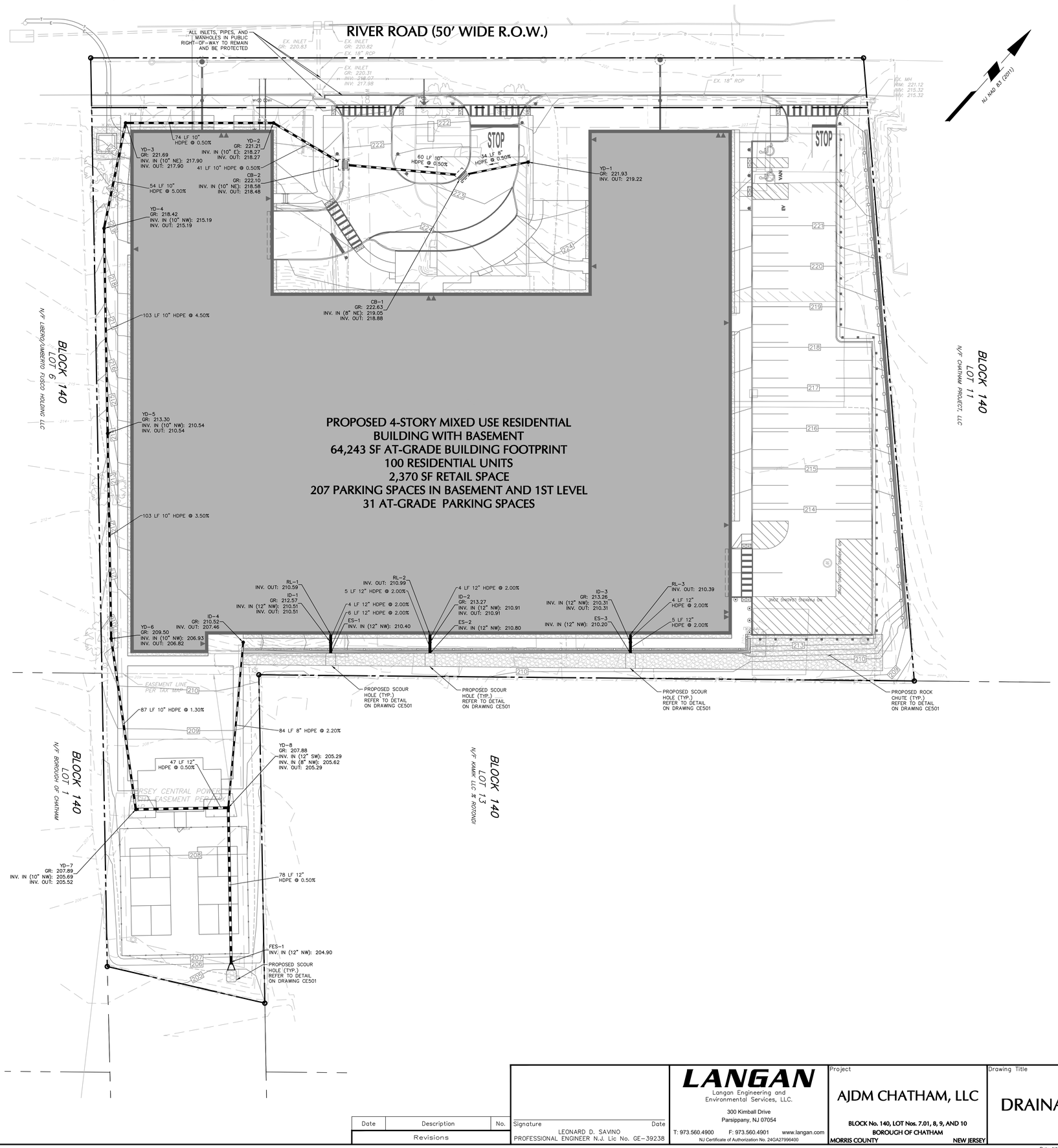

LEGEND

- PROPERTY LINE
- 600 EXISTING MAJOR CONTOUR
- 599 EXISTING MINOR CONTOUR
- 600 PROPOSED MAJOR CONTOUR
- 601 PROPOSED MINOR CONTOUR
- PROPOSED DRAINAGE PIPE
- PROPOSED CATCH BASIN
- PROPOSED DRAINAGE MANHOLE
- PROPOSED FLARED END SECTION

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

Date	Description	No.
	Revisions	

Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE-39238

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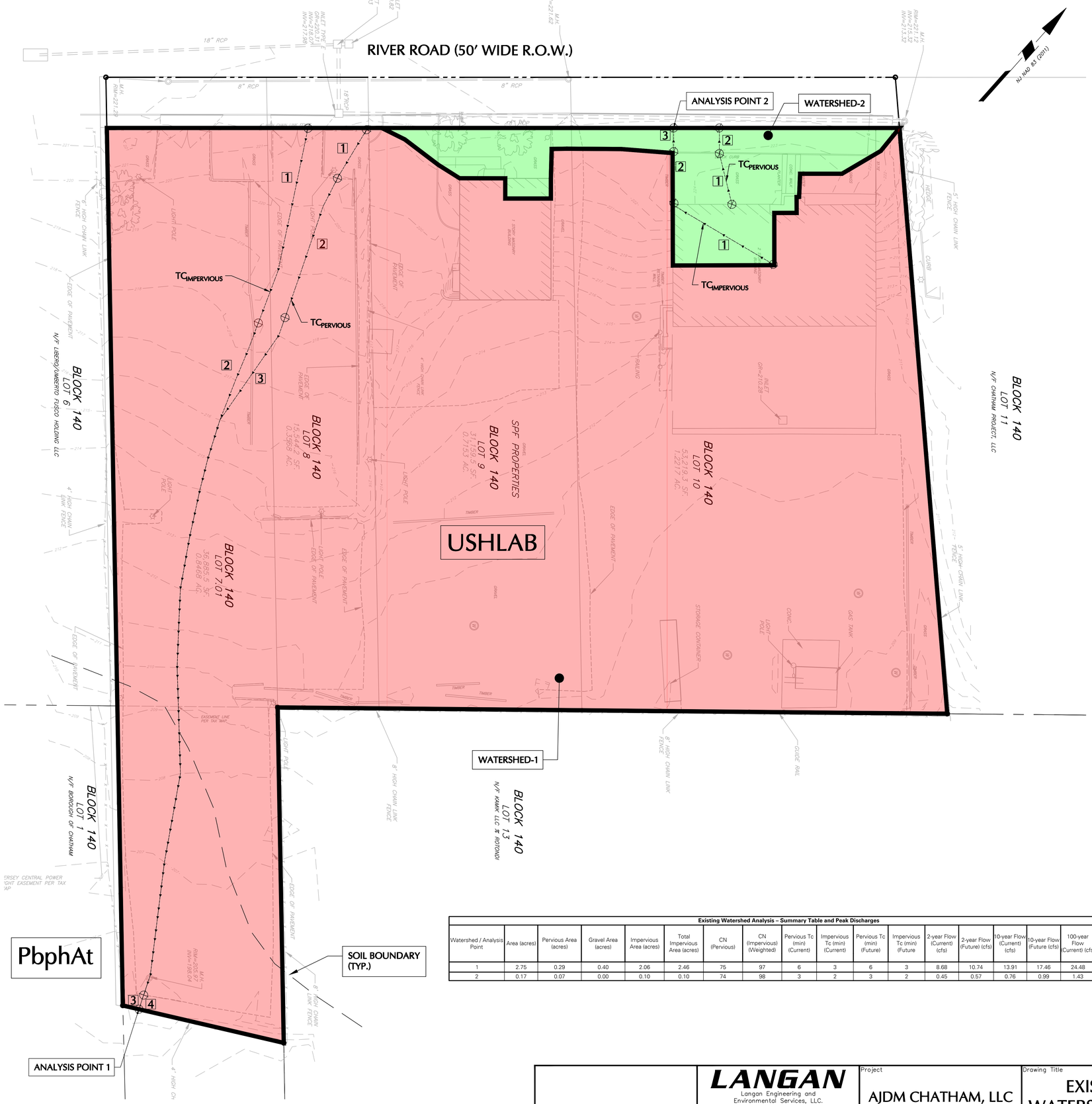
Project
AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
DRAINAGE PLAN

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No. CG102

Date: 1/15/2026 Time: 10:17 User: gchieff Style Table: Langan.stb Layout: CG102 Document Code: 101324801-0101-CG101-0102



Existing Watershed Analysis – Summary Table and Peak Discharges																	
Watershed / Analysis Point	Area (acres)	Pervious Area (acres)	Gravel Area (acres)	Impervious Area (acres)	Total Impervious Area (acres)	CN (Pervious)	CN (Impervious) (Weighted)	Pervious Tc (min) (Current)	Impervious Tc (min) (Current)	Pervious Tc (min) (Future)	Impervious Tc (min) (Future	2-year Flow (Current) (cfs)	2-year Flow (Future) (cfs)	10-year Flow (Current) (cfs)	10-year Flow (Future (cfs)	100-year Flow Current) (cfs)	100-year Flow (Future) (cfs)
1	2.75	0.29	0.40	2.06	2.46	75	97	6	3	6	3	8.68	10.74	13.91	17.46	24.48	34.04
2	0.17	0.07	0.00	0.10	0.10	74	98	3	2	3	2	0.45	0.57	0.76	0.99	1.43	2.03

SOIL LEGEND

USHALB	URBAN LAND – HALEDON COMPLEX
PbpAt	PARSIPPANY SILT LOAM

LEGEND

- PROPERTY LINE
- WATERSHED BOUNDARY
- TIME OF CONCENTRATION LINE

SCALE: 1 INCH = 20 FEET

NOTES:

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Revisions		

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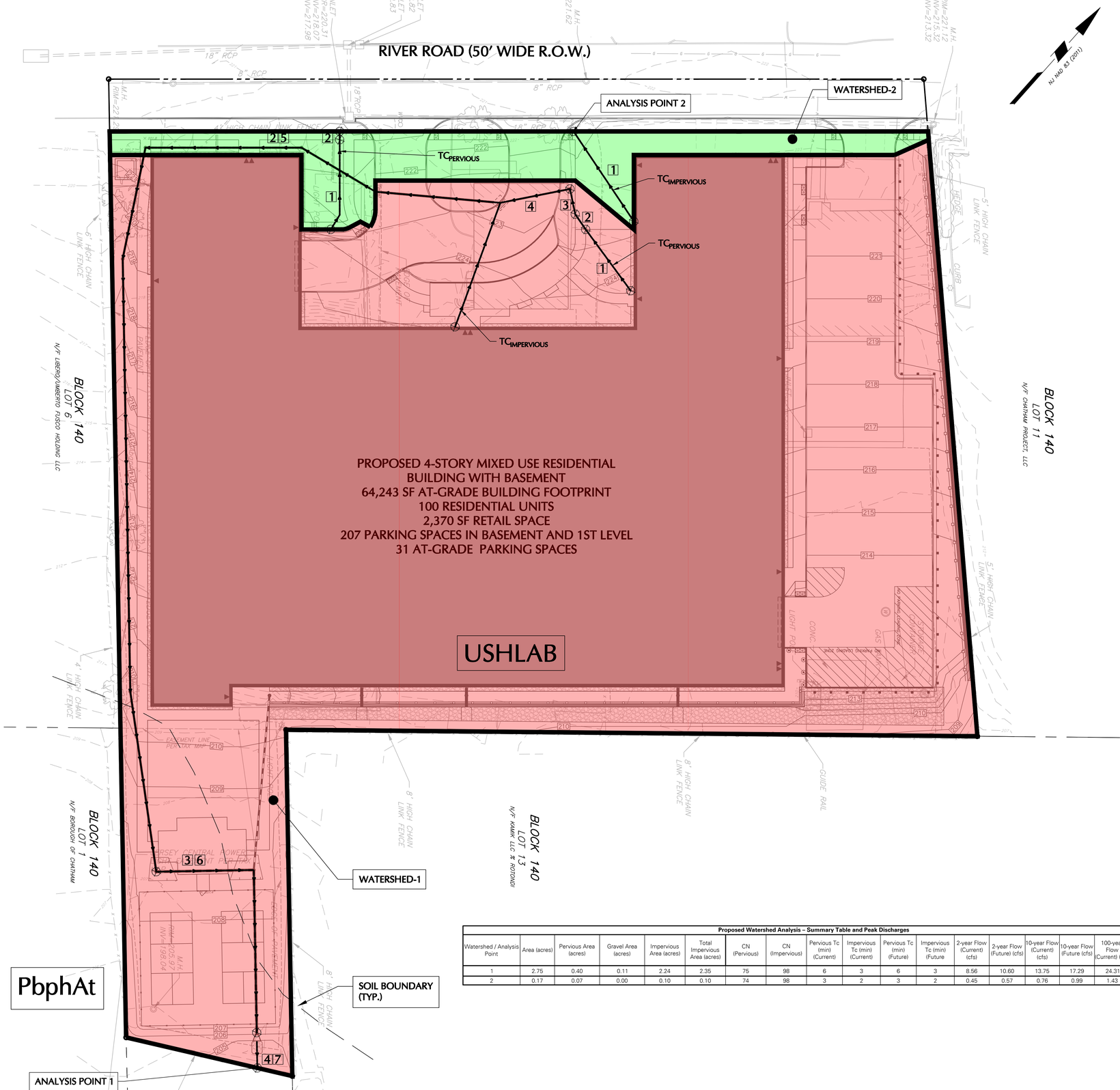
NJ Certificate of Authorization No. 24GA27996400

Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: EXISTING WATERSHED AREA MAP

Project No. 101324801
Date 09/25/2025
Drawn By GC
Checked By JD

Drawing No. CG201



Proposed Watershed Analysis – Summary Table and Peak Discharges

Watershed / Analysis Point	Area (acres)	Pervious Area (acres)	Gravel Area (acres)	Impervious Area (acres)	Total Impervious Area (acres)	CN (Pervious)	CN (Impervious)	Pervious Tc (min) (Current)	Impervious Tc (min) (Current)	Pervious Tc (min) (Future)	Impervious Tc (min) (Future	2-year Flow (Current) (cfs)	2-year Flow (Future) (cfs)	10-year Flow (Current) (cfs)	10-year Flow (Future (cfs)	100-year Flow (Current) (cfs)	100-year Flow (Future) (cfs)
1	2.75	0.40	0.11	2.24	2.35	75	98	6	3	6	3	8.56	10.60	13.75	17.29	24.31	33.87
2	0.17	0.07	0.00	0.10	0.10	74	98	3	2	3	2	0.45	0.57	0.76	0.99	1.43	2.03

SOIL LEGEND

USHALB	URBAN LAND – HALEDON COMPLEX
PbpAt	PARSIPPANY SILT LOAM

LEGEND

- PROPERTY LINE
- WATERSHED BOUNDARY
- TIME OF CONCENTRATION LINE

SCALE: 1 INCH = 20 FEET

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Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

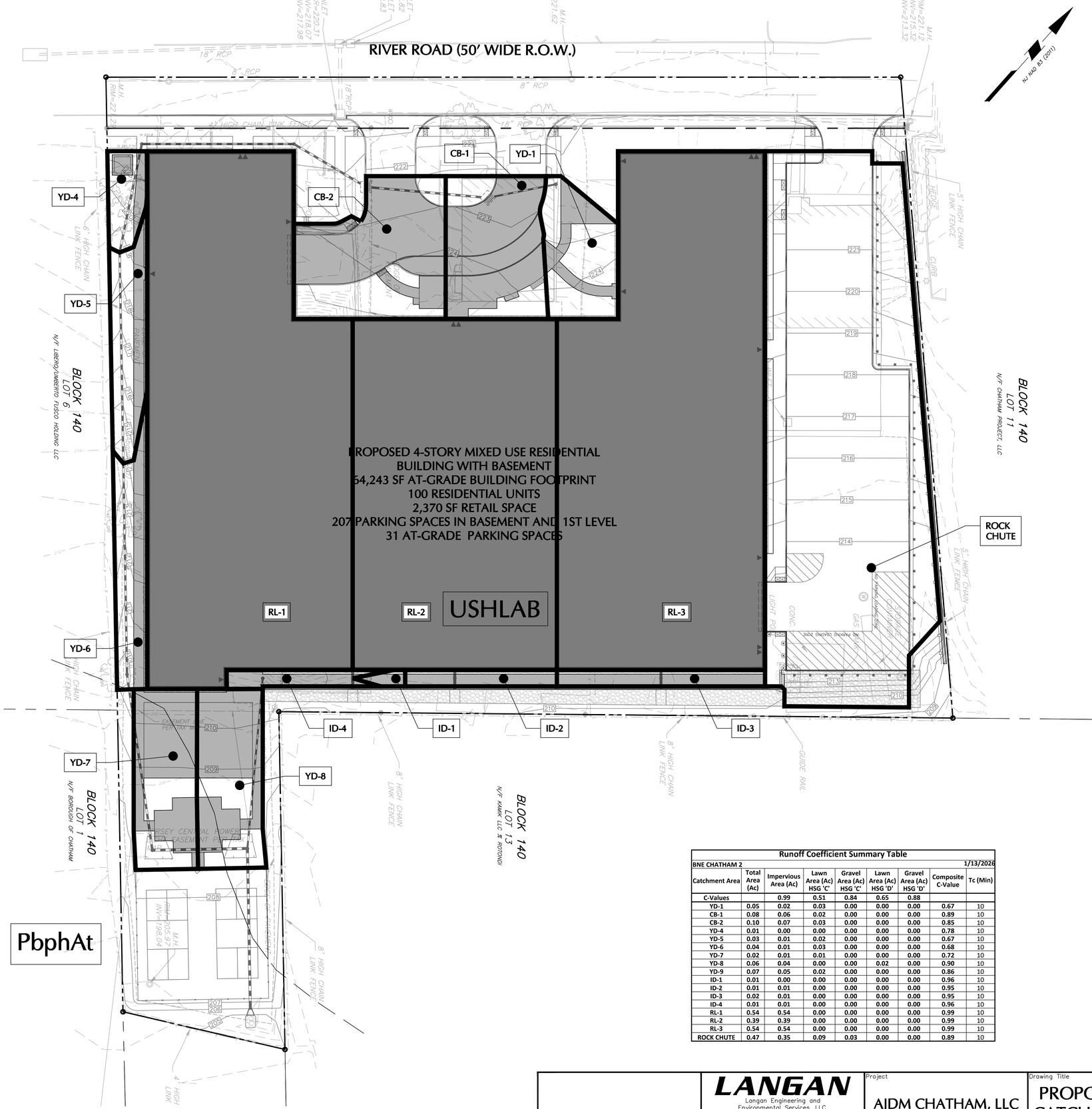
Drawing Title: PROPOSED WATERSHED AREA MAP

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No. CG202

Date: 1/14/2026 Time: 17:54 User: bwild Style Table: Langan.stb Layout: CG202 Document Code: 101324801-0101-CG201-0102

LANGAN 76 Project No. 101324801



Runoff Coefficient Summary Table

BNE CHATHAM 2 — 1/13/2026

Catchment Area	Total Area (Ac)	Impervious Area (Ac)	Lawn Area (Ac) HSG 'C'	Gravel Area (Ac) HSG 'C'	Lawn Area (Ac) HSG 'D'	Gravel Area (Ac) HSG 'D'	Composite C-Value	Tc (Min)
C-Values		0.99	0.51	0.84	0.65	0.88		
YD-1	0.05	0.02	0.03	0.00	0.00	0.00	0.67	10
CB-1	0.08	0.06	0.02	0.00	0.00	0.00	0.89	10
CB-2	0.10	0.07	0.03	0.00	0.00	0.00	0.85	10
YD-4	0.01	0.00	0.00	0.00	0.00	0.00	0.78	10
YD-5	0.03	0.01	0.02	0.00	0.00	0.00	0.67	10
YD-6	0.04	0.01	0.03	0.00	0.00	0.00	0.68	10
YD-7	0.02	0.01	0.01	0.00	0.00	0.00	0.72	10
YD-8	0.06	0.04	0.00	0.00	0.02	0.00	0.90	10
YD-9	0.07	0.05	0.02	0.00	0.00	0.00	0.86	10
ID-1	0.01	0.00	0.00	0.00	0.00	0.00	0.96	10
ID-2	0.01	0.01	0.00	0.00	0.00	0.00	0.95	10
ID-3	0.02	0.01	0.00	0.00	0.00	0.00	0.95	10
ID-4	0.01	0.01	0.00	0.00	0.00	0.00	0.96	10
RL-1	0.54	0.54	0.00	0.00	0.00	0.00	0.99	10
RL-2	0.39	0.39	0.00	0.00	0.00	0.00	0.99	10
RL-3	0.54	0.54	0.00	0.00	0.00	0.00	0.99	10
ROCK CHUTE	0.47	0.35	0.09	0.03	0.00	0.00	0.89	10

SOIL LEGEND

USHALB	URBAN LAND – HALEDON COMPLEX
PbpAt	PARSIPPANY SILT LOAM

LEGEND

- PROPERTY LINE
- WATERSHED BOUNDARY
- TIME OF CONCENTRATION LINE

SCALE: 1 INCH = 20 FEET

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Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
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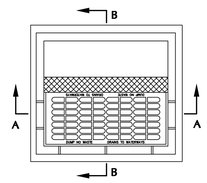
MORRIS COUNTY NEW JERSEY

Drawing Title: PROPOSED INLET CATCHMENT AREA MAP

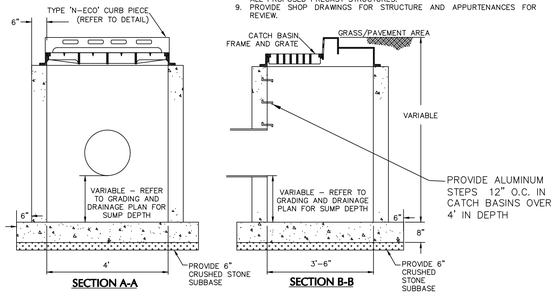
Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No. CG203



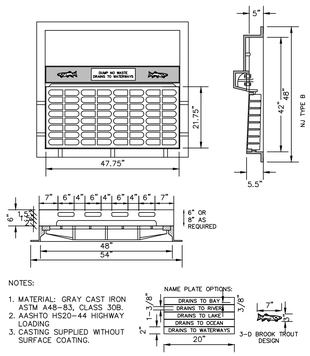
GENERAL NOTES

1. THE PRECAST MANUFACTURER IS RESPONSIBLE FOR STRUCTURAL DESIGN OF ALL PROPOSED PRECAST STRUCTURES. CONTRACTOR MUST PROVIDE SHOP DRAWINGS FOR REVIEW.
2. FOOTER AND INVERT TO BE NJDOT CLASS "C" CONCRETE.
3. IF WALL CONSTRUCTION OTHER THAN CONCRETE THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
4. CASTING TO BE CAMPBELL FOUNDRY NO. 2618 OR EQUIVALENT WITH TYPE N – ECO CURB PIECE
5. PROVIDE ALUMINUM ALCO STEPS 6061T6 12" O.C. IN CATCH BASIN OVER 4' IN DEPTH. MAX. DIST. BETWEEN BOTTOM STEP AND BOTTOM OF INLET SHALL BE 18".
6. WHEN ADDITIONAL DEPTH IS SCHEDULED WALLS BELOW THE DEPTH OF 8'–0" MEASURED FROM THE INLET GUTTER TO INVERT, SHALL BE 12" THICK IF CONCRETE OR DOUBLE BLOCK IF BLOCK. THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND TO 12" IN DEPTH.
7. SHALL MEET NJDOT STANDARDS AND H20 LOADING.
8. PRECAST MANUFACTURER IS RESPONSIBLE FOR STRUCTURAL DESIGN OF ALL PROPOSED PRECAST STRUCTURES.
9. PROVIDE SHOP DRAWINGS FOR STRUCTURE AND APPURTENANCES FOR REVIEW.



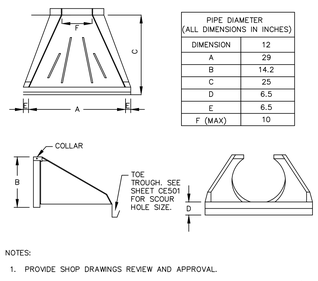
1 TYPE 'B' CATCH BASIN WITH CURB PIECE

NTS



2 CURB INLET WITH BICYCLE SAFE GRATE AND TYPE 'N-ECO' CURB PIECE

NTS



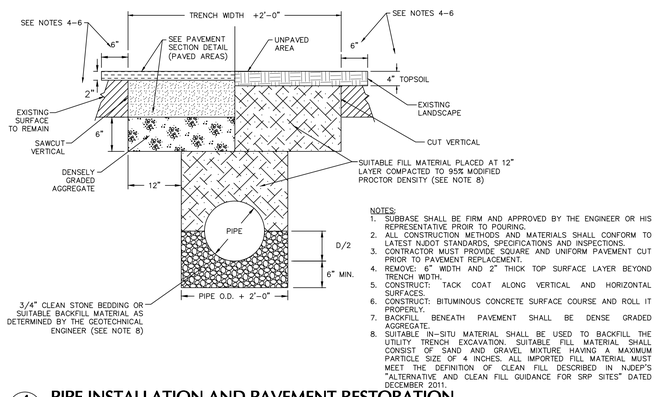
PIPE DIAMETER (ALL DIMENSIONS IN INCHES)	
DIMENSION	12
A	29
B	14.2
C	25
D	6.5
E	6.5
F (MAX)	10

NOTES:

1. PROVIDE SHOP DRAWINGS REVIEW AND APPROVAL.
2. THE HDPE FLARED END SECTIONS SHALL BE IN ACCORDANCE WITH ADS'S HDPE FLARED END SECTION SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.

3 HDPE FLARED END SECTION

NTS

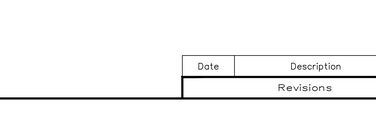


NOTES:

1. SUBBASE SHALL BE FIRM AND APPROVED BY THE ENGINEER OR HIS REPRESENTATIVE PRIOR TO POURING.
2. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO LATEST NJDOT STANDARDS, SPECIFICATIONS AND INSPECTIONS.
3. CONTRACTOR MUST PROVIDE SQUARE AND UNIFORM PAVEMENT CUT PRIOR TO PAVEMENT REPLACEMENT.
4. REMOVE: 6" WIDTH AND 2" THICK TOP SURFACE LAYER BEYOND TRENCH WIDTH.
5. CONSTRUCT: TACK COAT ALONG VERTICAL AND HORIZONTAL SURFACES.
6. CONSTRUCT: BITUMINOUS CONCRETE SURFACE COURSE AND ROLL IT PROPERLY.
7. BACKFILL BENEATH PAVEMENT SHALL BE DENSE GRADED AGGREGATE.
8. SUITABLE IN–SITU MATERIAL SHALL BE USED TO BACKFILL THE UTILITY TRENCH EXCAVATION. SUITABLE FILL MATERIAL SHALL CONSIST OF SAND AND GRAVEL MIXTURE HAVING A MAXIMUM PARTICLE SIZE OF 4 INCHES. ALL IMPORTED FILL MATERIAL MUST MEET THE DEFINITION OF CLEAN FILL DESCRIBED IN NJDEP'S "ALTERNATIVE AND CLEAN FILL GUIDANCE FOR SRP SITES" DATED DECEMBER 2011.

4 PIPE INSTALLATION AND PAVEMENT RESTORATION

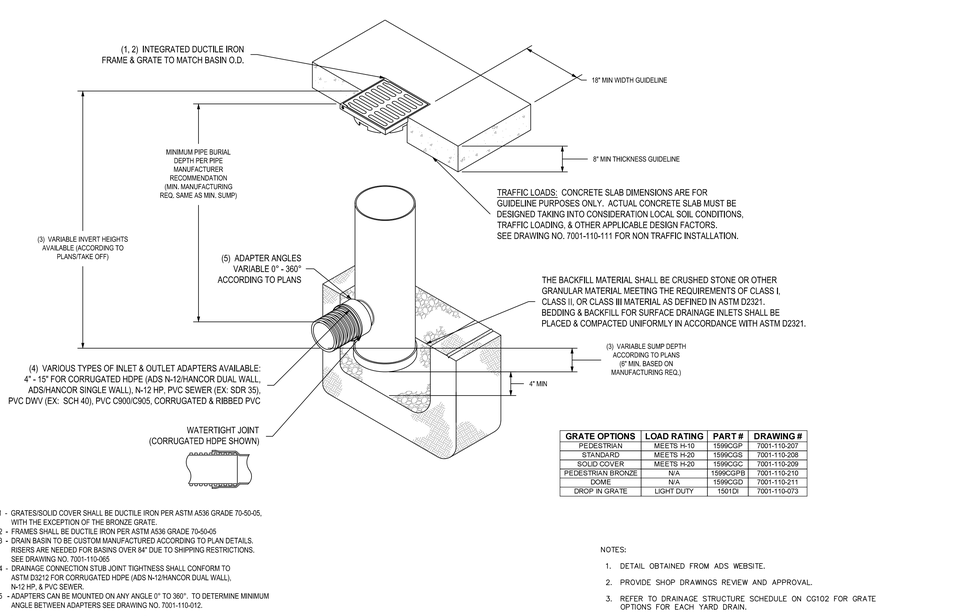
NTS



REF: NEW JERSEY DEPARTMENT OF TRANSPORTATION DETAIL (CD–602–1.5)

5 COPOLYMER PLASTIC LADDER RUNG

NTS



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1599CGP	7001-110-207
STANDARD	MEETS H-20	1599CGS	7001-110-208
SOLID COVER	MEETS H-20	1599CGC	7001-110-209
PEDESTRIAN BRONZE	N/A	1599CGPB	7001-110-210
DOME	N/A	1599CGD	7001-110-211
DROP IN GRATE	LIGHT DUTY	1501DI	7001-110-073

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

NOTES:

1. DETAIL OBTAINED FROM ADS WEBSITE.
2. PROVIDE SHOP DRAWINGS REVIEW AND APPROVAL.
3. REFER TO DRAINAGE STRUCTURE SCHEDULE ON CG102 FOR GRATE OPTIONS FOR EACH YARD DRAIN.

6 NYLOPLAST DRAIN BASIN

NTS

Date	Description	No.
Revisions		

Signature Date
LEONARD D. SAVINO
PROFESSIONAL ENGINEER N.J. Lic No. GE–39238

LANGAN
Langan Engineering and Environmental Services, LLC.
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project
AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
CONSTRUCTION DETAILS III

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By BMW

Drawing No. CS503

Date: 1/14/2026 Time: 18:04 User: gchieff Style Table: Langan.stb Layout: CS503 Document Code: 101324801-0101-CS501-0101

Project No. 101324801

APPENDIX A

Existing Stormwater Discharge Calculations

CN and TC Sheets

Existing Curve Number (CN) Calculations

Watershed Area	Area (ac)	HSG C Open Space (ac) CN = 74	HSG D Open Space (ac) CN = 80	Weighted Pervious CN	Total Pervious Area (ac)	Gravel Area (ac) CN = 89	Impervious Area (ac) CN = 98	Weighted Impervious CN	Total Impervious Area (ac)
1	2.75	0.26	0.03	75	0.29	0.40	2.06	97	2.46
2	0.17	0.07	0.00	74	0.07	0.00	0.10	98	0.10

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/8/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**	**BMW**	**Date Checked:**	**1/8/2026**

Circle One: (**Present**) Developed — **Existing Watershed 1 - Impervious (Current)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)

			Segment ID	1				
1.	Surface Description (NEH table 15-1)			Smooth Surfaces				
2.	Manning's Roughness Coeff., n (NEH table 15-1)			0.011				
3.	Flow Length, L (total L < 100 ft)		ft	100				
4.	Two-year 24-hr rainfall, P_2		in	3.47				
5.	Land Slope, s		ft/ft	0.020				
6.	Compute T_t	$T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	0.019	+		+	
						Sheet Flow Sub-Total		0.019 hours

Shallow Concentrated Flow

			Segment ID	2		3		
7.	Surface Description			Pavement		Short-Grass Pasture		
8.	Flow Length, L		ft	339		7		
9.	Watercourse Slope, s		ft/ft	0.037		0.063		
10.	Average Velocity, V (NEH table 15-3)		ft/s	3.89		1.75		
11.	Compute T_t	$T_t = \frac{L}{3600\,V}$	hr	0.024	+	0.001	+	
						Shallow Conc. Flow Sub-Total		0.025 hours

Channel Flow

			Segment ID					
12.	Flow Length, L		ft					
13.	Cross Sectional flow area, a		ft^2					
14.	Wetted Perimeter, P_w		ft					
15.	Hydraulic Radius, r	$r = a / P_w$	ft					
16.	Channel Slope, s		ft/ft					
17.	Manning's Roughness Coeff., n							
18.	Velocity, V	$V = (1.49\, r^{2/3} s^{1/2}) / n$	ft/s					
19.	Compute T_t	$T_t = \frac{L}{3600\,V}$	hr		+		+	
						Channel Flow Sub-Total		0.000 hours

Watershed or subarea T_c or T_t	Total Tc (hours) =	**0.045 hours**
(Add Sub-Total T_t from prior steps)	Total Tc (minutes) =	**3 minutes**

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/8/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**	**BMW**	**Date Checked:**	**1/8/2026**

Circle One: (**Present**) Developed — **Existing Watershed 1 - Impervious (Future)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)

	Segment ID		**1**					
1.	Surface Description (NEH table 15-1)		**Smooth Surfaces**					
2.	Manning's Roughness Coeff., n (NEH table 15-1)		**0.011**					
3.	Flow Length, L (total L < 100 ft)	ft	**100**					
4.	Two-year 24-hr rainfall, P_2	in	**4.23**					
5.	Land Slope, s	ft/ft	**0.020**					
6.	Compute T_t $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	**0.017**	+		+		
					Sheet Flow Sub-Total		**0.017 hours**	

Shallow Concentrated Flow

	Segment ID		**2**		**3**			
7.	Surface Description		**Pavement**		**Short-Grass Pasture**			
8.	Flow Length, L	ft	**339**		**7**			
9.	Watercourse Slope, s	ft/ft	**0.037**		**0.063**			
10.	Average Velocity, V (NEH table 15-3)	ft/s	**3.89**		**1.75**			
11.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr	**0.024**	+	**0.001**	+		
					Shallow Conc. Flow Sub-Total		**0.025 hours**	

Channel Flow

	Segment ID							
12.	Flow Length, L	ft						
13.	Cross Sectional flow area, a	ft^2						
14.	Wetted Perimeter, P_w	ft						
15.	Hydraulic Radius, r $r = a / P_w$	ft						
16.	Channel Slope, s	ft/ft						
17.	Manning's Roughness Coeff., n							
18.	Velocity, V $V = (1.49\, r^{2/3} s^{1/2}) / n$	ft/s						
19.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr		+		+		
					Channel Flow Sub-Total		**0.000 hours**	

Watershed or subarea T_c or T_t	Total Tc (hours) =	**0.043 hours**
(Add Sub-Total T_t from prior steps)	Total Tc (minutes) =	**3 minutes**

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/8/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**	**BMW**	**Date Checked:**	**1/8/2026**

Circle One: (**Present**) Developed — **Existing Watershed 1 - Pervious (Current)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)

		Segment ID	1		2		
1.	Surface Description (NEH table 15-1)		Short Grass Prairie		Smooth Surfaces		
2.	Manning's Roughness Coeff., n (NEH table 15-1)		0.15		0.011		
3.	Flow Length, L (total L < 100 ft)	ft	27		73		
4.	Two-year 24-hr rainfall, P_2	in	3.47		3.47		
5.	Land Slope, s	ft/ft	0.016		0.032		
6.	Compute T_t $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	0.060	+	0.012	+	

Sheet Flow Sub-Total **0.072 hours**

Shallow Concentrated Flow

		Segment ID	3		4		
7.	Surface Description		Pavement		Short-Grass Pasture		
8.	Flow Length, L	ft	348		7		
9.	Watercourse Slope, s	ft/ft	0.034		0.063		
10.	Average Velocity, V (NEH table 15-3)	ft/s	3.76		1.75		
11.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr	0.026	+	0.001	+	

Shallow Conc. Flow Sub-Total **0.027 hours**

Channel Flow

		Segment ID					
12.	Flow Length, L	ft					
13.	Cross Sectional flow area, a	ft^2					
14.	Wetted Perimeter, P_w	ft					
15.	Hydraulic Radius, r $r = a / P_w$	ft					
16.	Channel Slope, s	ft/ft					
17.	Manning's Roughness Coeff., n						
18.	Velocity, V $V = (1.49\, r^{2/3} s^{1/2}) / n$	ft/s					
19.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr		+		+	

Channel Flow Sub-Total **0.000 hours**

Watershed or subarea T_c or T_t		
(Add Sub-Total T_t from prior steps)	Total Tc (hours) =	**0.099 hours**
	Total Tc (minutes) =	**6 minutes**

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/8/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**	**BMW**	**Date Checked:**	**1/8/2026**

Circle One: (**Present**) Developed — **Existing Watershed 1 - Pervious (Future)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)

		Segment ID	1		2		
1.	Surface Description (NEH table 15-1)		Short Grass Prairie		Smooth Surfaces		
2.	Manning's Roughness Coeff., n (NEH table 15-1)		0.15		0.011		
3.	Flow Length, L (total L < 100 ft)	ft	27		73		
4.	Two-year 24-hr rainfall, P_2	in	4.23		4.23		
5.	Land Slope, s	ft/ft	0.016		0.032		
6.	Compute T_t $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	0.054	+	0.011	+	
					Sheet Flow Sub-Total		0.065 hours

Shallow Concentrated Flow

		Segment ID	3		4		
7.	Surface Description		Pavement		Short-Grass Pasture		
8.	Flow Length, L	ft	348		7		
9.	Watercourse Slope, s	ft/ft	0.034		0.063		
10.	Average Velocity, V (NEH table 15-3)	ft/s	3.76		1.75		
11.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr	0.026	+	0.001	+	
					Shallow Conc. Flow Sub-Total		0.027 hours

Channel Flow

		Segment ID					
12.	Flow Length, L	ft					
13.	Cross Sectional flow area, a	ft^2					
14.	Wetted Perimeter, P_w	ft					
15.	Hydraulic Radius, r $r = a / P_w$	ft					
16.	Channel Slope, s	ft/ft					
17.	Manning's Roughness Coeff., n						
18.	Velocity, V $V = (1.49\, r^{2/3} s^{1/2}) / n$	ft/s					
19.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr		+		+	
					Channel Flow Sub-Total		0.000 hours

Watershed or subarea T_c or T_t	Total Tc (hours) =	**0.092 hours**
(Add Sub-Total T_t from prior steps)	Total Tc (minutes) =	**6 minutes**

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/8/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**	**BMW**	**Date Checked:**	**1/8/2026**

Circle One: (**Present**) Developed — **Existing Watershed 2 - Impervious (Current)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)		Segment ID	**1**					
1.	Surface Description (NEH table 15-1)		**Smooth Surfaces**					
2.	Manning's Roughness Coeff., n (NEH table 15-1)		**0.011**					
3.	Flow Length, L (total L < 100 ft)	ft	**58**					
4.	Two-year 24-hr rainfall, P_2	in	**3.47**					
5.	Land Slope, s	ft/ft	**0.010**					
6.	Compute T_t $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	**0.016**	+		+		
					Sheet Flow Sub-Total		**0.016 hours**	
Shallow Concentrated Flow		Segment ID	**3**					
7.	Surface Description		**Pavement**					
8.	Flow Length, L	ft	**12**					
9.	Watercourse Slope, s	ft/ft	**0.042**					
10.	Average Velocity, V (NEH table 15-3)	ft/s	**4.19**					
11.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr	**0.001**	+		+		
					Shallow Conc. Flow Sub-Total		**0.001 hours**	
Channel Flow		Segment ID	**2**					
12.	Flow Length, L	ft	**25**					
13.	Cross Sectional flow area, a	ft^2	**0.02**					
14.	Wetted Perimeter, P_w	ft	**0.52**					
15.	Hydraulic Radius, r $r = a / P_w$	ft	**0.04**					
16.	Channel Slope, s	ft/ft	**0.007**					
17.	Manning's Roughness Coeff., n		**0.011**					
18.	Velocity, V $V = (1.49\, r^{2/3} s^{1/2}) / n$	ft/s	**1.39**					
19.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr	**0.005**	+		+		
					Channel Flow Sub-Total		**0.005 hours**	

Watershed or subarea T_c or T_t	Total Tc (hours) =	**0.022 hours**
(Add Sub-Total T_t from prior steps)	Software Limitations Require Minimum Tc =	**2 minutes**

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/8/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**	**BMW**	**Date Checked:**	**1/8/2026**

Circle One: (**Present**) Developed — **Existing Watershed 2 - Impervious (Future)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)		Segment ID	**1**					
1.	Surface Description (NEH table 15-1)		**Smooth Surfaces**					
2.	Manning's Roughness Coeff., n (NEH table 15-1)		**0.011**					
3.	Flow Length, L (total L < 100 ft)	ft	**58**					
4.	Two-year 24-hr rainfall, P_2	in	**4.23**					
5.	Land Slope, s	ft/ft	**0.010**					
6.	Compute T_t $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	**0.015**	+		+		
					Sheet Flow Sub-Total		**0.015 hours**	
Shallow Concentrated Flow		Segment ID	**3**					
7.	Surface Description		**Pavement**					
8.	Flow Length, L	ft	**12**					
9.	Watercourse Slope, s	ft/ft	**0.042**					
10.	Average Velocity, V (NEH table 15-3)	ft/s	**4.19**					
11.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr	**0.001**	+		+		
					Shallow Conc. Flow Sub-Total		**0.001 hours**	
Channel Flow		Segment ID	**2**					
12.	Flow Length, L	ft	**25**					
13.	Cross Sectional flow area, a	ft^2	**0.02**					
14.	Wetted Perimeter, P_w	ft	**0.52**					
15.	Hydraulic Radius, r $r = a / P_w$	ft	**0.04**					
16.	Channel Slope, s	ft/ft	**0.007**					
17.	Manning's Roughness Coeff., n		**0.011**					
18.	Velocity, V $V = (1.49\, r^{2/3} s^{1/2}) / n$	ft/s	**1.39**					
19.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr	**0.005**	+		+		
					Channel Flow Sub-Total		**0.005 hours**	

Watershed or subarea T_c or T_t	Total Tc (hours) =	**0.021 hours**
(Add Sub-Total T_t from prior steps)	Software Limitations Require Minimum Tc =	**2 minutes**

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/8/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**	**BMW**	**Date Checked:**	**1/8/2026**

Circle One: (**Present**) Developed — **Existing Watershed 2 - Pervious (Current)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)

		Segment ID	1		2		
1.	Surface Description (NEH table 15-1)		Short Grass Prairie		Smooth Surfaces		
2.	Manning's Roughness Coeff., n (NEH table 15-1)		0.15		0.011		
3.	Flow Length, L (total L < 100 ft)	ft	26		13		
4.	Two-year 24-hr rainfall, P_2	in	3.47		3.47		
5.	Land Slope, s	ft/ft	0.027		0.050		
6.	Compute T_t $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	0.047	+	0.003	+	
					Sheet Flow Sub-Total		0.050 hours

Shallow Concentrated Flow

		Segment ID					
7.	Surface Description						
8.	Flow Length, L	ft					
9.	Watercourse Slope, s	ft/ft					
10.	Average Velocity, V (NEH table 15-3)	ft/s					
11.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr		+		+	
					Shallow Conc. Flow Sub-Total		0.000 hours

Channel Flow

		Segment ID					
12.	Flow Length, L	ft					
13.	Cross Sectional flow area, a	ft^2					
14.	Wetted Perimeter, P_w	ft					
15.	Hydraulic Radius, r $r = a / P_w$	ft					
16.	Channel Slope, s	ft/ft					
17.	Manning's Roughness Coeff., n						
18.	Velocity, V $V = (1.49\, r^{2/3} s^{1/2}) / n$	ft/s					
19.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr		+		+	
					Channel Flow Sub-Total		0.000 hours

Watershed or subarea T_c or T_t	Total Tc (hours) =	**0.050 hours**
(Add Sub-Total T_t from prior steps)	Total Tc (minutes) =	**3 minutes**

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/8/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**	**BMW**	**Date Checked:**	**1/8/2026**

Circle One: (**Present**) Developed — **Existing Watershed 2 - Pervious (Future)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)

		Segment ID	1		2		
1.	Surface Description (NEH table 15-1)		Short Grass Prairie		Smooth Surfaces		
2.	Manning's Roughness Coeff., n (NEH table 15-1)		0.15		0.011		
3.	Flow Length, L (total L < 100 ft)	ft	26		13		
4.	Two-year 24-hr rainfall, P_2	in	4.23		4.23		
5.	Land Slope, s	ft/ft	0.027		0.050		
6.	Compute T_t $T_t = \frac{0.007\,(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	0.043	+	0.002	+	
					Sheet Flow Sub-Total		0.045 hours

Shallow Concentrated Flow

		Segment ID					
7.	Surface Description						
8.	Flow Length, L	ft					
9.	Watercourse Slope, s	ft/ft					
10.	Average Velocity, V (NEH table 15-3)	ft/s					
11.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr		+		+	
					Shallow Conc. Flow Sub-Total		0.000 hours

Channel Flow

		Segment ID					
12.	Flow Length, L	ft					
13.	Cross Sectional flow area, a	ft^2					
14.	Wetted Perimeter, P_w	ft					
15.	Hydraulic Radius, r $r = a / P_w$	ft					
16.	Channel Slope, s	ft/ft					
17.	Manning's Roughness Coeff., n						
18.	Velocity, V $V = (1.49\, r^{2/3} s^{1/2}) / n$	ft/s					
19.	Compute T_t $T_t = \frac{L}{3600\,V}$	hr		+		+	
					Channel Flow Sub-Total		0.000 hours

Watershed or subarea T_c or T_t	Total Tc (hours) =	**0.045 hours**
(Add Sub-Total T_t from prior steps)	Total Tc (minutes) =	**3 minutes**

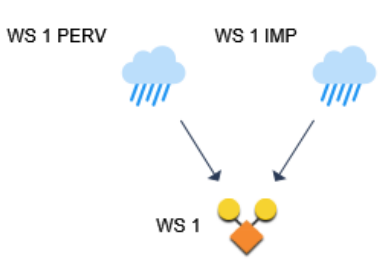
EXISTING RUNOFF HYDROGRAPHS "CURRENT" 2-, 10-, AND 100-YEAR STORMS

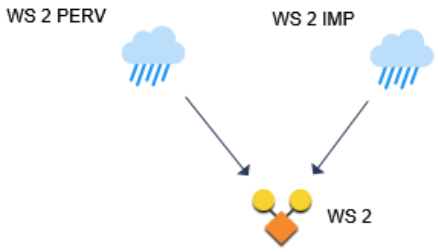
Table of Contents

Basin Model

Hydrology Studio v 3.0.0.41

Project Name: Existing
File: Chatham BNE Existing.hys
01-14-2026





Hydrograph by Return Period

Hydrology Studio v 3.0.0.41

Project Name: Existing
File: Chatham BNE Existing.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Outflow (cfs)							
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
1	NRCS Runoff	WS 1 PERV		0.444			0.972			2.125
2	NRCS Runoff	WS 1 IMP		8.249			12.96			22.40
3	Junction	WS 1		8.677			13.91			24.48
4	NRCS Runoff	WS 2 PERV		0.107			0.235			0.513
5	NRCS Runoff	WS 2 IMP		0.339			0.530			0.912
6	Junction	WS 2		0.446			0.764			1.426

Hydrograph 2-yr Summary

Hydrology Studio v 3.0.0.41

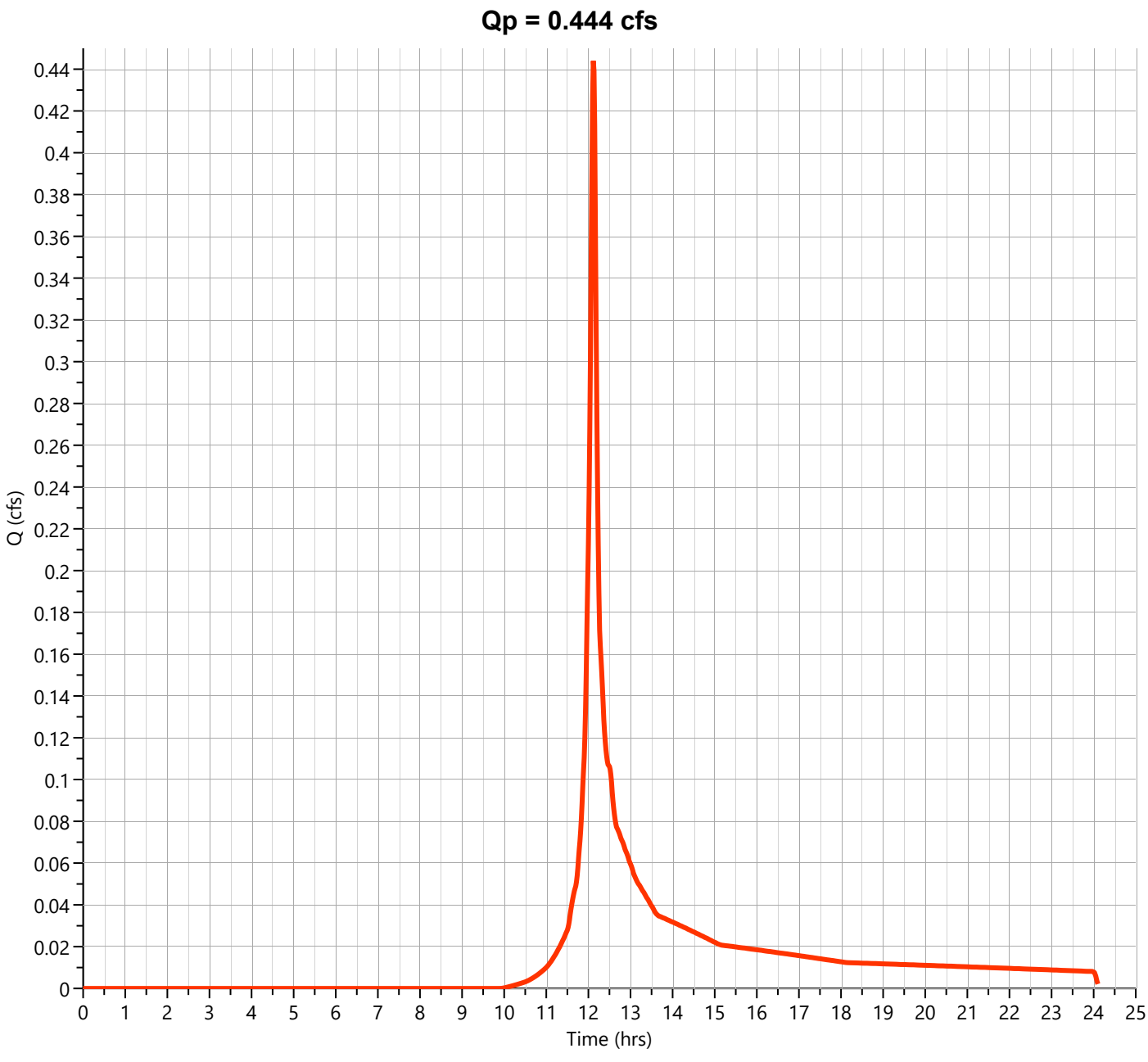
Project Name: Existing
File: Chatham BNE Existing.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	0.444	12.12	1,390	----		
2	NRCS Runoff	WS 1 IMP	8.249	12.10	26,158	----		
3	Junction	WS 1	8.677	12.10	27,548	1, 2		
4	NRCS Runoff	WS 2 PERV	0.107	12.10	290	----		
5	NRCS Runoff	WS 2 IMP	0.339	12.10	1,101	----		
6	Junction	WS 2	0.446	12.10	1,392	4, 5		

WS 1 PERV

Hyd. No. 1

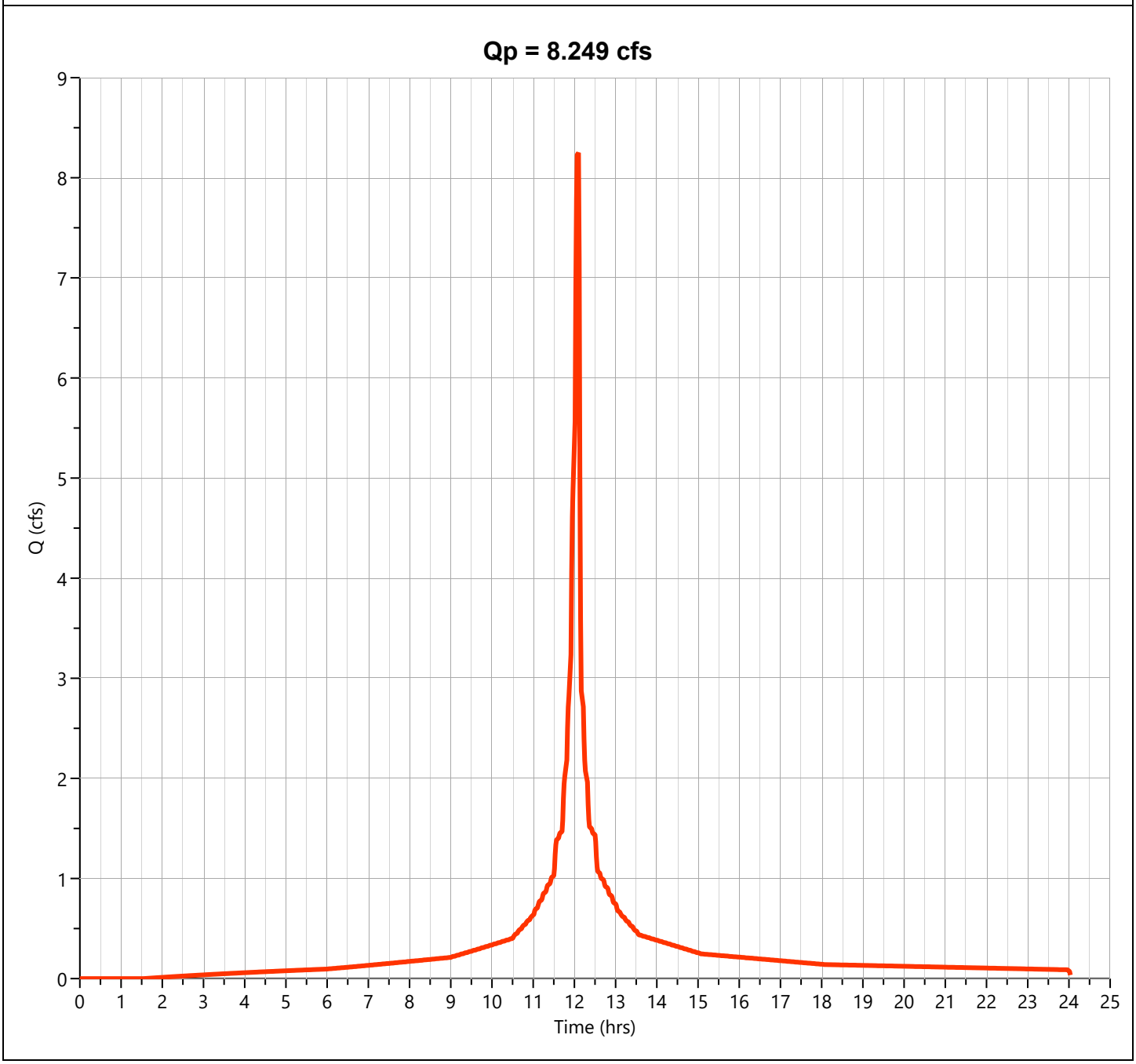
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.444 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 1,390 cuft
Drainage Area	= 0.29 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 3.47 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

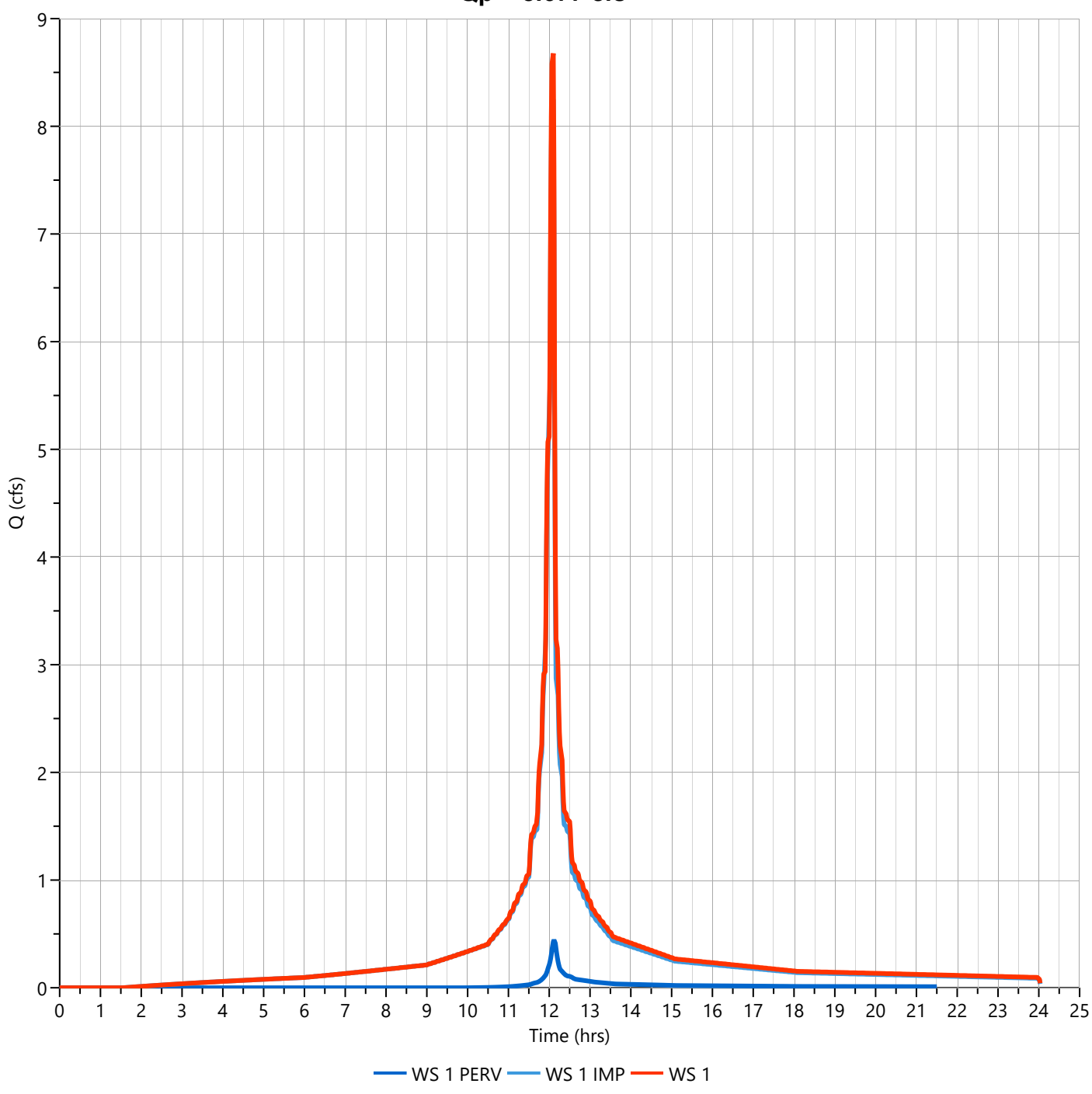
Hydrograph Type	= NRCS Runoff	Peak Flow	= 8.249 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 26,158 cuft
Drainage Area	= 2.46 ac	Curve Number	= 97.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 3.47 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

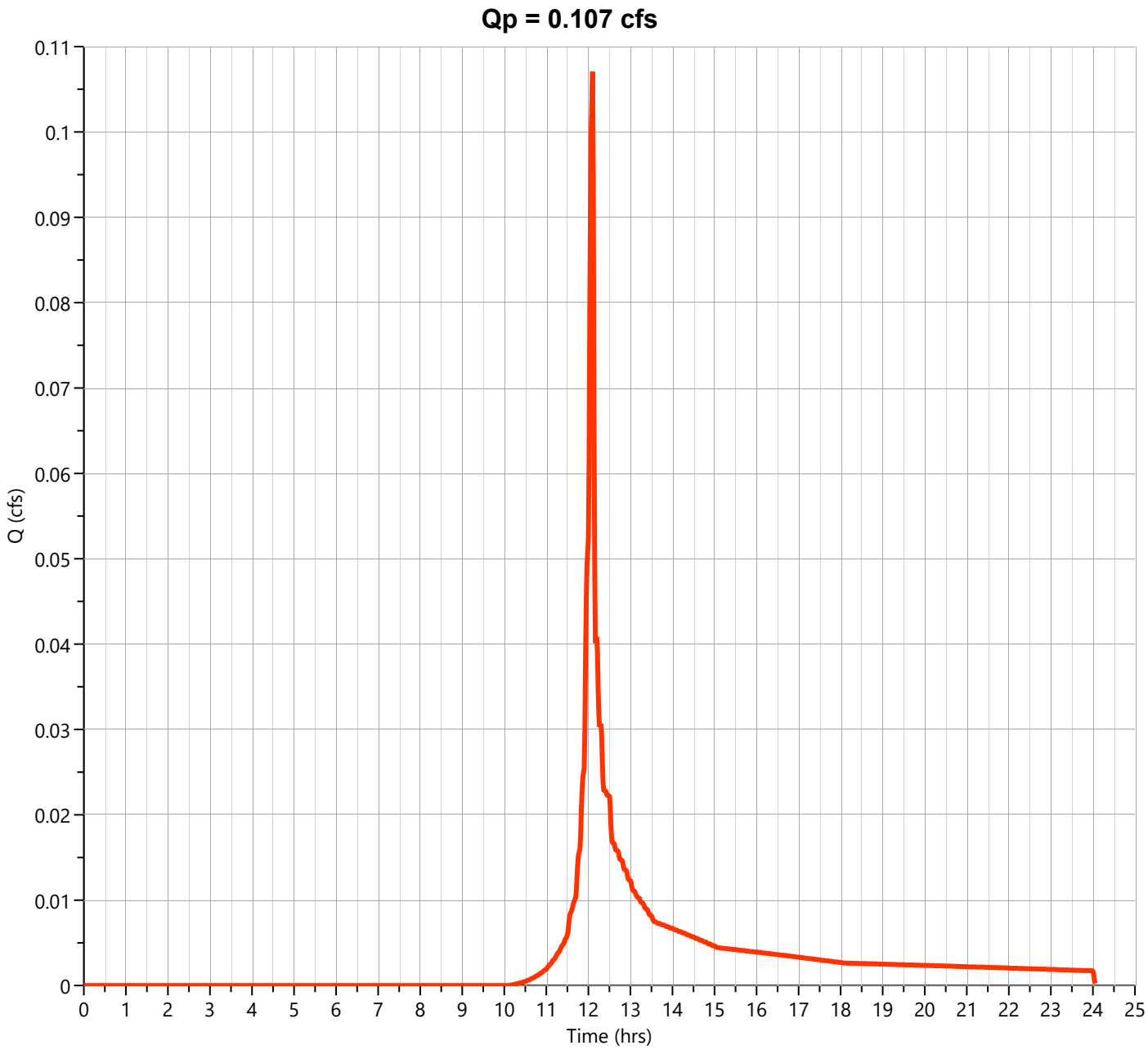
Hydrograph Type	= Junction	Peak Flow	= 8.677 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 27,548 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

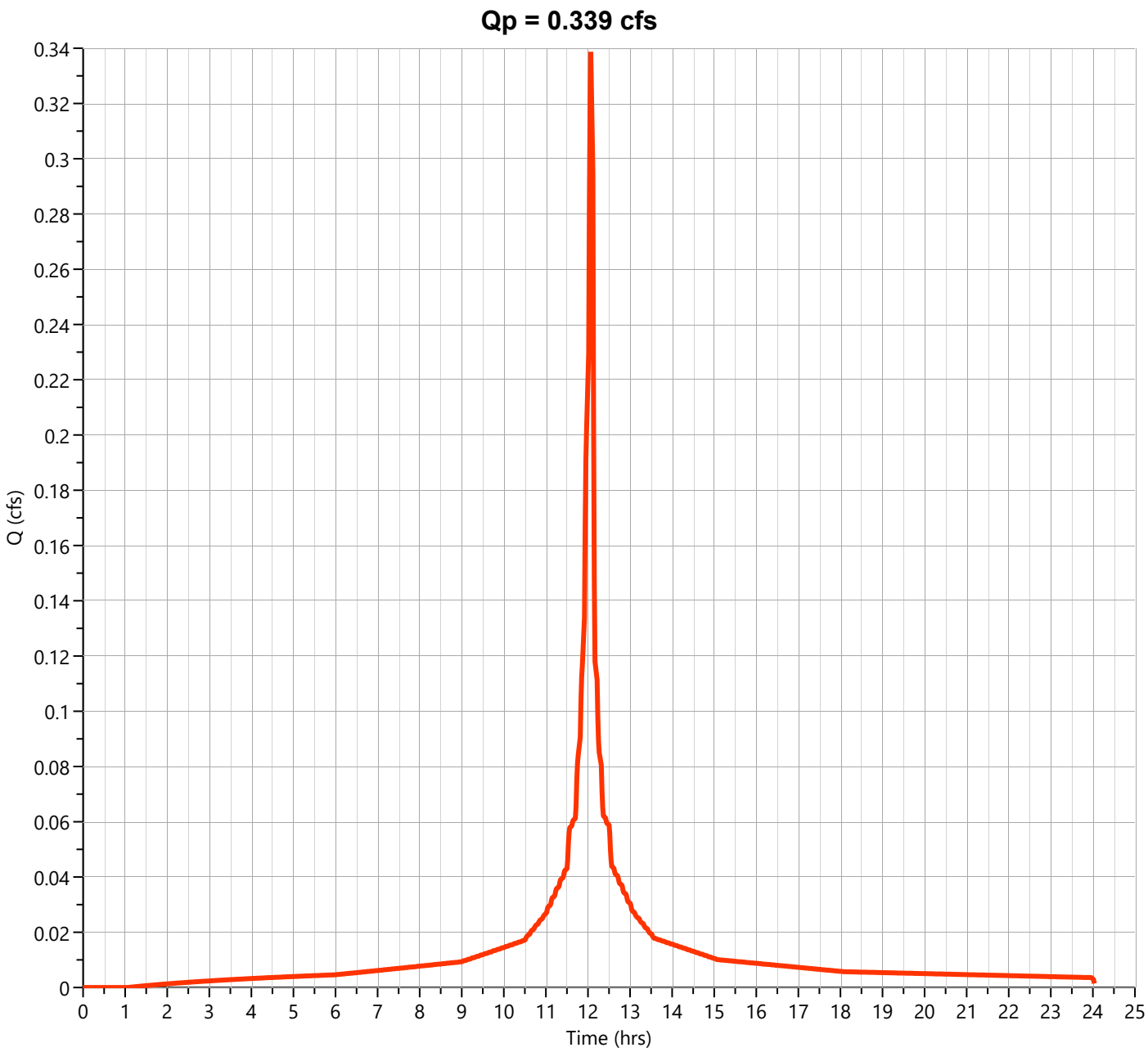
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.107 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 290 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 3.47 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

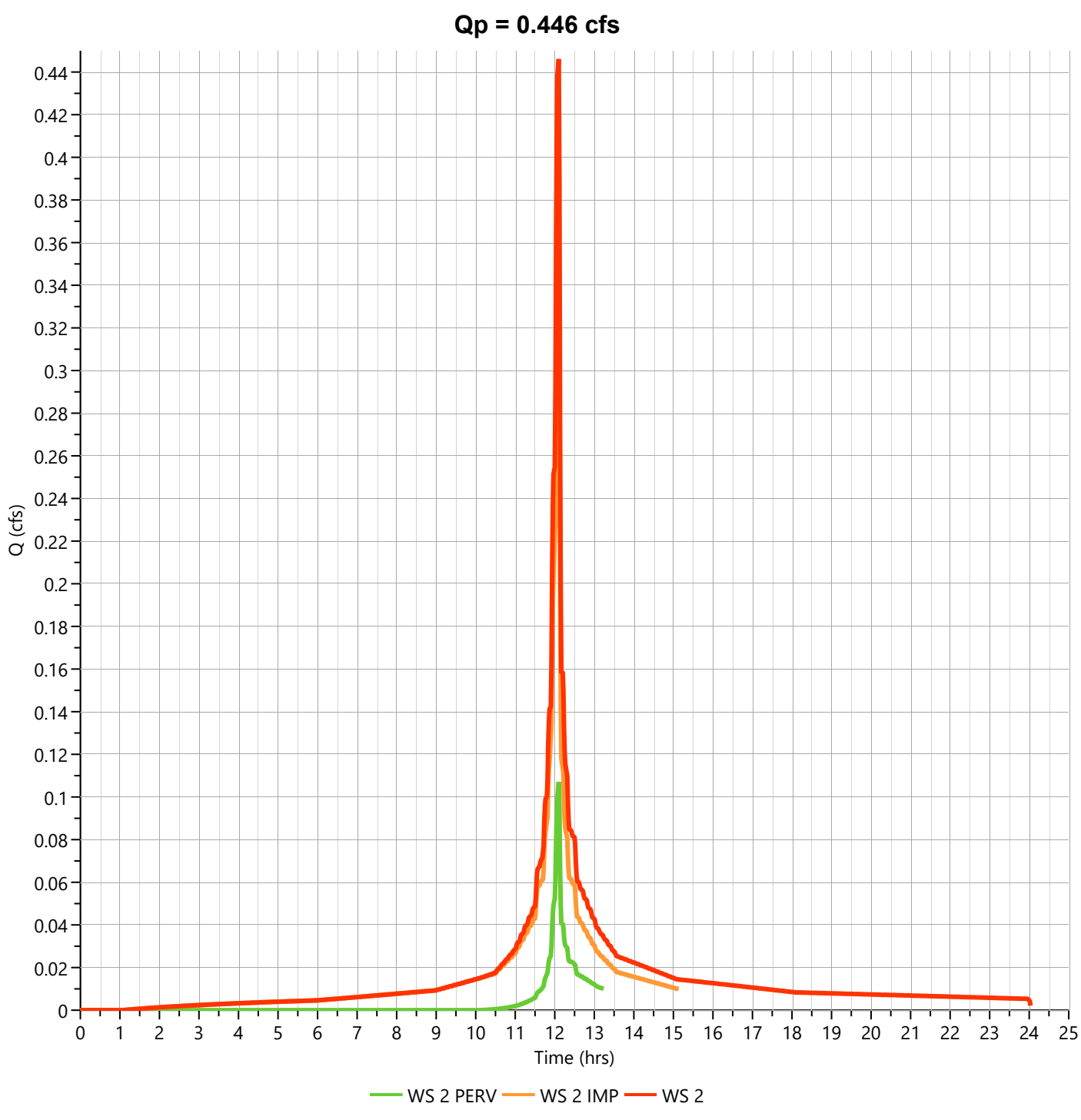
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.339 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 1,101 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 3.47 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 0.446 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 1,392 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



Hydrograph 10-yr Summary

Hydrology Studio v 3.0.0.41

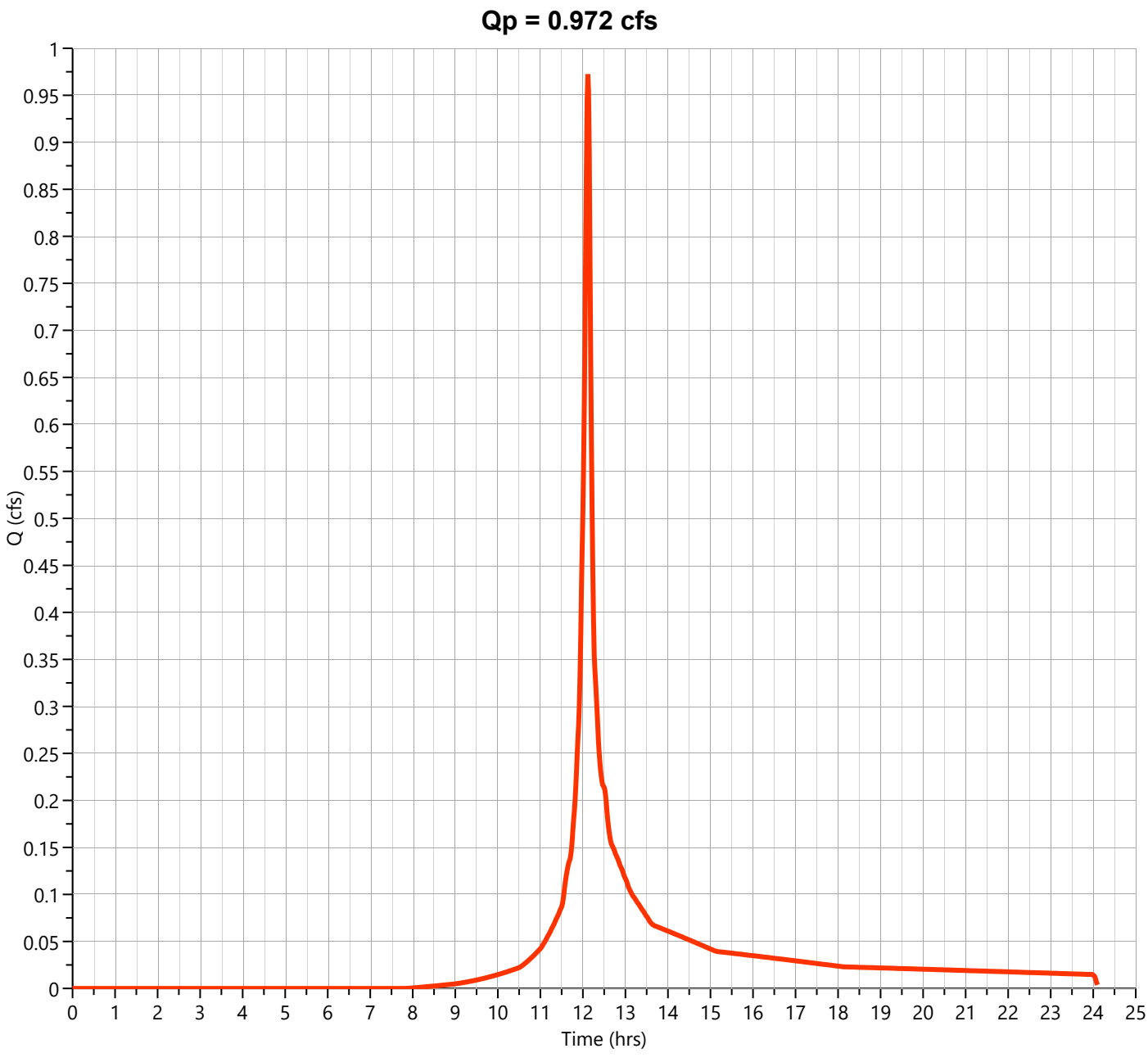
Project Name: Existing
File: Chatham BNE Existing.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	0.972	12.12	3,006	----		
2	NRCS Runoff	WS 1 IMP	12.96	12.10	42,158	----		
3	Junction	WS 1	13.91	12.10	45,165	1, 2		
4	NRCS Runoff	WS 2 PERV	0.235	12.10	638	----		
5	NRCS Runoff	WS 2 IMP	0.530	12.10	1,753	----		
6	Junction	WS 2	0.764	12.10	2,392	4, 5		

WS 1 PERV

Hyd. No. 1

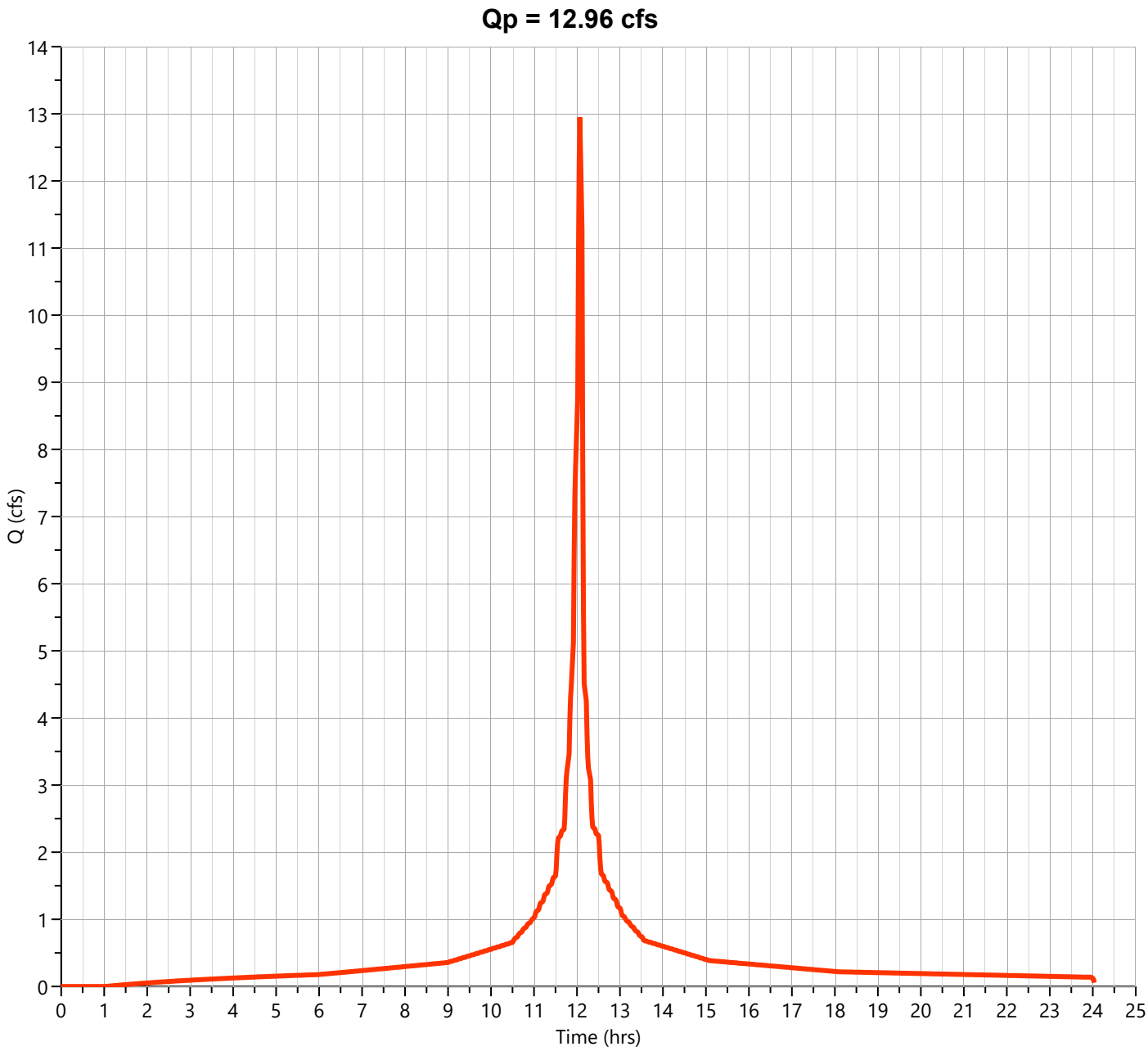
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.972 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 3,006 cuft
Drainage Area	= 0.29 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 5.39 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

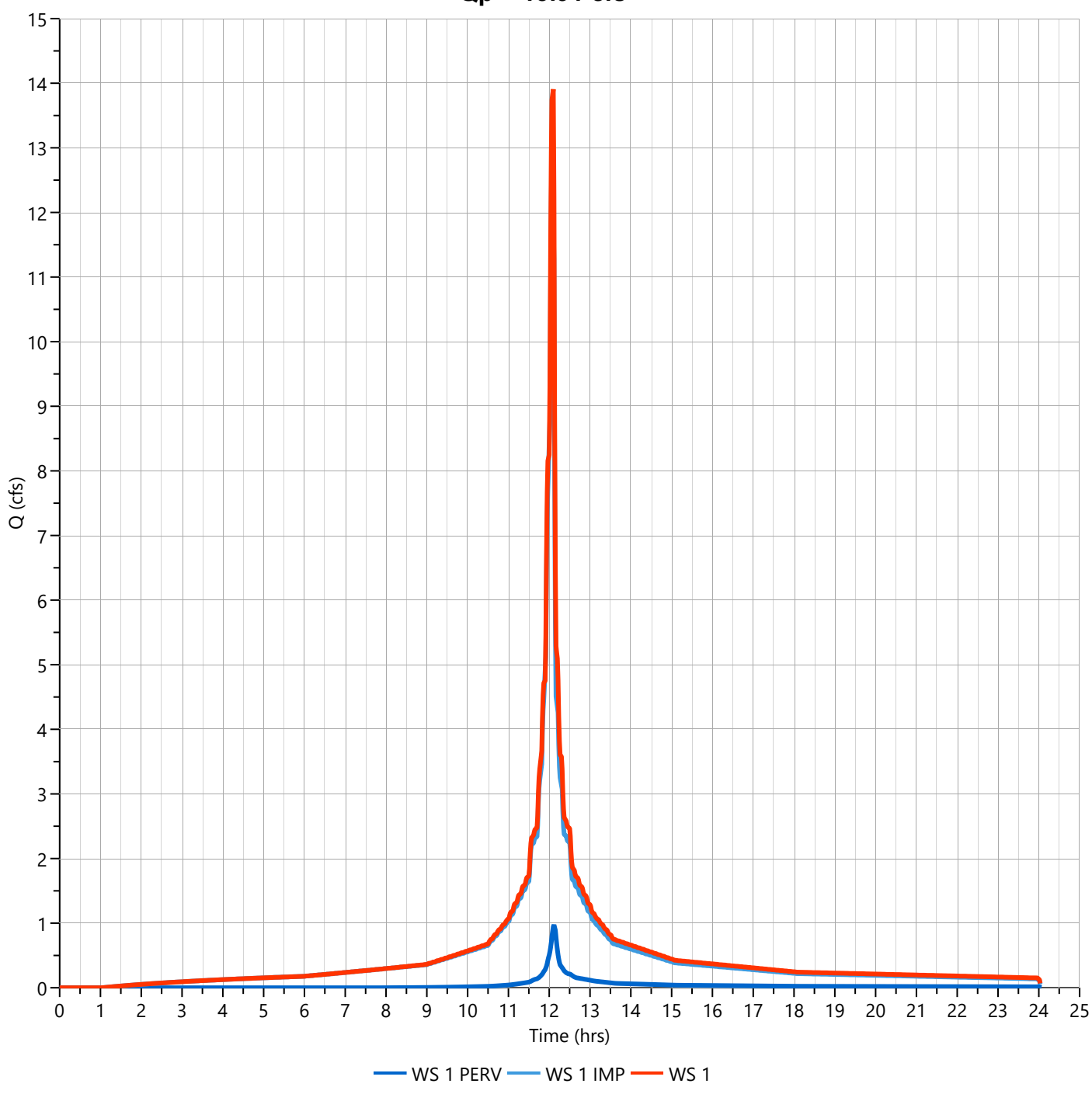
Hydrograph Type	= NRCS Runoff	Peak Flow	= 12.96 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 42,158 cuft
Drainage Area	= 2.46 ac	Curve Number	= 97.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 5.39 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

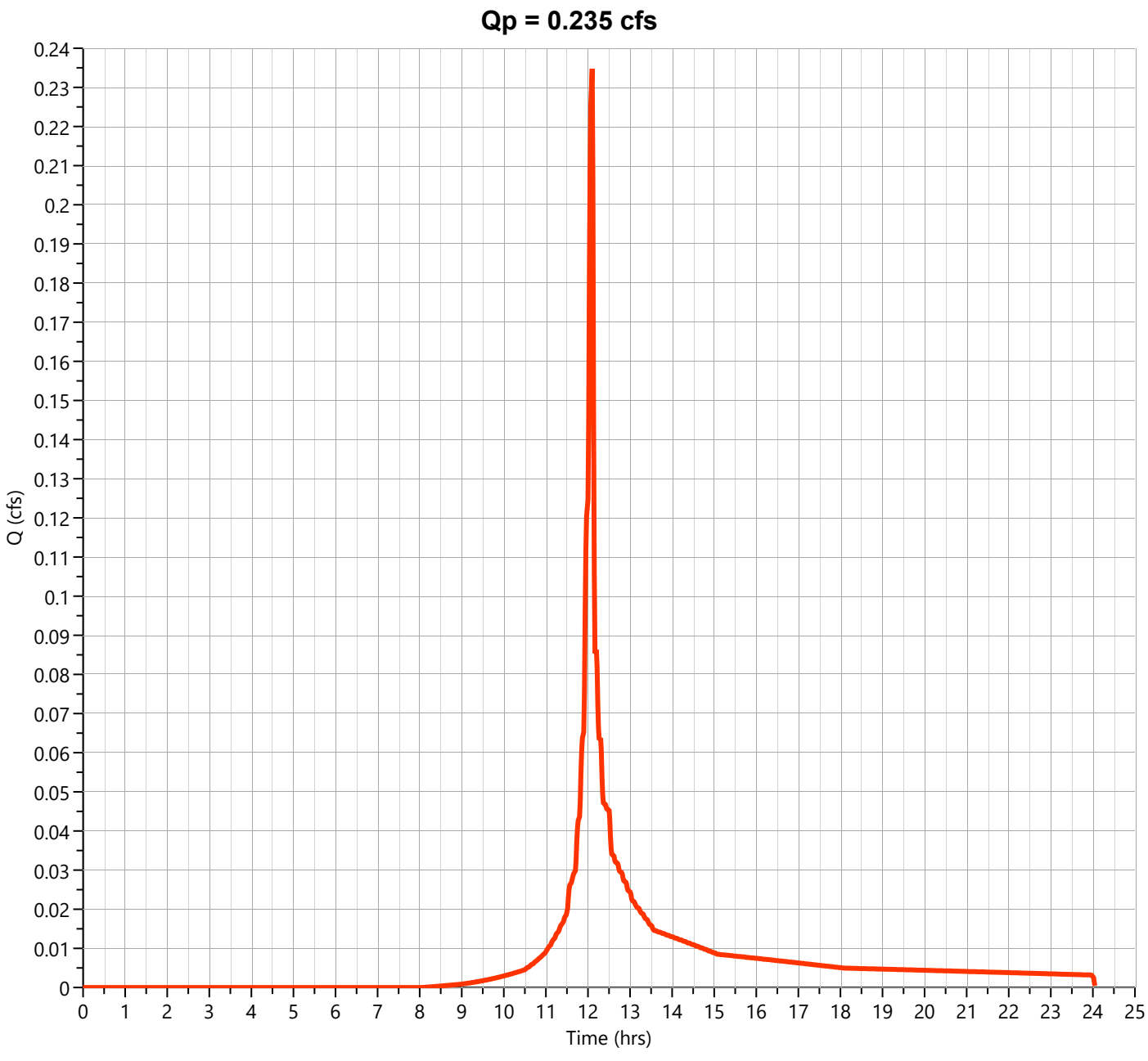
Hydrograph Type	= Junction	Peak Flow	= 13.91 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 45,165 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

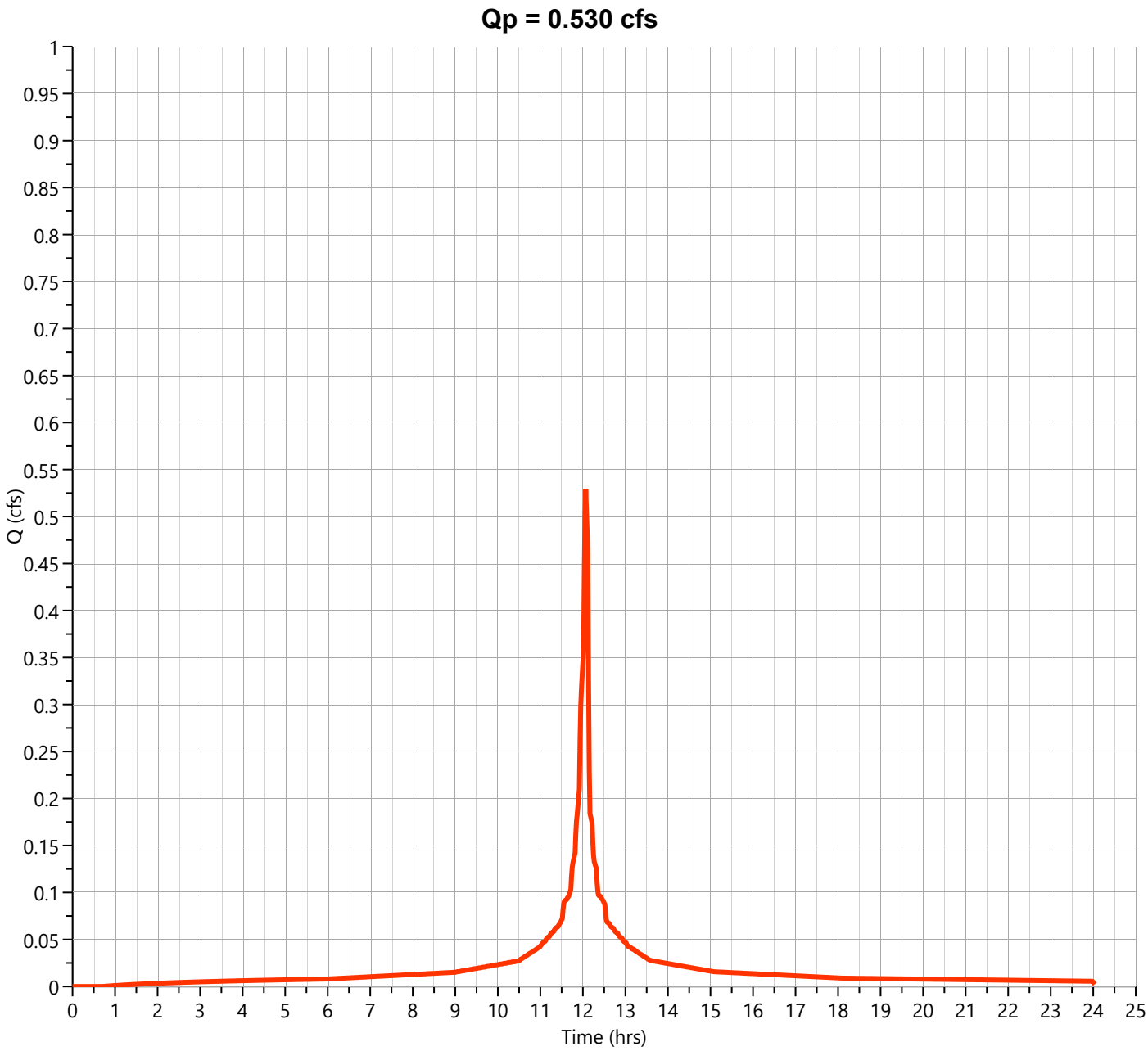
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.235 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 638 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 5.39 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

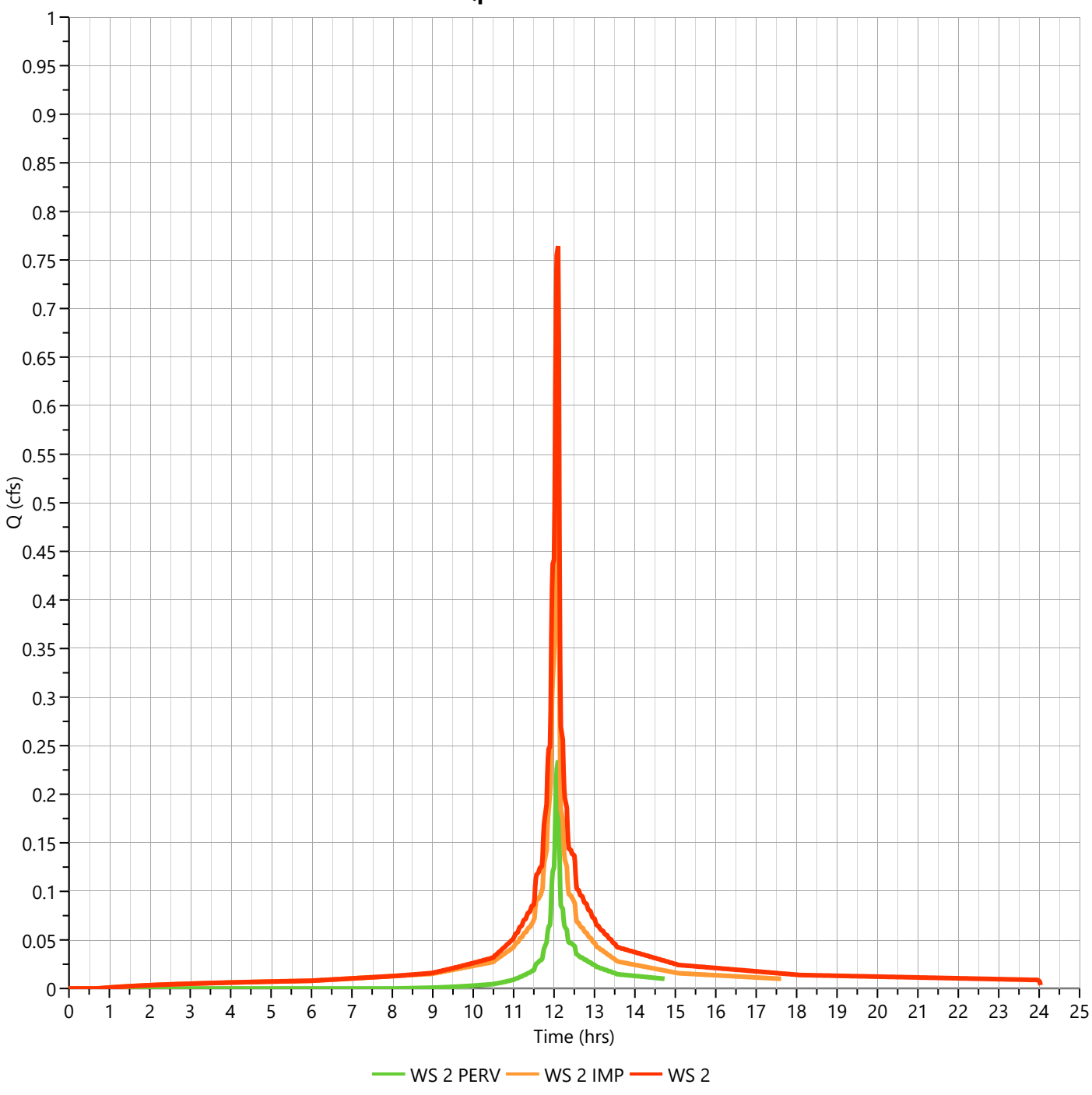
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.530 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 1,753 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 5.39 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 0.764 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 2,392 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



Hydrograph 100-yr Summary

Hydrology Studio v 3.0.0.41

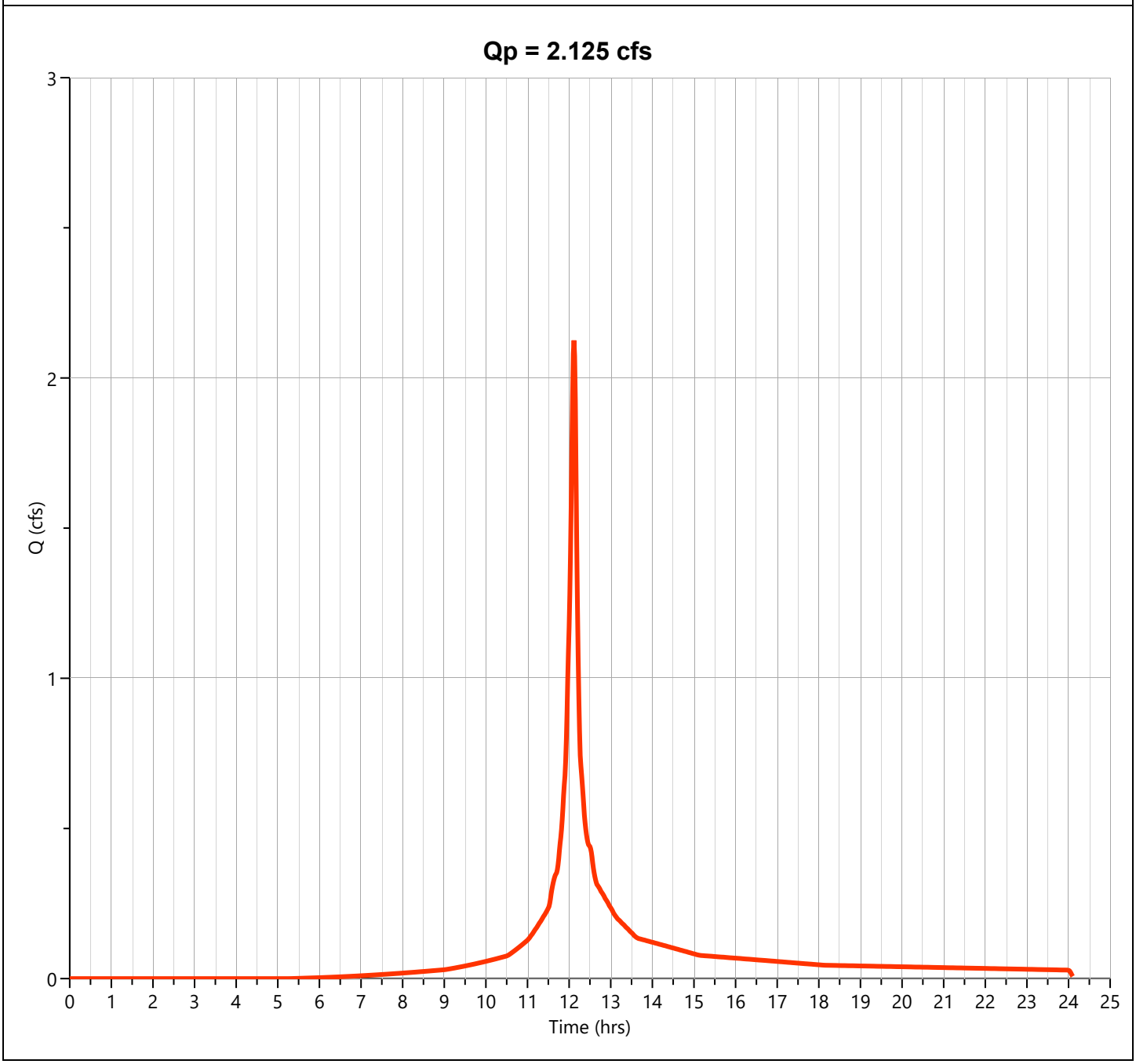
Project Name: Existing
File: Chatham BNE Existing.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	2.125	12.12	6,722	----		
2	NRCS Runoff	WS 1 IMP	22.40	12.10	74,499	----		
3	Junction	WS 1	24.48	12.10	81,221	1, 2		
4	NRCS Runoff	WS 2 PERV	0.513	12.10	1,445	----		
5	NRCS Runoff	WS 2 IMP	0.912	12.10	3,069	----		
6	Junction	WS 2	1.426	12.10	4,515	4, 5		

WS 1 PERV

Hyd. No. 1

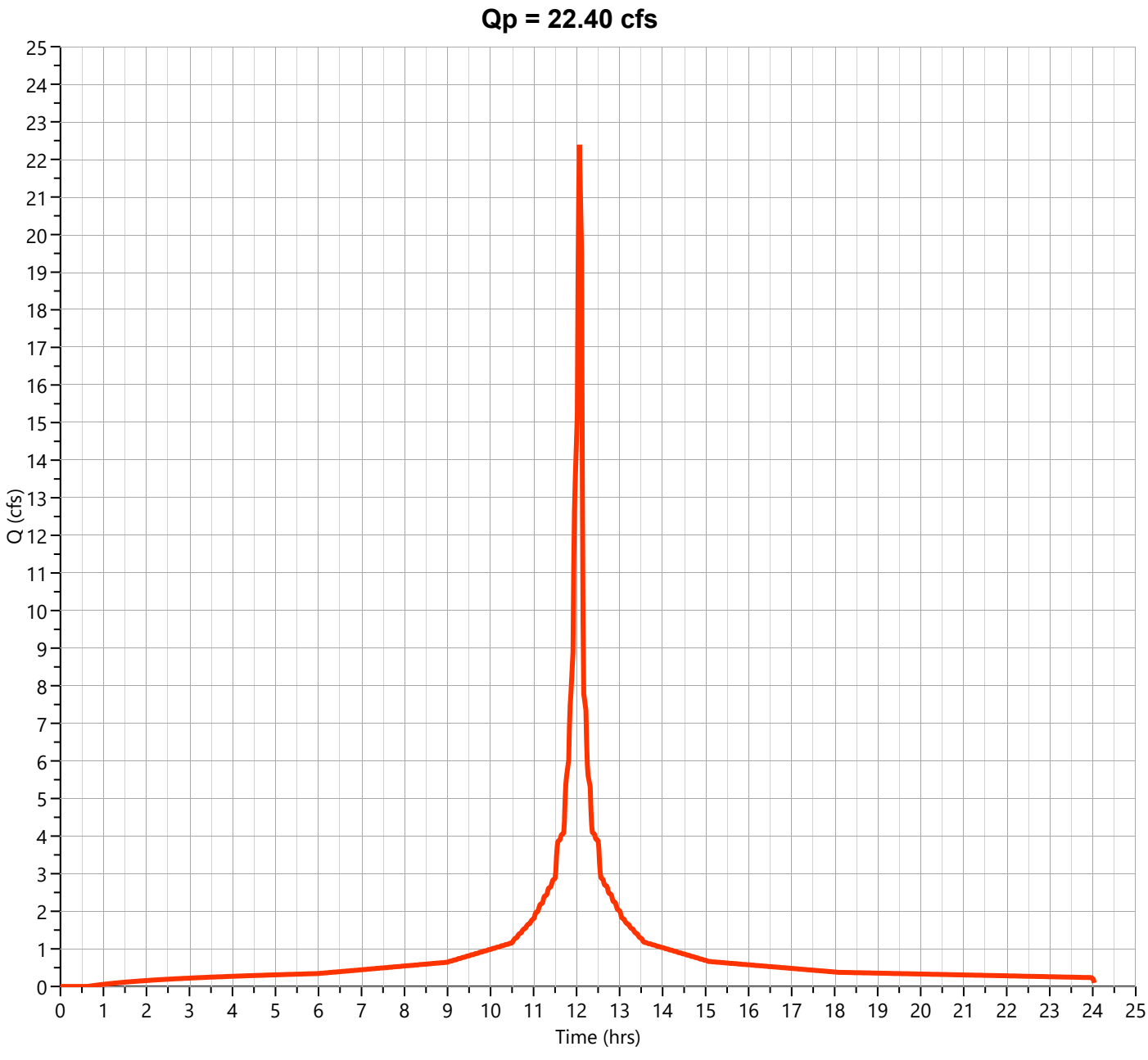
Hydrograph Type	= NRCS Runoff	Peak Flow	= 2.125 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 6,722 cuft
Drainage Area	= 0.29 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 9.26 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

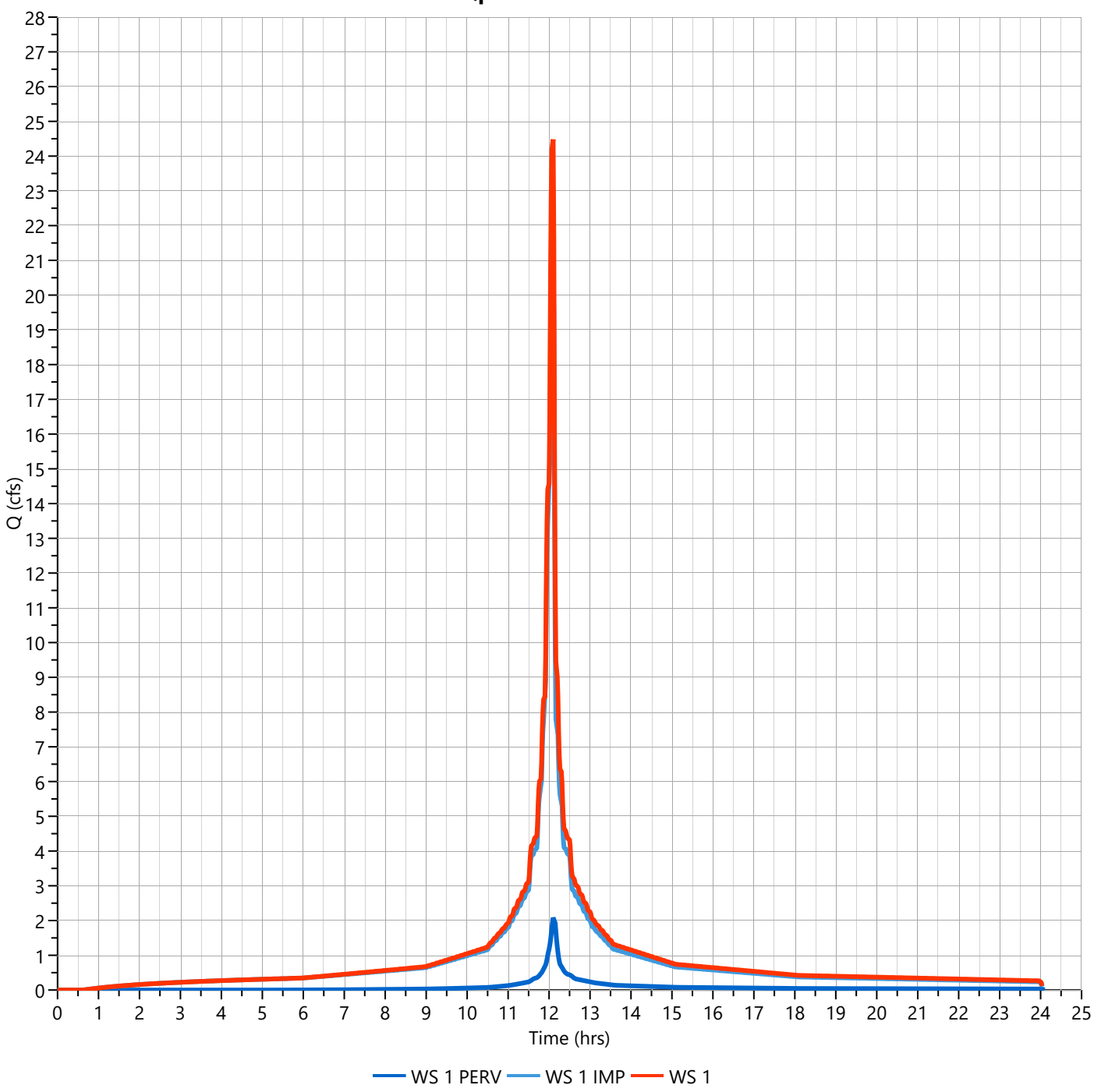
Hydrograph Type	= NRCS Runoff	Peak Flow	= 22.40 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 74,499 cuft
Drainage Area	= 2.46 ac	Curve Number	= 97.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 9.26 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

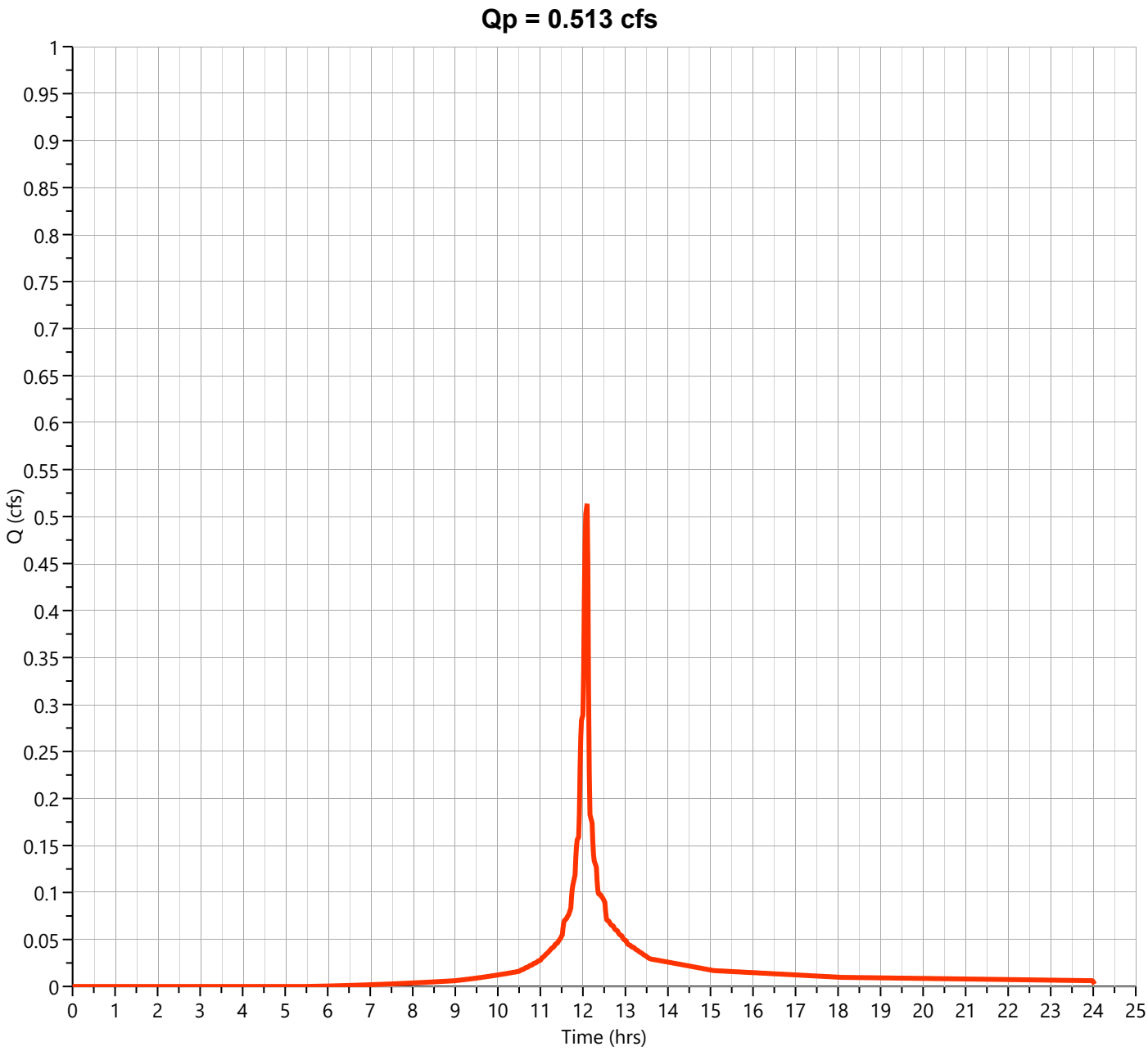
Hydrograph Type	= Junction	Peak Flow	= 24.48 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 81,221 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

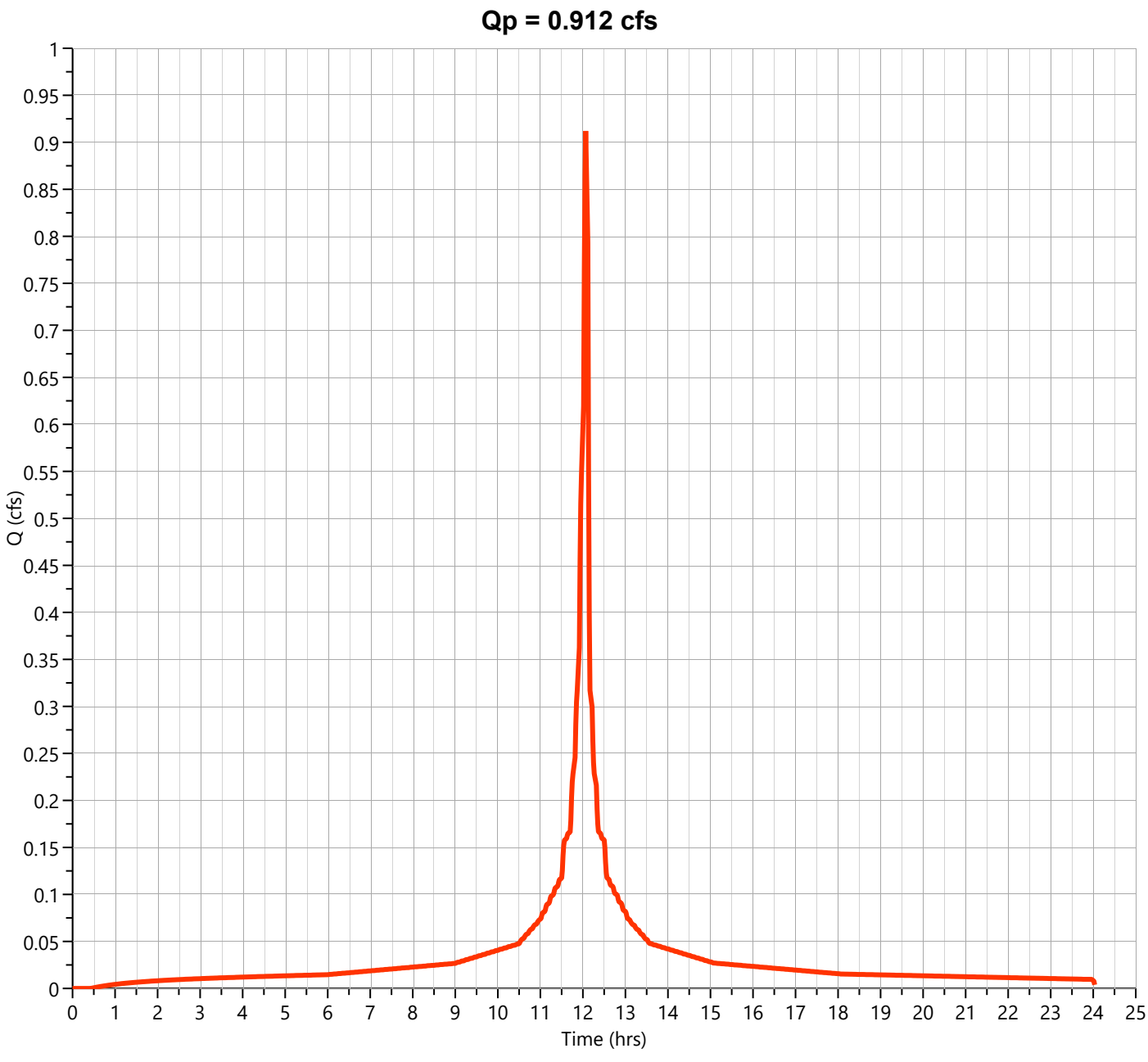
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.513 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 1,445 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 9.26 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

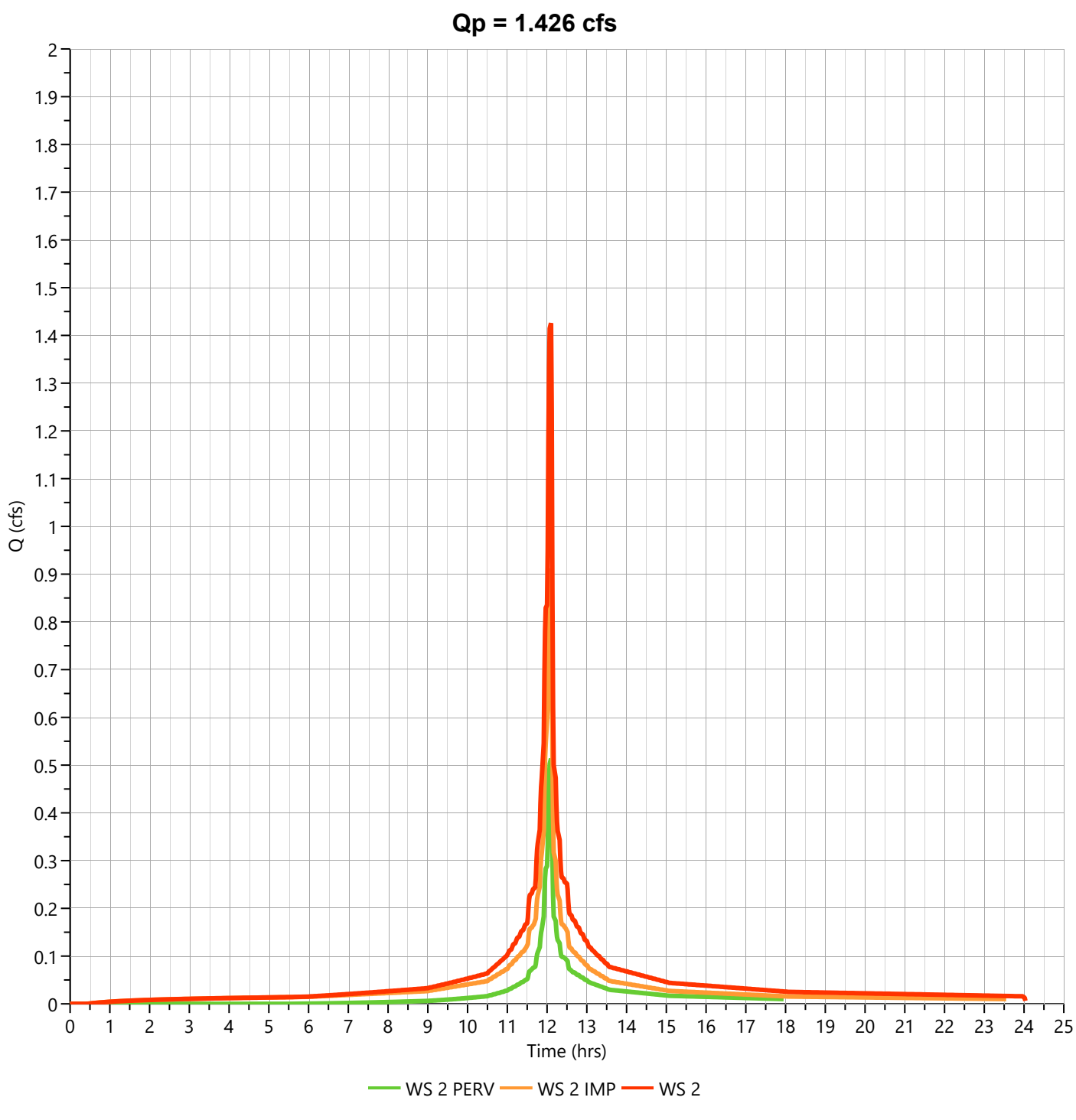
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.912 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 3,069 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 9.26 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 1.426 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 4,515 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



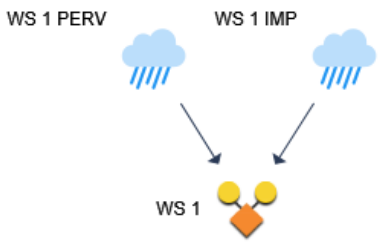
EXISTING RUNOFF HYDROGRAPHS "FUTURE" 2-, 10-, AND 100-YEAR STORMS

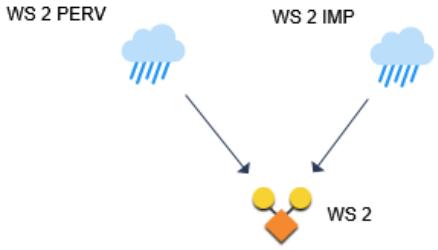
Table of Contents

Basin Model

Hydrology Studio v 3.0.0.41

Project Name: Existing
File: Chatham BNE Existing.hys
01-14-2026





Hydrograph by Return Period

Hydrology Studio v 3.0.0.41

Project Name: Existing
File: Chatham BNE Existing.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Outflow (cfs)							
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
1	NRCS Runoff	WS 1 PERV		0.645			1.354			3.182
2	NRCS Runoff	WS 1 IMP		10.12			16.14			30.91
3	Junction	WS 1		10.74			17.46			34.04
4	NRCS Runoff	WS 2 PERV		0.156			0.327			0.769
5	NRCS Runoff	WS 2 IMP		0.415			0.658			1.258
6	Junction	WS 2		0.570			0.985			2.027

Hydrograph 2-yr Summary

Hydrology Studio v 3.0.0.41

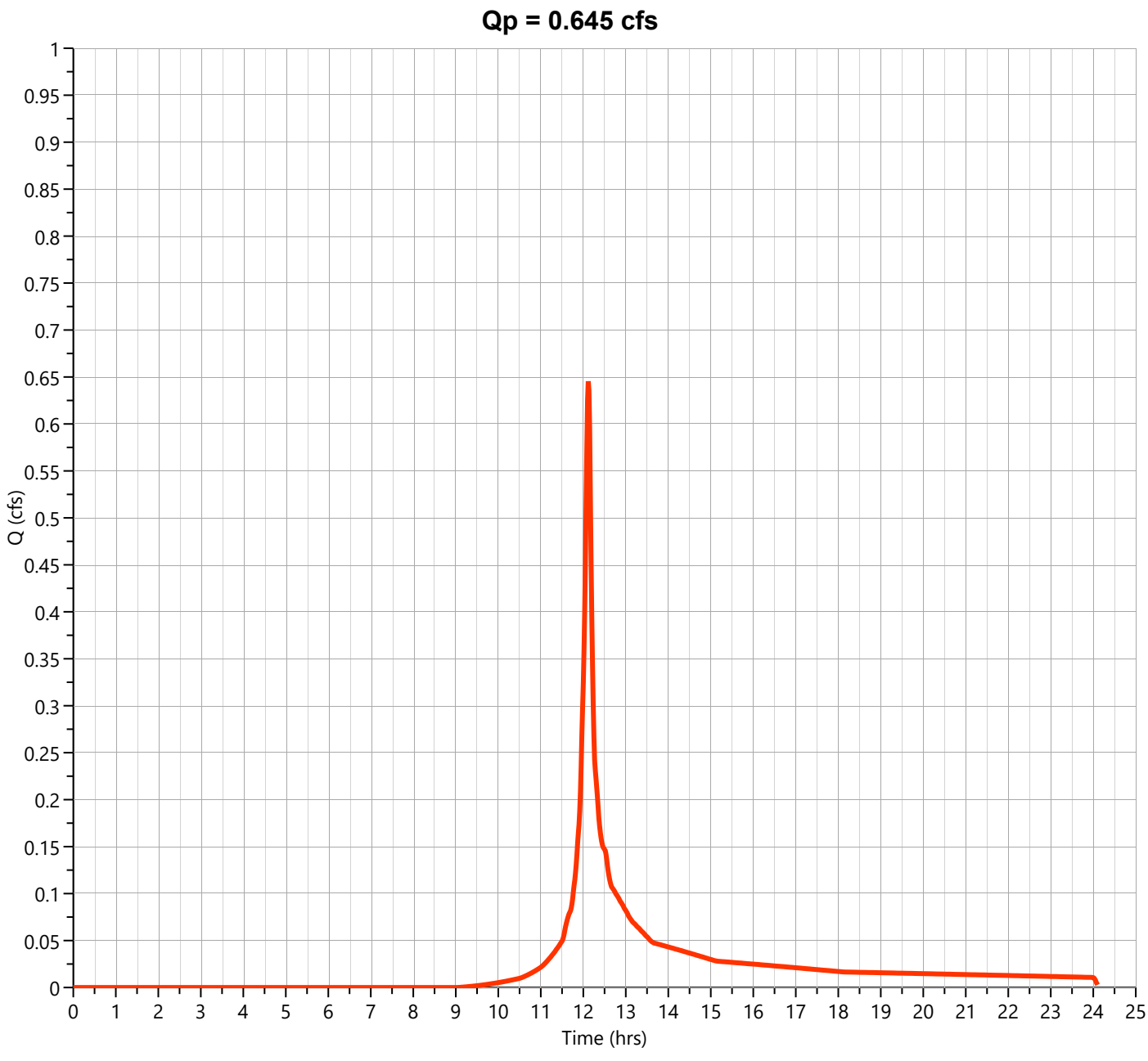
Project Name: Existing
File: Chatham BNE Existing.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	0.645	12.12	1,999	----		
2	NRCS Runoff	WS 1 IMP	10.12	12.10	32,484	----		
3	Junction	WS 1	10.74	12.10	34,483	1, 2		
4	NRCS Runoff	WS 2 PERV	0.156	12.10	421	----		
5	NRCS Runoff	WS 2 IMP	0.415	12.10	1,359	----		
6	Junction	WS 2	0.570	12.10	1,780	4, 5		

WS 1 PERV

Hyd. No. 1

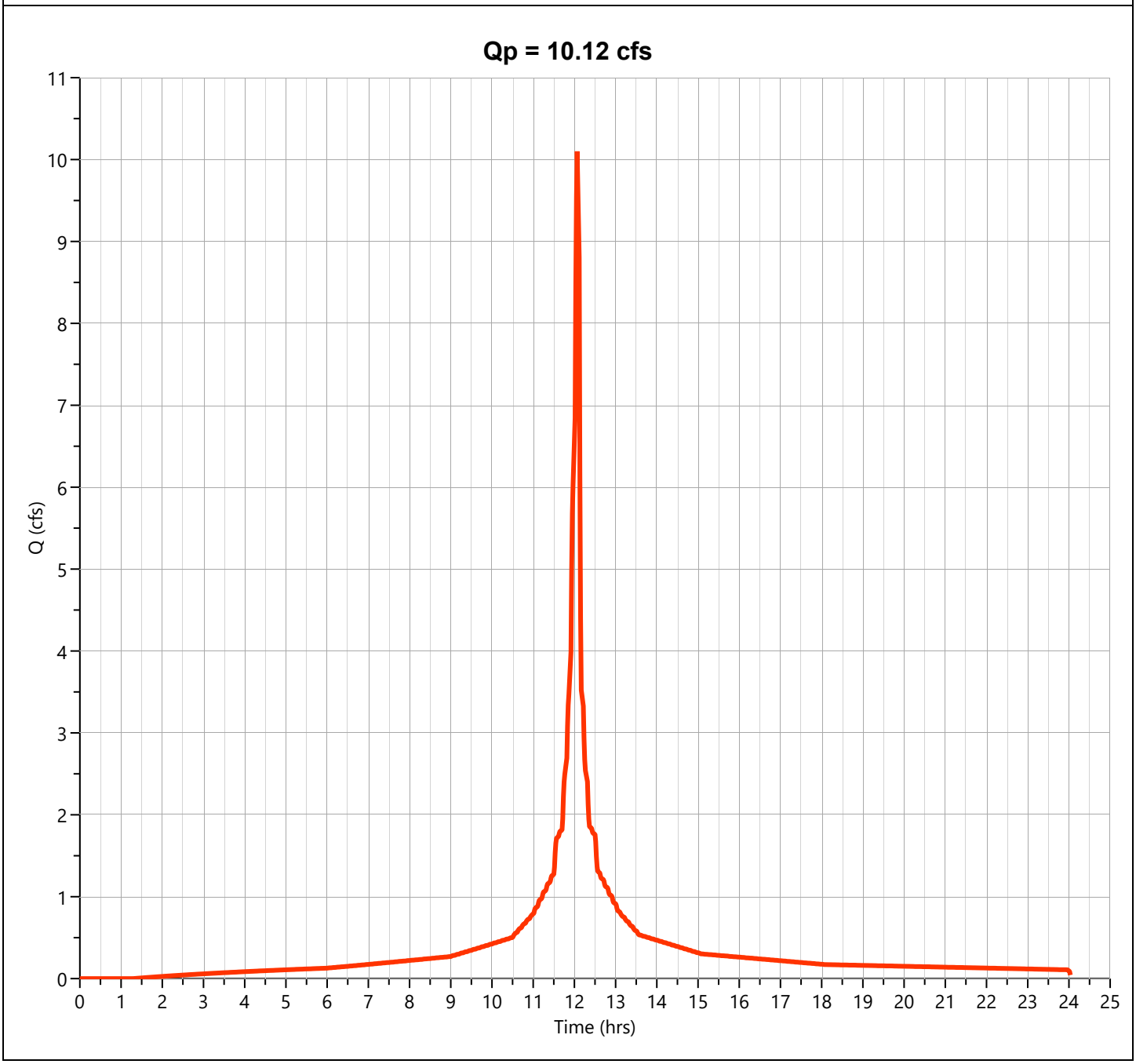
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.645 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 1,999 cuft
Drainage Area	= 0.29 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 4.23 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

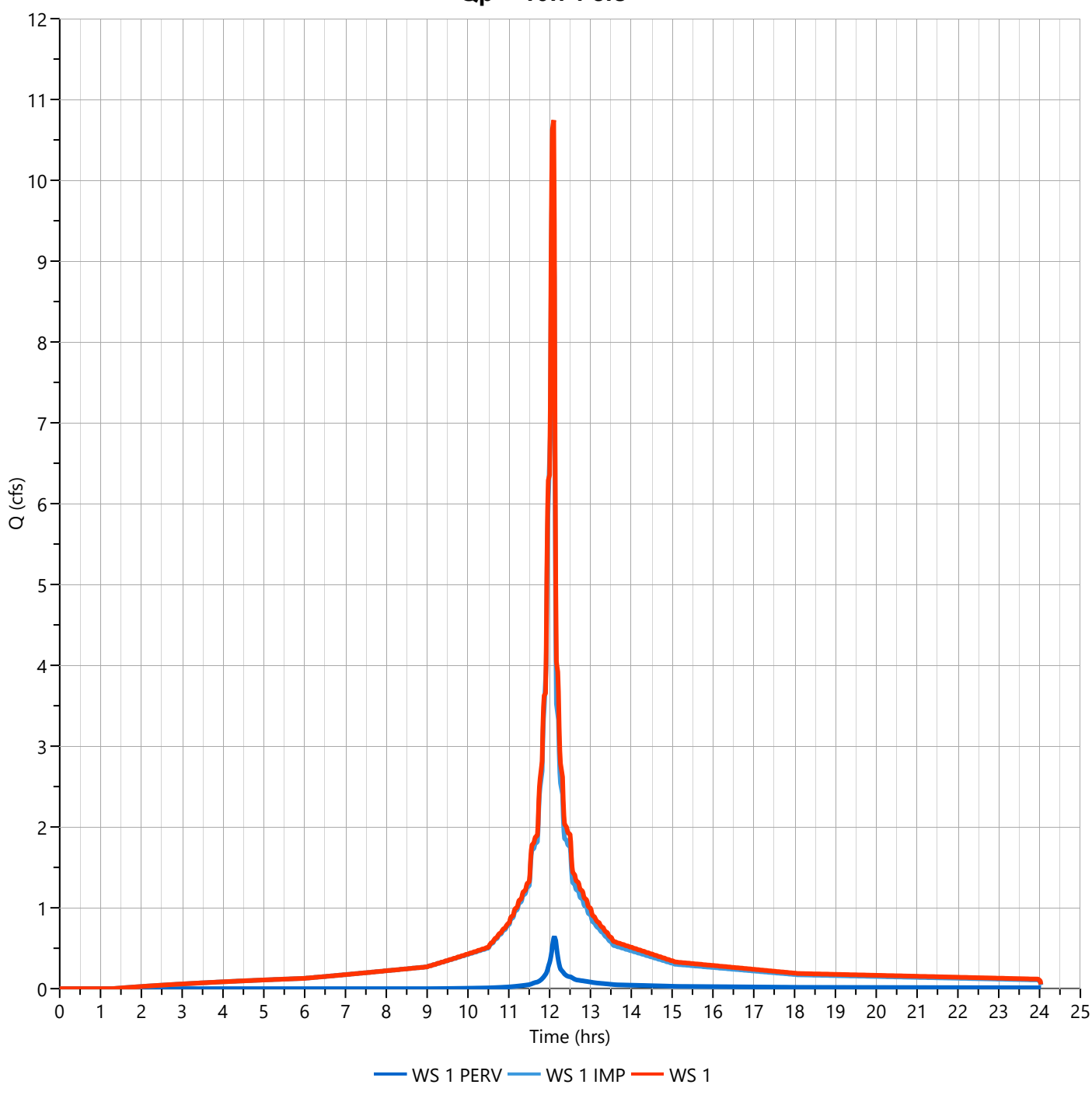
Hydrograph Type	= NRCS Runoff	Peak Flow	= 10.12 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 32,484 cuft
Drainage Area	= 2.46 ac	Curve Number	= 97.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 4.23 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

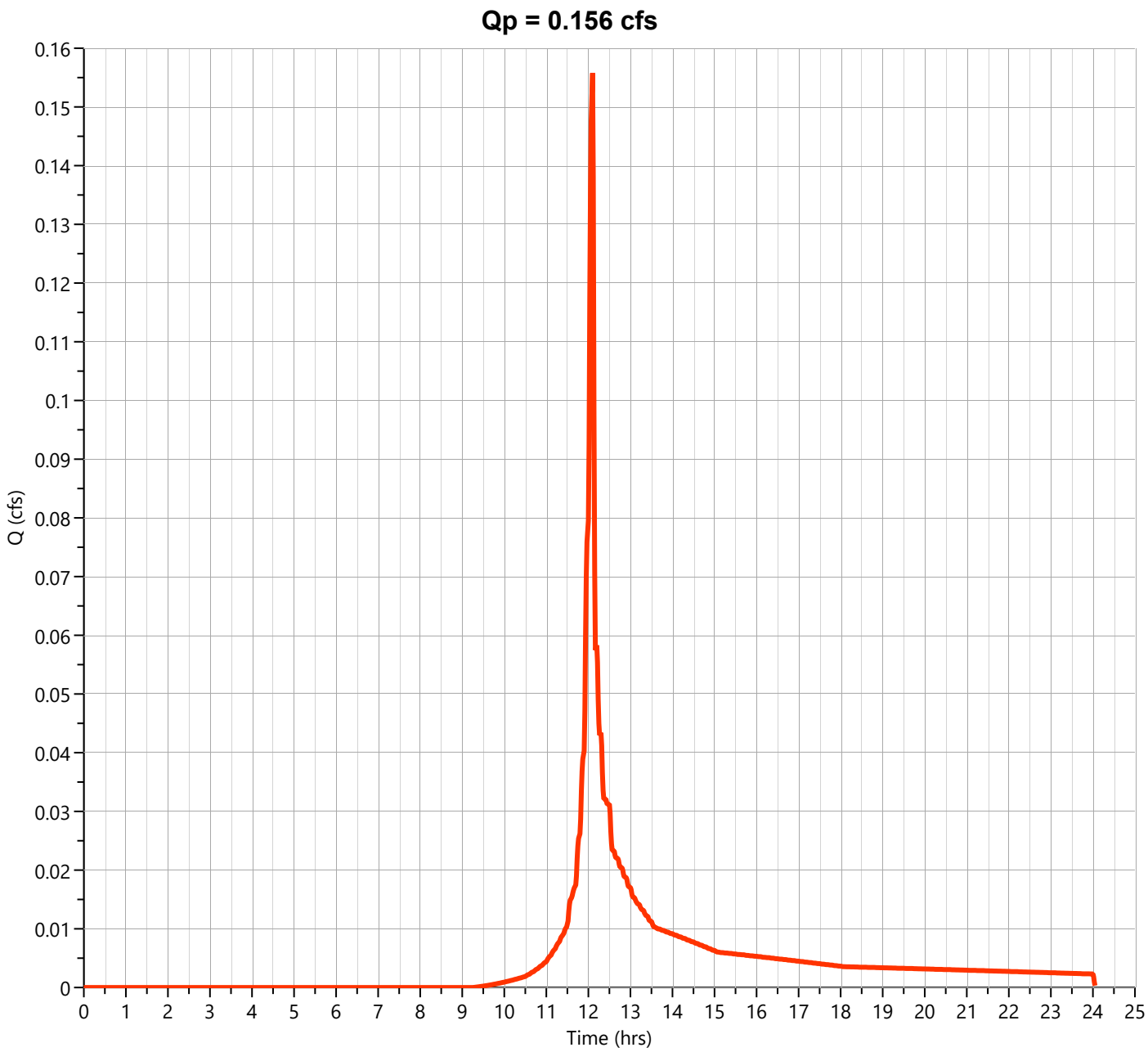
Hydrograph Type	= Junction	Peak Flow	= 10.74 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 34,483 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

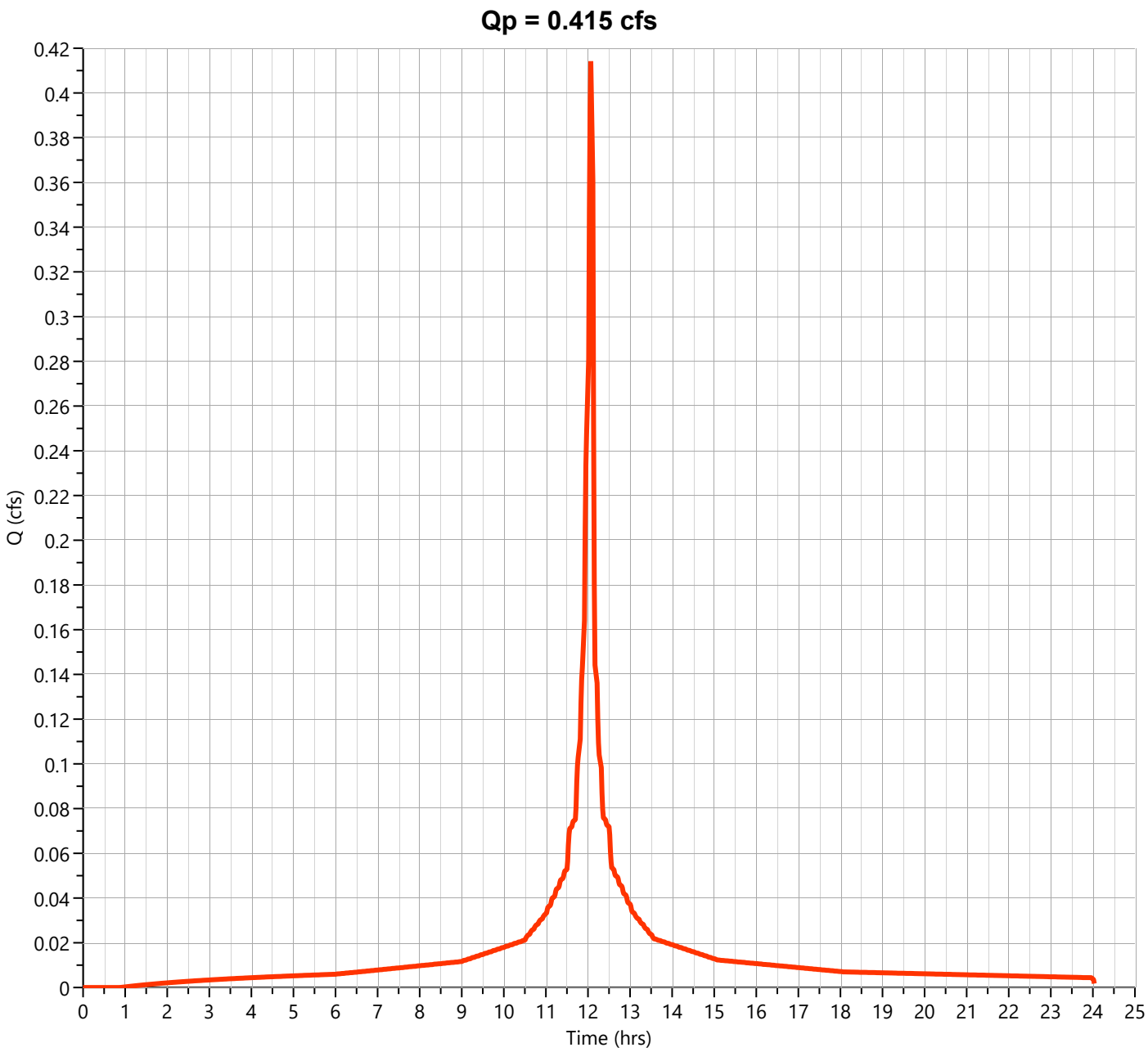
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.156 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 421 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 4.23 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

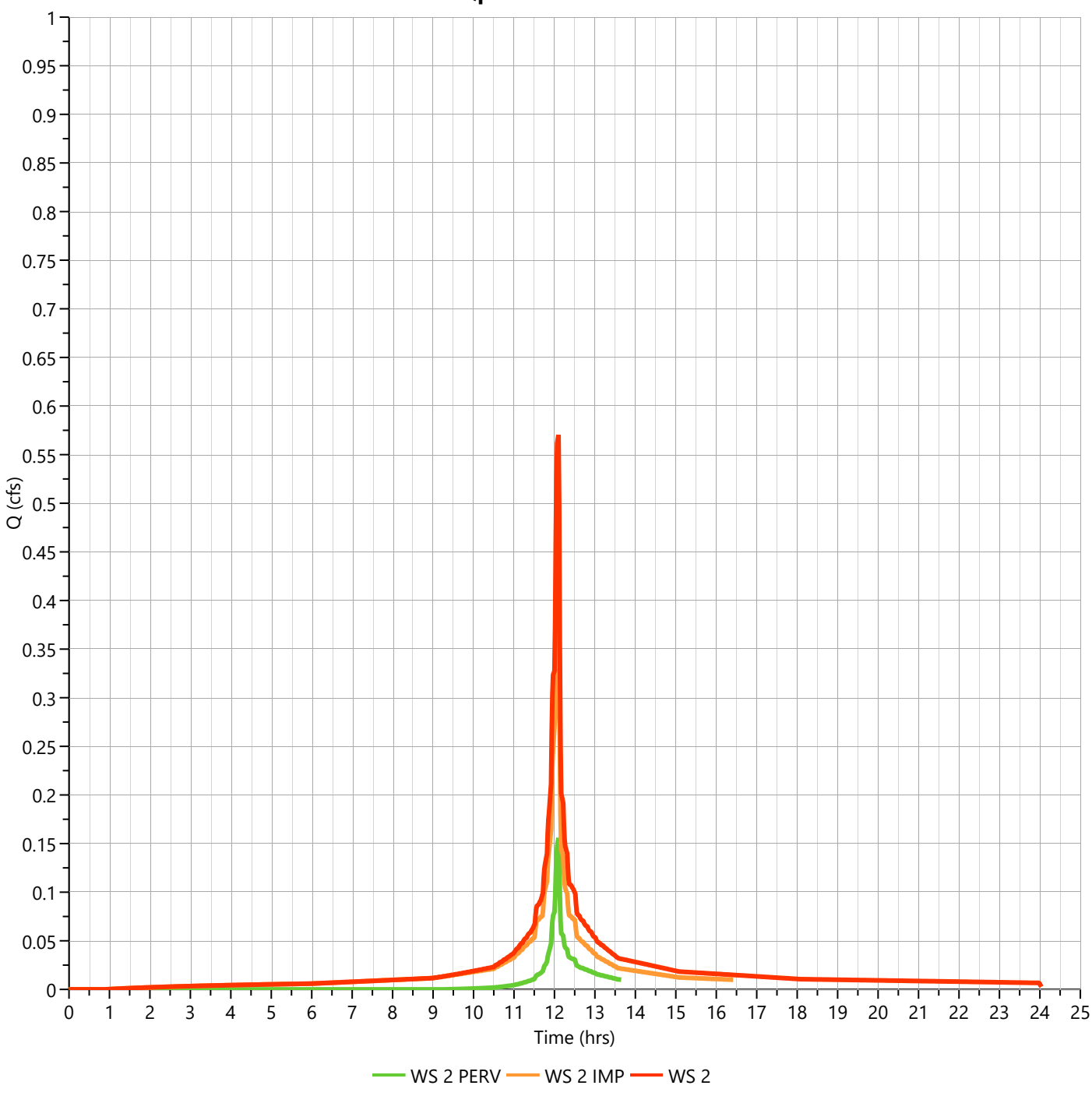
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.415 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 1,359 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 4.23 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 0.570 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 1,780 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



Hydrograph 10-yr Summary

Hydrology Studio v 3.0.0.41

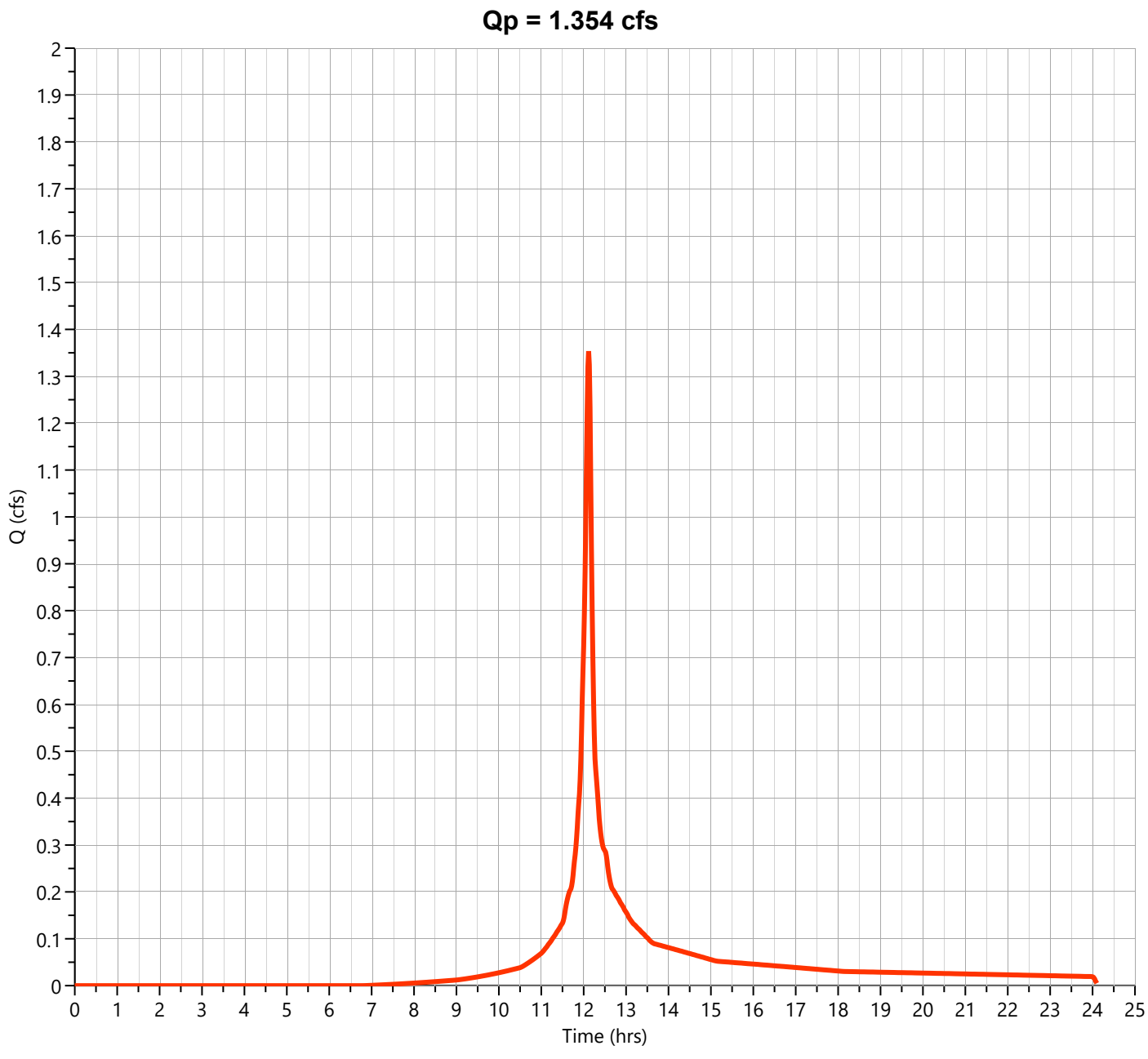
Project Name: Existing
File: Chatham BNE Existing.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	1.354	12.12	4,209	----		
2	NRCS Runoff	WS 1 IMP	16.14	12.10	53,015	----		
3	Junction	WS 1	17.46	12.10	57,224	1, 2		
4	NRCS Runoff	WS 2 PERV	0.327	12.10	899	----		
5	NRCS Runoff	WS 2 IMP	0.658	12.10	2,195	----		
6	Junction	WS 2	0.985	12.10	3,094	4, 5		

WS 1 PERV

Hyd. No. 1

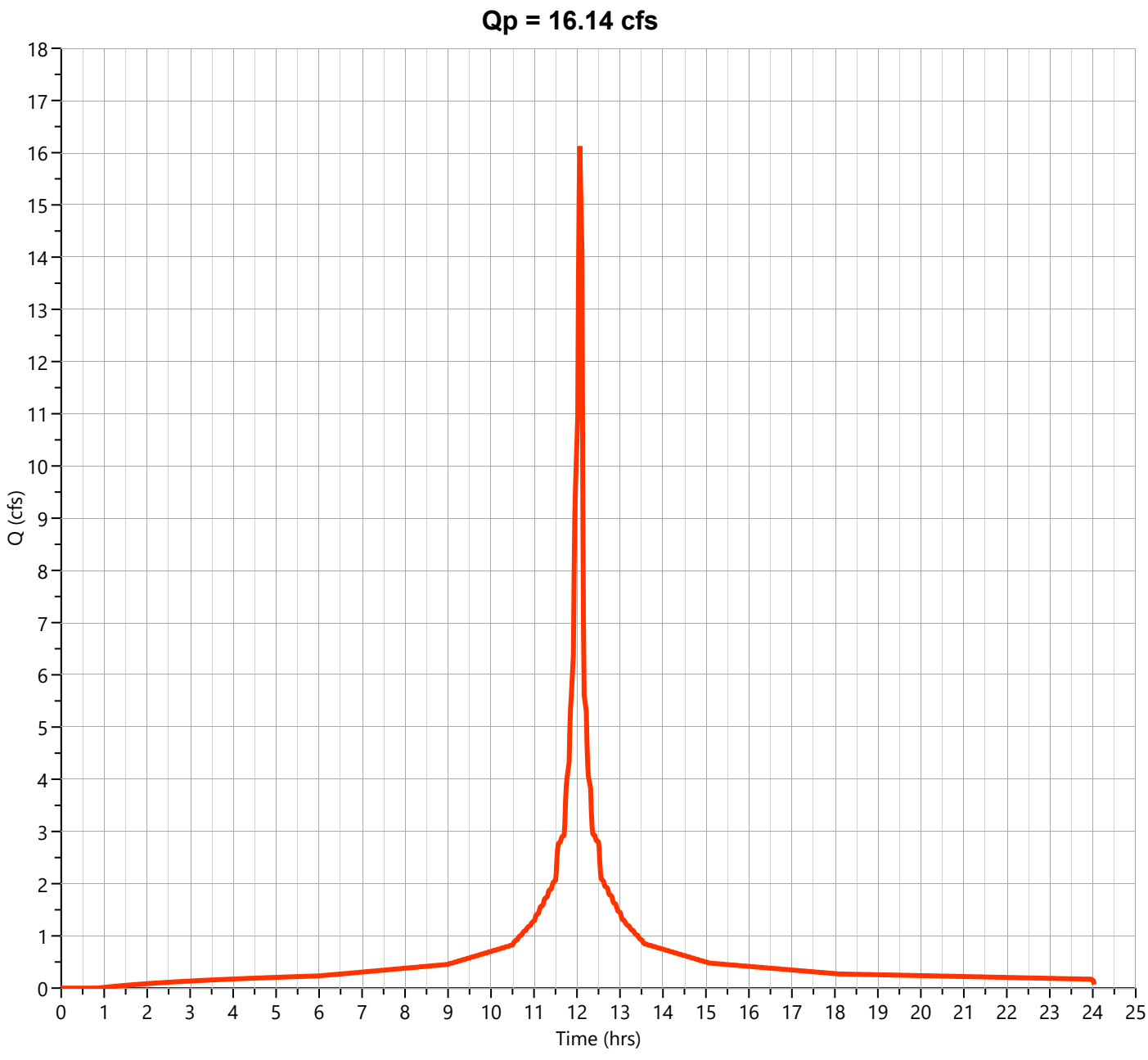
Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.354 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 4,209 cuft
Drainage Area	= 0.29 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 6.69 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

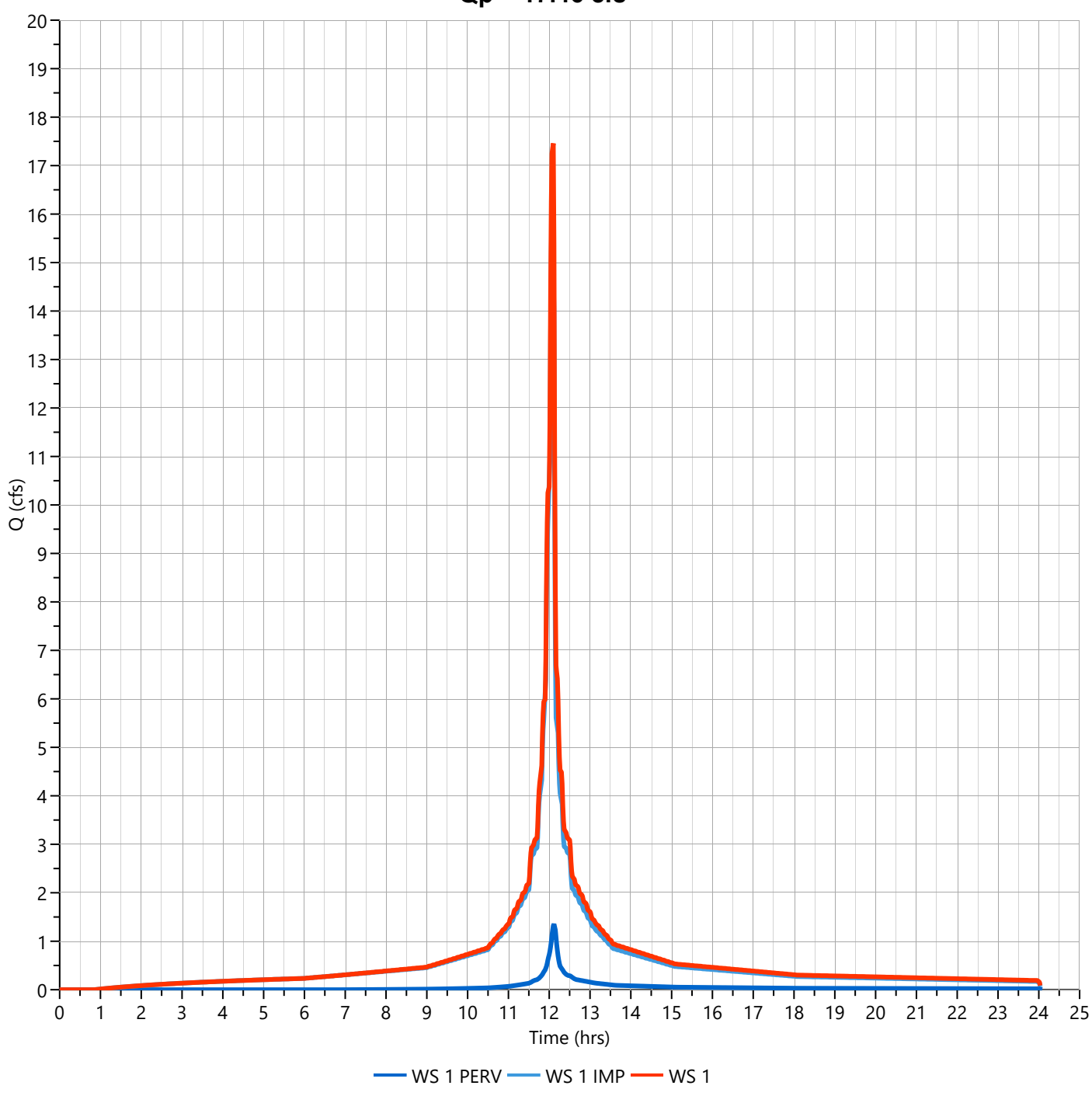
Hydrograph Type	= NRCS Runoff	Peak Flow	= 16.14 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 53,015 cuft
Drainage Area	= 2.46 ac	Curve Number	= 97.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 6.69 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

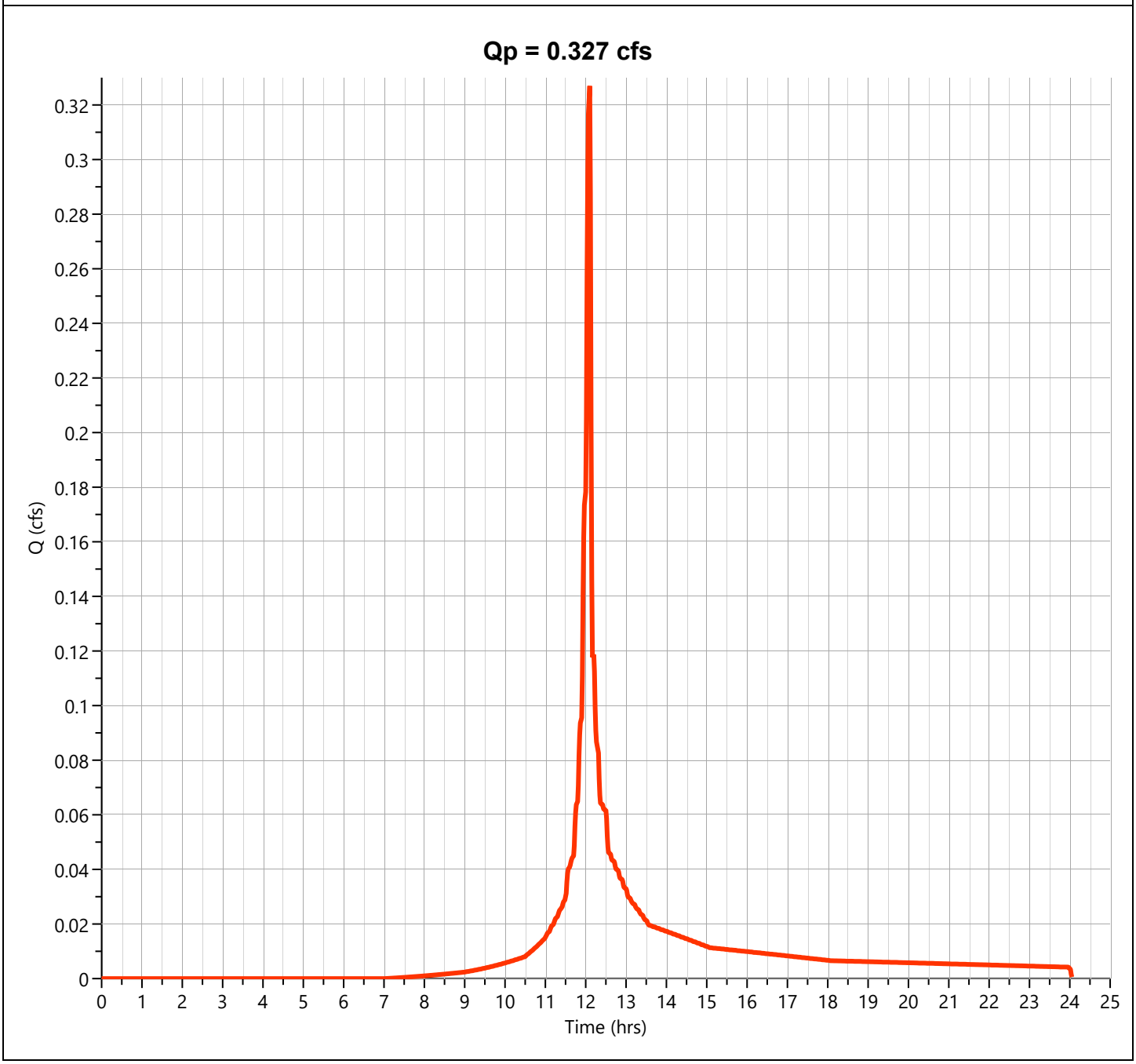
Hydrograph Type	= Junction	Peak Flow	= 17.46 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 57,224 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

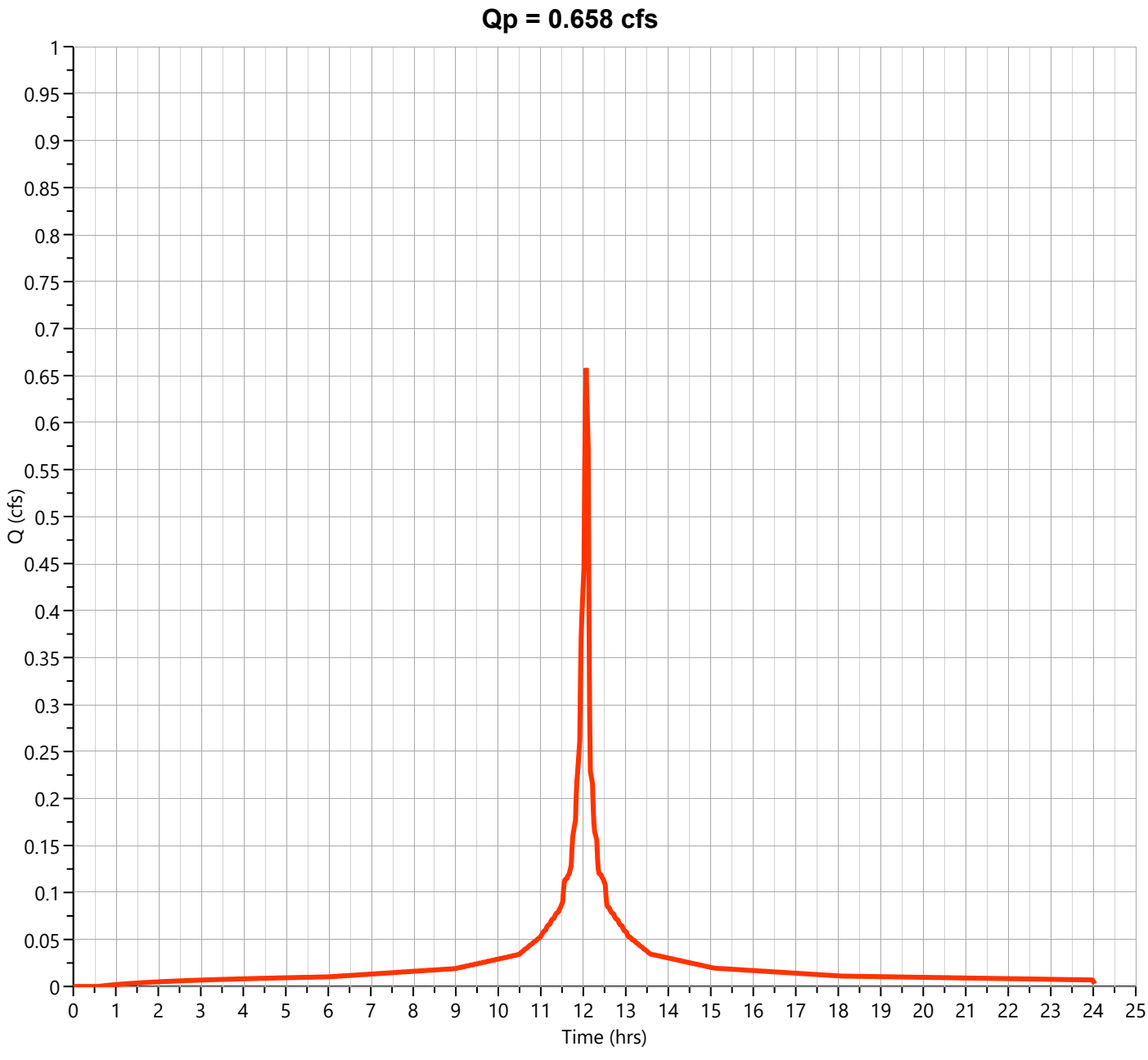
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.327 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 899 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 6.69 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

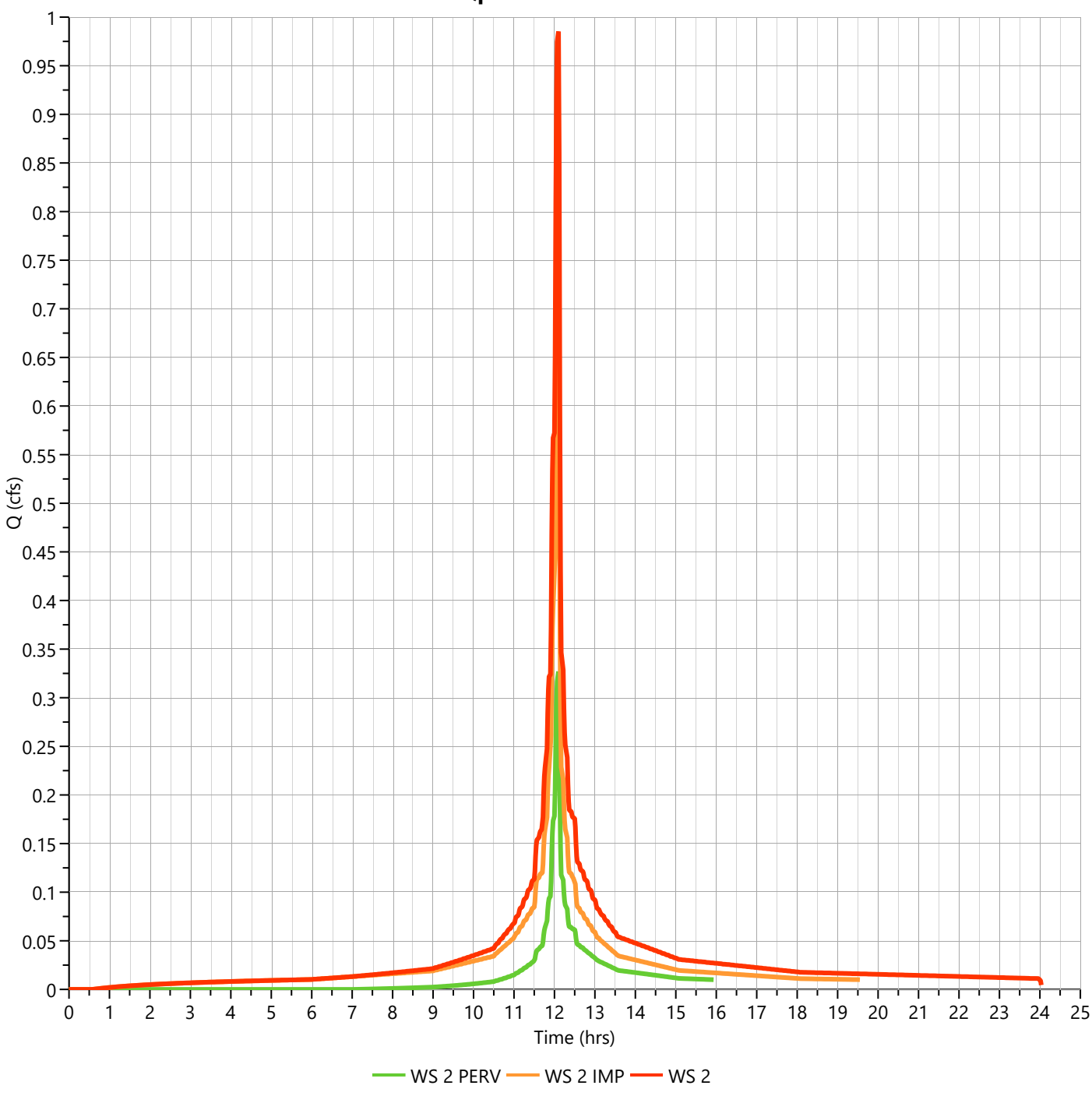
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.658 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 2,195 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 6.69 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 0.985 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 3,094 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



Hydrograph 100-yr Summary

Hydrology Studio v 3.0.0.41

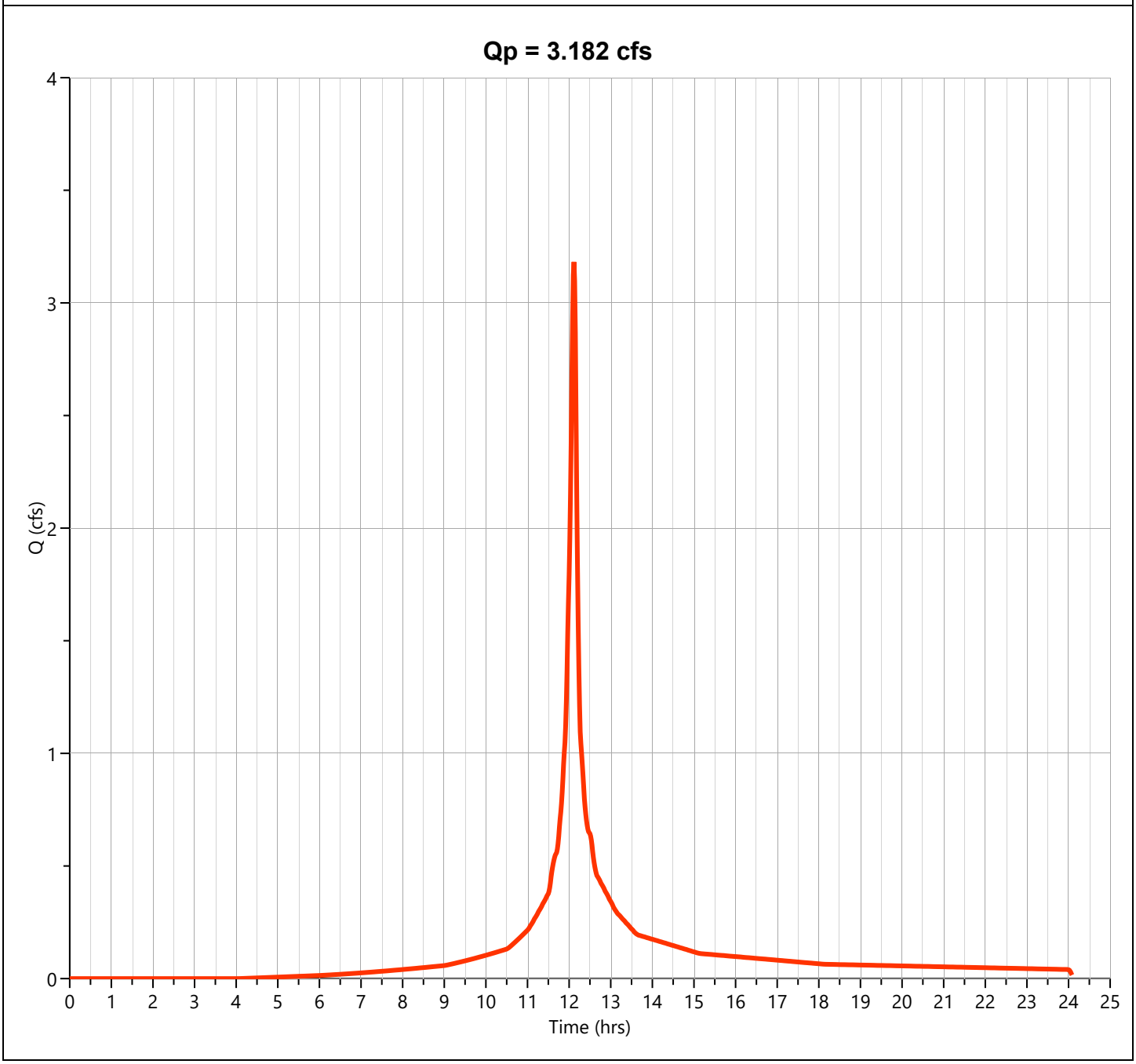
Project Name: Existing
File: Chatham BNE Existing.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	3.182	12.12	10,292	----		
2	NRCS Runoff	WS 1 IMP	30.91	12.10	103,777	----		
3	Junction	WS 1	34.04	12.10	114,069	1, 2		
4	NRCS Runoff	WS 2 PERV	0.769	12.10	2,224	----		
5	NRCS Runoff	WS 2 IMP	1.258	12.10	4,260	----		
6	Junction	WS 2	2.027	12.10	6,484	4, 5		

WS 1 PERV

Hyd. No. 1

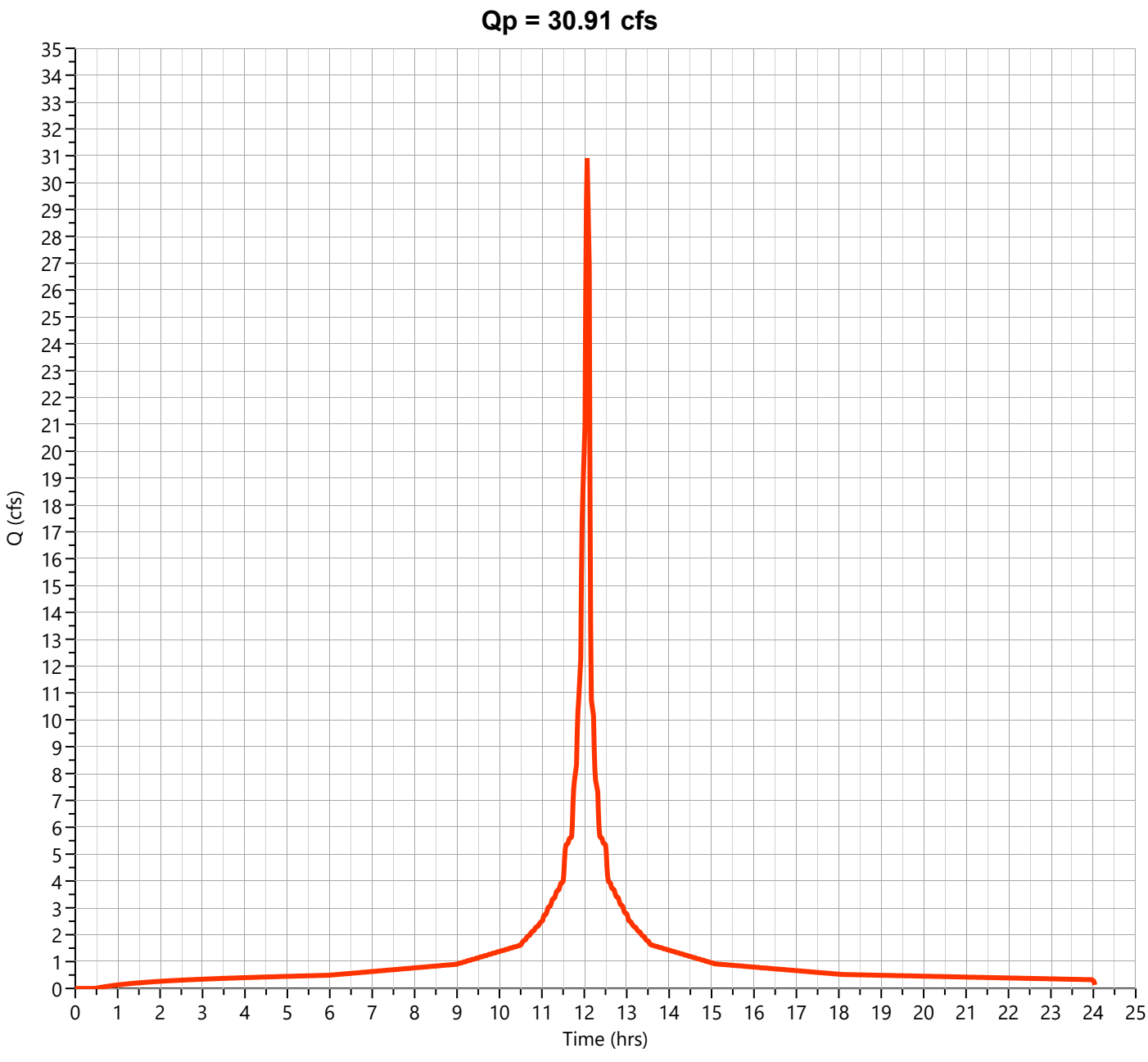
Hydrograph Type	= NRCS Runoff	Peak Flow	= 3.182 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 10,292 cuft
Drainage Area	= 0.29 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 12.76 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

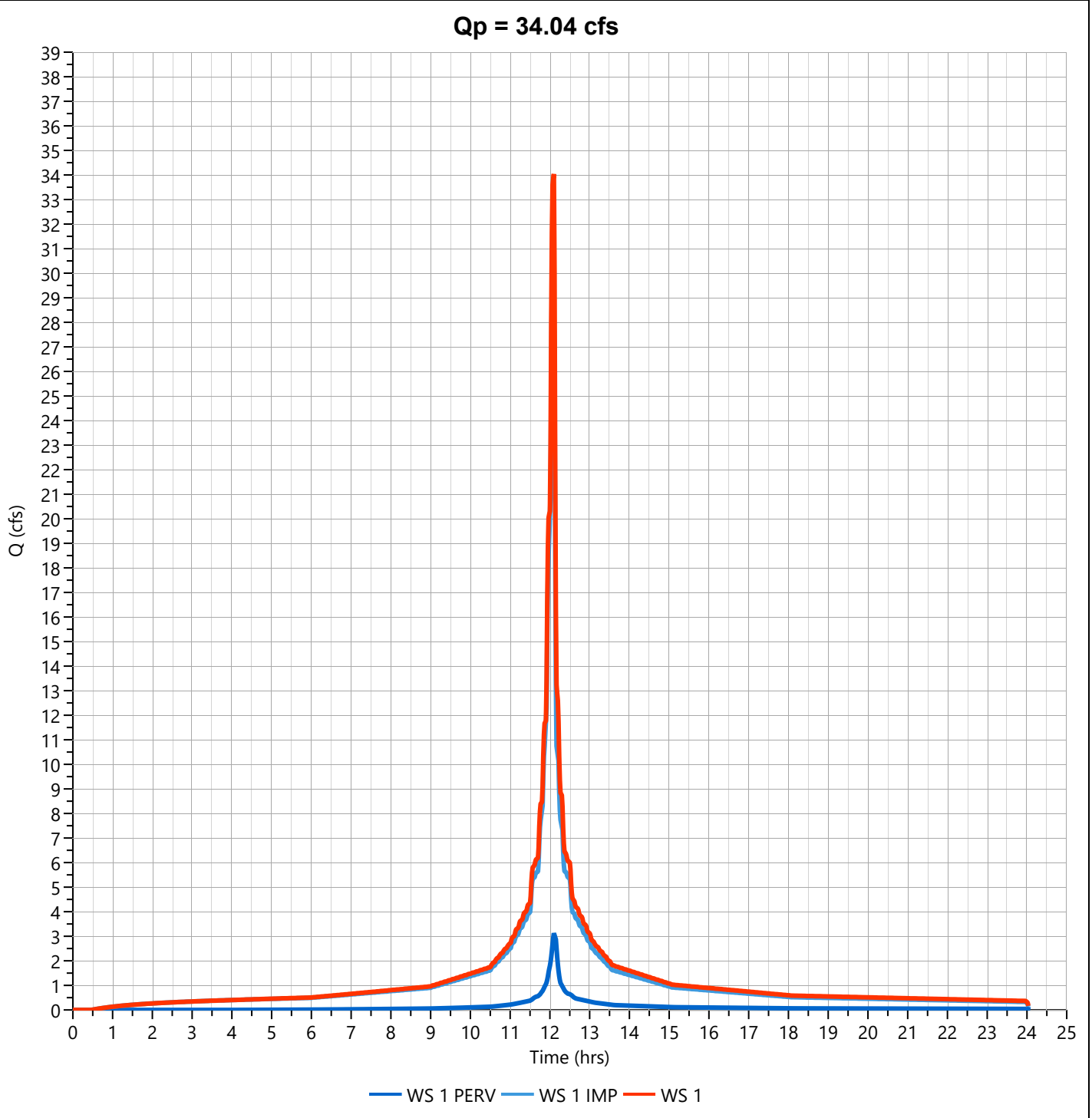
Hydrograph Type	= NRCS Runoff	Peak Flow	= 30.91 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 103,777 cuft
Drainage Area	= 2.46 ac	Curve Number	= 97.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 12.76 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

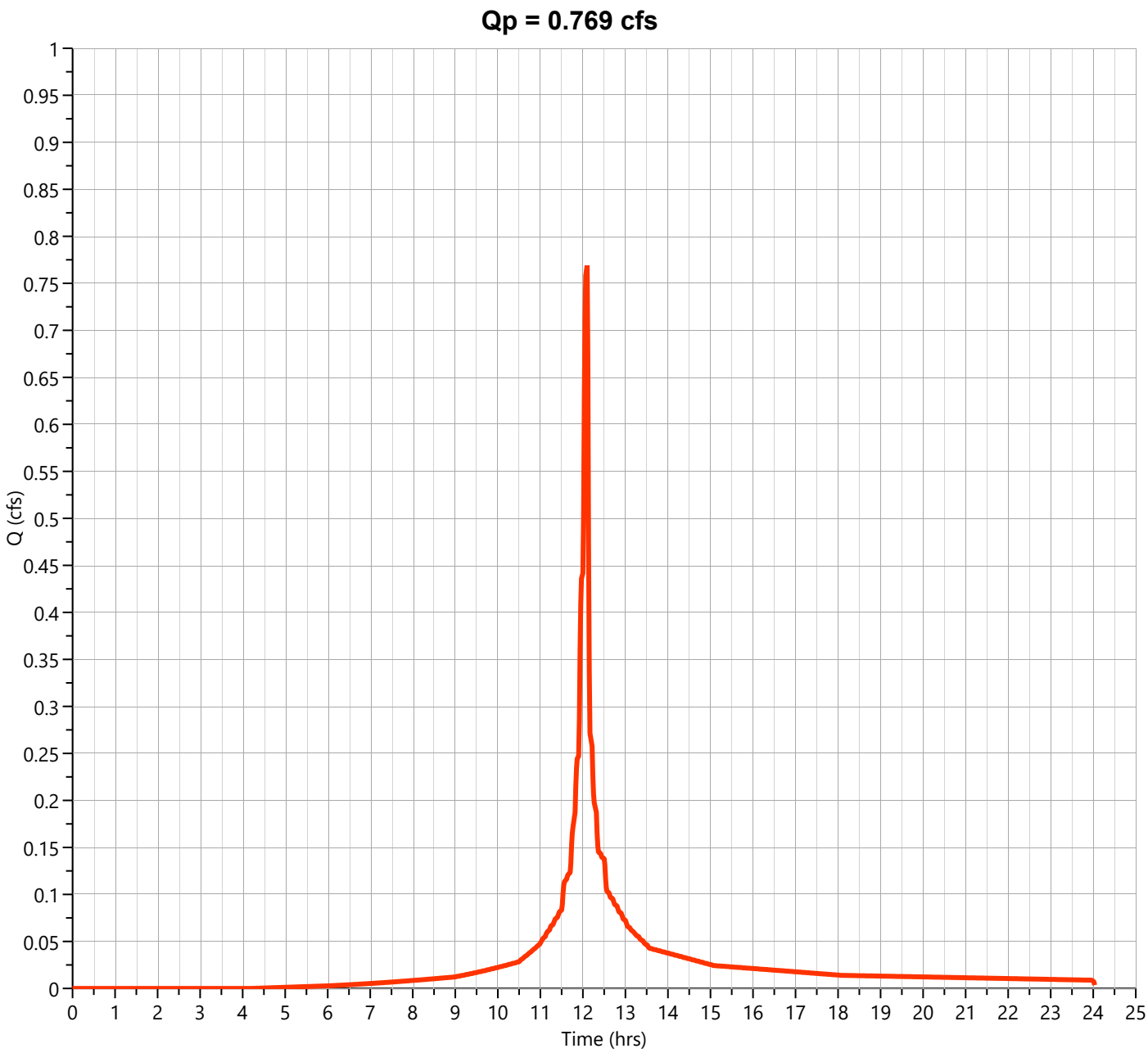
Hydrograph Type	= Junction	Peak Flow	= 34.04 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 114,069 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

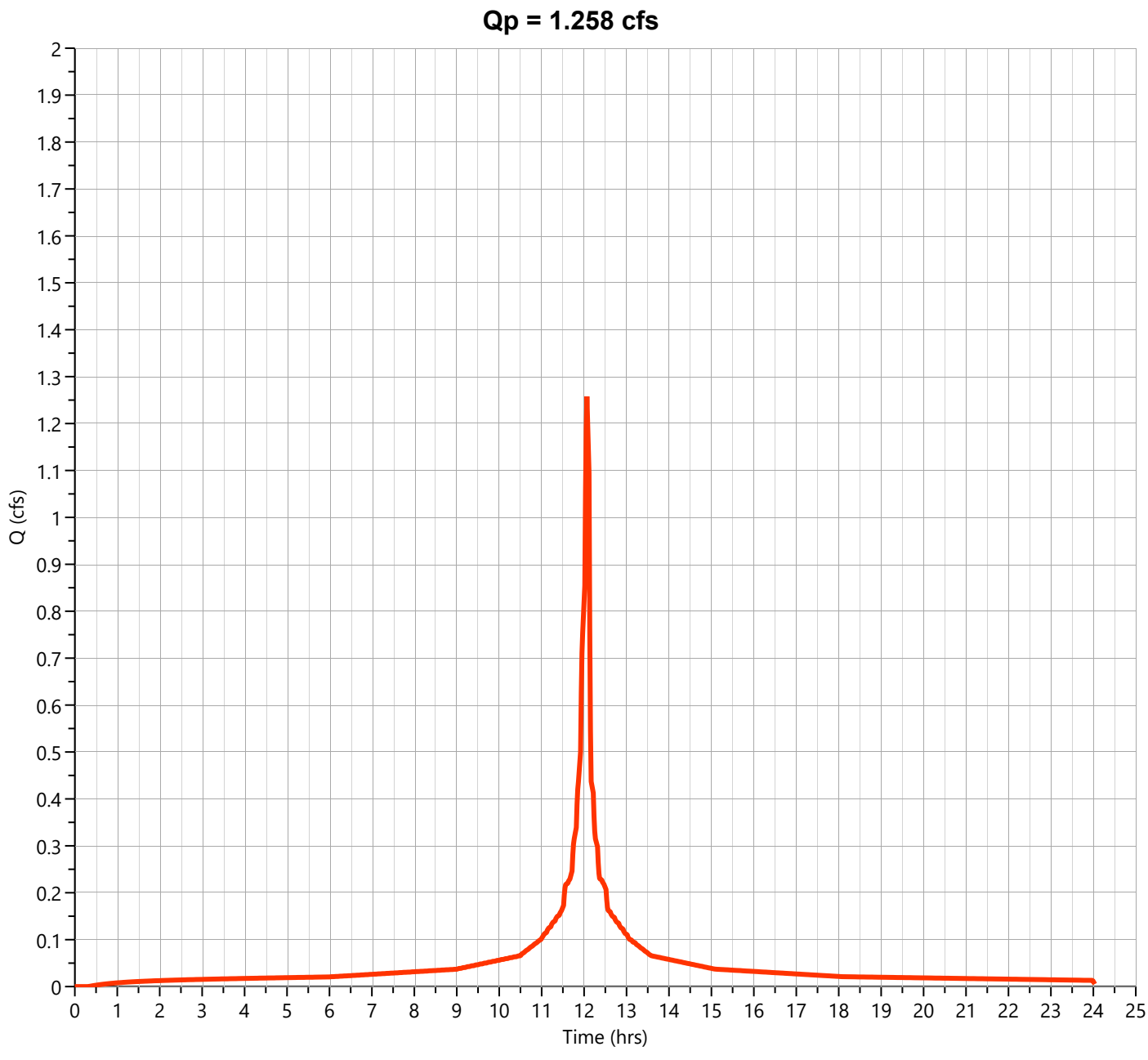
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.769 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 2,224 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 12.76 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

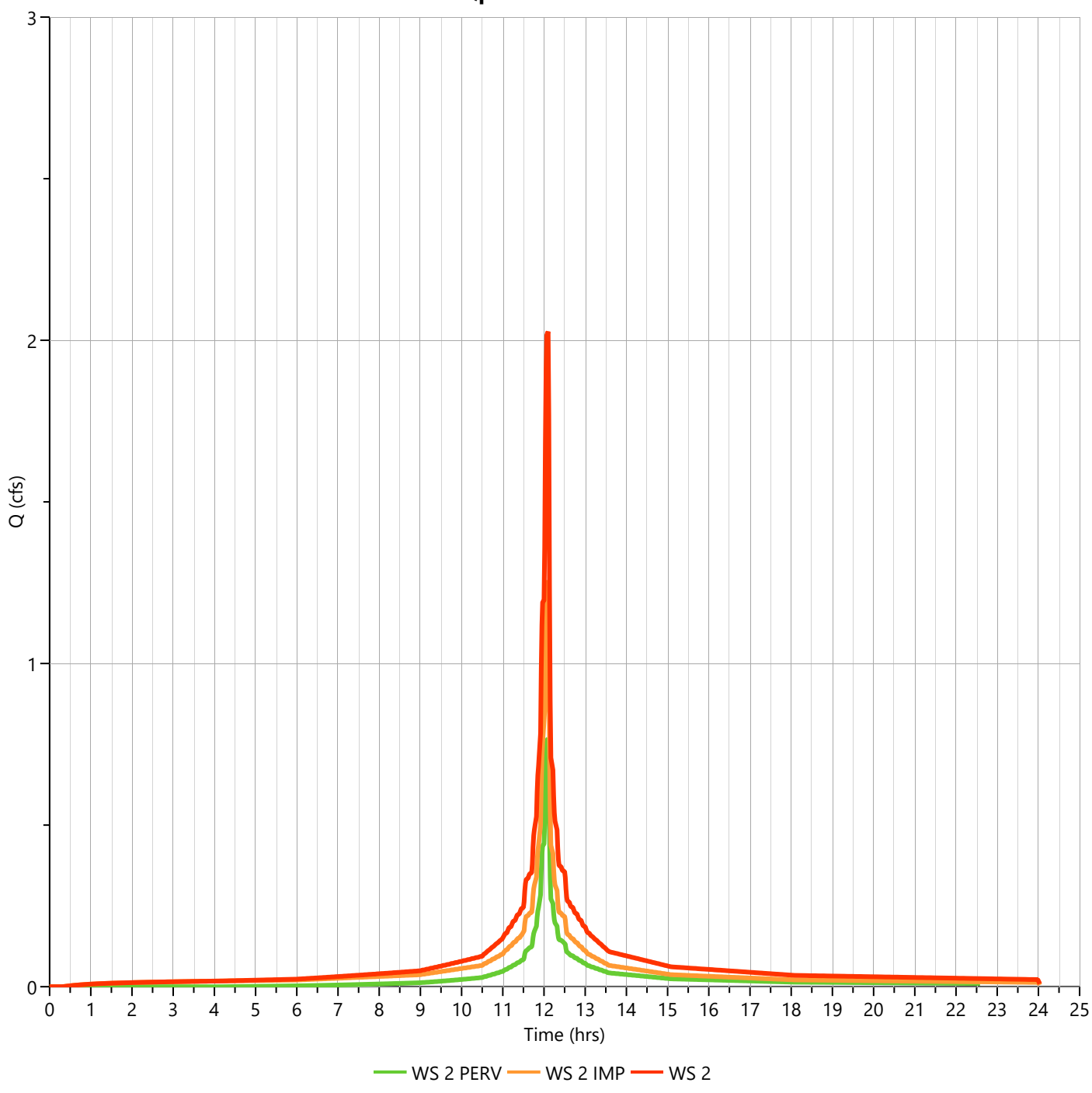
Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.258 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 4,260 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 12.76 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 2.027 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 6,484 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



APPENDIX B

Proposed Stormwater Discharge Calculations

CN and TC Sheets

Proposed Curve Number (CN) Calculations

Watershed Area	Area (ac)	HSG C	HSG D	Weighted Pervious CN	Total Pervious Area (ac)	Gravel Area (ac) CN = 89	Impervious Area (ac)	Weighted Impervious CN	Total Impervious Area (ac)
		Open Space (ac)	Open Space (ac)						
		CN = 74	CN = 80				CN = 98		
1	2.75	0.32	0.08	75	0.40	0.11	2.24	98	2.35
2	0.17	0.07	0.00	74	0.07	0.00	0.10	98	0.10

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/14/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**		**Date Checked:**	**1/14/2026**

Circle One: Present (**Developed**) — **Proposed Watershed 1 - Impervious (Current)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)		Segment ID	1		
1. Surface Description (NEH table 15-1)			Smooth Surfaces		
2. Manning's Roughness Coeff., n (NEH table 15-1)			0.011		
3. Design Flow Length, L_{des} (Total L_{des} < 100 ft)		ft	63		
4. Two-year 24-hr rainfall, P_2		in	3.47		
5. Land Slope, s		ft/ft	0.035		
6. McCuen-Spiess Limit, L_{mcs} (max. 100 ft)	$L_{mcs} = (100\ s^{0.5})/n$	ft	100		
7. Compute T_t	$T_t = \frac{0.007\ (nL_{des})^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	0.011	+	+
				Sheet Flow Sub-Total	0.011 hours

Shallow Concentrated Flow		Segment ID	4		
8. Surface Description			Short-Grass Pasture		
9. Flow Length, L		ft	12		
10. Watercourse Slope, s		ft/ft	0.020		
11. Average Velocity, V (NEH table 15-3)		ft/s	0.98		
12. Compute T_t	$T_t = \frac{L}{3600\ V}$	hr	0.003	+	+
				Shallow Conc. Flow Sub-Total	0.003 hours

Channel Flow		Segment ID	2	3	
13. Flow Length, L		ft	523	125	
14. Cross Sectional flow area, a		ft^2	0.54	0.79	
15. Wetted Perimeter, P_w		ft	2.61	3.14	
16. Hydraulic Radius, r	$r = a / P_w$	ft	0.21	0.25	
17. Channel Slope, s		ft/ft	0.021	0.005	
18. Manning's Roughness Coeff., n			0.012	0.012	
19. Velocity, V	$V = (1.49\ r^{2/3} s^{1/2}) / n$	ft/s	6.38	3.48	
20. Compute T_t	$T_t = \frac{L}{3600\ V}$	hr	0.023	+ 0.010	+
				Channel Flow Sub-Total	0.033 hours

Watershed or subarea T_c or T_t	Total Tc (hours) =	0.047 hours
(Add Sub-Total T_t from prior steps)	Total Tc (minutes) =	3 minutes

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/14/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**		**Date Checked:**	**1/14/2026**

Circle One: Present (**Developed**) — **Proposed Watershed 1 - Impervious (Future)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)

			Segment ID	1		
1.	Surface Description (NEH table 15-1)			Smooth Surfaces		
2.	Manning's Roughness Coeff., n (NEH table 15-1)			0.011		
3.	Design Flow Length, L_{des} (Total L_{des} < 100 ft)		ft	63		
4.	Two-year 24-hr rainfall, P_2		in	4.23		
5.	Land Slope, s		ft/ft	0.035		
6.	McCuen-Spiess Limit, L_{mcs} (max. 100 ft)	$L_{mcs} = (100\ s^{0.5})/n$	ft	100		
7.	Compute T_t	$T_t = \frac{0.007\ (nL_{des})^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	0.010	+	+

Sheet Flow Sub-Total **0.010 hours**

Shallow Concentrated Flow

			Segment ID	4		
8.	Surface Description			Short-Grass Pasture		
9.	Flow Length, L		ft	12		
10.	Watercourse Slope, s		ft/ft	0.020		
11.	Average Velocity, V (NEH table 15-3)		ft/s	0.98		
12.	Compute T_t	$T_t = \frac{L}{3600\ V}$	hr	0.003	+	+

Shallow Conc. Flow Sub-Total **0.003 hours**

Channel Flow

			Segment ID	2	3	
13.	Flow Length, L		ft	523	125	
14.	Cross Sectional flow area, a		ft^2	0.54	0.79	
15.	Wetted Perimeter, P_w		ft	2.61	3.14	
16.	Hydraulic Radius, r	$r = a / P_w$	ft	0.21	0.25	
17.	Channel Slope, s		ft/ft	0.021	0.005	
18.	Manning's Roughness Coeff., n			0.012	0.012	
19.	Velocity, V	$V = (1.49\ r^{2/3} s^{1/2}) / n$	ft/s	6.38	3.48	
20.	Compute T_t	$T_t = \frac{L}{3600\ V}$	hr	0.023	+ 0.010	+

Channel Flow Sub-Total **0.033 hours**

Watershed or subarea T_c or T_t
(Add Sub-Total T_t from prior steps)

Total Tc (hours) = **0.046 hours**

Total Tc (minutes) = **3 minutes**

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/14/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**		**Date Checked:**	**1/14/2026**

Circle One: Present (**Developed**) — **Proposed Watershed 1 - Pervious (Current)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)		Segment ID	1		2		3
1.	Surface Description (NEH table 15-1)		Short Grass Prairie		Smooth Surfaces		Short Grass Prairie
2.	Manning's Roughness Coeff., n (NEH table 15-1)		0.15		0.011		0.15
3.	Design Flow Length, L_{des} (Total L_{des} < 100 ft)	ft	36		9		12
4.	Two-year 24-hr rainfall, P_2	in	3.47		3.47		3.47
5.	Land Slope, s	ft/ft	0.061		0.019		0.042
6.	McCuen-Spiess Limit, L_{mcs} (max. 100 ft) $L_{mcs} = (100\ s^{0.5})/n$	ft	100		100		100
7.	Compute T_t $T_t = \frac{0.007\ (nL_{des})^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	0.044	+	0.003	+	0.021
					Sheet Flow Sub-Total		0.069 hours

Shallow Concentrated Flow		Segment ID	7				
8.	Surface Description		Short-Grass Pasture				
9.	Flow Length, L	ft	12				
10.	Watercourse Slope, s	ft/ft	0.020				
11.	Average Velocity, V (NEH table 15-3)	ft/s	0.98				
12.	Compute T_t $T_t = \frac{L}{3600\ V}$	hr	0.003	+		+	
					Shallow Conc. Flow Sub-Total		0.003 hours

Channel Flow		Segment ID	4		5		6
13.	Flow Length, L	ft	34		523		125
14.	Cross Sectional flow area, a	ft^2	0.35		0.54		0.79
15.	Wetted Perimeter, P_w	ft	2.10		2.61		3.14
16.	Hydraulic Radius, r $r = a / P_w$	ft	0.17		0.21		0.25
17.	Channel Slope, s	ft/ft	0.005		0.021		0.005
18.	Manning's Roughness Coeff., n		0.012		0.012		0.012
19.	Velocity, V $V = (1.49\ r^{2/3} s^{1/2}) / n$	ft/s	2.67		6.38		3.48
20.	Compute T_t $T_t = \frac{L}{3600\ V}$	hr	0.004	+	0.023	+	0.010
					Channel Flow Sub-Total		0.036 hours

Watershed or subarea T_c or T_t	Total Tc (hours) =	0.108 hours
(Add Sub-Total T_t from prior steps)	Total Tc (minutes) =	6 minutes

Project: Chatham BNE 2 | **By:** GC | **Date:** 1/14/2026

Location: Borough of Chatham, Morris County, NJ | **Checked By:** | **Date Checked:** 1/14/2026

Circle One: Present (**Developed**) — **Proposed Watershed 1 - Pervious (Future)**

Circle One: (T_c) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)		Segment ID	1		2		3
1.	Surface Description (NEH table 15-1)		Short Grass Prairie		Smooth Surfaces		Short Grass Prairie
2.	Manning's Roughness Coeff., n (NEH table 15-1)		0.15		0.011		0.15
3.	Design Flow Length, L_{des} (Total L_{des} < 100 ft)	ft	36		9		12
4.	Two-year 24-hr rainfall, P_2	in	4.23		4.23		4.23
5.	Land Slope, s	ft/ft	0.061		0.019		0.042
6.	McCuen-Spiess Limit, L_{mcs} (max. 100 ft) $L_{mcs} = (100\ s^{0.5})/n$	ft	100		100		100
7.	Compute T_t $T_t = \frac{0.007\ (nL_{des})^{0.8}}{P_2^{0.5} S^{0.4}}$	hr	0.040	+	0.003	+	0.019
					Sheet Flow Sub-Total		0.062 hours

Shallow Concentrated Flow		Segment ID	7				
8.	Surface Description		Short-Grass Pasture				
9.	Flow Length, L	ft	12				
10.	Watercourse Slope, s	ft/ft	0.020				
11.	Average Velocity, V (NEH table 15-3)	ft/s	0.98				
12.	Compute T_t $T_t = \frac{L}{3600\ V}$	hr	0.003	+		+	
					Shallow Conc. Flow Sub-Total		0.003 hours

Channel Flow		Segment ID	4		5		6
13.	Flow Length, L	ft	34		523		125
14.	Cross Sectional flow area, a	ft^2	0.35		0.54		0.79
15.	Wetted Perimeter, P_w	ft	2.10		2.61		3.14
16.	Hydraulic Radius, r $r = a / P_w$	ft	0.17		0.21		0.25
17.	Channel Slope, s	ft/ft	0.005		0.021		0.005
18.	Manning's Roughness Coeff., n		0.012		0.012		0.012
19.	Velocity, V $V = (1.49\ r^{2/3} s^{1/2}) / n$	ft/s	2.67		6.38		3.48
20.	Compute T_t $T_t = \frac{L}{3600\ V}$	hr	0.004	+	0.023	+	0.010
					Channel Flow Sub-Total		0.036 hours

Watershed or subarea T_c or T_t	Total Tc (hours) =	0.102 hours
(Add Sub-Total T_t from prior steps)	Total Tc (minutes) =	6 minutes

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/14/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**		**Date Checked:**	**1/14/2026**

Circle One: Present (**Developed**) — **Proposed Watershed 2 - Impervious (Current)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)		Segment ID	1		
1.	Surface Description (NEH table 15-1)		Smooth Surfaces		
2.	Manning's Roughness Coeff., n (NEH table 15-1)		0.011		
3.	Design Flow Length, L_{des} (Total L_{des} < 100 ft)	ft	52		
4.	Two-year 24-hr rainfall, P_2	in	3.47		
5.	Land Slope, s	ft/ft	0.019		
6.	McCuen-Spiess Limit, L_{mcs} (max. 100 ft) $L_{mcs} = (100\ s^{0.5})/n$	ft	100		
7.	Compute T_t $T_t = \frac{0.007\ (nL_{des})^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	0.012	+	+
				Sheet Flow Sub-Total	0.012 hours

Shallow Concentrated Flow		Segment ID			
8.	Surface Description				
9.	Flow Length, L	ft			
10.	Watercourse Slope, s	ft/ft			
11.	Average Velocity, V (NEH table 15-3)	ft/s			
12.	Compute T_t $T_t = \frac{L}{3600\ V}$	hr		+	+
				Shallow Conc. Flow Sub-Total	0.000 hours

Channel Flow		Segment ID			
13.	Flow Length, L	ft			
14.	Cross Sectional flow area, a	ft^2			
15.	Wetted Perimeter, P_w	ft			
16.	Hydraulic Radius, r $r = a / P_w$	ft			
17.	Channel Slope, s	ft/ft			
18.	Manning's Roughness Coeff., n				
19.	Velocity, V $V = (1.49\ r^{2/3} s^{1/2}) / n$	ft/s			
20.	Compute T_t $T_t = \frac{L}{3600\ V}$	hr		+	+
				Channel Flow Sub-Total	0.000 hours

Watershed or subarea T_c or T_t	Total Tc (hours) =	0.012 hours
(Add Sub-Total T_t from prior steps)	Software Limitations Require Minimum Tc =	2 minutes

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/14/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**		**Date Checked:**	**1/14/2026**

Circle One: Present (**Developed**) — **Proposed Watershed 2 - Impervious (Future)**

Circle One: (**T_c**) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)

			Segment ID					
1.	Surface Description (NEH table 15-1)			**1**				
				Smooth Surfaces				
2.	Manning's Roughness Coeff., n (NEH table 15-1)			**0.011**				
3.	Design Flow Length, L_{des} (Total L_{des} < 100 ft)		ft	**52**				
4.	Two-year 24-hr rainfall, P_2		in	**4.23**				
5.	Land Slope, s		ft/ft	**0.019**				
6.	McCuen-Spiess Limit, L_{mcs} (max. 100 ft)	$L_{mcs} = (100\ s^{0.5})/n$	ft	**100**				
7.	Compute T_t	$T_t = \frac{0.007\ (nL_{des})^{0.8}}{P_2^{0.5} s^{0.4}}$	hr	**0.011**	+		+	

Sheet Flow Sub-Total **0.011 hours**

Shallow Concentrated Flow

			Segment ID					
8.	Surface Description							
9.	Flow Length, L		ft					
10.	Watercourse Slope, s		ft/ft					
11.	Average Velocity, V (NEH table 15-3)		ft/s					
12.	Compute T_t	$T_t = \frac{L}{3600\ V}$	hr		+		+	

Shallow Conc. Flow Sub-Total **0.000 hours**

Channel Flow

			Segment ID					
13.	Flow Length, L		ft					
14.	Cross Sectional flow area, a		ft^2					
15.	Wetted Perimeter, P_w		ft					
16.	Hydraulic Radius, r	$r = a / P_w$	ft					
17.	Channel Slope, s		ft/ft					
18.	Manning's Roughness Coeff., n							
19.	Velocity, V	$V = (1.49\ r^{2/3} s^{1/2}) / n$	ft/s					
20.	Compute T_t	$T_t = \frac{L}{3600\ V}$	hr		+		+	

Channel Flow Sub-Total **0.000 hours**

Watershed or subarea T_c or T_t	Total Tc (hours) =	**0.011 hours**
(Add Sub-Total T_t from prior steps)	Software Limitations Require Minimum Tc =	**2 minutes**

Project:	**Chatham BNE 2**	**By:**	**GC**	**Date:**	**1/14/2026**
Location:	**Borough of Chatham, Morris County, NJ**	**Checked By:**		**Date Checked:**	**1/14/2026**

Circle One: Present **(Developed)** — **Proposed Watershed 2 - Pervious (Current)**

Circle One: **(T_c)** T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)		Segment ID	1		2		
1.	Surface Description (NEH table 15-1)		Short Grass Prairie		Smooth Surfaces		
2.	Manning's Roughness Coeff., n (NEH table 15-1)		0.15		0.011		
3.	Design Flow Length, L_{des} (Total L_{des} < 100 ft)	ft	45		4		
4.	Two-year 24-hr rainfall, P_2	in	3.47		3.47		
5.	Land Slope, s	ft/ft	0.058		0.015		
6.	McCuen-Spiess Limit, L_{mcs} (max. 100 ft) $L_{mcs} = (100\ s^{0.5})/n$	ft	100		100		
7.	Compute T_t $T_t = \frac{0.007\ (nL_{des})^{0.8}}{P_2^{0.5} S^{0.4}}$	hr	0.054	+	0.002	+	
					Sheet Flow Sub-Total		0.056 hours

Shallow Concentrated Flow		Segment ID					
8.	Surface Description						
9.	Flow Length, L	ft					
10.	Watercourse Slope, s	ft/ft					
11.	Average Velocity, V (NEH table 15-3)	ft/s					
12.	Compute T_t $T_t = \frac{L}{3600\ V}$	hr		+		+	
					Shallow Conc. Flow Sub-Total		0.000 hours

Channel Flow		Segment ID					
13.	Flow Length, L	ft					
14.	Cross Sectional flow area, a	ft^2					
15.	Wetted Perimeter, P_w	ft					
16.	Hydraulic Radius, r $r = a / P_w$	ft					
17.	Channel Slope, s	ft/ft					
18.	Manning's Roughness Coeff., n						
19.	Velocity, V $V = (1.49\ r^{2/3} s^{1/2}) / n$	ft/s					
20.	Compute T_t $T_t = \frac{L}{3600\ V}$	hr		+		+	
					Channel Flow Sub-Total		0.000 hours

Watershed or subarea T_c or T_t	Total Tc (hours) =	0.056 hours
(Add Sub-Total T_t from prior steps)	Total Tc (minutes) =	3 minutes

Project: Chatham BNE 2 | **By:** GC | **Date:** 1/14/2026

Location: Borough of Chatham, Morris County, NJ | **Checked By:** | **Date Checked:** 1/14/2026

Circle One: Present (**Developed**) — **Proposed Watershed 2 - Pervious (Future)**

Circle One: (T_c) T_t **through subarea**

Include a map, schematic, or description of flow segments.

Sheet Flow (Applicable to T_c Only)		Segment ID	1		2		
1.	Surface Description (NEH table 15-1)		Short Grass Prairie		Smooth Surfaces		
2.	Manning's Roughness Coeff., n (NEH table 15-1)		0.15		0.011		
3.	Design Flow Length, L_{des} (Total L_{des} < 100 ft)	ft	45		4		
4.	Two-year 24-hr rainfall, P_2	in	4.23		4.23		
5.	Land Slope, s	ft/ft	0.058		0.015		
6.	McCuen-Spiess Limit, L_{mcs} (max. 100 ft) $L_{mcs} = (100\ s^{0.5})/n$	ft	100		100		
7.	Compute T_t $T_t = \frac{0.007\ (nL_{des})^{0.8}}{P_2^{0.5} S^{0.4}}$	hr	0.049	+	0.002	+	
					Sheet Flow Sub-Total		0.051 hours

Shallow Concentrated Flow		Segment ID					
8.	Surface Description						
9.	Flow Length, L	ft					
10.	Watercourse Slope, s	ft/ft					
11.	Average Velocity, V (NEH table 15-3)	ft/s					
12.	Compute T_t $T_t = \frac{L}{3600\ V}$	hr		+		+	
					Shallow Conc. Flow Sub-Total		0.000 hours

Channel Flow		Segment ID					
13.	Flow Length, L	ft					
14.	Cross Sectional flow area, a	ft^2					
15.	Wetted Perimeter, P_w	ft					
16.	Hydraulic Radius, r $r = a / P_w$	ft					
17.	Channel Slope, s	ft/ft					
18.	Manning's Roughness Coeff., n						
19.	Velocity, V $V = (1.49\ r^{2/3} s^{1/2}) / n$	ft/s					
20.	Compute T_t $T_t = \frac{L}{3600\ V}$	hr		+		+	
					Channel Flow Sub-Total		0.000 hours

Watershed or subarea T_c or T_t	Total Tc (hours) =	0.051 hours
(Add Sub-Total T_t from prior steps)	Total Tc (minutes) =	3 minutes

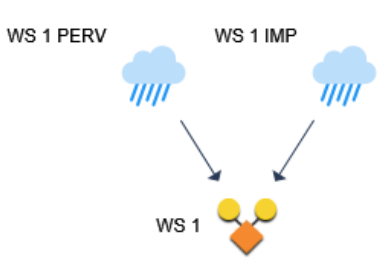
PROPOSED RUNOFF HYDROGRAPHS "CURRENT" 2-, 10-, AND 100-YEAR STORMS

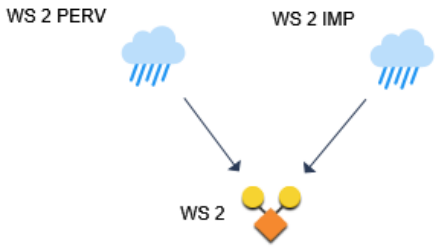
Table of Contents

Basin Model

Hydrology Studio v 3.0.0.41

Project Name: Proposed
File: Chatham BNE Proposed.hys
01-14-2026





Hydrograph by Return Period

Hydrology Studio v 3.0.0.41

Project Name: Proposed
File: Chatham BNE Proposed.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Outflow (cfs)							
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
1	NRCS Runoff	WS 1 PERV		0.612			1.341			2.931
2	NRCS Runoff	WS 1 IMP		7.968			12.44			21.44
3	Junction	WS 1		8.557			13.75			24.31
4	NRCS Runoff	WS 2 PERV		0.107			0.235			0.513
5	NRCS Runoff	WS 2 IMP		0.339			0.530			0.912
6	Junction	WS 2		0.446			0.764			1.426

Hydrograph 2-yr Summary

Hydrology Studio v 3.0.0.41

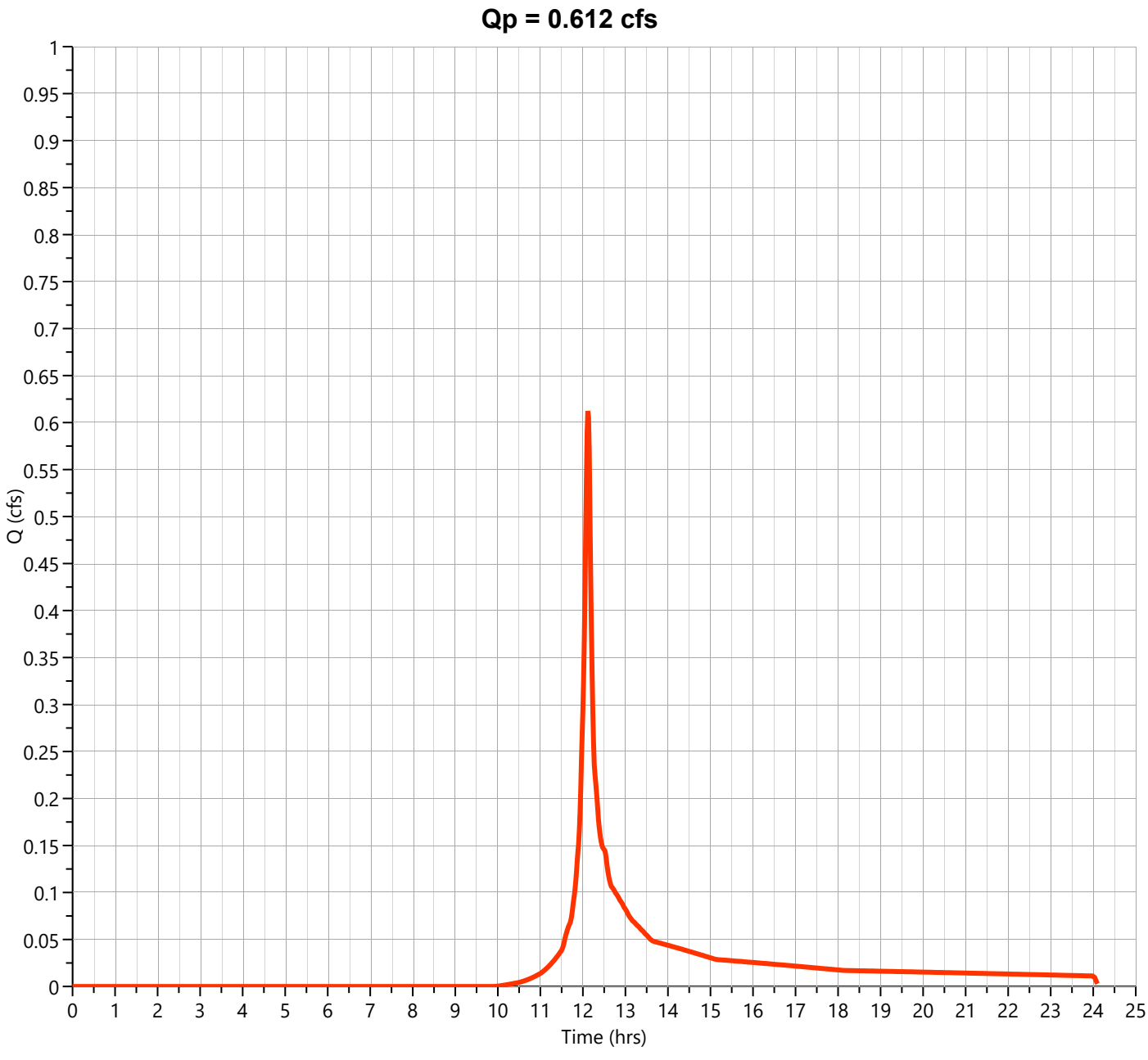
Project Name: Proposed
File: Chatham BNE Proposed.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	0.612	12.12	1,918	----		
2	NRCS Runoff	WS 1 IMP	7.968	12.10	25,884	----		
3	Junction	WS 1	8.557	12.10	27,801	1, 2		
4	NRCS Runoff	WS 2 PERV	0.107	12.10	290	----		
5	NRCS Runoff	WS 2 IMP	0.339	12.10	1,101	----		
6	Junction	WS 2	0.446	12.10	1,392	4, 5		

WS 1 PERV

Hyd. No. 1

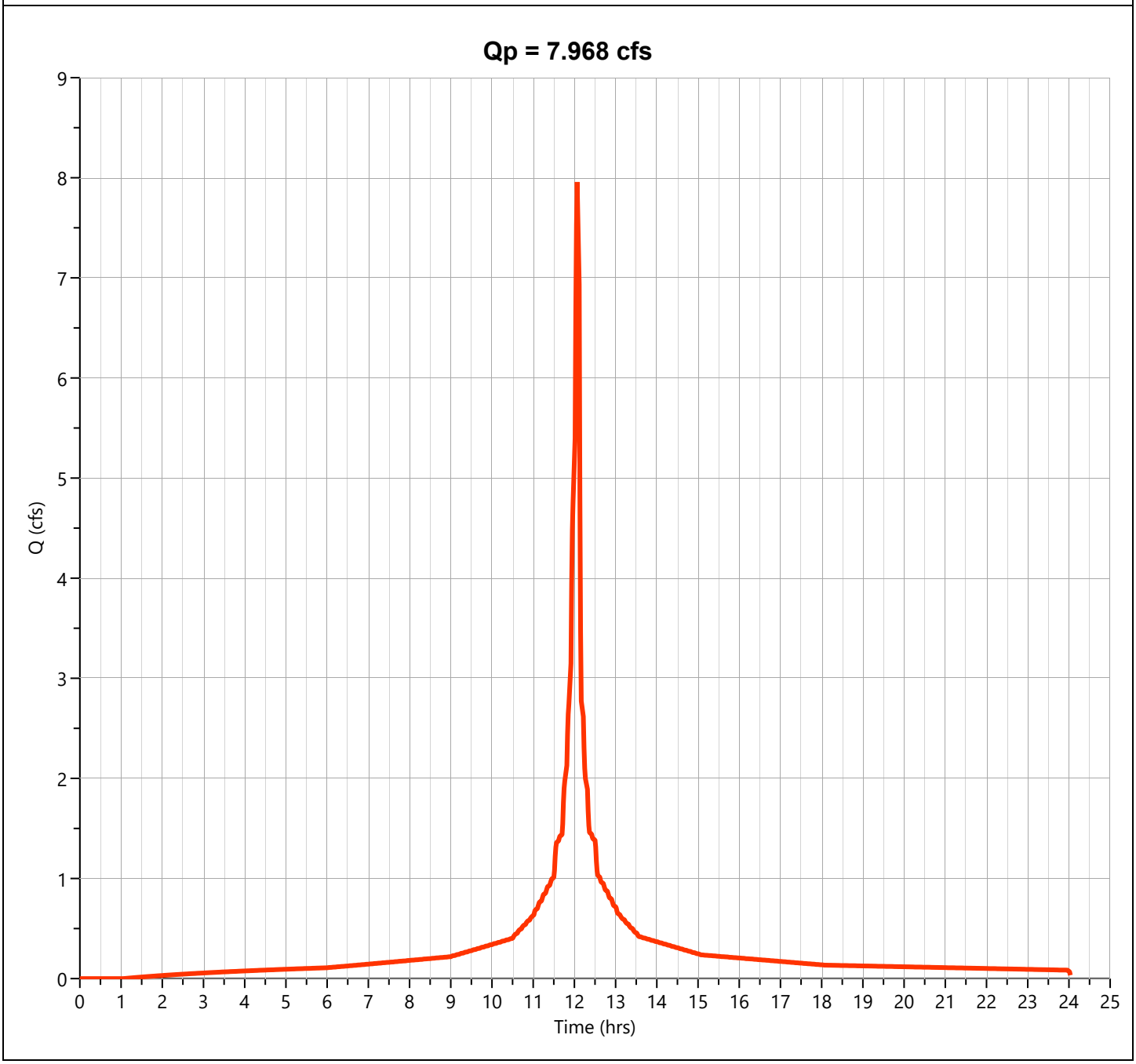
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.612 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 1,918 cuft
Drainage Area	= 0.4 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 3.47 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

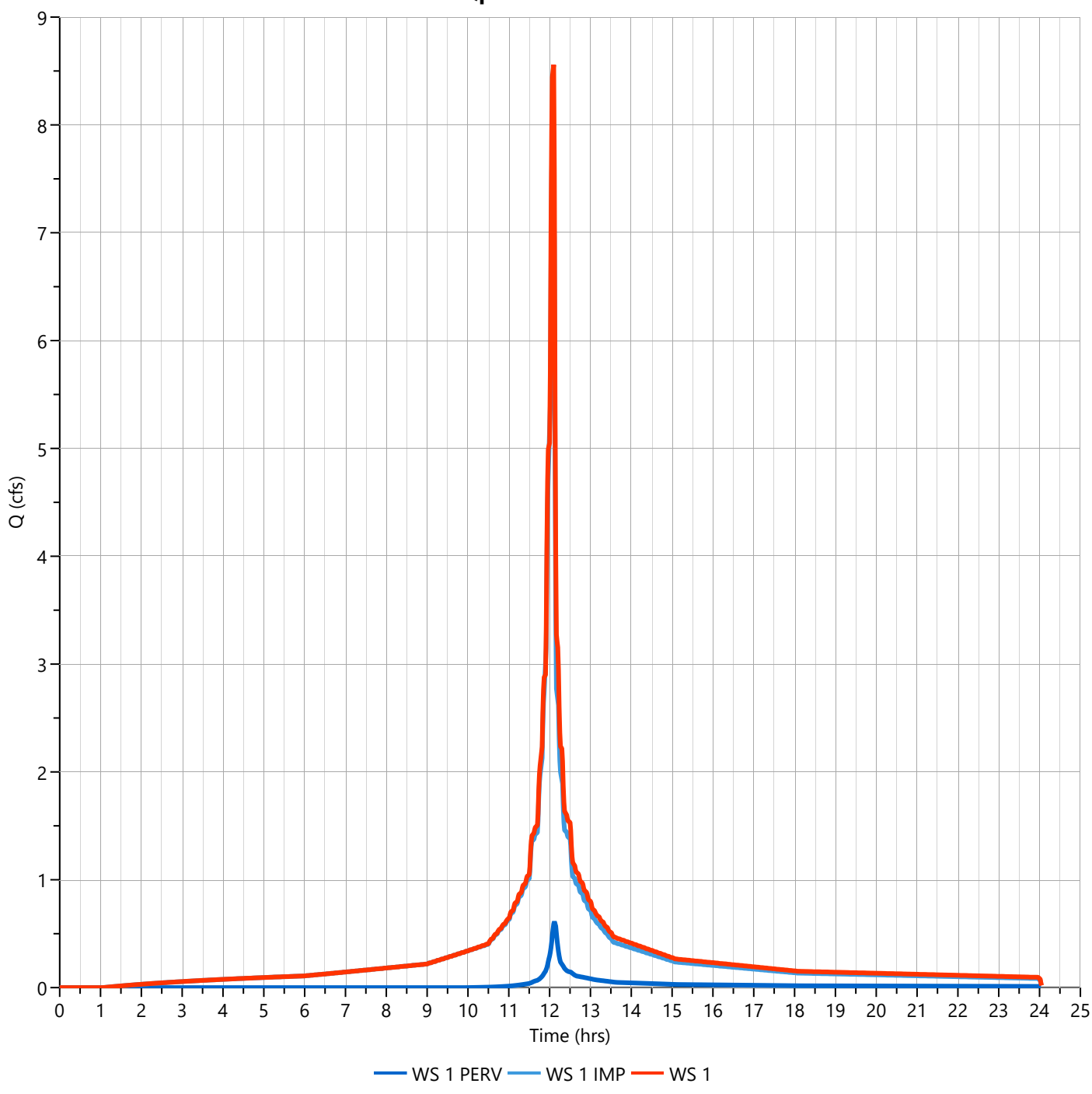
Hydrograph Type	= NRCS Runoff	Peak Flow	= 7.968 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 25,884 cuft
Drainage Area	= 2.35 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 3.47 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

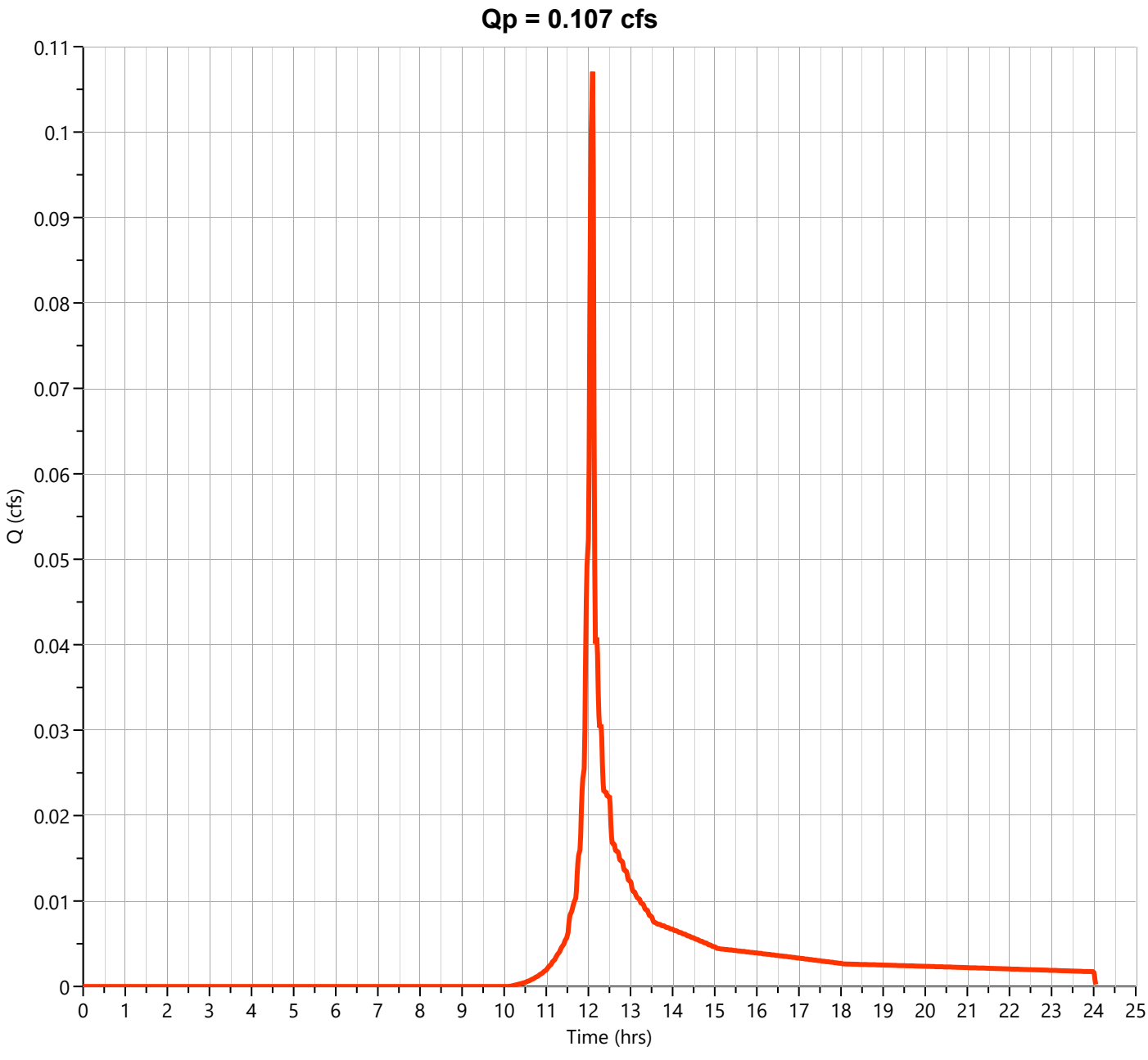
Hydrograph Type	= Junction	Peak Flow	= 8.557 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 27,801 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

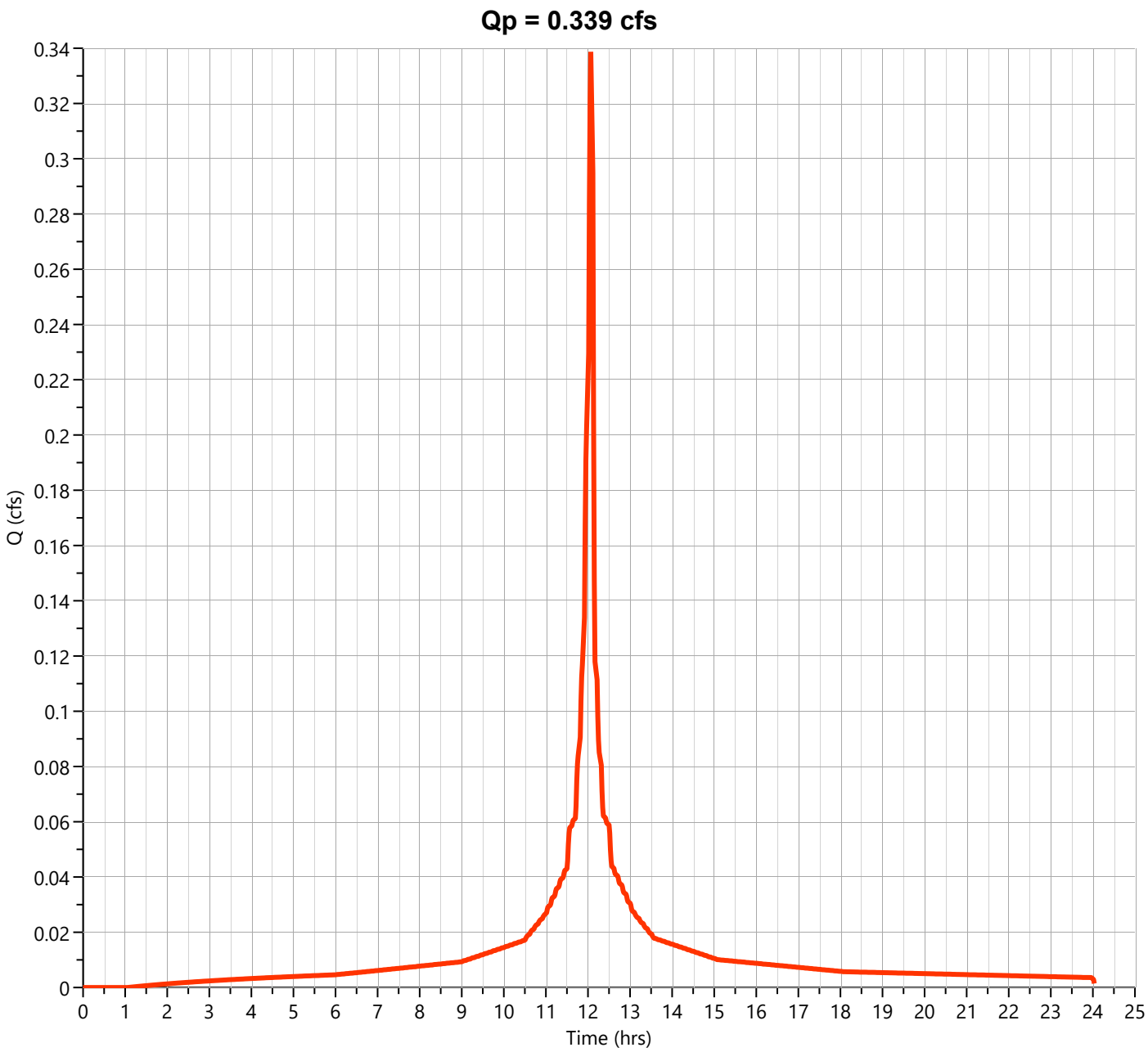
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.107 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 290 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 3.47 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

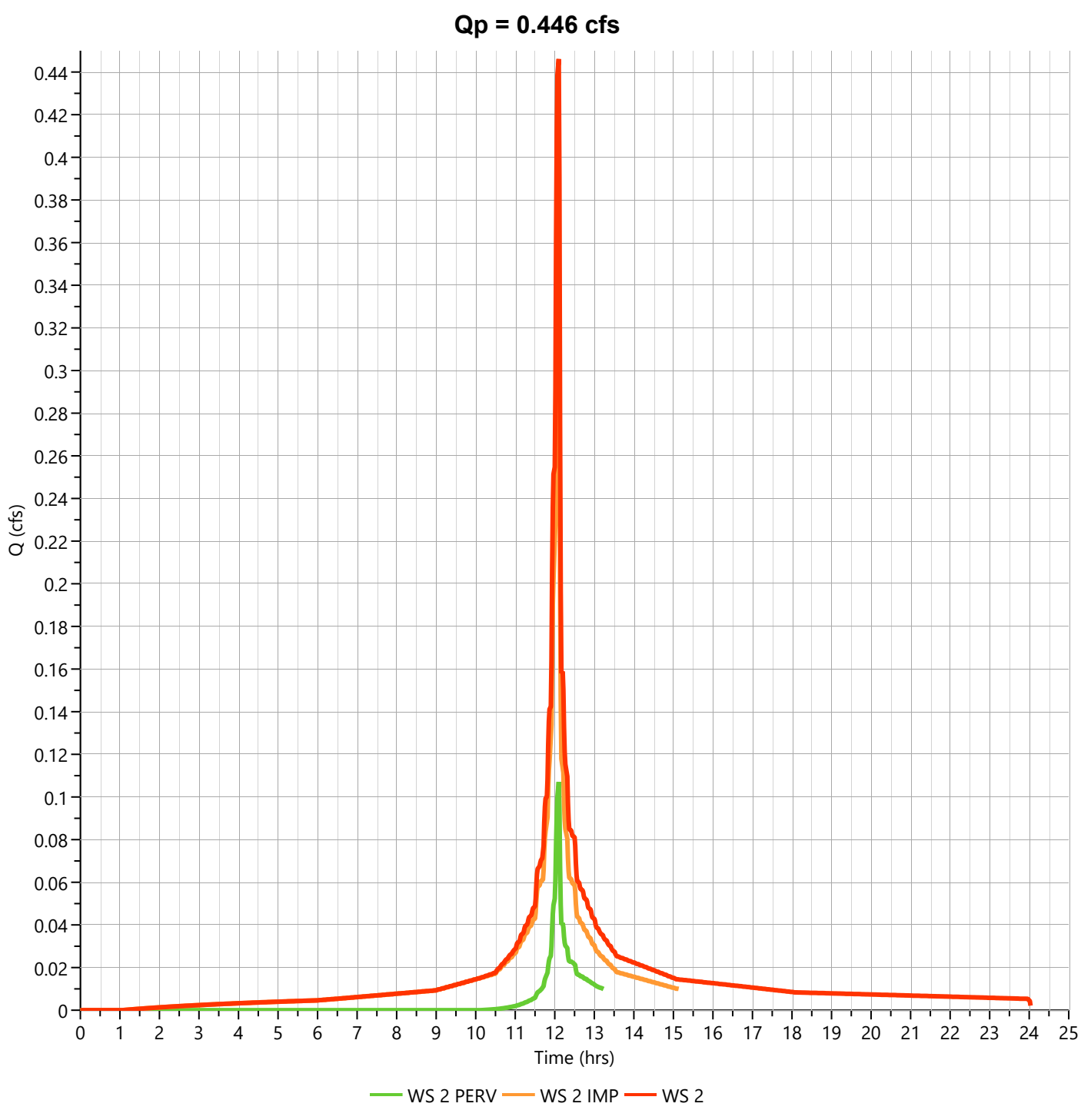
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.339 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 1,101 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 3.47 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 0.446 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 1,392 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



Hydrograph 10-yr Summary

Hydrology Studio v 3.0.0.41

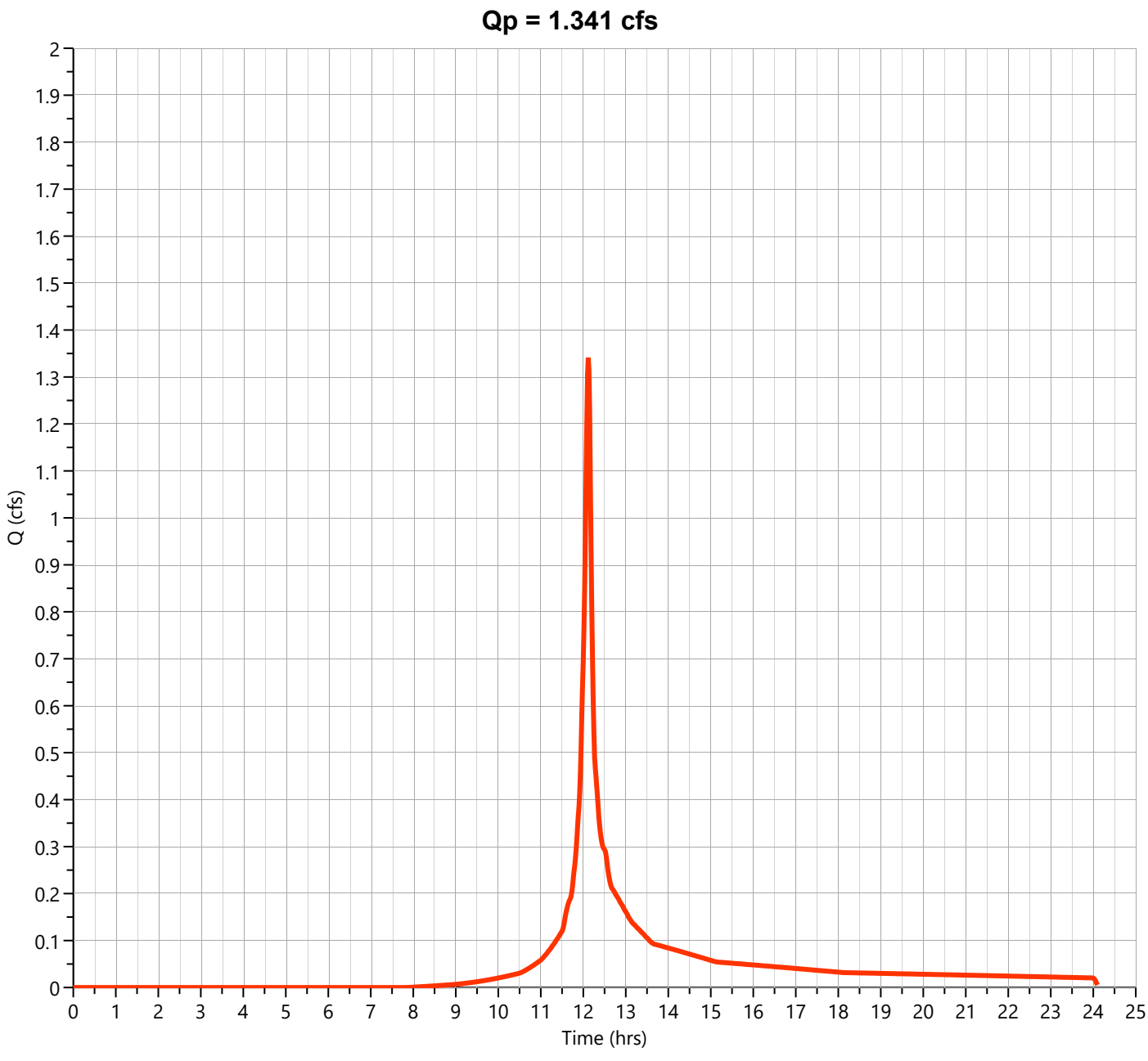
Project Name: Proposed
File: Chatham BNE Proposed.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	1.341	12.12	4,146	----		
2	NRCS Runoff	WS 1 IMP	12.44	12.10	41,207	----		
3	Junction	WS 1	13.75	12.10	45,354	1, 2		
4	NRCS Runoff	WS 2 PERV	0.235	12.10	638	----		
5	NRCS Runoff	WS 2 IMP	0.530	12.10	1,753	----		
6	Junction	WS 2	0.764	12.10	2,392	4, 5		

WS 1 PERV

Hyd. No. 1

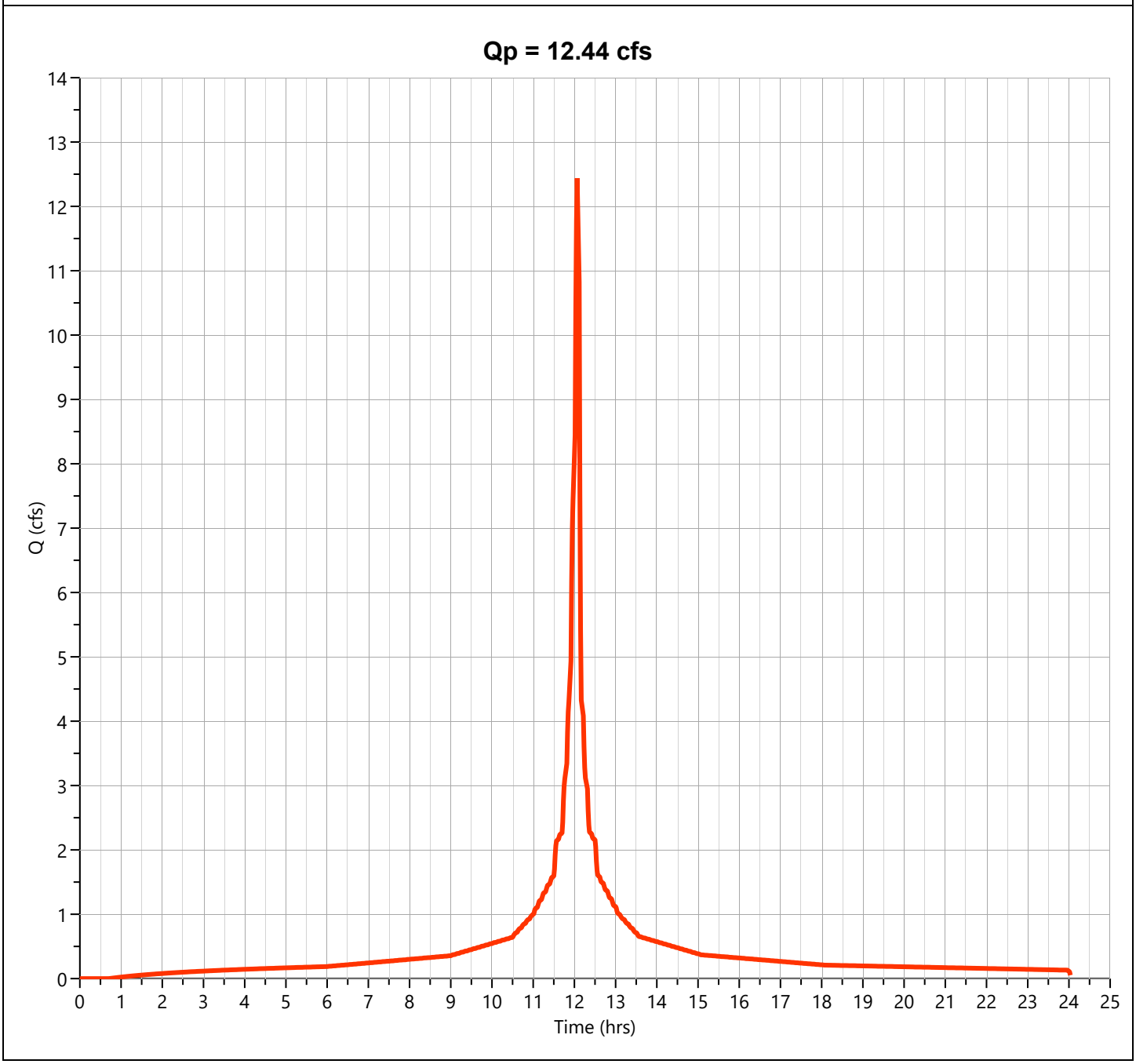
Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.341 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 4,146 cuft
Drainage Area	= 0.4 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 5.39 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

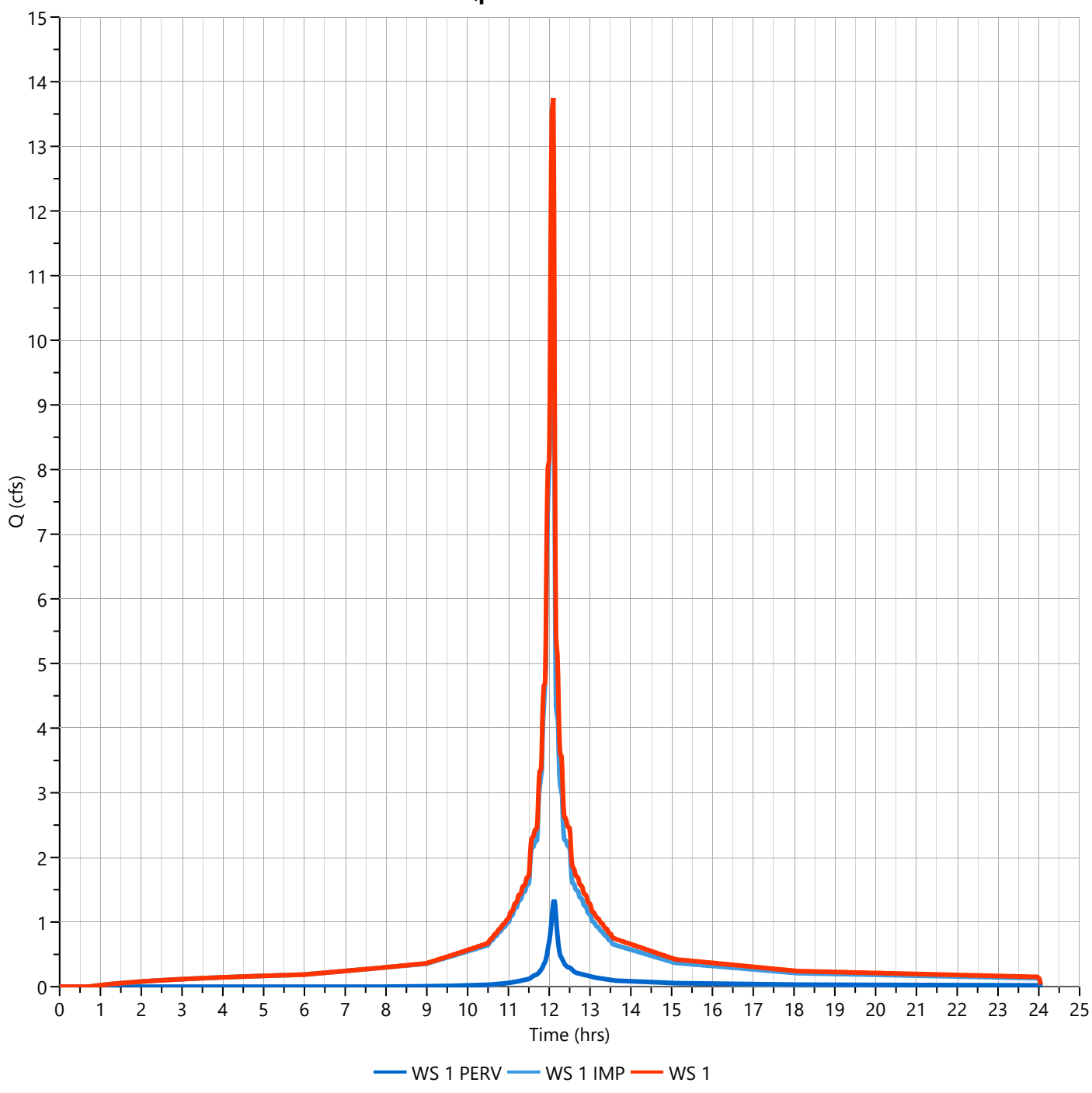
Hydrograph Type	= NRCS Runoff	Peak Flow	= 12.44 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 41,207 cuft
Drainage Area	= 2.35 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 5.39 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

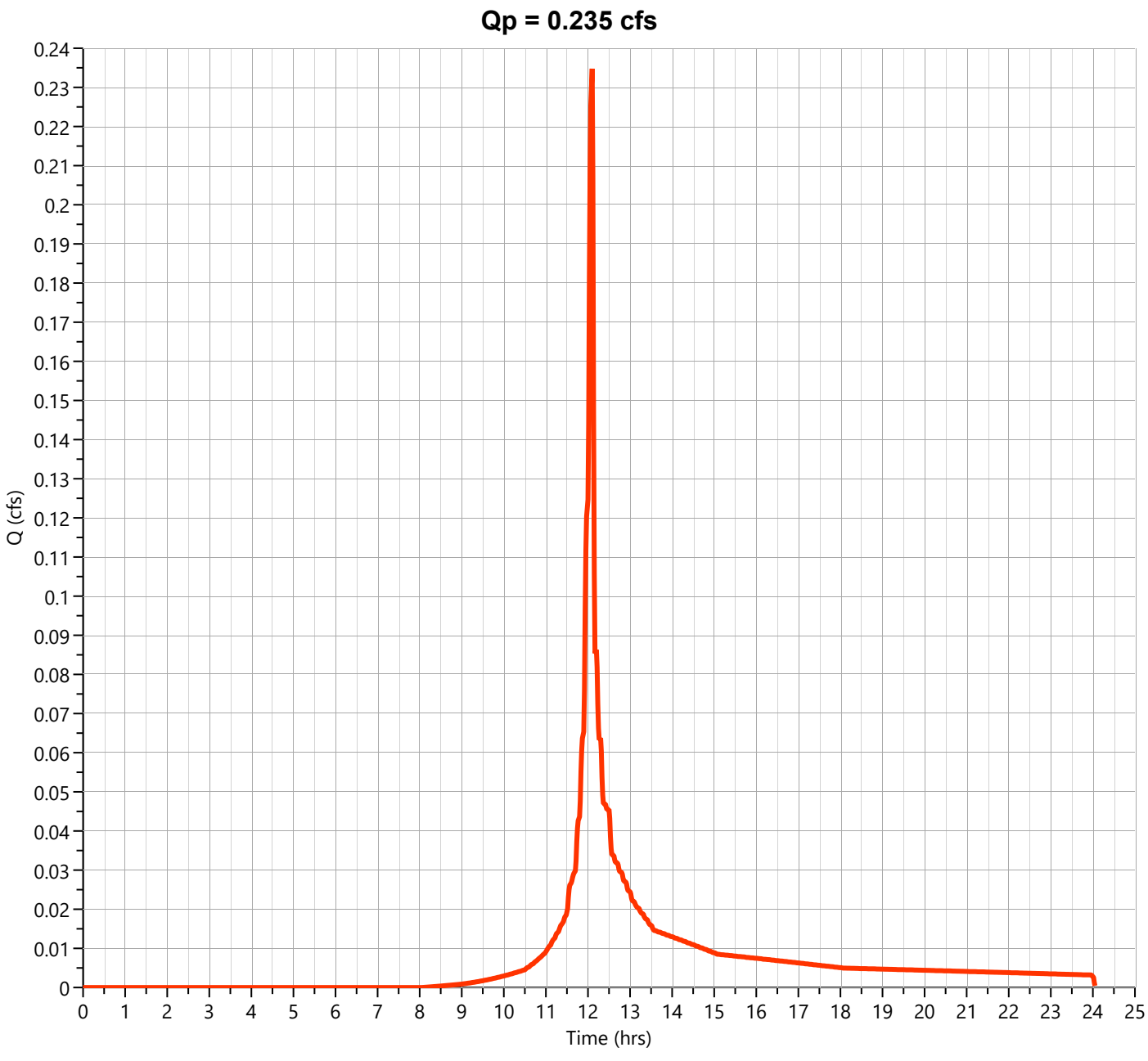
Hydrograph Type	= Junction	Peak Flow	= 13.75 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 45,354 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

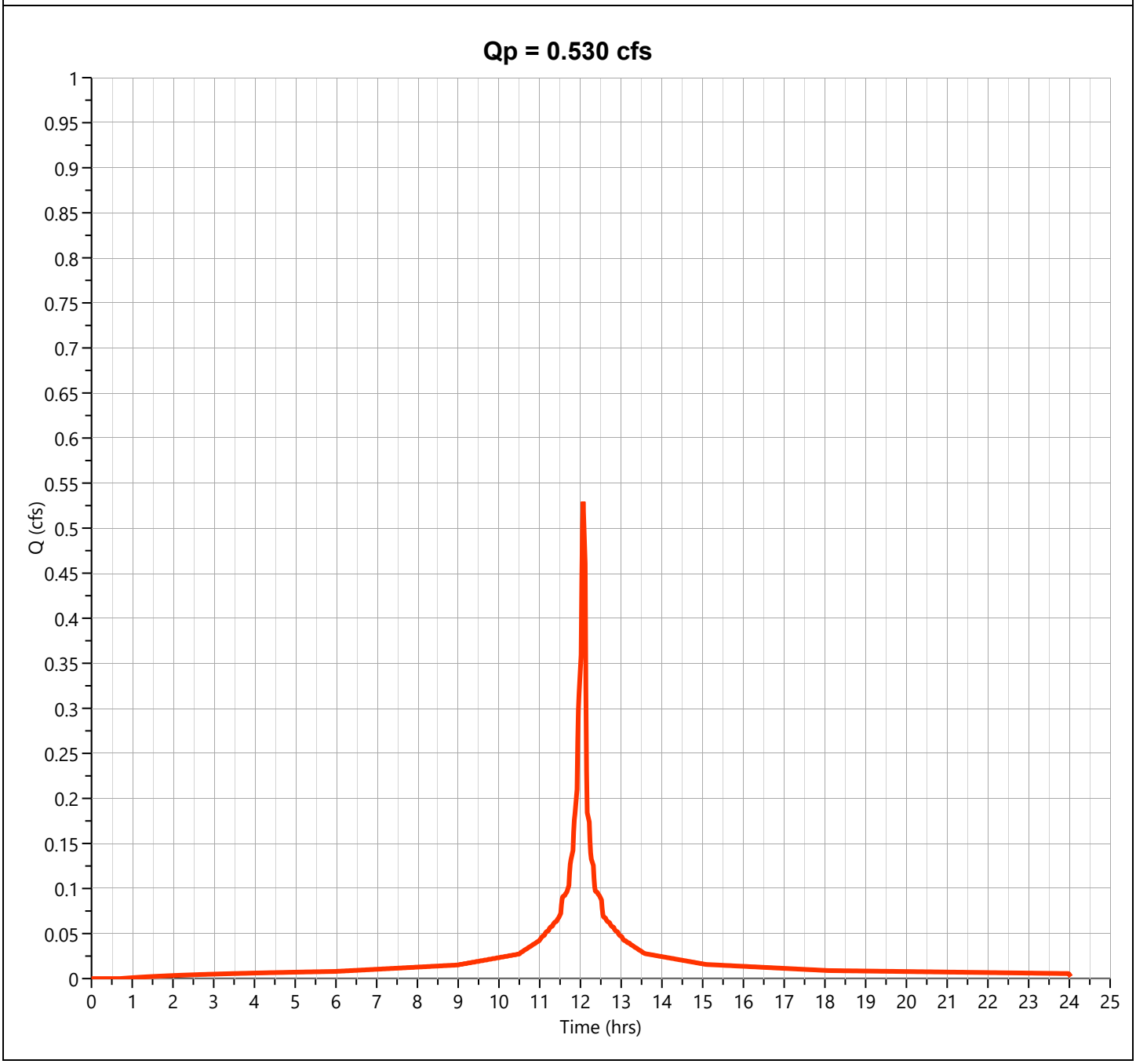
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.235 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 638 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 5.39 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

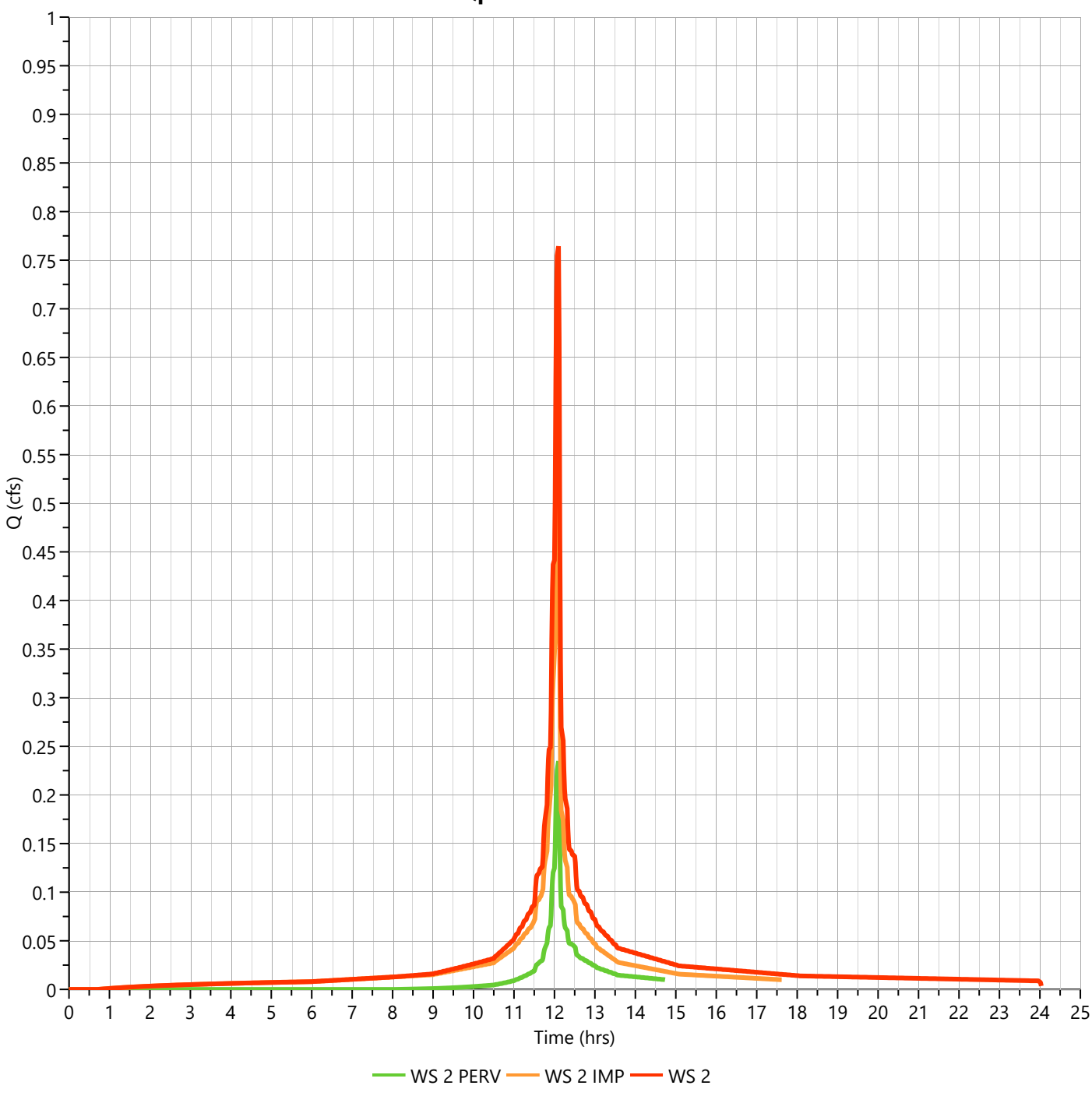
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.530 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 1,753 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 5.39 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 0.764 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 2,392 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



Hydrograph 100-yr Summary

Hydrology Studio v 3.0.0.41

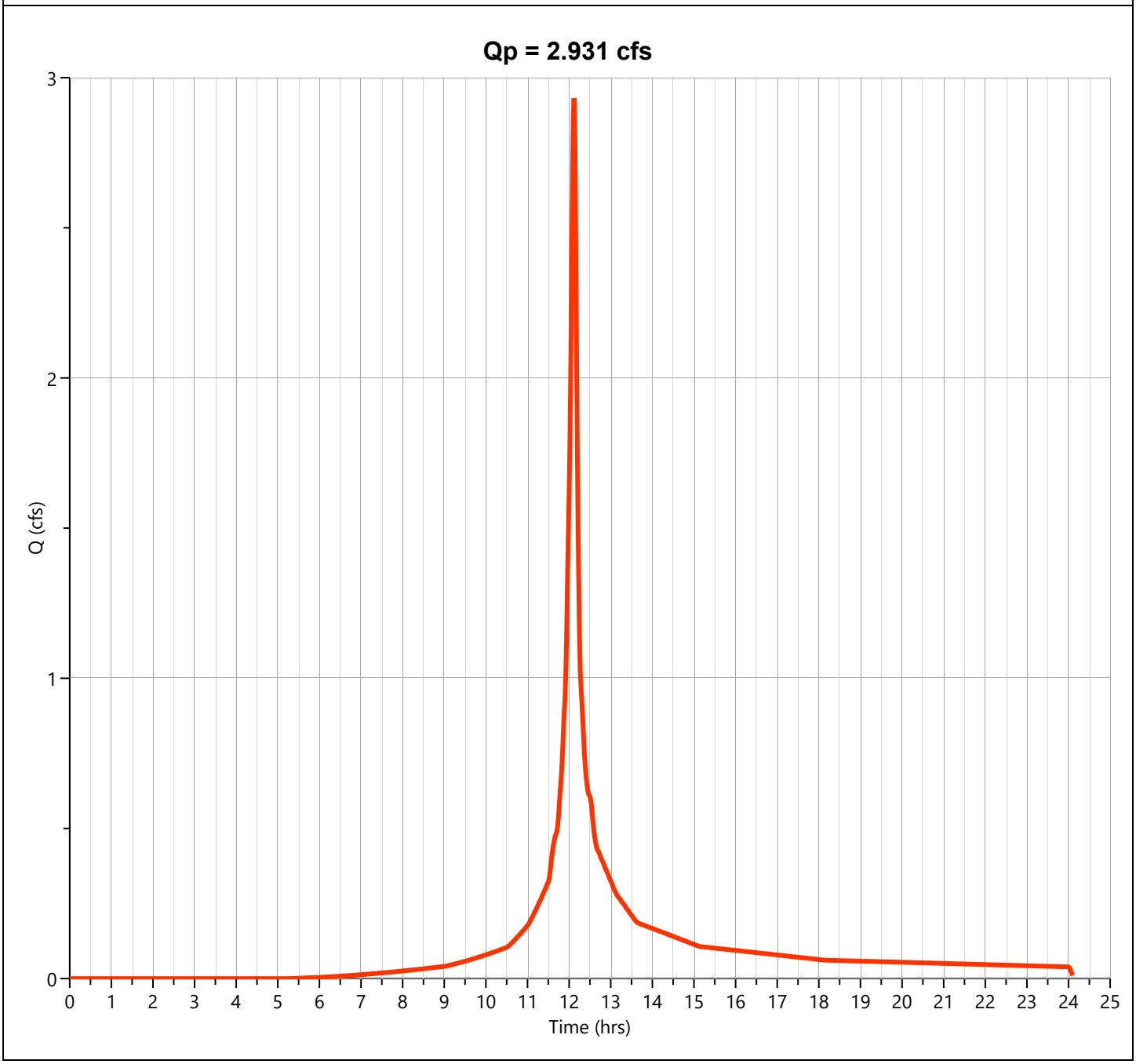
Project Name: Proposed
File: Chatham BNE Proposed.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	2.931	12.12	9,271	----		
2	NRCS Runoff	WS 1 IMP	21.44	12.10	72,132	----		
3	Junction	WS 1	24.31	12.10	81,403	1, 2		
4	NRCS Runoff	WS 2 PERV	0.513	12.10	1,445	----		
5	NRCS Runoff	WS 2 IMP	0.912	12.10	3,069	----		
6	Junction	WS 2	1.426	12.10	4,515	4, 5		

WS 1 PERV

Hyd. No. 1

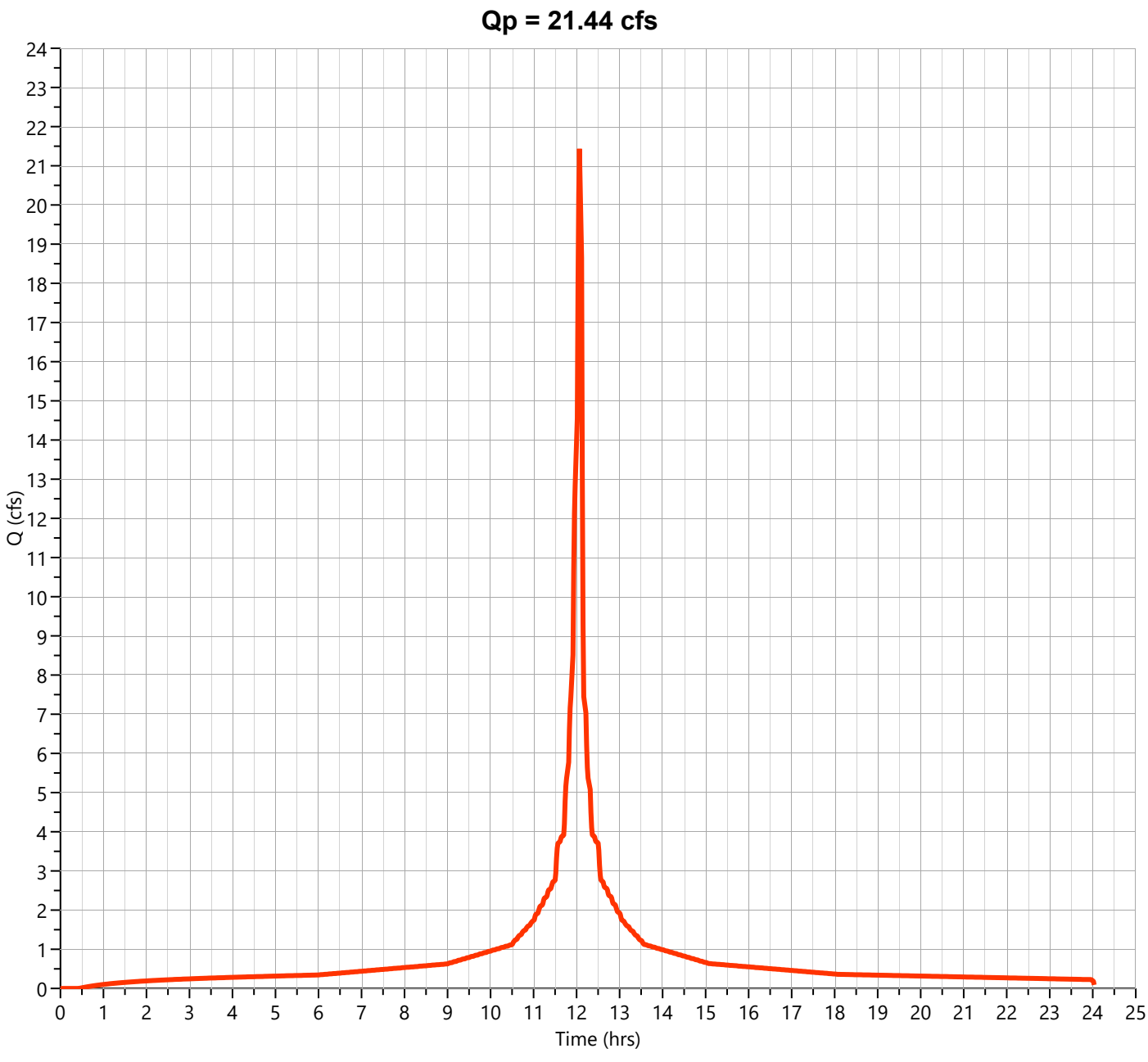
Hydrograph Type	= NRCS Runoff	Peak Flow	= 2.931 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 9,271 cuft
Drainage Area	= 0.4 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 9.26 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

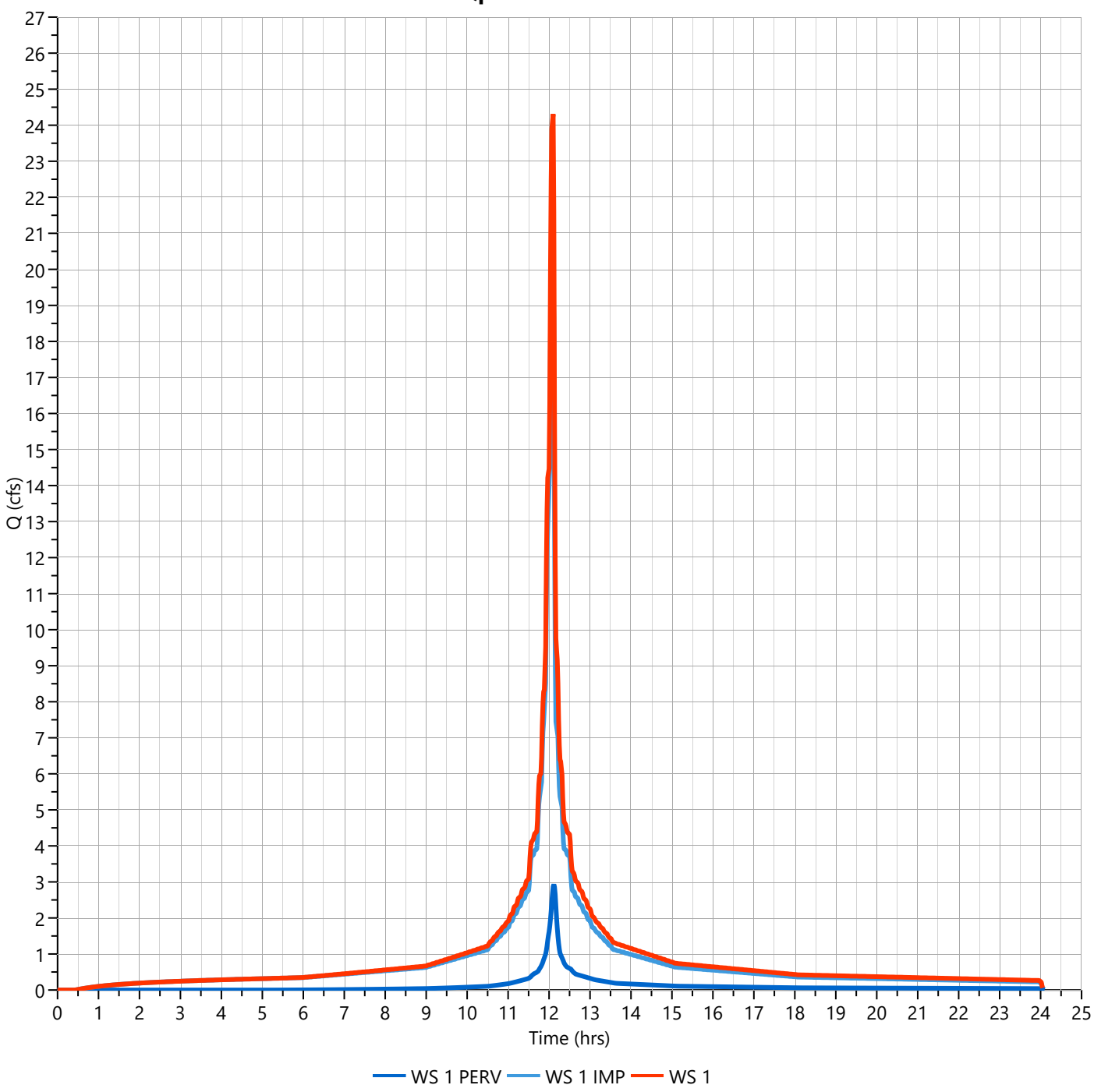
Hydrograph Type	= NRCS Runoff	Peak Flow	= 21.44 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 72,132 cuft
Drainage Area	= 2.35 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 9.26 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

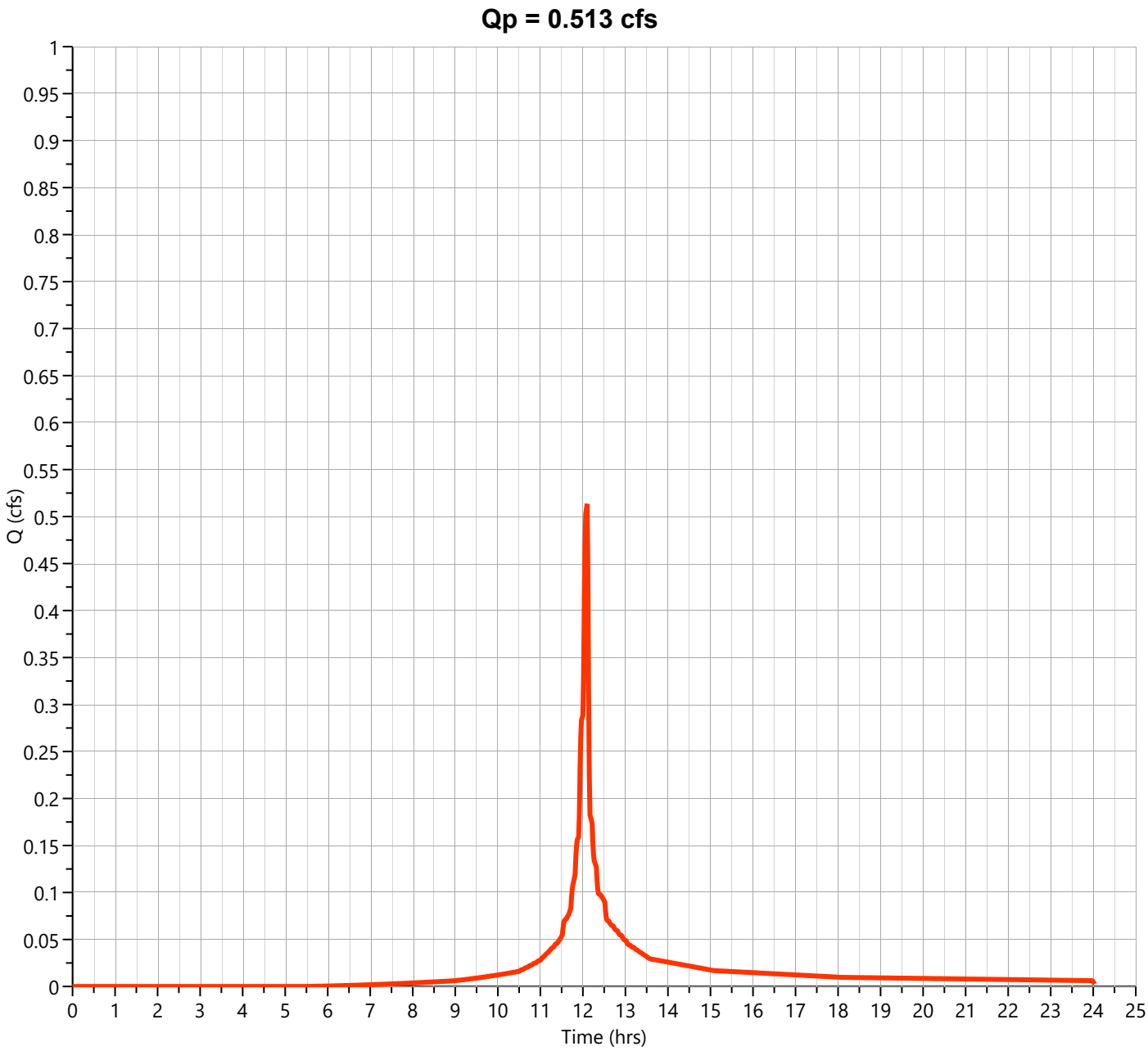
Hydrograph Type	= Junction	Peak Flow	= 24.31 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 81,403 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

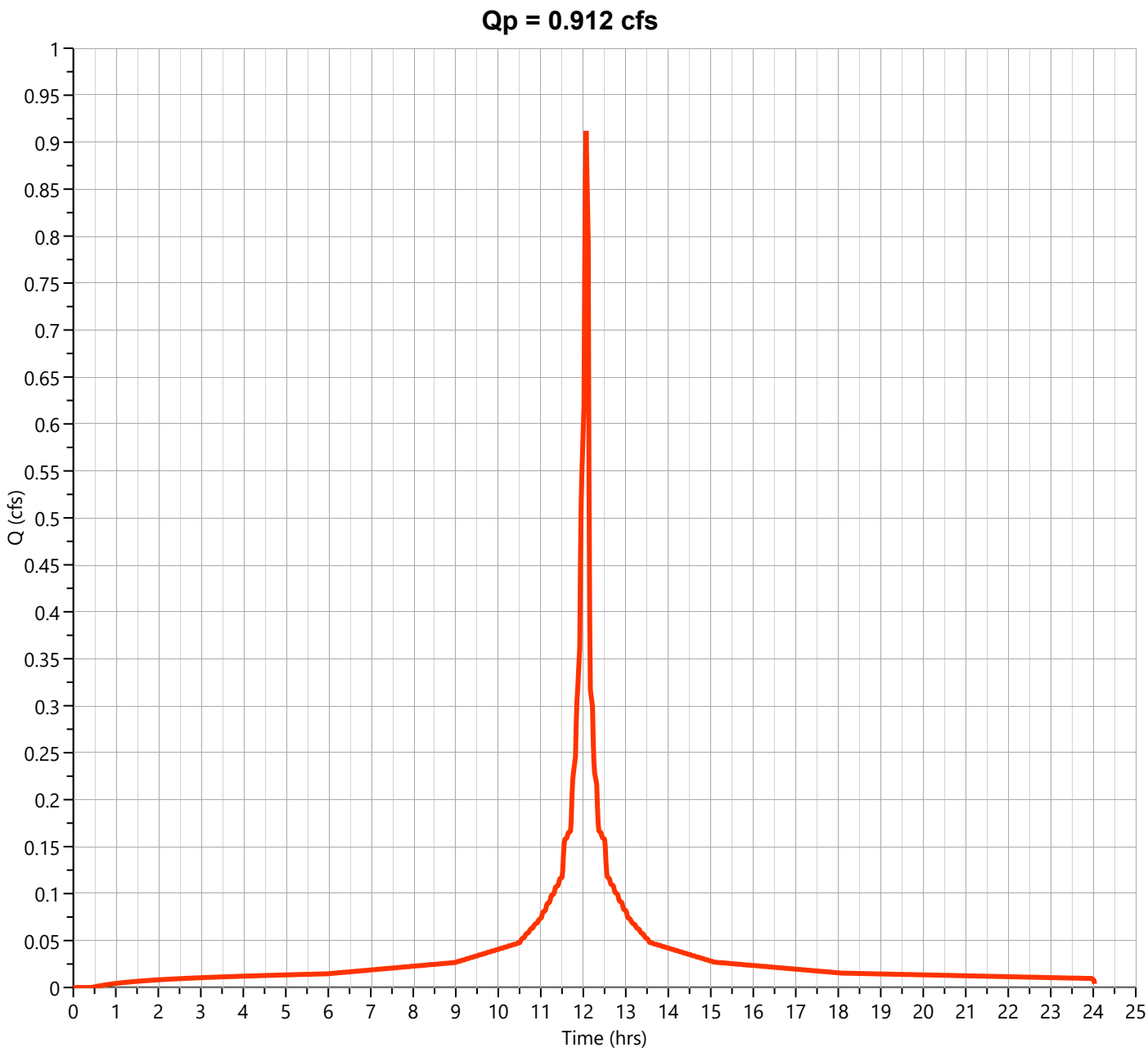
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.513 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 1,445 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 9.26 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

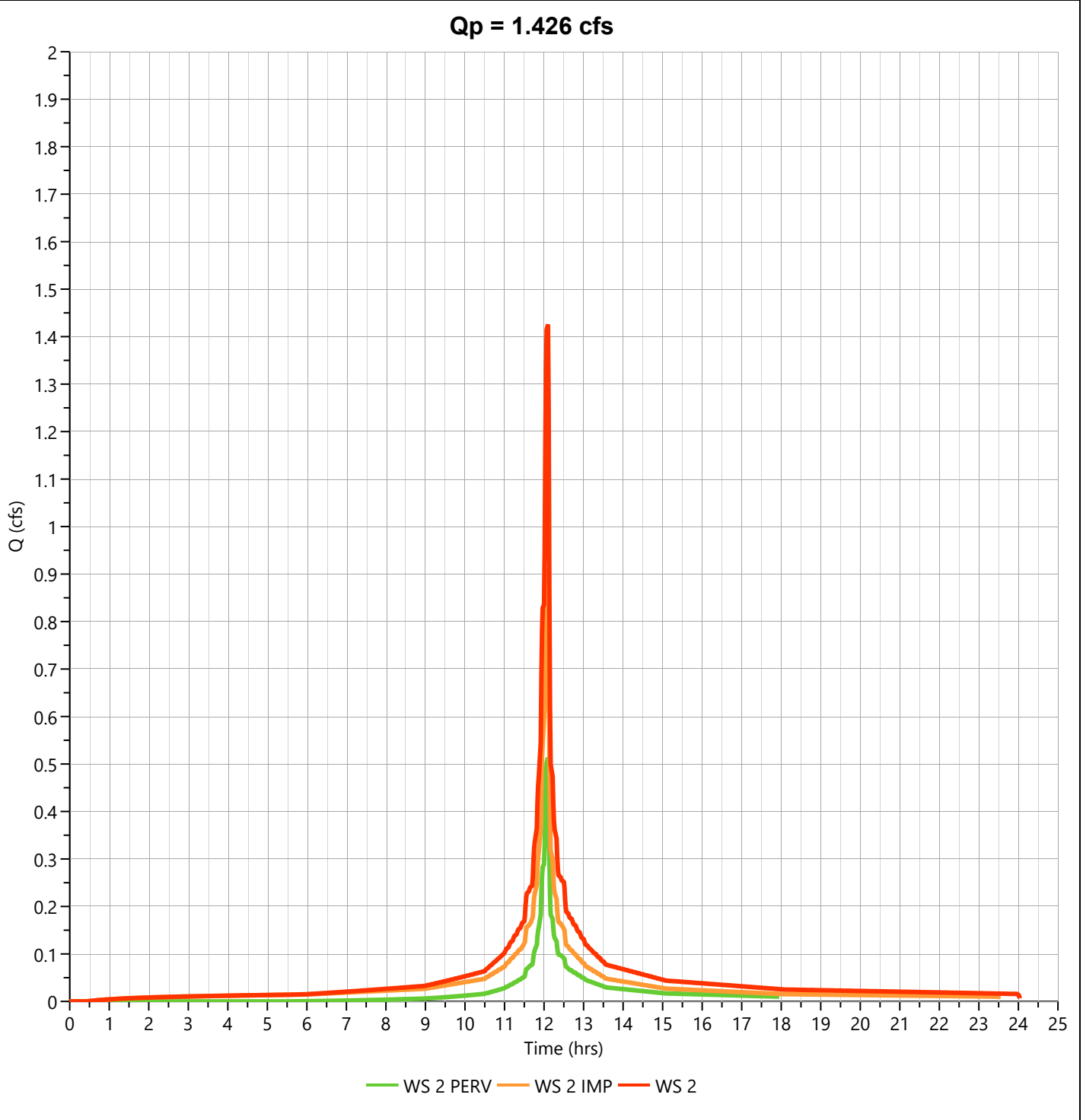
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.912 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 3,069 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 9.26 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 1.426 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 4,515 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



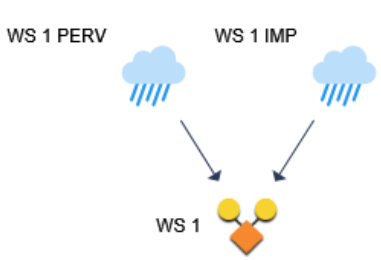
PROPOSED RUNOFF HYDROGRAPHS "FUTURE" 2-, 10-, AND 100-YEAR STORMS

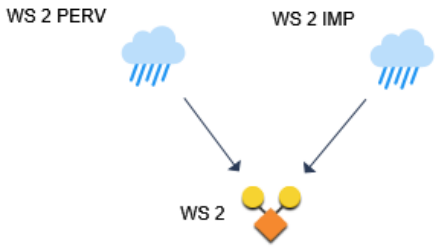
Table of Contents

Basin Model

Hydrology Studio v 3.0.0.41

Project Name: Proposed
File: Chatham BNE Proposed.hys
01-14-2026





Hydrograph by Return Period

Hydrology Studio v 3.0.0.41

Project Name: Proposed
File: Chatham BNE Proposed.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Outflow (cfs)							
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
1	NRCS Runoff	WS 1 PERV		0.890			1.867			4.389
2	NRCS Runoff	WS 1 IMP		9.742			15.47			29.56
3	Junction	WS 1		10.60			17.29			33.87
4	NRCS Runoff	WS 2 PERV		0.156			0.327			0.769
5	NRCS Runoff	WS 2 IMP		0.415			0.658			1.258
6	Junction	WS 2		0.570			0.985			2.027

Hydrograph 2-yr Summary

Hydrology Studio v 3.0.0.41

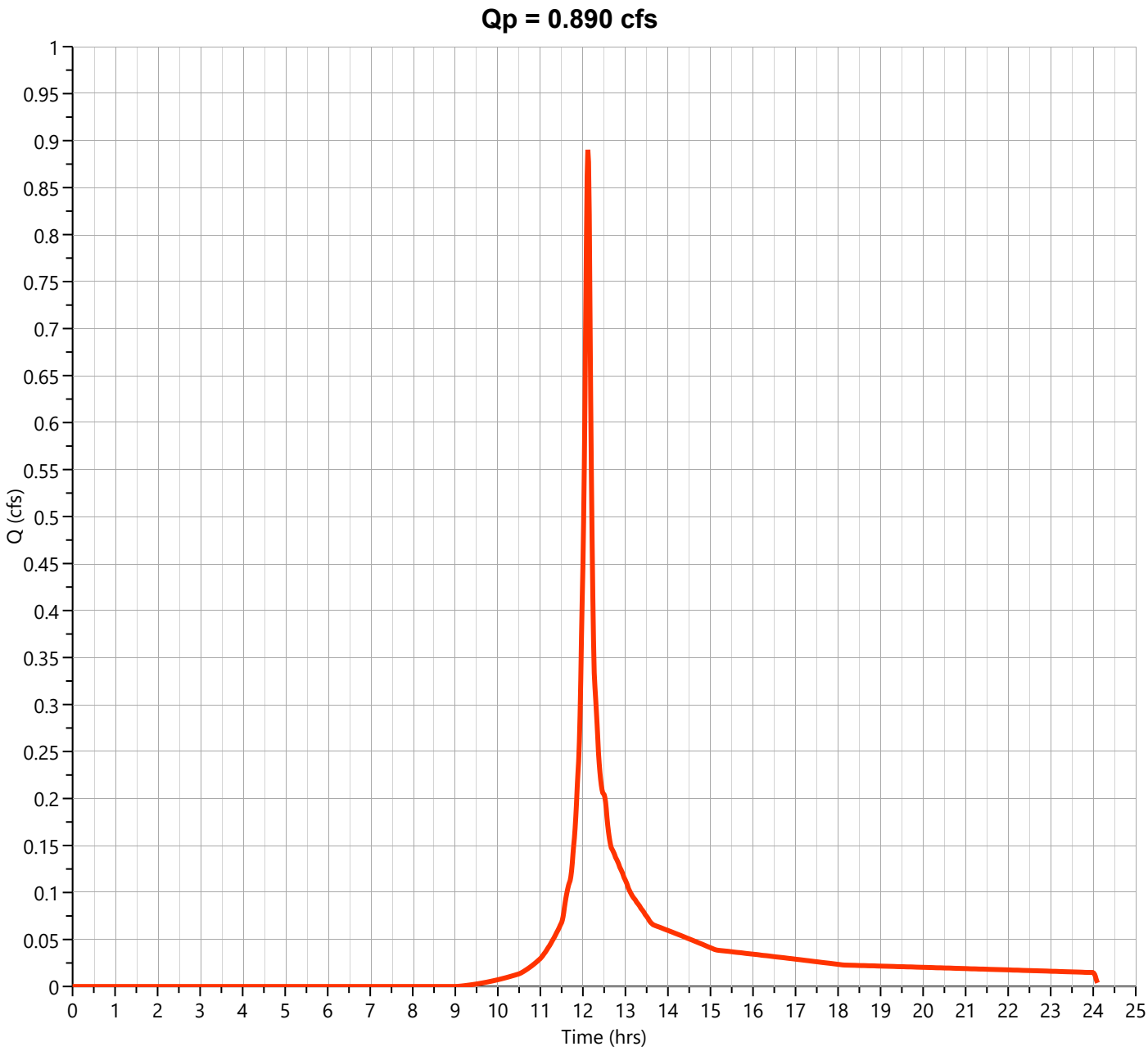
Project Name: Proposed
File: Chatham BNE Proposed.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	0.890	12.12	2,757	----		
2	NRCS Runoff	WS 1 IMP	9.742	12.10	31,946	----		
3	Junction	WS 1	10.60	12.10	34,703	1, 2		
4	NRCS Runoff	WS 2 PERV	0.156	12.10	421	----		
5	NRCS Runoff	WS 2 IMP	0.415	12.10	1,359	----		
6	Junction	WS 2	0.570	12.10	1,780	4, 5		

WS 1 PERV

Hyd. No. 1

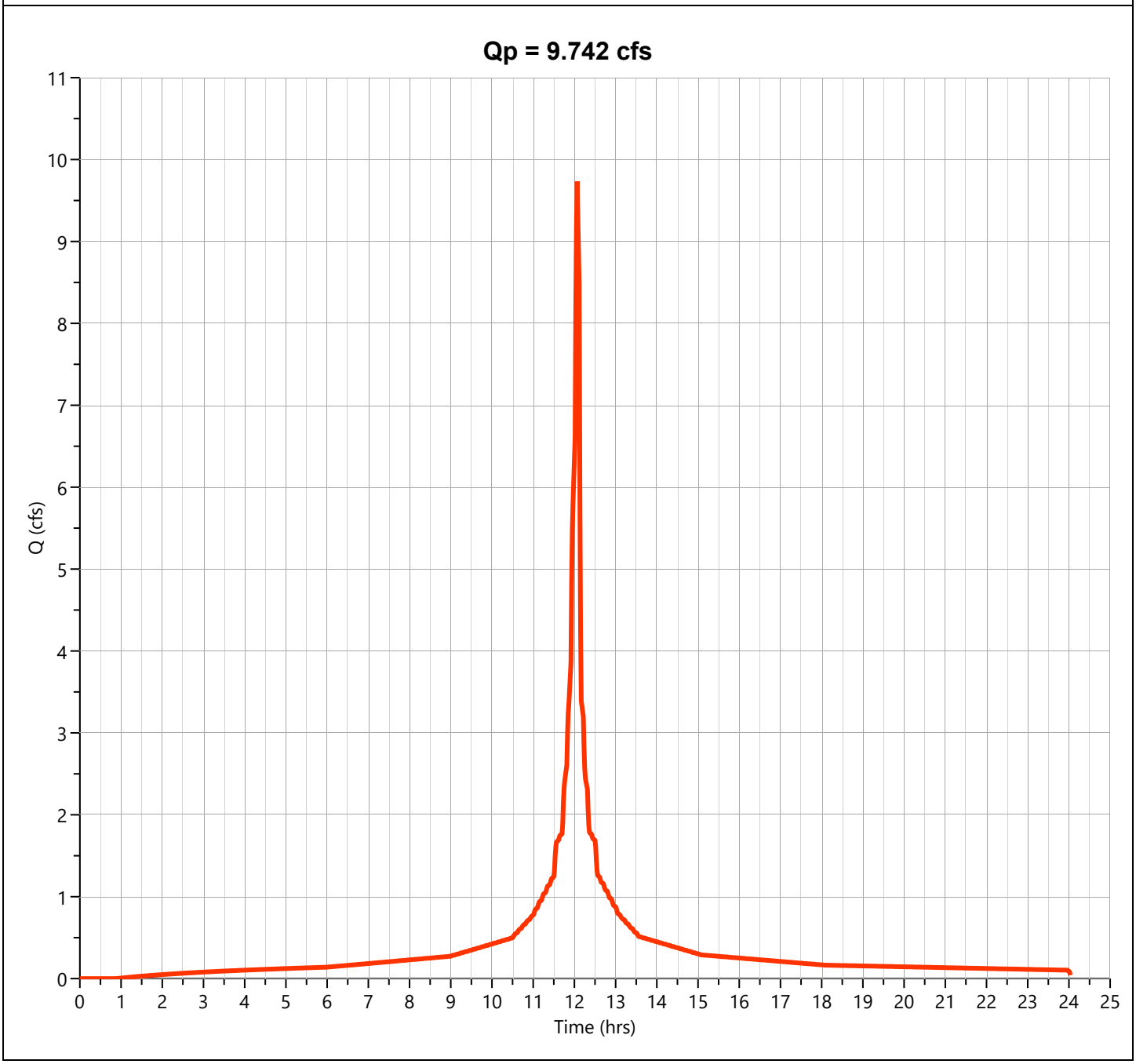
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.890 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 2,757 cuft
Drainage Area	= 0.4 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 4.23 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

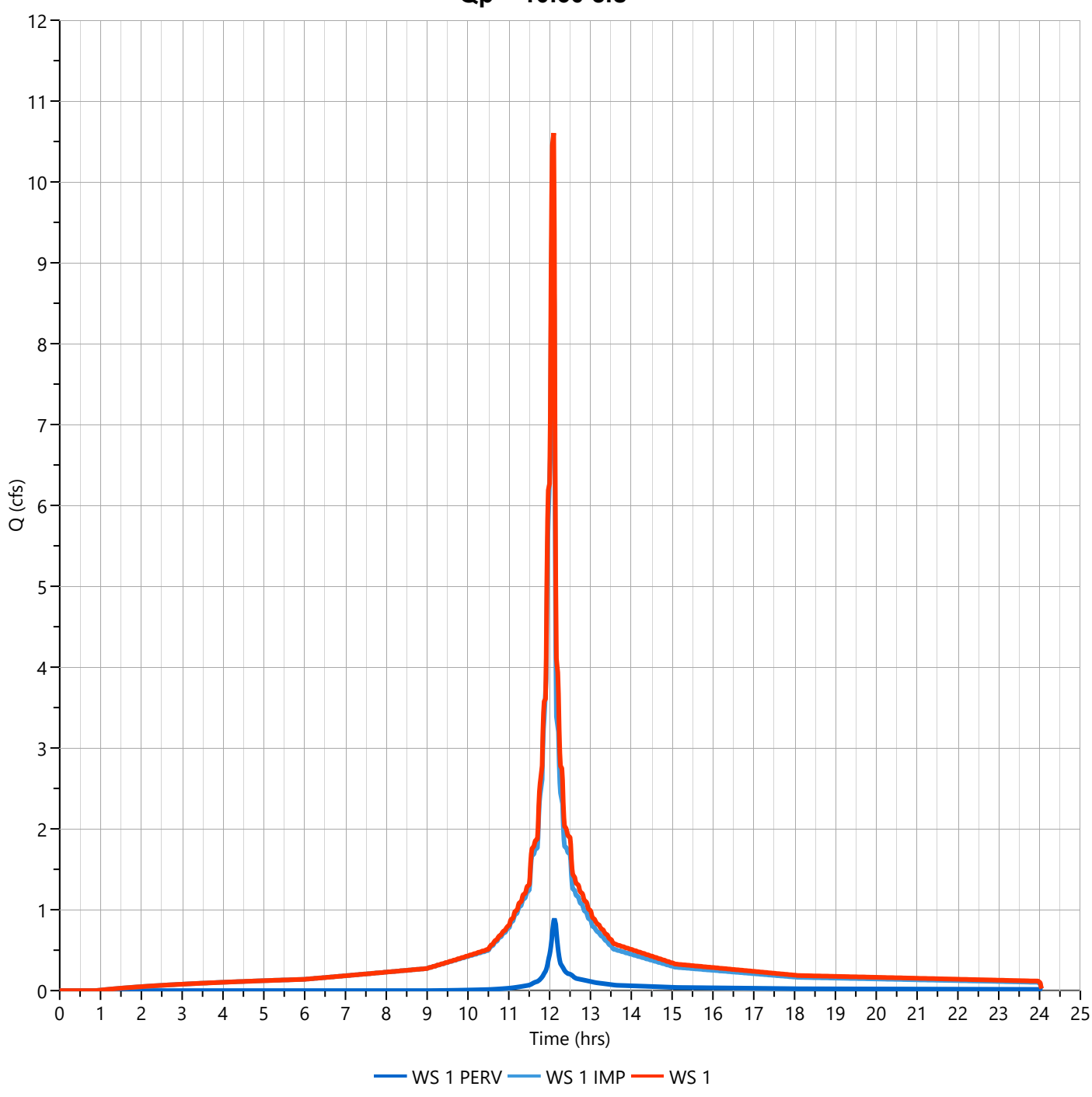
Hydrograph Type	= NRCS Runoff	Peak Flow	= 9.742 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 31,946 cuft
Drainage Area	= 2.35 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 4.23 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

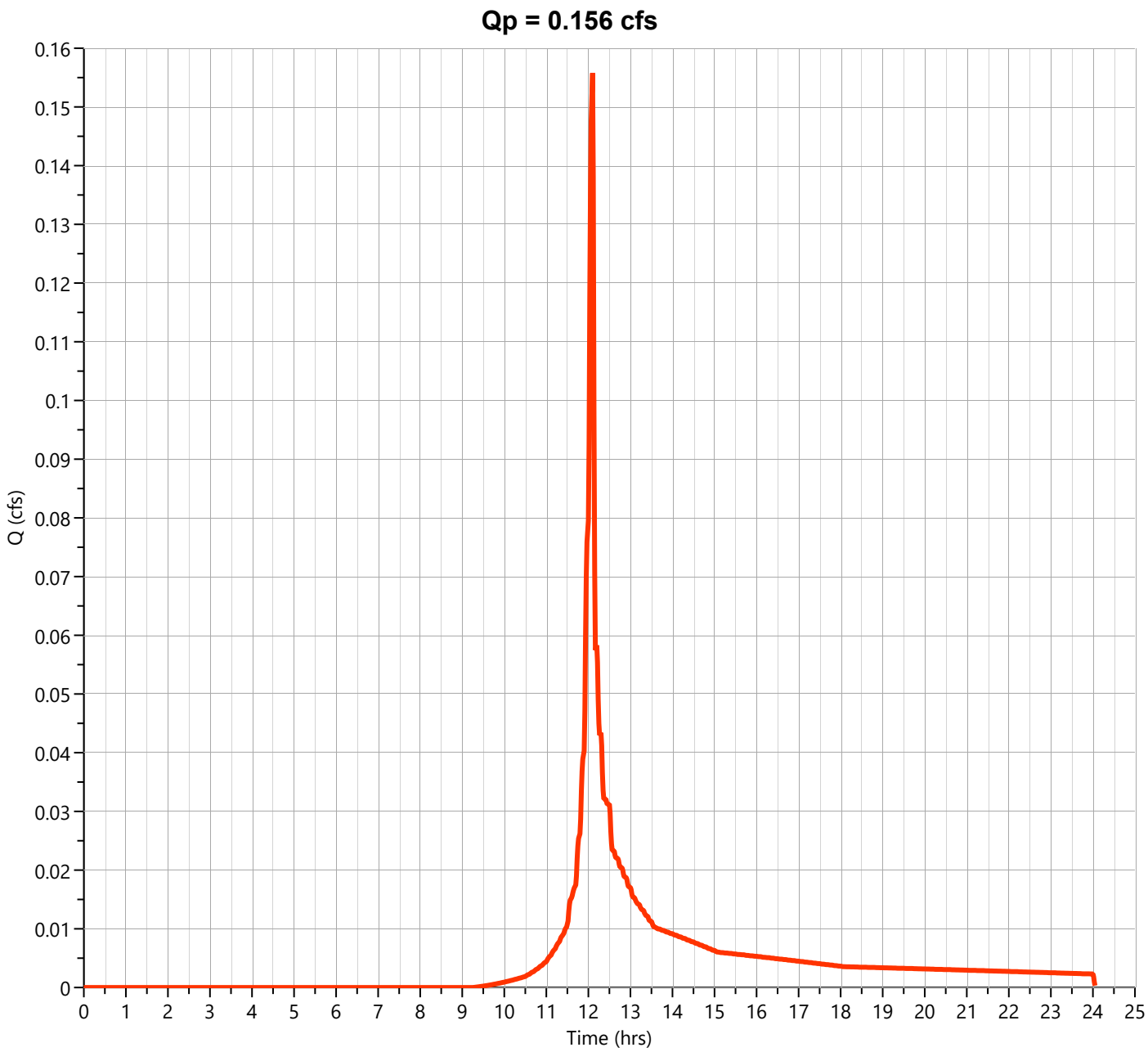
Hydrograph Type	= Junction	Peak Flow	= 10.60 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 34,703 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

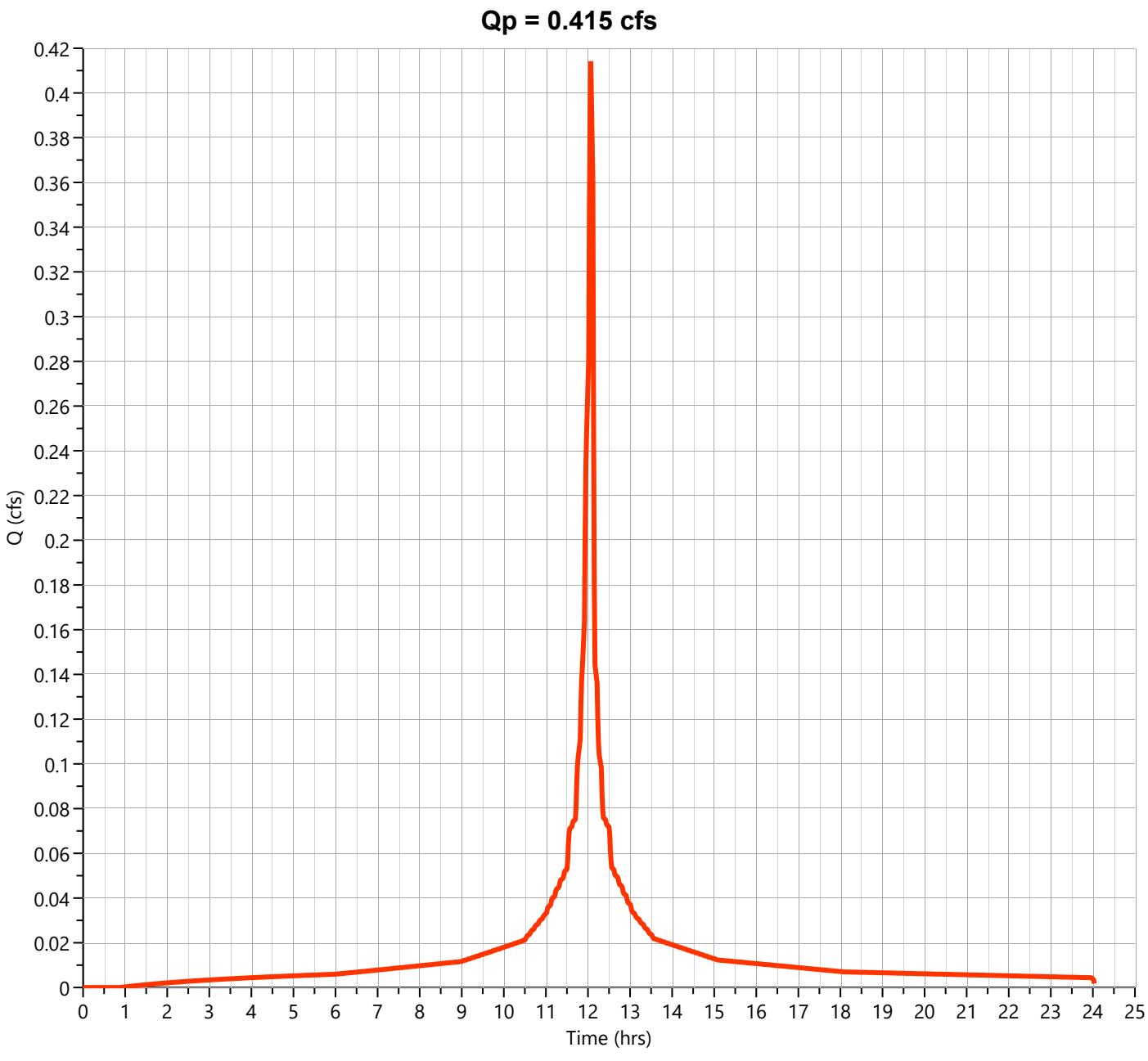
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.156 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 421 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 4.23 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

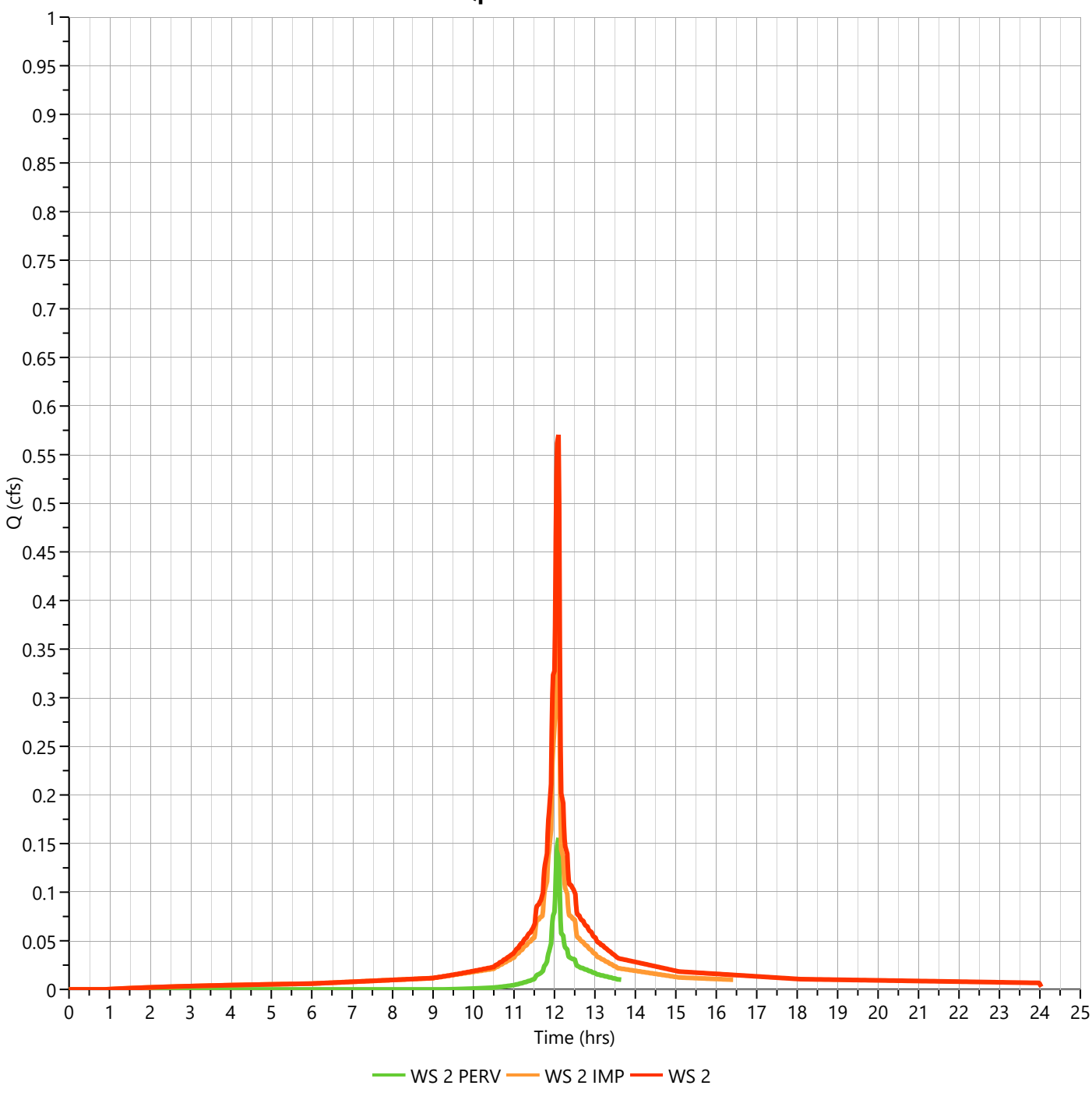
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.415 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 1,359 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 4.23 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 0.570 cfs
Storm Frequency	= 2-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 1,780 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



Hydrograph 10-yr Summary

Hydrology Studio v 3.0.0.41

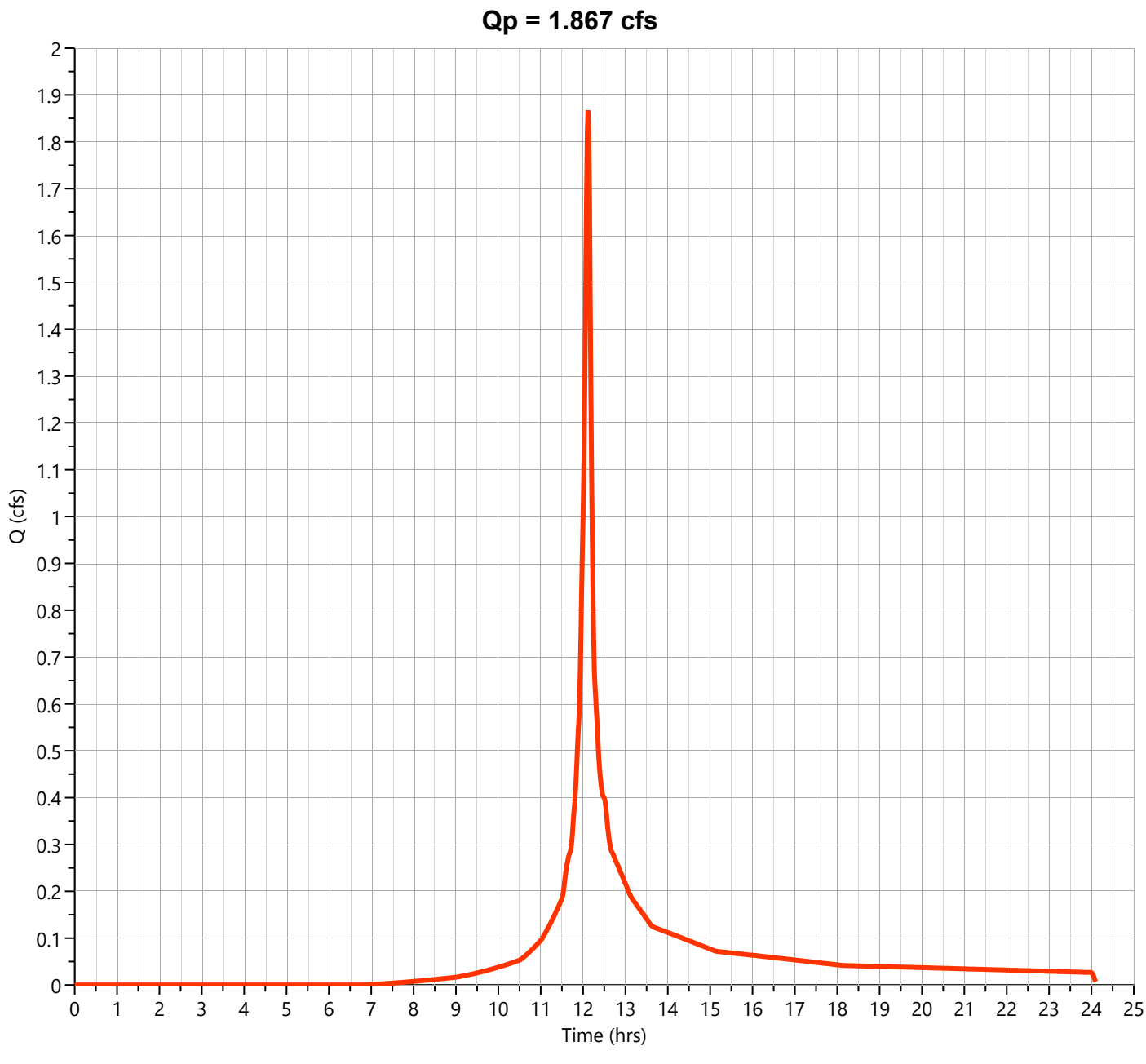
Project Name: Proposed
File: Chatham BNE Proposed.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	1.867	12.12	5,806	----		
2	NRCS Runoff	WS 1 IMP	15.47	12.10	51,592	----		
3	Junction	WS 1	17.29	12.10	57,398	1, 2		
4	NRCS Runoff	WS 2 PERV	0.327	12.10	899	----		
5	NRCS Runoff	WS 2 IMP	0.658	12.10	2,195	----		
6	Junction	WS 2	0.985	12.10	3,094	4, 5		

WS 1 PERV

Hyd. No. 1

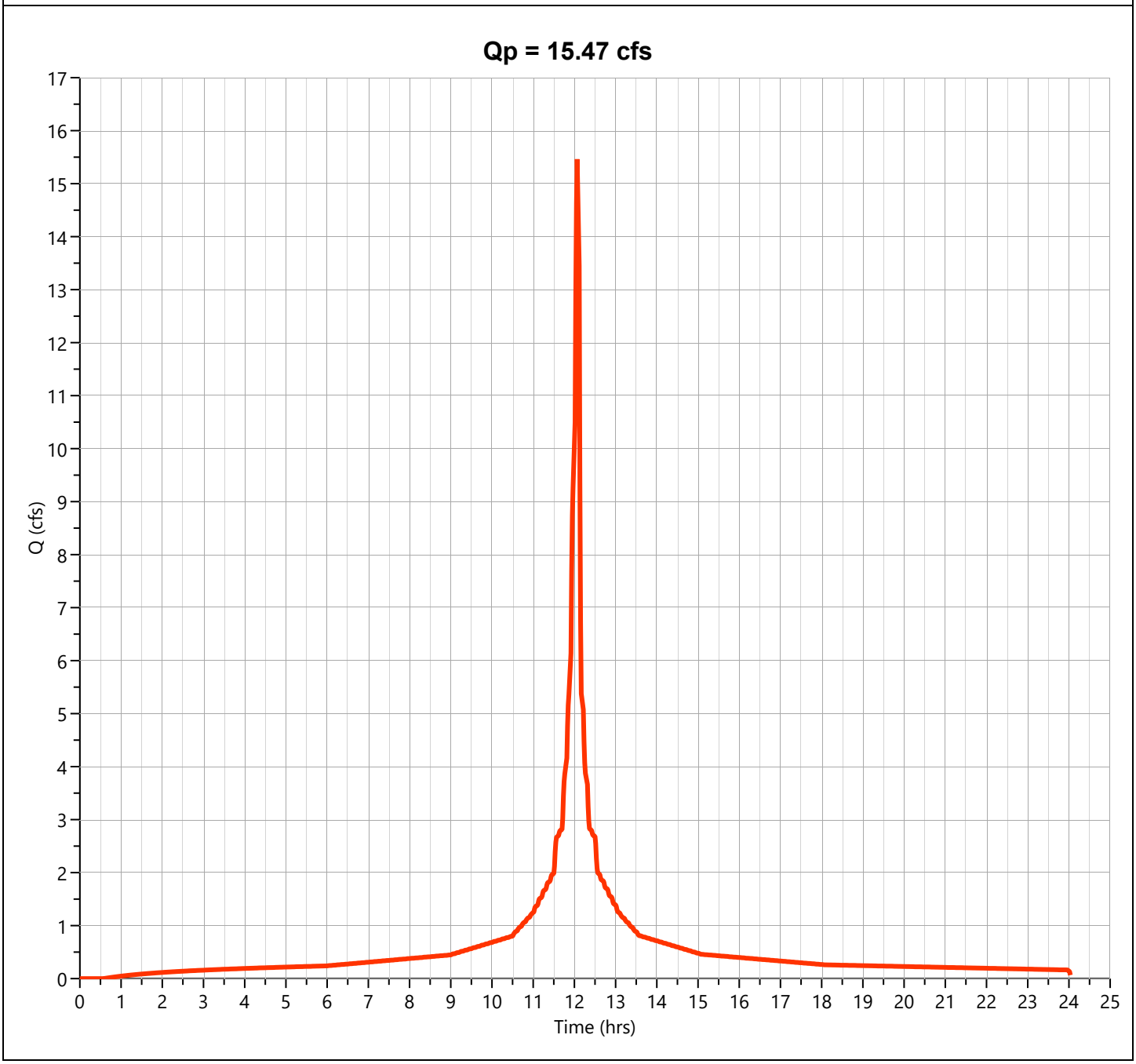
Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.867 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 5,806 cuft
Drainage Area	= 0.4 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 6.69 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

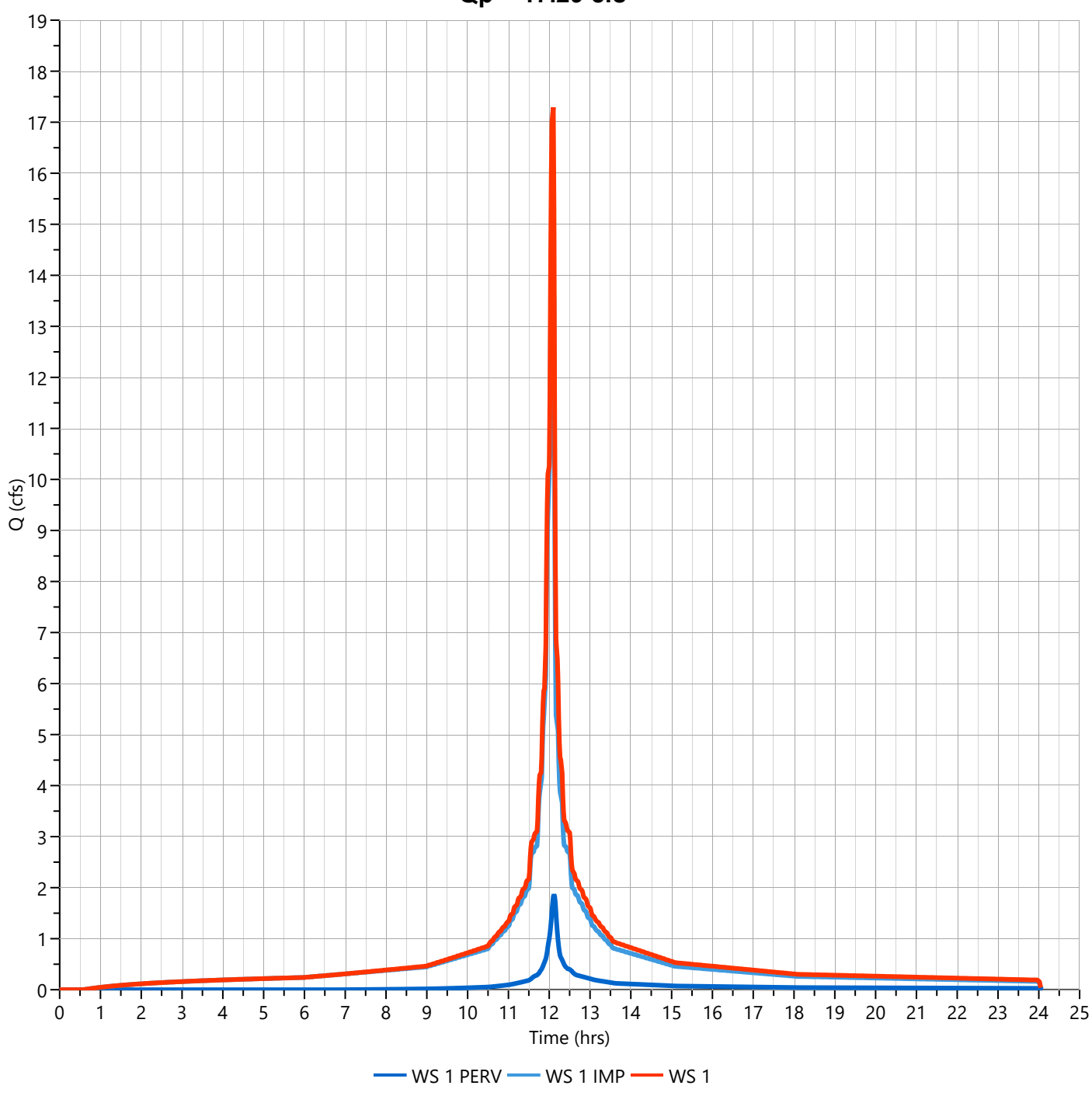
Hydrograph Type	= NRCS Runoff	Peak Flow	= 15.47 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 51,592 cuft
Drainage Area	= 2.35 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 6.69 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

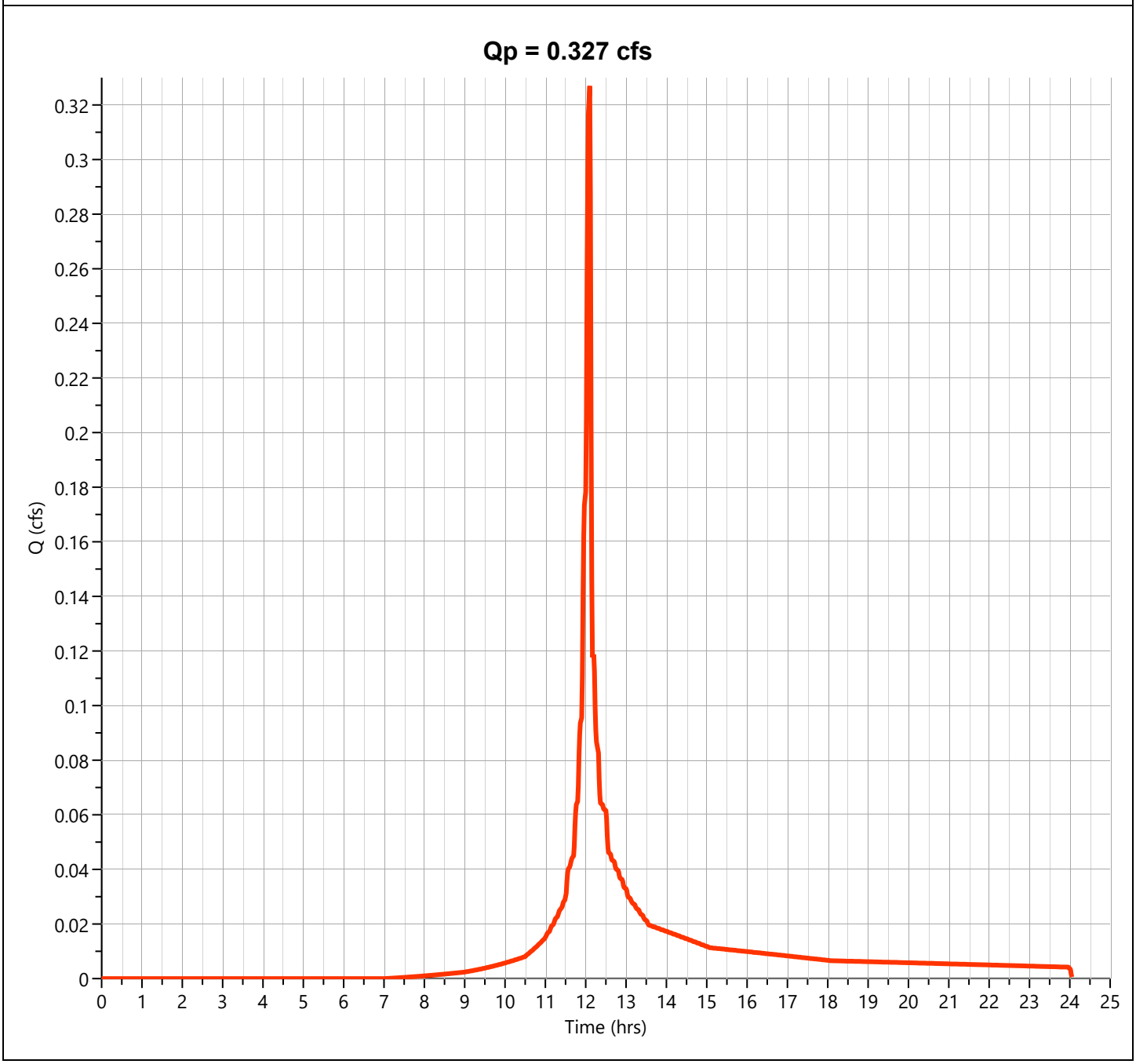
Hydrograph Type	= Junction	Peak Flow	= 17.29 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 57,398 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

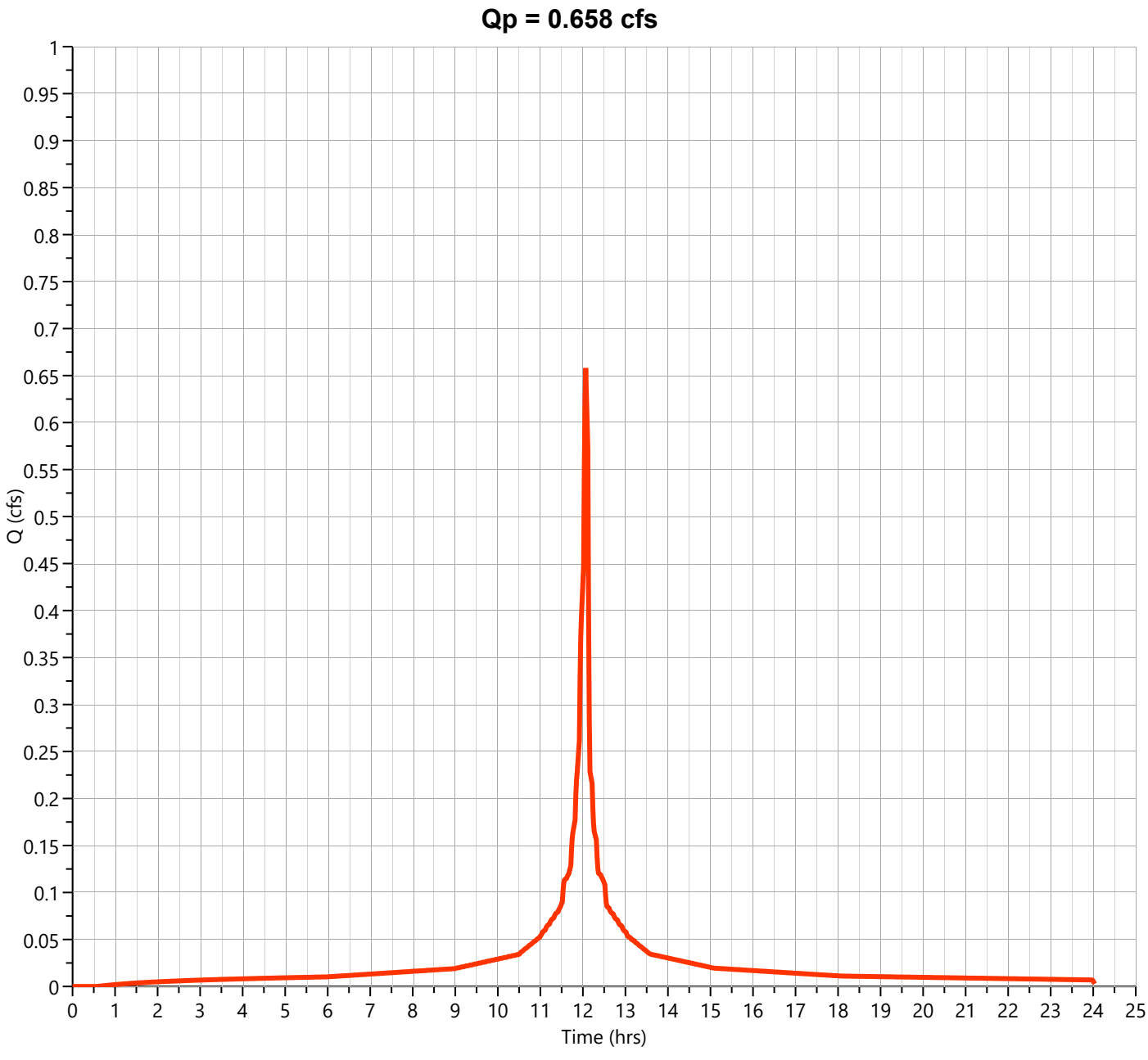
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.327 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 899 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 6.69 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

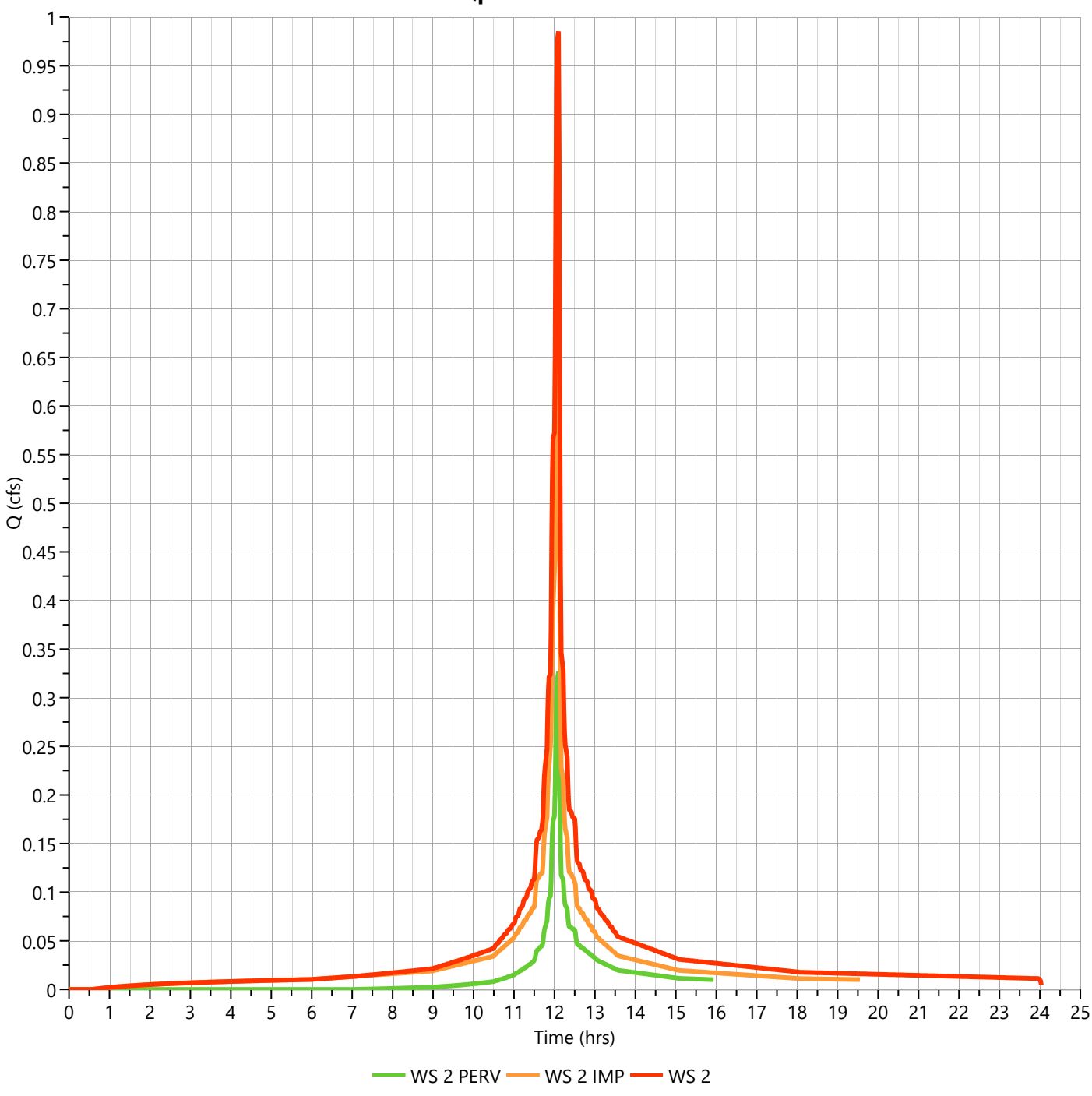
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.658 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 2,195 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 6.69 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 0.985 cfs
Storm Frequency	= 10-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 3,094 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



Hydrograph 100-yr Summary

Hydrology Studio v 3.0.0.41

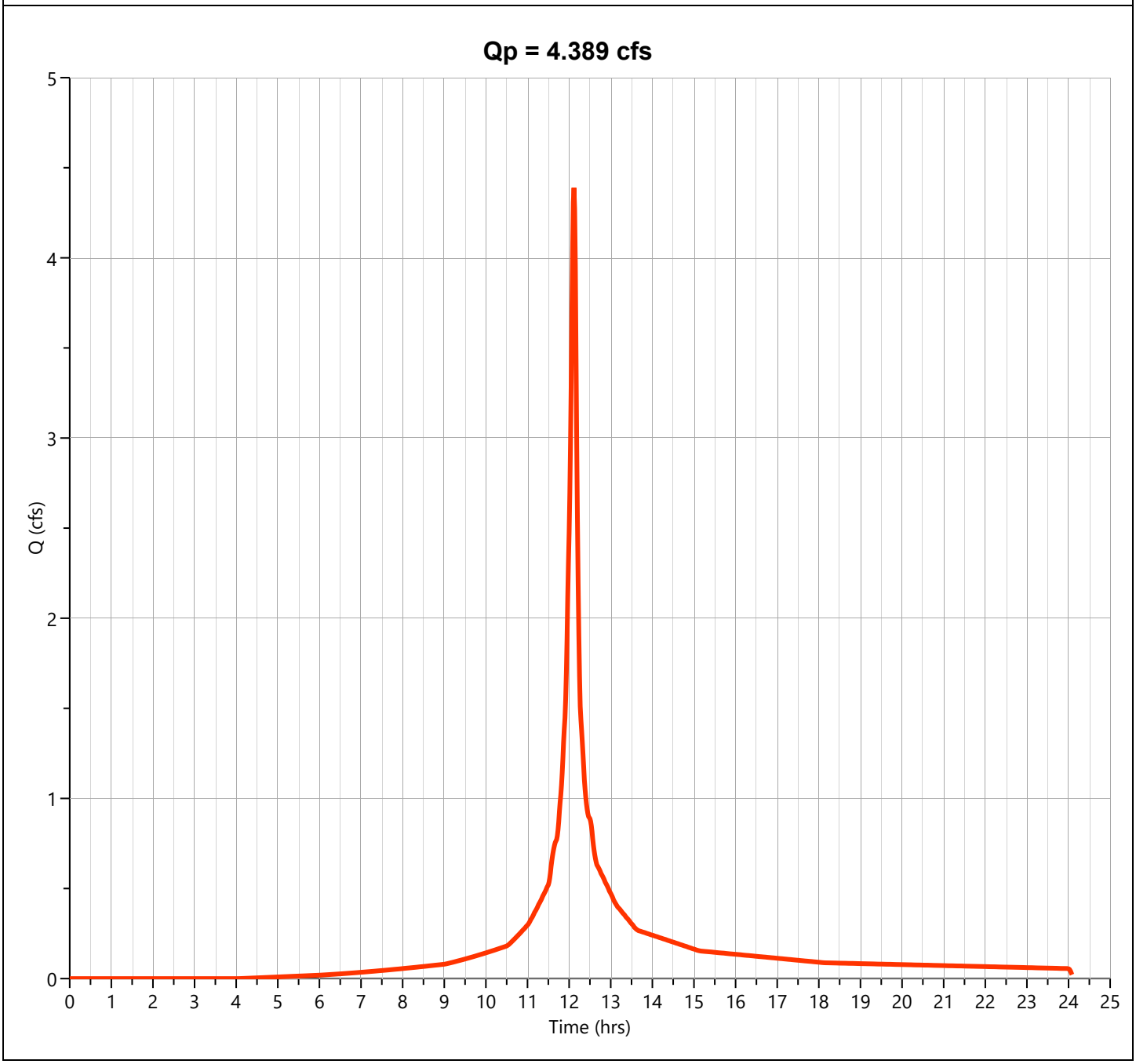
Project Name: Proposed
File: Chatham BNE Proposed.hys
01-14-2026

Hyd. No.	Hydrograph Type	Hydrograph Name	Peak Flow (cfs)	Time to Peak (hrs)	Hydrograph Volume (cuft)	Inflow Hyd(s)	Maximum Elevation (ft)	Maximum Storage (cuft)
1	NRCS Runoff	WS 1 PERV	4.389	12.12	14,196	----		
2	NRCS Runoff	WS 1 IMP	29.56	12.10	100,113	----		
3	Junction	WS 1	33.87	12.10	114,309	1, 2		
4	NRCS Runoff	WS 2 PERV	0.769	12.10	2,224	----		
5	NRCS Runoff	WS 2 IMP	1.258	12.10	4,260	----		
6	Junction	WS 2	2.027	12.10	6,484	4, 5		

WS 1 PERV

Hyd. No. 1

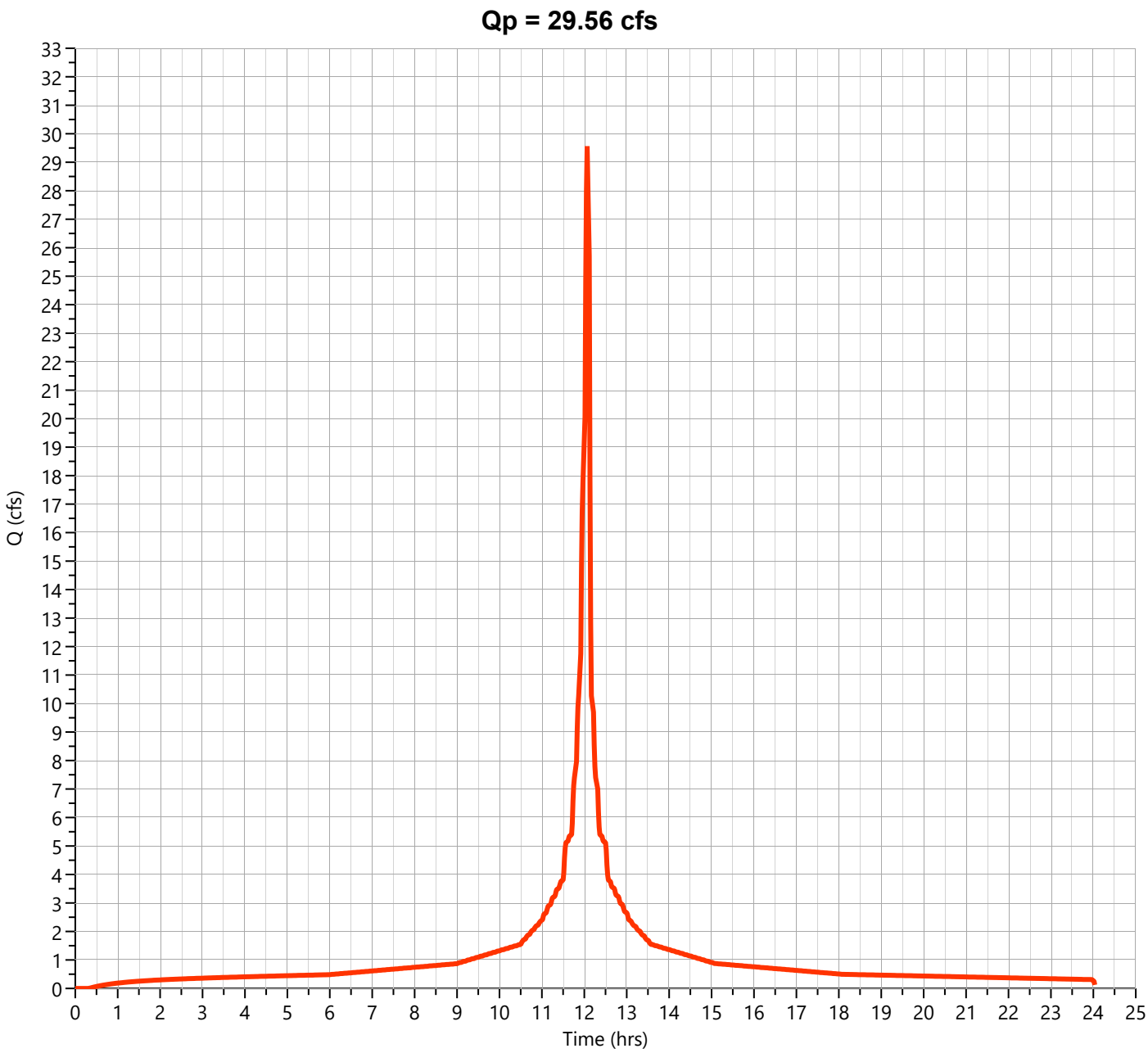
Hydrograph Type	= NRCS Runoff	Peak Flow	= 4.389 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.12 hrs
Time Interval	= 1 min	Runoff Volume	= 14,196 cuft
Drainage Area	= 0.4 ac	Curve Number	= 75.00
Tc Method	= User	Time of Conc. (Tc)	= 6.0 min
Total Rainfall	= 12.76 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1 IMP

Hyd. No. 2

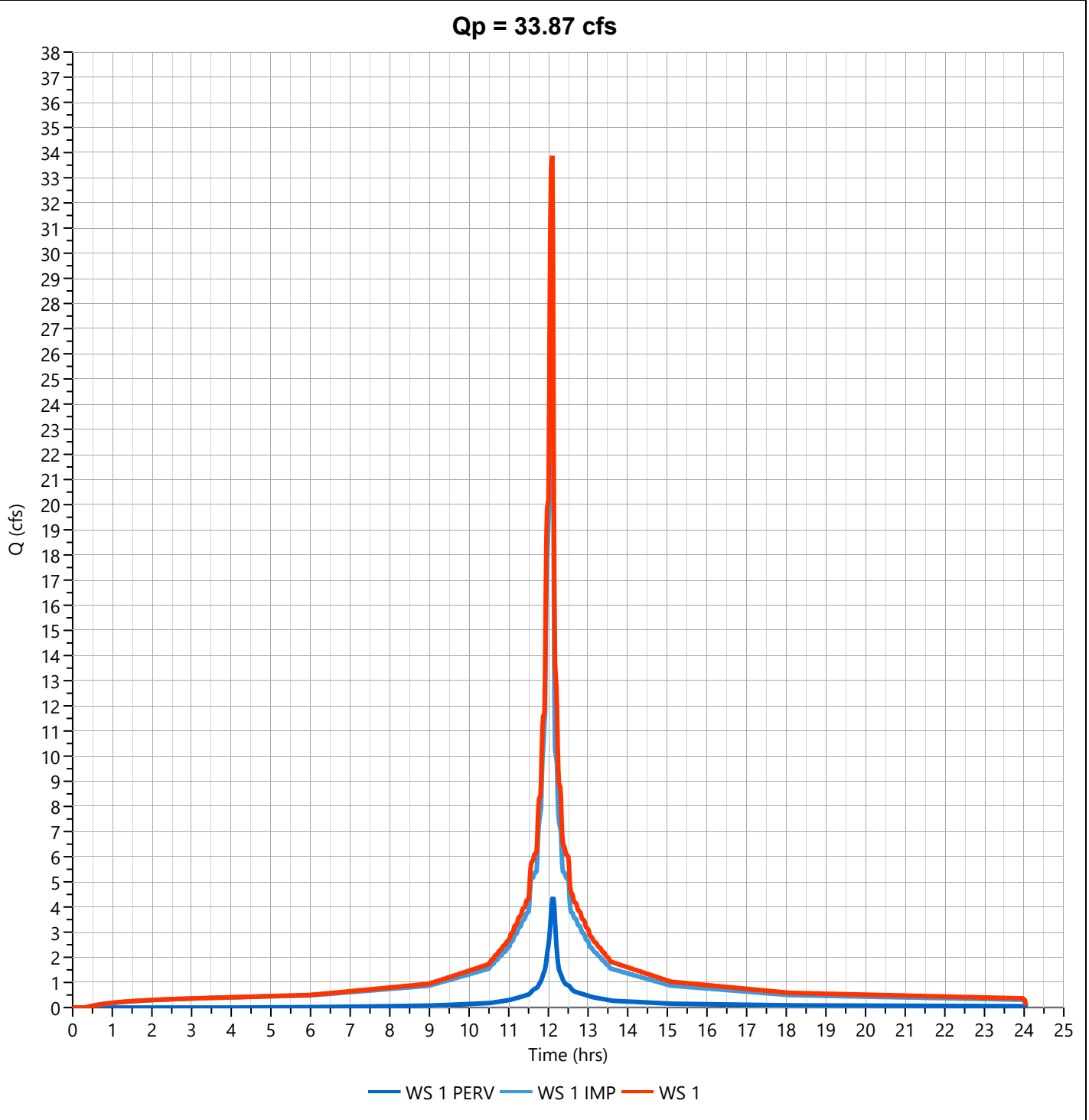
Hydrograph Type	= NRCS Runoff	Peak Flow	= 29.56 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 100,113 cuft
Drainage Area	= 2.35 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 12.76 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 1

Hyd. No. 3

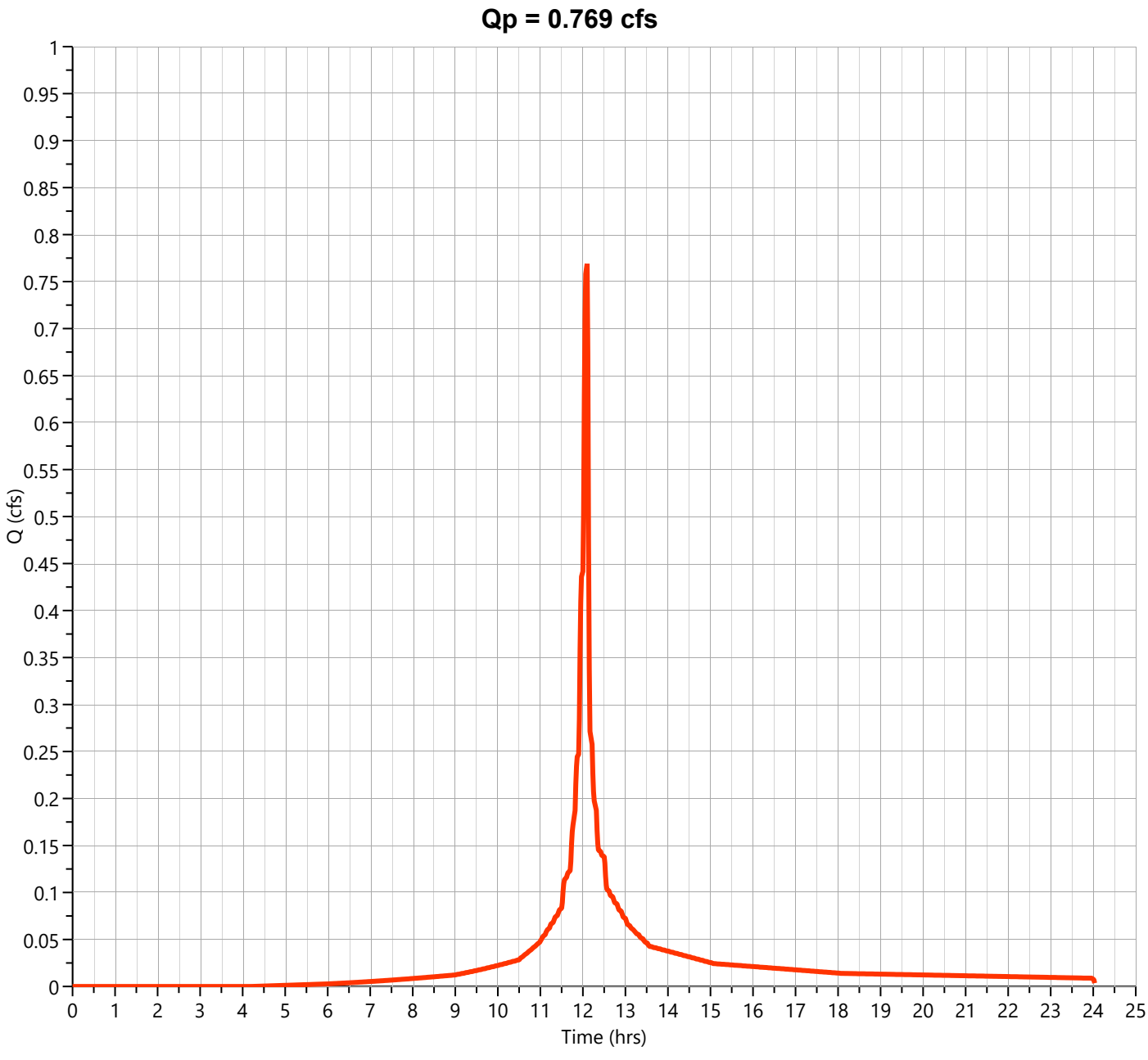
Hydrograph Type	= Junction	Peak Flow	= 33.87 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 114,309 cuft
Inflow Hydrographs	= 1, 2	Total Contrib. Area	= 2.75 ac



WS 2 PERV

Hyd. No. 4

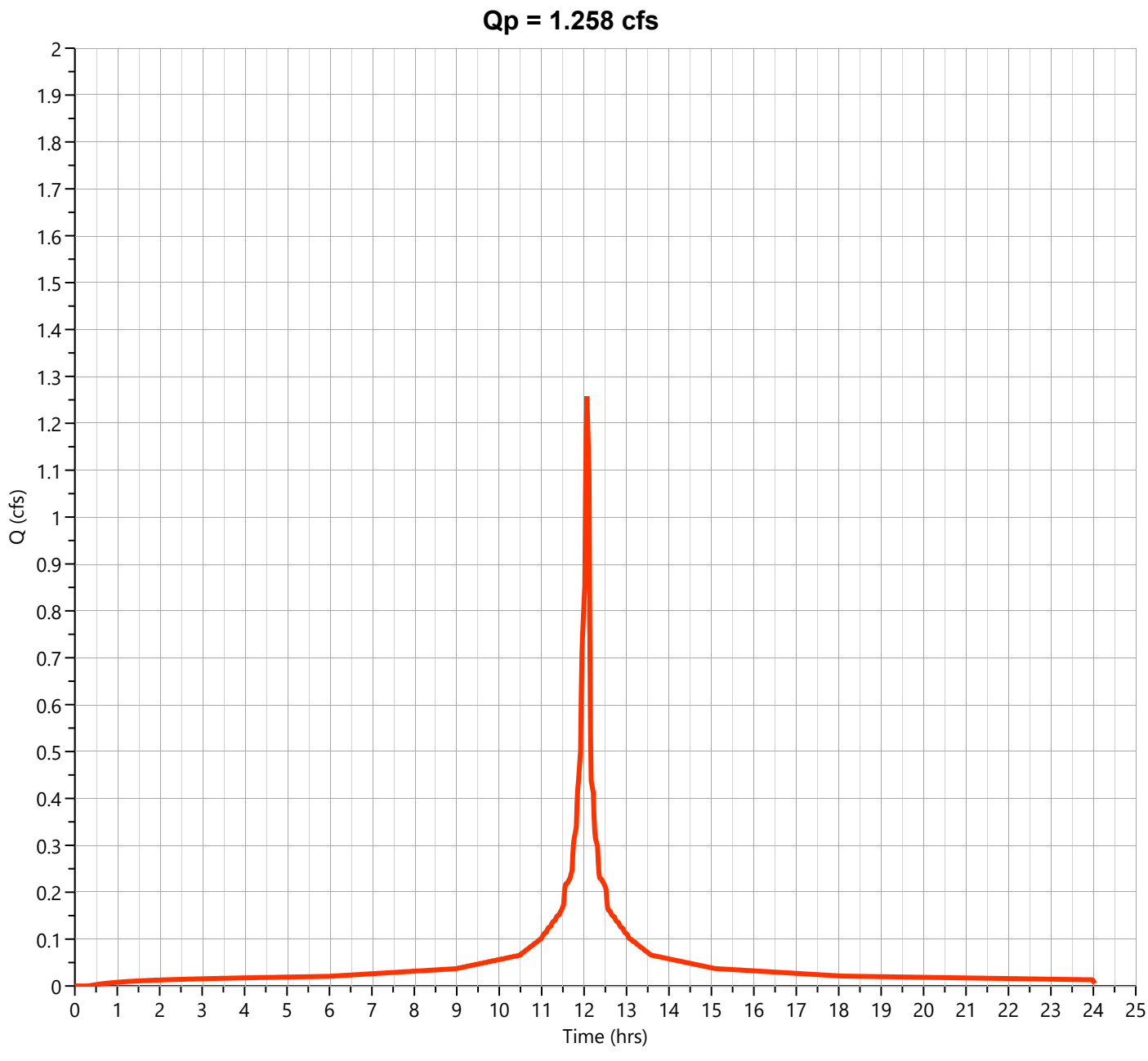
Hydrograph Type	= NRCS Runoff	Peak Flow	= 0.769 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 2,224 cuft
Drainage Area	= 0.07 ac	Curve Number	= 74.00
Tc Method	= User	Time of Conc. (Tc)	= 3.0 min
Total Rainfall	= 12.76 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2 IMP

Hyd. No. 5

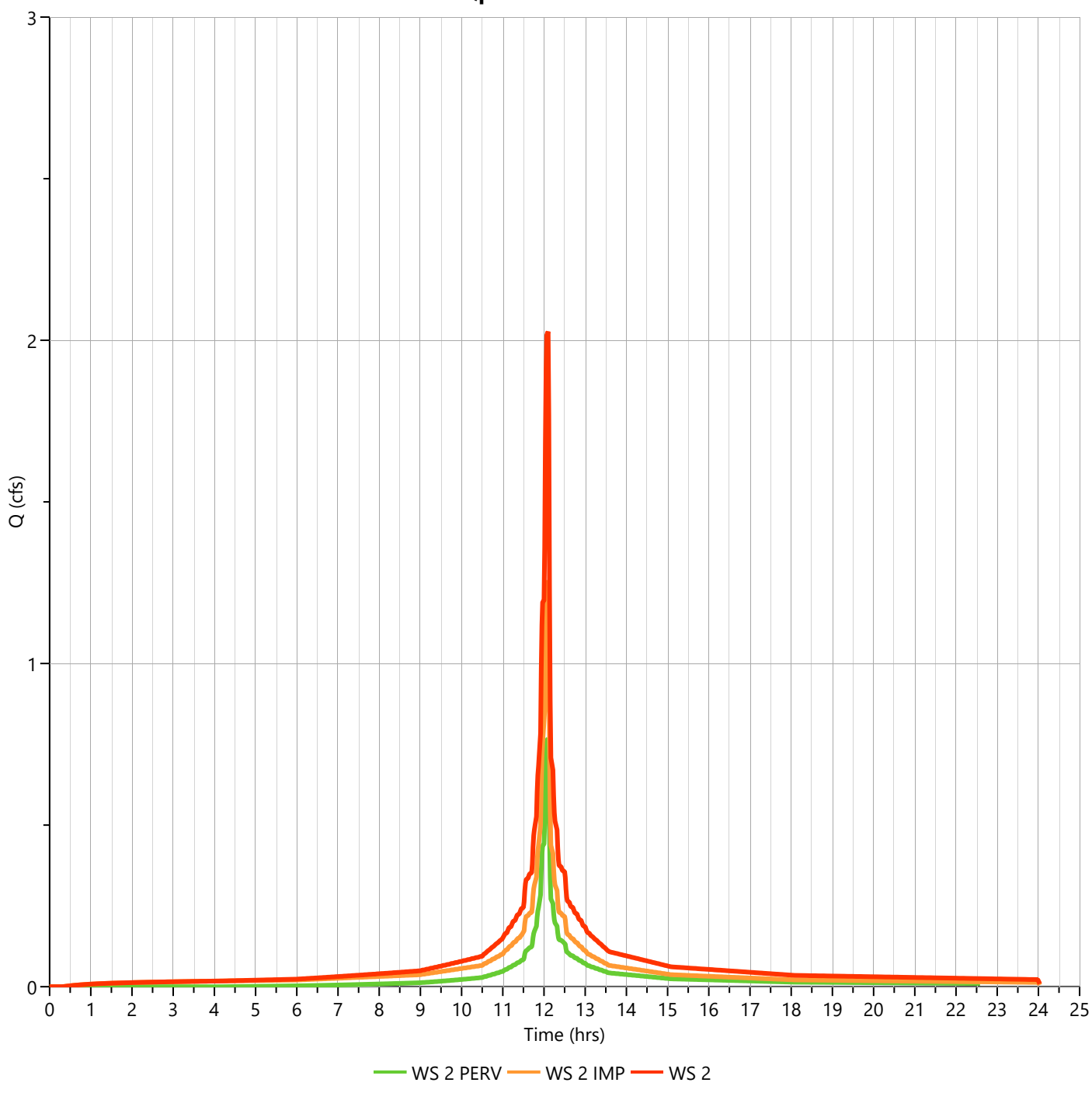
Hydrograph Type	= NRCS Runoff	Peak Flow	= 1.258 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Runoff Volume	= 4,260 cuft
Drainage Area	= 0.1 ac	Curve Number	= 98.00
Tc Method	= User	Time of Conc. (Tc)	= 2.0 min
Total Rainfall	= 12.76 in	Design Storm	= NOAA-D
Storm Duration	= 24 hrs	Shape Factor	= 484



WS 2

Hyd. No. 6

Hydrograph Type	= Junction	Peak Flow	= 2.027 cfs
Storm Frequency	= 100-yr	Time to Peak	= 12.10 hrs
Time Interval	= 1 min	Hydrograph Volume	= 6,484 cuft
Inflow Hydrographs	= 4, 5	Total Contrib. Area	= 0.17 ac



CURVE UNDER CURVE HYDROGRAPHS COMPARISON WATERSHED 1

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	-0.01
0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	-0.01
0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	-0.01
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-0.02
0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-0.02
0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-0.02
0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	-0.03
0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	-0.03
0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	-0.03
0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	-0.04
0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	-0.04
0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	-0.04
0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	-0.05
0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	-0.04
0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.05	-0.04
0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	-0.05
0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	-0.04
0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	-0.04
0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.06	-0.04
0.77	0.00	0.00	0.00	0.00	0.01	-0.01	0.02	0.07	-0.05
0.78	0.00	0.00	0.00	0.00	0.01	-0.01	0.03	0.07	-0.04
0.80	0.00	0.00	0.00	0.00	0.01	-0.01	0.03	0.07	-0.04
0.82	0.00	0.00	0.00	0.00	0.01	-0.01	0.03	0.08	-0.05
0.83	0.00	0.00	0.00	0.00	0.01	-0.01	0.03	0.08	-0.05
0.85	0.00	0.00	0.00	0.00	0.01	-0.01	0.04	0.08	-0.04
0.87	0.00	0.00	0.00	0.00	0.01	-0.01	0.04	0.08	-0.04
0.88	0.00	0.00	0.00	0.00	0.02	-0.02	0.04	0.09	-0.05
0.90	0.00	0.00	0.00	0.00	0.02	-0.02	0.04	0.09	-0.05
0.92	0.00	0.00	0.00	0.00	0.02	-0.02	0.05	0.09	-0.04
0.93	0.00	0.00	0.00	0.00	0.02	-0.02	0.05	0.09	-0.04
0.95	0.00	0.00	0.00	0.00	0.02	-0.02	0.05	0.10	-0.05
0.97	0.00	0.00	0.00	0.00	0.02	-0.02	0.05	0.10	-0.05
0.98	0.00	0.00	0.00	0.00	0.02	-0.02	0.06	0.10	-0.04
1.00	0.00	0.00	0.00	0.00	0.02	-0.02	0.06	0.10	-0.04
1.02	0.00	0.00	0.00	0.00	0.02	-0.02	0.06	0.10	-0.04
1.03	0.00	0.00	0.00	0.00	0.03	-0.03	0.06	0.11	-0.05
1.05	0.00	0.00	0.00	0.00	0.03	-0.03	0.06	0.11	-0.05
1.07	0.00	0.00	0.00	0.00	0.03	-0.03	0.07	0.11	-0.04
1.08	0.00	0.00	0.00	0.00	0.03	-0.03	0.07	0.11	-0.04
1.10	0.00	0.00	0.00	0.00	0.03	-0.03	0.07	0.11	-0.04
1.12	0.00	0.00	0.00	0.01	0.03	-0.02	0.07	0.12	-0.05
1.13	0.00	0.00	0.00	0.01	0.03	-0.02	0.07	0.12	-0.05
1.15	0.00	0.00	0.00	0.01	0.03	-0.02	0.08	0.12	-0.04
1.17	0.00	0.00	0.00	0.01	0.04	-0.03	0.08	0.12	-0.04
1.18	0.00	0.01	-0.01	0.01	0.04	-0.03	0.08	0.12	-0.04
1.20	0.00	0.01	-0.01	0.01	0.04	-0.03	0.08	0.13	-0.05
1.22	0.00	0.01	-0.01	0.01	0.04	-0.03	0.08	0.13	-0.05
1.23	0.00	0.01	-0.01	0.01	0.04	-0.03	0.09	0.13	-0.04
1.25	0.00	0.01	-0.01	0.01	0.04	-0.03	0.09	0.13	-0.04
1.27	0.00	0.01	-0.01	0.01	0.04	-0.03	0.09	0.13	-0.04
1.28	0.00	0.01	-0.01	0.02	0.04	-0.02	0.09	0.13	-0.04
1.30	0.00	0.01	-0.01	0.02	0.04	-0.02	0.09	0.14	-0.05
1.32	0.00	0.01	-0.01	0.02	0.04	-0.02	0.10	0.14	-0.04
1.33	0.00	0.01	-0.01	0.02	0.05	-0.03	0.10	0.14	-0.04
1.35	0.00	0.01	-0.01	0.02	0.05	-0.03	0.10	0.14	-0.04
1.37	0.00	0.01	-0.01	0.02	0.05	-0.03	0.10	0.14	-0.04
1.38	0.00	0.01	-0.01	0.02	0.05	-0.03	0.10	0.14	-0.04
1.40	0.00	0.01	-0.01	0.02	0.05	-0.03	0.10	0.15	-0.05
1.42	0.00	0.01	-0.01	0.02	0.05	-0.03	0.11	0.15	-0.04
1.43	0.00	0.01	-0.01	0.02	0.05	-0.03	0.11	0.15	-0.04
1.45	0.00	0.01	-0.01	0.03	0.05	-0.02	0.11	0.15	-0.04
1.47	0.00	0.02	-0.02	0.03	0.05	-0.02	0.11	0.15	-0.04
1.48	0.00	0.02	-0.02	0.03	0.05	-0.02	0.11	0.15	-0.04
1.50	0.00	0.02	-0.02	0.03	0.06	-0.03	0.11	0.15	-0.04
1.52	0.00	0.02	-0.02	0.03	0.06	-0.03	0.12	0.16	-0.04
1.53	0.00	0.02	-0.02	0.03	0.06	-0.03	0.12	0.16	-0.04

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	-0.01
0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	-0.01
0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	-0.02
0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	-0.03
0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	-0.03
0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04	-0.04
0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	-0.05
0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	-0.05
0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	-0.06
0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.06	-0.05
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.07	-0.06
0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.07	-0.05
0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.08	-0.06
0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09	-0.06
0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.09	-0.06
0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.10	-0.06
0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.10	-0.06
0.62	0.00	0.00	0.00	0.00	0.01	-0.01	0.04	0.10	-0.06
0.63	0.00	0.00	0.00	0.00	0.01	-0.01	0.05	0.11	-0.06
0.65	0.00	0.00	0.00	0.00	0.01	-0.01	0.05	0.11	-0.06
0.67	0.00	0.00	0.00	0.00	0.01	-0.01	0.06	0.12	-0.06
0.68	0.00	0.00	0.00	0.00	0.01	-0.01	0.06	0.12	-0.06
0.70	0.00	0.00	0.00	0.00	0.02	-0.02	0.07	0.13	-0.06
0.72	0.00	0.00	0.00	0.00	0.02	-0.02	0.07	0.13	-0.06
0.73	0.00	0.00	0.00	0.00	0.02	-0.02	0.07	0.13	-0.06
0.75	0.00	0.00	0.00	0.00	0.02	-0.02	0.08	0.14	-0.06
0.77	0.00	0.00	0.00	0.00	0.02	-0.02	0.08	0.14	-0.06
0.78	0.00	0.00	0.00	0.00	0.03	-0.03	0.09	0.15	-0.06
0.80	0.00	0.00	0.00	0.00	0.03	-0.03	0.09	0.15	-0.06
0.82	0.00	0.00	0.00	0.00	0.03	-0.03	0.09	0.15	-0.06
0.83	0.00	0.00	0.00	0.00	0.03	-0.03	0.10	0.16	-0.06
0.85	0.00	0.00	0.00	0.00	0.03	-0.03	0.10	0.16	-0.06
0.87	0.00	0.00	0.00	0.00	0.03	-0.03	0.10	0.16	-0.06
0.88	0.00	0.00	0.00	0.00	0.04	-0.04	0.11	0.17	-0.06
0.90	0.00	0.00	0.00	0.01	0.04	-0.03	0.11	0.17	-0.06
0.92	0.00	0.00	0.00	0.01	0.04	-0.03	0.11	0.17	-0.06
0.93	0.00	0.00	0.00	0.01	0.04	-0.03	0.12	0.18	-0.06
0.95	0.00	0.00	0.00	0.01	0.04	-0.03	0.12	0.18	-0.06
0.97	0.00	0.01	-0.01	0.01	0.04	-0.03	0.13	0.18	-0.05
0.98	0.00	0.01	-0.01	0.01	0.05	-0.04	0.13	0.19	-0.06
1.00	0.00	0.01	-0.01	0.01	0.05	-0.04	0.13	0.19	-0.06
1.02	0.00	0.01	-0.01	0.02	0.05	-0.03	0.13	0.19	-0.06
1.03	0.00	0.01	-0.01	0.02	0.05	-0.03	0.14	0.19	-0.05
1.05	0.00	0.01	-0.01	0.02	0.05	-0.03	0.14	0.20	-0.06
1.07	0.00	0.01	-0.01	0.02	0.05	-0.03	0.14	0.20	-0.06
1.08	0.00	0.01	-0.01	0.02	0.05	-0.03	0.15	0.20	-0.05
1.10	0.00	0.01	-0.01	0.02	0.06	-0.04	0.15	0.20	-0.05
1.12	0.00	0.01	-0.01	0.02	0.06	-0.04	0.15	0.21	-0.06
1.13	0.00	0.01	-0.01	0.03	0.06	-0.03	0.15	0.21	-0.06
1.15	0.00	0.01	-0.01	0.03	0.06	-0.03	0.16	0.21	-0.05
1.17	0.00	0.02	-0.02	0.03	0.06	-0.03	0.16	0.21	-0.05
1.18	0.00	0.02	-0.02	0.03	0.06	-0.03	0.16	0.22	-0.06
1.20	0.00	0.02	-0.02	0.03	0.06	-0.03	0.17	0.22	-0.05
1.22	0.00	0.02	-0.02	0.03	0.07	-0.04	0.17	0.22	-0.05
1.23	0.00	0.02	-0.02	0.03	0.07	-0.04	0.17	0.22	-0.05
1.25	0.00	0.02	-0.02	0.04	0.07	-0.03	0.17	0.23	-0.06
1.27	0.00	0.02	-0.02	0.04	0.07	-0.03	0.18	0.23	-0.05
1.28	0.00	0.02	-0.02	0.04	0.07	-0.03	0.18	0.23	-0.05
1.30	0.00	0.02	-0.02	0.04	0.07	-0.03	0.18	0.23	-0.05
1.32	0.00	0.02	-0.02	0.04	0.07	-0.03	0.18	0.23	-0.05
1.33	0.00	0.02	-0.02	0.04	0.07	-0.03	0.19	0.24	-0.05
1.35	0.00	0.02	-0.02	0.04	0.08	-0.04	0.19	0.24	-0.05
1.37	0.00	0.02	-0.02	0.04	0.08	-0.04	0.19	0.24	-0.05
1.38	0.00	0.03	-0.03	0.05	0.08	-0.03	0.19	0.24	-0.05
1.40	0.00	0.03	-0.03	0.05	0.08	-0.03	0.20	0.24	-0.04
1.42	0.01	0.03	-0.02	0.05	0.08	-0.03	0.20	0.25	-0.05
1.43	0.01	0.03	-0.02	0.05	0.08	-0.03	0.20	0.25	-0.05
1.45	0.01	0.03	-0.02	0.05	0.08	-0.03	0.20	0.25	-0.05
1.47	0.01	0.03	-0.02	0.05	0.08	-0.03	0.20	0.25	-0.05
1.48	0.01	0.03	-0.02	0.05	0.09	-0.04	0.21	0.25	-0.04
1.50	0.01	0.03	-0.02	0.05	0.09	-0.04	0.21	0.25	-0.04
1.52	0.01	0.03	-0.02	0.05	0.09	-0.04	0.21	0.26	-0.05
1.53	0.01	0.03	-0.02	0.06	0.09	-0.03	0.21	0.26	-0.05

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
1.55	0.00	0.02	-0.02	0.03	0.06	-0.03	0.12	0.16	-0.04
1.57	0.00	0.02	-0.02	0.03	0.06	-0.03	0.12	0.16	-0.04
1.58	0.00	0.02	-0.02	0.03	0.06	-0.03	0.12	0.16	-0.04
1.60	0.00	0.02	-0.02	0.03	0.06	-0.03	0.12	0.16	-0.04
1.62	0.00	0.02	-0.02	0.03	0.06	-0.03	0.13	0.16	-0.03
1.63	0.00	0.02	-0.02	0.03	0.06	-0.03	0.13	0.17	-0.04
1.65	0.00	0.02	-0.02	0.04	0.06	-0.02	0.13	0.17	-0.04
1.67	0.00	0.02	-0.02	0.04	0.06	-0.02	0.13	0.17	-0.04
1.68	0.00	0.02	-0.02	0.04	0.06	-0.02	0.13	0.17	-0.04
1.70	0.00	0.02	-0.02	0.04	0.07	-0.03	0.13	0.17	-0.04
1.72	0.01	0.02	-0.01	0.04	0.07	-0.03	0.13	0.17	-0.04
1.73	0.01	0.02	-0.01	0.04	0.07	-0.03	0.14	0.17	-0.03
1.75	0.01	0.02	-0.01	0.04	0.07	-0.03	0.14	0.18	-0.04
1.77	0.01	0.02	-0.01	0.04	0.07	-0.03	0.14	0.18	-0.04
1.78	0.01	0.03	-0.02	0.04	0.07	-0.03	0.14	0.18	-0.04
1.80	0.01	0.03	-0.02	0.04	0.07	-0.03	0.14	0.18	-0.04
1.82	0.01	0.03	-0.02	0.04	0.07	-0.03	0.14	0.18	-0.04
1.83	0.01	0.03	-0.02	0.04	0.07	-0.03	0.14	0.18	-0.04
1.85	0.01	0.03	-0.02	0.05	0.07	-0.02	0.15	0.18	-0.03
1.87	0.01	0.03	-0.02	0.05	0.07	-0.02	0.15	0.18	-0.03
1.88	0.01	0.03	-0.02	0.05	0.07	-0.02	0.15	0.19	-0.04
1.90	0.01	0.03	-0.02	0.05	0.08	-0.03	0.15	0.19	-0.04
1.92	0.01	0.03	-0.02	0.05	0.08	-0.03	0.15	0.19	-0.04
1.93	0.01	0.03	-0.02	0.05	0.08	-0.03	0.15	0.19	-0.04
1.95	0.01	0.03	-0.02	0.05	0.08	-0.03	0.15	0.19	-0.04
1.97	0.01	0.03	-0.02	0.05	0.08	-0.03	0.15	0.19	-0.04
1.98	0.01	0.03	-0.02	0.05	0.08	-0.03	0.16	0.19	-0.03
2.00	0.01	0.03	-0.02	0.05	0.08	-0.03	0.16	0.19	-0.03
2.02	0.01	0.03	-0.02	0.05	0.08	-0.03	0.16	0.19	-0.03
2.03	0.01	0.03	-0.02	0.05	0.08	-0.03	0.16	0.19	-0.03
2.05	0.01	0.03	-0.02	0.06	0.08	-0.02	0.16	0.20	-0.04
2.07	0.01	0.03	-0.02	0.06	0.08	-0.02	0.16	0.20	-0.04
2.08	0.02	0.03	-0.01	0.06	0.08	-0.02	0.16	0.20	-0.04
2.10	0.02	0.03	-0.01	0.06	0.08	-0.02	0.17	0.20	-0.03
2.12	0.02	0.03	-0.01	0.06	0.08	-0.02	0.17	0.20	-0.03
2.13	0.02	0.04	-0.02	0.06	0.09	-0.03	0.17	0.20	-0.03
2.15	0.02	0.04	-0.02	0.06	0.09	-0.03	0.17	0.20	-0.03
2.17	0.02	0.04	-0.02	0.06	0.09	-0.03	0.17	0.20	-0.03
2.18	0.02	0.04	-0.02	0.06	0.09	-0.03	0.17	0.20	-0.03
2.20	0.02	0.04	-0.02	0.06	0.09	-0.03	0.17	0.21	-0.04
2.22	0.02	0.04	-0.02	0.06	0.09	-0.03	0.17	0.21	-0.04
2.23	0.02	0.04	-0.02	0.06	0.09	-0.03	0.18	0.21	-0.03
2.25	0.02	0.04	-0.02	0.06	0.09	-0.03	0.18	0.21	-0.03
2.27	0.02	0.04	-0.02	0.06	0.09	-0.03	0.18	0.21	-0.03
2.28	0.02	0.04	-0.02	0.07	0.09	-0.02	0.18	0.21	-0.03
2.30	0.02	0.04	-0.02	0.07	0.09	-0.02	0.18	0.21	-0.03
2.32	0.02	0.04	-0.02	0.07	0.09	-0.02	0.18	0.21	-0.03
2.33	0.02	0.04	-0.02	0.07	0.09	-0.02	0.18	0.21	-0.03
2.35	0.02	0.04	-0.02	0.07	0.09	-0.02	0.18	0.21	-0.03
2.37	0.02	0.04	-0.02	0.07	0.10	-0.03	0.18	0.21	-0.03
2.38	0.02	0.04	-0.02	0.07	0.10	-0.03	0.19	0.22	-0.03
2.40	0.02	0.04	-0.02	0.07	0.10	-0.03	0.19	0.22	-0.03
2.42	0.02	0.04	-0.02	0.07	0.10	-0.03	0.19	0.22	-0.03
2.43	0.02	0.04	-0.02	0.07	0.10	-0.03	0.19	0.22	-0.03
2.45	0.02	0.04	-0.02	0.07	0.10	-0.03	0.19	0.22	-0.03
2.47	0.03	0.04	-0.01	0.07	0.10	-0.03	0.19	0.22	-0.03
2.48	0.03	0.04	-0.01	0.07	0.10	-0.03	0.19	0.22	-0.03
2.50	0.03	0.04	-0.01	0.07	0.10	-0.03	0.19	0.22	-0.03
2.52	0.03	0.05	-0.02	0.07	0.10	-0.03	0.19	0.22	-0.03
2.53	0.03	0.05	-0.02	0.08	0.10	-0.02	0.20	0.22	-0.02
2.55	0.03	0.05	-0.02	0.08	0.10	-0.02	0.20	0.22	-0.02
2.57	0.03	0.05	-0.02	0.08	0.10	-0.02	0.20	0.22	-0.02
2.58	0.03	0.05	-0.02	0.08	0.10	-0.02	0.20	0.23	-0.03
2.60	0.03	0.05	-0.02	0.08	0.10	-0.02	0.20	0.23	-0.03
2.62	0.03	0.05	-0.02	0.08	0.10	-0.02	0.20	0.23	-0.03
2.63	0.03	0.05	-0.02	0.08	0.11	-0.03	0.20	0.23	-0.03
2.65	0.03	0.05	-0.02	0.08	0.11	-0.03	0.20	0.23	-0.03
2.67	0.03	0.05	-0.02	0.08	0.11	-0.03	0.20	0.23	-0.03
2.68	0.03	0.05	-0.02	0.08	0.11	-0.03	0.21	0.23	-0.02
2.70	0.03	0.05	-0.02	0.08	0.11	-0.03	0.21	0.23	-0.02
2.72	0.03	0.05	-0.02	0.08	0.11	-0.03	0.21	0.23	-0.02
2.73	0.03	0.05	-0.02	0.08	0.11	-0.03	0.21	0.23	-0.02
2.75	0.03	0.05	-0.02	0.08	0.11	-0.03	0.21	0.23	-0.02
2.77	0.03	0.05	-0.02	0.08	0.11	-0.03	0.21	0.23	-0.02
2.78	0.03	0.05	-0.02	0.09	0.11	-0.02	0.21	0.23	-0.02
2.80	0.03	0.05	-0.02	0.09	0.11	-0.02	0.21	0.24	-0.03
2.82	0.03	0.05	-0.02	0.09	0.11	-0.02	0.21	0.24	-0.03
2.83	0.03	0.05	-0.02	0.09	0.11	-0.02	0.21	0.24	-0.03
2.85	0.03	0.05	-0.02	0.09	0.11	-0.02	0.22	0.24	-0.02
2.87	0.03	0.05	-0.02	0.09	0.11	-0.02	0.22	0.24	-0.02
2.88	0.04	0.05	-0.01	0.09	0.11	-0.02	0.22	0.24	-0.02
2.90	0.04	0.05	-0.01	0.09	0.11	-0.02	0.22	0.24	-0.02
2.92	0.04	0.05	-0.01	0.09	0.11	-0.02	0.22	0.24	-0.02
2.93	0.04	0.06	-0.02	0.09	0.11	-0.02	0.22	0.24	-0.02
2.95	0.04	0.06	-0.02	0.09	0.12	-0.03	0.22	0.24	-0.02
2.97	0.04	0.06	-0.02	0.09	0.12	-0.03	0.22	0.24	-0.02
2.98	0.04	0.06	-0.02	0.09	0.12	-0.03	0.22	0.24	-0.02
3.00	0.04	0.06	-0.02	0.09	0.12	-0.03	0.22	0.24	-0.02
3.02	0.04	0.06	-0.02	0.09	0.12	-0.03	0.22	0.24	-0.02
3.03	0.04	0.06	-0.02	0.09	0.12	-0.03	0.22	0.25	-0.03
3.05	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02
3.07	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02
3.08	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
1.55	0.01	0.03	-0.02	0.06	0.09	-0.03	0.22	0.26	-0.04
1.57	0.01	0.03	-0.02	0.06	0.09	-0.03	0.22	0.26	-0.04
1.58	0.01	0.03	-0.02	0.06	0.09	-0.03	0.22	0.26	-0.04
1.60	0.01	0.03	-0.02	0.06	0.09	-0.03	0.22	0.26	-0.04
1.62	0.01	0.03	-0.02	0.06	0.09	-0.03	0.22	0.27	-0.05
1.63	0.01	0.04	-0.03	0.06	0.10	-0.04	0.23	0.27	-0.04
1.65	0.01	0.04	-0.03	0.06	0.10	-0.04	0.23	0.27	-0.04
1.67	0.02	0.04	-0.02	0.06	0.10	-0.04	0.23	0.27	-0.04
1.68	0.02	0.04	-0.02	0.07	0.10	-0.03	0.23	0.27	-0.04
1.70	0.02	0.04	-0.02	0.07	0.10	-0.03	0.23	0.27	-0.04
1.72	0.02	0.04	-0.02	0.07	0.10	-0.03	0.23	0.28	-0.05
1.73	0.02	0.04	-0.02	0.07	0.10	-0.03	0.24	0.28	-0.04
1.75	0.02	0.04	-0.02	0.07	0.10	-0.03	0.24	0.28	-0.04
1.77	0.02	0.04	-0.02	0.07	0.10	-0.03	0.24	0.28	-0.04
1.78	0.02	0.04	-0.02	0.07	0.10	-0.03	0.24	0.28	-0.04
1.80	0.02	0.04	-0.02	0.07	0.10	-0.03	0.24	0.28	-0.04
1.82	0.02	0.04	-0.02	0.07	0.11	-0.04	0.25	0.28	-0.03
1.83	0.02	0.04	-0.02	0.08	0.11	-0.03	0.25	0.29	-0.04
1.85	0.02	0.04	-0.02	0.08	0.11	-0.03	0.25	0.29	-0.04
1.87	0.02	0.04	-0.02	0.08	0.11	-0.03	0.25	0.29	-0.04
1.88	0.02	0.05	-0.03	0.08	0.11	-0.03	0.25	0.29	-0.04
1.90	0.02	0.05	-0.03	0.08	0.11	-0.03	0.26	0.29	-0.03
1.92	0.02	0.05	-0.03	0.08	0.11	-0.03	0.26	0.29	-0.03
1.93	0.02	0.05	-0.03	0.08	0.11	-0.03	0.26	0.29	-0.03
1.95	0.03	0.05	-0.02	0.08	0.11	-0.03	0.26	0.30	-0.04
1.97	0.03	0.05	-0.02	0.08	0.11	-0.03	0.26	0.30	-0.04
1.98	0.03	0.05	-0.02	0.08	0.11	-0.03	0.26	0.30	-0.04
2.00	0.03	0.05	-0.02	0.08	0.12	-0.04	0.26	0.30	-0.04
2.02	0.03	0.05	-0.02	0.09	0.12	-0.03	0.27	0.30	-0.03
2.03	0.03	0.05	-0.02	0.09	0.12	-0.03	0.27	0.30	-0.03
2.05	0.03	0.05	-0.02	0.09	0.12	-0.03	0.27	0.30	-0.03
2.07	0.03	0.05	-0.02	0.09	0.12	-0.03	0.27	0.31	-0.04
2.08	0.03	0.05	-0.02	0.09	0.12	-0.03	0.27	0.31	-0.04
2.10	0.03	0.05	-0.02	0.09	0.12	-0.03	0.27	0.31	-0.04
2.12	0.03	0.05	-0.02	0.09	0.12	-0.03	0.28	0.31	-0.03
2.13	0.03	0.05	-0.02	0.09	0.12	-0.03	0.28	0.31	-0.03
2.15	0.03	0.05	-0.02	0.09	0.12	-0.03	0.28	0.31	-0.03
2.17	0.03	0.06	-0.03	0.10	0.13	-0.03	0.28	0.31	-0.03
2.18	0.03	0.06	-0.03	0.10	0.13	-0.03	0.28	0.31	-0.03
2.20	0.03	0.06	-0.03	0.10	0.13	-0.03	0.28	0.31	-0.03
2.22	0.03	0.06	-0.03	0.10	0.13	-0.03	0.29	0.32	-0.03
2.23	0.04	0.06	-0.02	0.10	0.13	-0.03	0.29	0.32	-0.03
2.25	0.04	0.06	-0.02	0.10	0.13	-0.03	0.29	0.32	-0.03
2.27	0.04	0.06	-0.02	0.10	0.13	-0.03	0.29	0.32	-0.03
2.28	0.04	0.06	-0.02	0.10	0.13	-0.03	0.29	0.32	-0.03
2.30	0.04	0.06	-0.02	0.10	0.13	-0.03	0.29	0.32	-0.03
2.32	0.04	0.06	-0.02	0.10	0.13	-0.03	0.29	0.32	-0.03
2.33	0.04	0.06	-0.02	0.10	0.13	-0.03	0.30	0.32	-0.02
2.35	0.04	0.06	-0.02	0.10	0.13	-0.03	0.30	0.32	-0.02
2.37	0.04	0.06	-0.02	0.11	0.13	-0.02	0.30	0.33	-0.03
2.38	0.04	0.06	-0.02	0.11	0.13	-0.02	0.30	0.33	-0.03
2.40	0.04	0.06	-0.02	0.11	0.14	-0.03	0.30	0.33	-0.03
2.42	0.04	0.06	-0.02	0.11	0.14	-0.03	0.30	0.33	-0.03
2.43	0.04	0.06	-0.02	0.11	0.14	-0.03	0.30	0.33	-0.03
2.45	0.04	0.06	-0.02	0.11	0.14	-0.03	0.30	0.33	-0.03
2.47	0.04	0.06	-0.02	0.11	0.14	-0.03	0.31	0.33	-0.02
2.48	0.04	0.07	-0.03	0.11	0.14	-0.03	0.31	0.33	-0.02
2.50	0.04	0.07	-0.03	0.11	0.14	-0.03	0.31	0.33	-0.02
2.52	0.04	0.07	-0.03	0.11	0.14	-0.03	0.31	0.33	-0.02
2.53	0.04	0.07	-0.03	0.11	0.14	-0.03	0.31	0.34	-0.03
2.55	0.05	0.07	-0.02	0.11	0.14	-0.03	0.31	0.34	-0.03
2.57	0.05	0.07	-0.02	0.12	0.14	-0.02	0.31	0.34	-0.03
2.58	0.05	0.07	-0.02	0.12	0.14	-0.02	0.31	0.34	-0.03
2.60	0.05	0.07	-0.02	0.12	0.14	-0.02	0.32	0.34	-0.02
2.62	0.05	0.07	-0.02	0.12	0.14	-0.02	0.32	0.34	-0.02
2.63	0.05	0.07	-0.02	0.12	0.15	-0.03	0.32	0.34	-0.02
2.65	0.05	0.07	-0.02	0.12	0.15	-0.03	0.32	0.34	-0.02
2.67	0.05	0.07	-0.02	0.12	0.15	-0.03	0.32	0.35	-0.03
2.68	0.05	0.07	-0.02	0.12	0.15	-0.03	0.32	0.35	-0.03
2.70	0.05	0.07	-0.02	0.12	0.15	-0.03	0.32	0.35	-0.03
2.72	0.05	0.07	-0.02	0.12	0.15	-0.03	0.33	0.35	-0.02
2.73	0.05	0.07	-0.02	0.12	0.15	-0.03	0.33	0.35	-0.02
2.75	0.05	0.07	-0.02	0.12	0.15	-0.03	0.33	0.35	-0.02
2.77	0.05	0.07	-0.02	0.12	0.15	-0.03	0.33	0.35	-0.02
2.78	0.05	0.07	-0.02	0.13	0.15	-0.02	0.33	0.35	-0.02
2.80	0.05	0.07	-0.02	0.13	0.15	-0.02	0.33	0.35	-0.02
2.82	0.05	0.07	-0.02	0.13	0.15	-0.02	0.33	0.35	-0.02
2.83	0.05	0.08	-0.03	0.13	0.15	-0.02	0.33	0.35	-0.02
2.85	0.05	0.08	-0.03	0.13	0.15	-0.02	0.34	0.35	-0.01
2.87	0.06	0.08	-0.02	0.13	0.16	-0.03	0.34	0.36	-0.02
2.88	0.06	0.08	-0.02	0.13	0.16	-0.03	0.34	0.36	-0.02
2.90	0.06	0.08	-0.02	0.13	0.16	-0.03	0.34	0.36	-0.02
2.92	0.06	0.08	-0.02	0.13	0.16	-0.03	0.34	0.36	-0.02
2.93	0.06	0.08	-0.02	0.13	0.16	-0.03	0.34	0.36	-0.02
2.95	0.06	0.08	-0.02	0.13	0.16	-0.03	0.34	0.36	-0.02
2.97	0.06	0.08	-0.02	0.13	0.16	-0.03	0.34	0.36	-0.02
2.98	0.06	0.08	-0.02	0.13	0.16	-0.03	0.34	0.36	-0.02
3.00	0.06	0.08	-0.02	0.13	0.16	-0.03	0.34	0.36	-0.02
3.02	0.06	0.08	-0.02	0.14	0.16	-0.02	0.34	0.36	-0.02
3.03	0.06	0.08	-0.02	0.14	0.16	-0.02	0.35	0.36	-0.01
3.05	0.06	0.08	-0.02	0.14	0.16	-0.02	0.35	0.36	-0.01
3.07	0.06	0.08	-0.02	0.14	0.16	-0.02	0.35	0.37	-0.02
3.08	0.06	0.08	-0.02	0.14	0.16	-0.02	0.35	0.37	-0.02

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
3.10	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02
3.12	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02
3.13	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02
3.15	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02
3.17	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02
3.18	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02
3.20	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02
3.22	0.04	0.06	-0.02	0.10	0.12	-0.02	0.23	0.25	-0.02
3.23	0.04	0.06	-0.02	0.10	0.12	-0.02	0.24	0.26	-0.02
3.25	0.04	0.06	-0.02	0.10	0.12	-0.02	0.24	0.26	-0.02
3.27	0.04	0.06	-0.02	0.10	0.13	-0.03	0.24	0.26	-0.02
3.28	0.04	0.06	-0.02	0.10	0.13	-0.03	0.24	0.26	-0.02
3.30	0.04	0.06	-0.02	0.10	0.13	-0.03	0.24	0.26	-0.02
3.32	0.04	0.06	-0.02	0.10	0.13	-0.03	0.24	0.26	-0.02
3.33	0.05	0.06	-0.01	0.11	0.13	-0.02	0.24	0.26	-0.02
3.35	0.05	0.06	-0.01	0.11	0.13	-0.02	0.24	0.26	-0.02
3.37	0.05	0.06	-0.01	0.11	0.13	-0.02	0.24	0.26	-0.02
3.38	0.05	0.06	-0.01	0.11	0.13	-0.02	0.24	0.26	-0.02
3.40	0.05	0.07	-0.02	0.11	0.13	-0.02	0.24	0.26	-0.02
3.42	0.05	0.07	-0.02	0.11	0.13	-0.02	0.24	0.26	-0.02
3.43	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.26	-0.01
3.45	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.47	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.48	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.50	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.52	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.53	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.55	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.57	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.58	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.60	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.62	0.05	0.07	-0.02	0.11	0.13	-0.02	0.25	0.27	-0.02
3.63	0.05	0.07	-0.02	0.12	0.14	-0.02	0.25	0.27	-0.02
3.65	0.05	0.07	-0.02	0.12	0.14	-0.02	0.26	0.27	-0.01
3.67	0.05	0.07	-0.02	0.12	0.14	-0.02	0.26	0.27	-0.01
3.68	0.05	0.07	-0.02	0.12	0.14	-0.02	0.26	0.27	-0.01
3.70	0.05	0.07	-0.02	0.12	0.14	-0.02	0.26	0.27	-0.01
3.72	0.05	0.07	-0.02	0.12	0.14	-0.02	0.26	0.27	-0.01
3.73	0.05	0.07	-0.02	0.12	0.14	-0.02	0.26	0.27	-0.01
3.75	0.05	0.07	-0.02	0.12	0.14	-0.02	0.26	0.27	-0.01
3.77	0.05	0.07	-0.02	0.12	0.14	-0.02	0.26	0.27	-0.01
3.78	0.05	0.07	-0.02	0.12	0.14	-0.02	0.26	0.28	-0.02
3.80	0.06	0.07	-0.01	0.12	0.14	-0.02	0.26	0.28	-0.02
3.82	0.06	0.07	-0.01	0.12	0.14	-0.02	0.26	0.28	-0.02
3.83	0.06	0.07	-0.01	0.12	0.14	-0.02	0.26	0.28	-0.02
3.85	0.06	0.07	-0.01	0.12	0.14	-0.02	0.26	0.28	-0.02
3.87	0.06	0.07	-0.01	0.12	0.14	-0.02	0.27	0.28	-0.01
3.88	0.06	0.07	-0.01	0.12	0.14	-0.02	0.27	0.28	-0.01
3.90	0.06	0.08	-0.02	0.12	0.14	-0.02	0.27	0.28	-0.01
3.92	0.06	0.08	-0.02	0.12	0.14	-0.02	0.27	0.28	-0.01
3.93	0.06	0.08	-0.02	0.12	0.14	-0.02	0.27	0.28	-0.01
3.95	0.06	0.08	-0.02	0.13	0.14	-0.01	0.27	0.28	-0.01
3.97	0.06	0.08	-0.02	0.13	0.14	-0.01	0.27	0.28	-0.01
3.98	0.06	0.08	-0.02	0.13	0.14	-0.01	0.27	0.28	-0.01
4.00	0.06	0.08	-0.02	0.13	0.14	-0.01	0.27	0.28	-0.01
4.02	0.06	0.08	-0.02	0.13	0.15	-0.02	0.27	0.28	-0.01
4.03	0.06	0.08	-0.02	0.13	0.15	-0.02	0.27	0.29	-0.02
4.05	0.06	0.08	-0.02	0.13	0.15	-0.02	0.27	0.29	-0.02
4.07	0.06	0.08	-0.02	0.13	0.15	-0.02	0.27	0.29	-0.02
4.08	0.06	0.08	-0.02	0.13	0.15	-0.02	0.27	0.29	-0.02
4.10	0.06	0.08	-0.02	0.13	0.15	-0.02	0.27	0.29	-0.02
4.12	0.06	0.08	-0.02	0.13	0.15	-0.02	0.28	0.29	-0.01
4.13	0.06	0.08	-0.02	0.13	0.15	-0.02	0.28	0.29	-0.01
4.15	0.06	0.08	-0.02	0.13	0.15	-0.02	0.28	0.29	-0.01
4.17	0.06	0.08	-0.02	0.13	0.15	-0.02	0.28	0.29	-0.01
4.18	0.06	0.08	-0.02	0.13	0.15	-0.02	0.28	0.29	-0.01
4.20	0.06	0.08	-0.02	0.13	0.15	-0.02	0.28	0.29	-0.01
4.22	0.06	0.08	-0.02	0.13	0.15	-0.02	0.28	0.29	-0.01
4.23	0.06	0.08	-0.02	0.13	0.15	-0.02	0.28	0.29	-0.01
4.25	0.06	0.08	-0.02	0.13	0.15	-0.02	0.28	0.29	-0.01
4.27	0.06	0.08	-0.02	0.13	0.15	-0.02	0.28	0.29	-0.01
4.28	0.07	0.08	-0.01	0.13	0.15	-0.02	0.28	0.29	-0.01
4.30	0.07	0.08	-0.01	0.13	0.15	-0.02	0.28	0.29	-0.01
4.32	0.07	0.08	-0.01	0.14	0.15	-0.01	0.28	0.29	-0.01
4.33	0.07	0.08	-0.01	0.14	0.15	-0.01	0.29	0.30	-0.01
4.35	0.07	0.08	-0.01	0.14	0.15	-0.01	0.29	0.30	-0.01
4.37	0.07	0.08	-0.01	0.14	0.15	-0.01	0.29	0.30	-0.01
4.38	0.07	0.08	-0.01	0.14	0.15	-0.01	0.29	0.30	-0.01
4.40	0.07	0.08	-0.01	0.14	0.16	-0.02	0.29	0.30	-0.01
4.42	0.07	0.08	-0.01	0.14	0.16	-0.02	0.29	0.30	-0.01
4.43	0.07	0.08	-0.01	0.14	0.16	-0.02	0.29	0.30	-0.01
4.45	0.07	0.08	-0.01	0.14	0.16	-0.02	0.29	0.30	-0.01
4.47	0.07	0.09	-0.02	0.14	0.16	-0.02	0.29	0.30	-0.01
4.48	0.07	0.09	-0.02	0.14	0.16	-0.02	0.29	0.30	-0.01
4.50	0.07	0.09	-0.02	0.14	0.16	-0.02	0.29	0.30	-0.01
4.52	0.07	0.09	-0.02	0.14	0.16	-0.02	0.29	0.30	-0.01
4.53	0.07	0.09	-0.02	0.14	0.16	-0.02	0.29	0.30	-0.01
4.55	0.07	0.09	-0.02	0.14	0.16	-0.02	0.29	0.30	-0.01
4.57	0.07	0.09	-0.02	0.14	0.16	-0.02	0.29	0.30	-0.01
4.58	0.07	0.09	-0.02	0.14	0.16	-0.02	0.30	0.30	0.00
4.60	0.07	0.09	-0.02	0.14	0.16	-0.02	0.30	0.30	0.00
4.62	0.07	0.09	-0.02	0.14	0.16	-0.02	0.30	0.30	0.00
4.63	0.07	0.09	-0.02	0.14	0.16	-0.02	0.30	0.30	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
3.10	0.06	0.08	-0.02	0.14	0.16	-0.02	0.35	0.37	-0.02
3.12	0.06	0.08	-0.02	0.14	0.16	-0.02	0.35	0.37	-0.02
3.13	0.06	0.08	-0.02	0.14	0.16	-0.02	0.35	0.37	-0.02
3.15	0.06	0.08	-0.02	0.14	0.17	-0.03	0.35	0.37	-0.02
3.17	0.06	0.08	-0.02	0.14	0.17	-0.03	0.36	0.37	-0.01
3.18	0.06	0.08	-0.02	0.14	0.17	-0.03	0.36	0.37	-0.01
3.20	0.06	0.08	-0.02	0.14	0.17	-0.03	0.36	0.37	-0.01
3.22	0.06	0.09	-0.03	0.14	0.17	-0.03	0.36	0.37	-0.01
3.23	0.07	0.09	-0.02	0.15	0.17	-0.02	0.36	0.37	-0.01
3.25	0.07	0.09	-0.02	0.15	0.17	-0.02	0.36	0.37	-0.01
3.27	0.07	0.09	-0.02	0.15	0.17	-0.02	0.36	0.38	-0.02
3.28	0.07	0.09	-0.02	0.15	0.17	-0.02	0.36	0.38	-0.02
3.30	0.07	0.09	-0.02	0.15	0.17	-0.02	0.36	0.38	-0.02
3.32	0.07	0.09	-0.02	0.15	0.17	-0.02	0.36	0.38	-0.02
3.33	0.07	0.09	-0.02	0.15	0.17	-0.02	0.37	0.38	-0.01
3.35	0.07	0.09	-0.02	0.15	0.17	-0.02	0.37	0.38	-0.01
3.37	0.07	0.09	-0.02	0.15	0.17	-0.02	0.37	0.38	-0.01
3.38	0.07	0.09	-0.02	0.15	0.17	-0.02	0.37	0.38	-0.01
3.40	0.07	0.09	-0.02	0.15	0.17	-0.02	0.37	0.38	-0.01
3.42	0.07	0.09	-0.02	0.15	0.17	-0.02	0.37	0.38	-0.01
3.43	0.07	0.09	-0.02	0.15	0.18	-0.03	0.37	0.38	-0.01
3.45	0.07	0.09	-0.02	0.15	0.18	-0.03	0.37	0.39	-0.02
3.47	0.07	0.09	-0.02	0.16	0.18	-0.02	0.38	0.39	-0.01
3.48	0.07	0.09	-0.02	0.16	0.18	-0.02	0.38	0.39	-0.01
3.50	0.07	0.09	-0.02	0.16	0.18	-0.02	0.38	0.39	-0.01
3.52	0.07	0.09	-0.02	0.16	0.18	-0.02	0.38	0.39	-0.01
3.53	0.07	0.09	-0.02	0.16	0.18	-0.02	0.38	0.39	-0.01
3.55	0.07	0.09	-0.02	0.16	0.18	-0.02	0.38	0.39	-0.01
3.57	0.07	0.09	-0.02	0.16	0.18	-0.02	0.38	0.39	-0.01
3.58	0.07	0.09	-0.02	0.16	0.18	-0.02	0.38	0.39	-0.01
3.60	0.07	0.09	-0.02	0.16	0.18	-0.02	0.38	0.39	-0.01
3.62	0.08	0.09	-0.01	0.16	0.18	-0.02	0.38	0.39	-0.01
3.63	0.08	0.10	-0.02	0.16	0.18	-0.02	0.38	0.39	-0.01
3.65	0.08	0.10	-0.02	0.16	0.18	-0.02	0.39	0.39	0.00
3.67	0.08	0.10	-0.02	0.16	0.18	-0.02	0.39	0.40	-0.01
3.68	0.08	0.10	-0.02	0.16	0.18	-0.02	0.39	0.40	-0.01
3.70	0.08	0.10	-0.02	0.16	0.18	-0.02	0.39	0.40	-0.01
3.72	0.08	0.10	-0.02	0.16	0.18	-0.02	0.39	0.40	-0.01
3.73	0.08	0.10	-0.02	0.16	0.18	-0.02	0.39	0.40	-0.01
3.75	0.08	0.10	-0.02	0.17	0.18	-0.01	0.39	0.40	-0.01
3.77	0.08	0.10	-0.02	0.17	0.18	-0.01	0.39	0.40	-0.01
3.78	0.08	0.10	-0.02	0.17	0.18	-0.01	0.39	0.40	-0.01
3.80	0.08	0.10	-0.02	0.17	0.18	-0.01	0.39	0.40	-0.01
3.82	0.08	0.10	-0.02	0.17	0.19	-0.02	0.39	0.40	-0.01
3.83	0.08	0.10	-0.02	0.17	0.19	-0.02	0.39	0.40	-0.01
3.85	0.08	0.10	-0.02	0.17	0.19	-0.02	0.40	0.40	0.00
3.87	0.08	0.10	-0.02	0.17	0.19	-0.02	0.40	0.40	0.00
3.88	0.08	0.10	-0.02	0.17	0.19	-0.02	0.40	0.40	0.00
3.90	0.08	0.10	-0.02	0.17	0.19	-0.02	0.40	0.40	0.00
3.92	0.08	0.10	-0.02	0.17	0.19	-0.02	0.40	0.40	0.00
3.93	0.08	0.10	-0.02	0.17	0.19	-0.02	0.40	0.41	-0.01
3.95	0.08	0.10	-0.02	0.17	0.19	-0.02	0.40	0.41	-0.01
3.97	0.08	0.10	-0.02	0.17	0.19	-0.02	0.40	0.41	-0.01
3.98	0.08	0.10	-0.02	0.17	0.19	-0.02	0.40	0.41	-0.01
4.00	0.09	0.10	-0.01	0.17	0.19	-0.02	0.40	0.41	-0.01
4.02	0.09	0.10	-0.01	0.17	0.19	-0.02	0.40	0.41	-0.01
4.03	0.09	0.10	-0.01	0.18	0.19	-0.01	0.40	0.41	-0.01
4.05	0.09	0.10	-0.01	0.18	0.19	-0.01	0.41	0.41	0.00
4.07	0.09	0.11	-0.02	0.18	0.19	-0.01	0.41	0.41	0.00
4.08	0.09	0.11	-0.02	0.18	0.19	-0.01	0.41	0.41	0.00
4.10	0.09	0.11	-0.02	0.18	0.19	-0.01	0.41	0.41	0.00
4.12	0.09	0.11	-0.02	0.18	0.19	-0.01	0.41	0.41	0.00
4.13	0.09	0.11	-0.02	0.18	0.20	-0.02	0.41	0.41	0.00
4.15	0.09	0.11	-0.02	0.18	0.20	-0.02	0.41	0.42	-0.01
4.17	0.09	0.11	-0.02	0.18	0.20	-0.02	0.41	0.42	-0.01
4.18	0.09	0.11	-0.02	0.18	0.20	-0.02	0.41	0.42	-0.01
4.20	0.09	0.11	-0.02	0.18	0.20	-0.02	0.41	0.42	-0.01
4.22	0.09	0.11	-0.02	0.18	0.20	-0.02	0.41	0.42	-0.01
4.23	0.09	0.11	-0.02	0.18	0.20	-0.02	0.42	0.42	0.00
4.25	0.09	0.11	-0.02	0.18	0.20	-0.02	0.42	0.42	0.00
4.27	0.09	0.11	-0.02	0.18	0.20	-0.02	0.42	0.42	0.00
4.28	0.09	0.11	-0.02	0.18	0.20	-0.02	0.42	0.42	0.00
4.30	0.09	0.11	-0.02	0.18	0.20	-0.02	0.42	0.42	0.00
4.32	0.09	0.11	-0.02	0.18	0.20	-0.02	0.42	0.42	0.00
4.33	0.09	0.11	-0.02	0.19	0.20	-0.01	0.42	0.43	-0.01
4.35	0.09	0.11	-0.02	0.19	0.20	-0.01	0.42	0.43	-0.01
4.37	0.09	0.11	-0.02	0.19	0.20	-0.01	0.43	0.43	0.00
4.38	0.09	0.11	-0.02	0.19	0.20	-0.01	0.43	0.43	0.00
4.40	0.09	0.11	-0.02	0.19	0.20	-0.01	0.43	0.43	0.00
4.42	0.10	0.11	-0.01	0.19	0.20	-0.01	0.43	0.43	0.00
4.43	0.10	0.11	-0.01	0.19	0.20	-0.01	0.43	0.43	0.00
4.45	0.10	0.11	-0.01	0.19	0.20	-0.01	0.43	0.43	0.00
4.47	0.10	0.11	-0.01	0.19	0.20	-0.01	0.43	0.43	0.00
4.48	0.10	0.11	-0.01	0.19	0.20	-0.01	0.43	0.43	0.00
4.50	0.10	0.11	-0.01	0.19	0.20	-0.01	0.43	0.43	0.00
4.52	0.10	0.11	-0.01	0.19	0.21	-0.02	0.43	0.43	0.00
4.53	0.10	0.11	-0.01	0.19	0.21	-0.02	0.43	0.43	0.00
4.55	0.10	0.12	-0.02	0.19	0.21	-0.02	0.43	0.44	-0.01
4.57	0.10	0.12	-0.02	0.19	0.21	-0.02	0.44	0.44	0.00
4.58	0.10	0.12	-0.02	0.19	0.21	-0.02	0.44	0.44	0.00
4.60	0.10	0.12	-0.02	0.19	0.21	-0.02	0.44	0.44	0.00
4.62	0.10	0.12	-0.02	0.19	0.21	-0.02	0.44	0.44	0.00
4.63	0.10	0.12	-0.02	0.20	0.21	-0.01	0.44	0.44	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
4.65	0.07	0.09	-0.02	0.14	0.16	-0.02	0.30	0.30	0.00
4.67	0.07	0.09	-0.02	0.14	0.16	-0.02	0.30	0.30	0.00
4.68	0.07	0.09	-0.02	0.15	0.16	-0.01	0.30	0.30	0.00
4.70	0.07	0.09	-0.02	0.15	0.16	-0.01	0.30	0.31	-0.01
4.72	0.07	0.09	-0.02	0.15	0.16	-0.01	0.30	0.31	-0.01
4.73	0.07	0.09	-0.02	0.15	0.16	-0.01	0.30	0.31	-0.01
4.75	0.07	0.09	-0.02	0.15	0.16	-0.01	0.30	0.31	-0.01
4.77	0.07	0.09	-0.02	0.15	0.16	-0.01	0.30	0.31	-0.01
4.78	0.07	0.09	-0.02	0.15	0.16	-0.01	0.30	0.31	-0.01
4.80	0.07	0.09	-0.02	0.15	0.16	-0.01	0.30	0.31	-0.01
4.82	0.08	0.09	-0.01	0.15	0.16	-0.01	0.30	0.31	-0.01
4.83	0.08	0.09	-0.01	0.15	0.16	-0.01	0.30	0.31	-0.01
4.85	0.08	0.09	-0.01	0.15	0.16	-0.01	0.31	0.31	0.00
4.87	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.31	0.00
4.88	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.31	0.00
4.90	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.31	0.00
4.92	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.31	0.00
4.93	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.31	0.00
4.95	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.31	0.00
4.97	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.32	-0.01
4.98	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.32	-0.01
5.00	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.32	-0.01
5.02	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.32	-0.01
5.03	0.08	0.09	-0.01	0.15	0.17	-0.02	0.31	0.32	-0.01
5.05	0.08	0.09	-0.01	0.16	0.17	-0.01	0.31	0.32	-0.01
5.07	0.08	0.09	-0.01	0.16	0.17	-0.01	0.31	0.32	-0.01
5.08	0.08	0.10	-0.02	0.16	0.17	-0.01	0.31	0.32	-0.01
5.10	0.08	0.10	-0.02	0.16	0.17	-0.01	0.31	0.32	-0.01
5.12	0.08	0.10	-0.02	0.16	0.17	-0.01	0.31	0.32	-0.01
5.13	0.08	0.10	-0.02	0.16	0.17	-0.01	0.31	0.32	-0.01
5.15	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.32	0.00
5.17	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.32	0.00
5.18	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.32	0.00
5.20	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.32	0.00
5.22	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.32	0.00
5.23	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.32	0.00
5.25	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.32	0.00
5.27	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.33	-0.01
5.28	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.33	-0.01
5.30	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.33	-0.01
5.32	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.33	-0.01
5.33	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.33	-0.01
5.35	0.08	0.10	-0.02	0.16	0.17	-0.01	0.32	0.33	-0.01
5.37	0.09	0.10	-0.01	0.16	0.18	-0.02	0.32	0.33	-0.01
5.38	0.09	0.10	-0.01	0.16	0.18	-0.02	0.32	0.33	-0.01
5.40	0.09	0.10	-0.01	0.16	0.18	-0.02	0.32	0.33	-0.01
5.42	0.09	0.10	-0.01	0.16	0.18	-0.02	0.32	0.33	-0.01
5.43	0.09	0.10	-0.01	0.16	0.18	-0.02	0.33	0.33	0.00
5.45	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.47	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.48	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.50	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.52	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.53	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.55	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.57	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.58	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.60	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.62	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.33	0.00
5.63	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.34	-0.01
5.65	0.09	0.10	-0.01	0.17	0.18	-0.01	0.33	0.34	-0.01
5.67	0.09	0.10	-0.01	0.17	0.18	-0.01	0.34	0.34	0.00
5.68	0.09	0.10	-0.01	0.17	0.18	-0.01	0.34	0.34	0.00
5.70	0.09	0.10	-0.01	0.17	0.18	-0.01	0.34	0.34	0.00
5.72	0.09	0.10	-0.01	0.17	0.18	-0.01	0.34	0.34	0.00
5.73	0.09	0.11	-0.02	0.17	0.18	-0.01	0.34	0.34	0.00
5.75	0.09	0.11	-0.02	0.17	0.18	-0.01	0.34	0.34	0.00
5.77	0.09	0.11	-0.02	0.17	0.18	-0.01	0.34	0.34	0.00
5.78	0.09	0.11	-0.02	0.17	0.18	-0.01	0.34	0.34	0.00
5.80	0.09	0.11	-0.02	0.17	0.18	-0.01	0.34	0.34	0.00
5.82	0.09	0.11	-0.02	0.17	0.18	-0.01	0.34	0.34	0.00
5.83	0.09	0.11	-0.02	0.17	0.18	-0.01	0.34	0.34	0.00
5.85	0.09	0.11	-0.02	0.17	0.19	-0.02	0.34	0.34	0.00
5.87	0.09	0.11	-0.02	0.18	0.19	-0.01	0.34	0.34	0.00
5.88	0.09	0.11	-0.02	0.18	0.19	-0.01	0.34	0.34	0.00
5.90	0.09	0.11	-0.02	0.18	0.19	-0.01	0.34	0.34	0.00
5.92	0.09	0.11	-0.02	0.18	0.19	-0.01	0.34	0.35	-0.01
5.93	0.09	0.11	-0.02	0.18	0.19	-0.01	0.34	0.35	-0.01
5.95	0.10	0.11	-0.01	0.18	0.19	-0.01	0.35	0.35	0.00
5.97	0.10	0.11	-0.01	0.18	0.19	-0.01	0.35	0.35	0.00
5.98	0.10	0.11	-0.01	0.18	0.19	-0.01	0.35	0.35	0.00
6.00	0.10	0.11	-0.01	0.18	0.19	-0.01	0.35	0.35	0.00
6.02	0.10	0.11	-0.01	0.18	0.19	-0.01	0.35	0.35	0.00
6.03	0.10	0.11	-0.01	0.18	0.19	-0.01	0.35	0.35	0.00
6.05	0.10	0.11	-0.01	0.18	0.19	-0.01	0.36	0.36	0.00
6.07	0.10	0.11	-0.01	0.18	0.19	-0.01	0.36	0.36	0.00
6.08	0.10	0.11	-0.01	0.18	0.19	-0.01	0.36	0.36	0.00
6.10	0.10	0.11	-0.01	0.18	0.19	-0.01	0.36	0.36	0.00
6.12	0.10	0.11	-0.01	0.18	0.19	-0.01	0.36	0.36	0.00
6.13	0.10	0.11	-0.01	0.19	0.20	-0.01	0.36	0.36	0.00
6.15	0.10	0.11	-0.01	0.19	0.20	-0.01	0.37	0.37	0.00
6.17	0.10	0.12	-0.02	0.19	0.20	-0.01	0.37	0.37	0.00
6.18	0.10	0.12	-0.02	0.19	0.20	-0.01	0.37	0.37	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
4.65	0.10	0.12	-0.02	0.20	0.21	-0.01	0.44	0.44	0.00
4.67	0.10	0.12	-0.02	0.20	0.21	-0.01	0.44	0.44	0.00
4.68	0.10	0.12	-0.02	0.20	0.21	-0.01	0.44	0.44	0.00
4.70	0.10	0.12	-0.02	0.20	0.21	-0.01	0.44	0.44	0.00
4.72	0.10	0.12	-0.02	0.20	0.21	-0.01	0.44	0.44	0.00
4.73	0.10	0.12	-0.02	0.20	0.21	-0.01	0.44	0.44	0.00
4.75	0.10	0.12	-0.02	0.20	0.21	-0.01	0.44	0.45	-0.01
4.77	0.10	0.12	-0.02	0.20	0.21	-0.01	0.45	0.45	0.00
4.78	0.10	0.12	-0.02	0.20	0.21	-0.01	0.45	0.45	0.00
4.80	0.10	0.12	-0.02	0.20	0.21	-0.01	0.45	0.45	0.00
4.82	0.10	0.12	-0.02	0.20	0.21	-0.01	0.45	0.45	0.00
4.83	0.10	0.12	-0.02	0.20	0.21	-0.01	0.45	0.45	0.00
4.85	0.10	0.12	-0.02	0.20	0.21	-0.01	0.45	0.45	0.00
4.87	0.11	0.12	-0.01	0.20	0.21	-0.01	0.45	0.45	0.00
4.88	0.11	0.12	-0.01	0.20	0.22	-0.02	0.45	0.45	0.00
4.90	0.11	0.12	-0.01	0.20	0.22	-0.02	0.45	0.45	0.00
4.92	0.11	0.12	-0.01	0.20	0.22	-0.02	0.45	0.45	0.00
4.93	0.11	0.12	-0.01	0.20	0.22	-0.02	0.45	0.45	0.00
4.95	0.11	0.12	-0.01	0.21	0.22	-0.01	0.45	0.45	0.00
4.97	0.11	0.12	-0.01	0.21	0.22	-0.01	0.46	0.46	0.00
4.98	0.11	0.12	-0.01	0.21	0.22	-0.01	0.46	0.46	0.00
5.00	0.11	0.12	-0.01	0.21	0.22	-0.01	0.46	0.46	0.00
5.02	0.11	0.12	-0.01	0.21	0.22	-0.01	0.46	0.46	0.00
5.03	0.11	0.12	-0.01	0.21	0.22	-0.01	0.46	0.46	0.00
5.05	0.11	0.12	-0.01	0.21	0.22	-0.01	0.46	0.46	0.00
5.07	0.11	0.12	-0.01	0.21	0.22	-0.01	0.46	0.46	0.00
5.08	0.11	0.12	-0.01	0.21	0.22	-0.01	0.46	0.46	0.00
5.10	0.11	0.12	-0.01	0.21	0.22	-0.01	0.46	0.46	0.00
5.12	0.11	0.12	-0.01	0.21	0.22	-0.01	0.46	0.46	0.00
5.13	0.11	0.13	-0.02	0.21	0.22	-0.01	0.46	0.46	0.00
5.15	0.11	0.13	-0.02	0.21	0.22	-0.01	0.46	0.46	0.00
5.17	0.11	0.13	-0.02	0.21	0.22	-0.01	0.47	0.46	0.01
5.18	0.11	0.13	-0.02	0.21	0.22	-0.01	0.47	0.46	0.01
5.20	0.11	0.13	-0.02	0.21	0.22	-0.01	0.47	0.47	0.00
5.22	0.11	0.13	-0.02	0.21	0.22	-0.01	0.47	0.47	0.00
5.23	0.11	0.13	-0.02	0.21	0.22	-0.01	0.47	0.47	0.00
5.25	0.11	0.13	-0.02	0.21	0.22	-0.01	0.47	0.47	0.00
5.27	0.11	0.13	-0.02	0.22	0.23	-0.01	0.47	0.47	0.00
5.28	0.11	0.13	-0.02	0.22	0.23	-0.01	0.47	0.47	0.00
5.30	0.11	0.13	-0.02	0.22	0.23	-0.01	0.47	0.47	0.00
5.32	0.11	0.13	-0.02	0.22	0.23	-0.01	0.47	0.47	0.00
5.33	0.11	0.13	-0.02	0.22	0.23	-0.01	0.47	0.47	0.00
5.35	0.12	0.13	-0.01	0.22	0.23	-0.01	0.47	0.47	0.00
5.37	0.12	0.13	-0.01	0.22	0.23	-0.01	0.47	0.47	0.00
5.38	0.12	0.13	-0.01	0.22	0.23	-0.01	0.47	0.47	0.00
5.40	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.47	0.01
5.42	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.43	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.45	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.47	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.48	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.50	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.52	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.53	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.55	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.57	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.58	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.60	0.12	0.13	-0.01	0.22	0.23	-0.01	0.48	0.48	0.00
5.62	0.12	0.13	-0.01	0.22	0.23	-0.01	0.49	0.48	0.01
5.63	0.12	0.13	-0.01	0.22	0.23	-0.01	0.49	0.49	0.00
5.65	0.12	0.13	-0.01	0.23	0.23	0.00	0.49	0.49	0.00
5.67	0.12	0.13	-0.01	0.23	0.23	0.00	0.49	0.49	0.00
5.68	0.12	0.14	-0.02	0.23	0.23	0.00	0.49	0.49	0.00
5.70	0.12	0.14	-0.02	0.23	0.23	0.00	0.49	0.49	0.00
5.72	0.12	0.14	-0.02	0.23	0.23	0.00	0.49	0.49	0.00
5.73	0.12	0.14	-0.02	0.23	0.24	-0.01	0.49	0.49	0.00
5.75	0.12	0.14	-0.02	0.23	0.24	-0.01	0.50	0.49	0.01
5.77	0.12	0.14	-0.02	0.23	0.24	-0.01	0.50	0.49	0.01
5.78	0.12	0.14	-0.02	0.23	0.24	-0.01	0.50	0.49	0.01
5.80	0.12	0.14	-0.02	0.23	0.24	-0.01	0.50	0.49	0.01
5.82	0.12	0.14	-0.02	0.23	0.24	-0.01	0.50	0.49	0.01
5.83	0.12	0.14	-0.02	0.23	0.24	-0.01	0.50	0.50	0.00
5.85	0.13	0.14	-0.01	0.23	0.24	-0.01	0.50	0.50	0.00
5.87	0.13	0.14	-0.01	0.23	0.24	-0.01	0.50	0.50	0.00
5.88	0.13	0.14	-0.01	0.23	0.24	-0.01	0.50	0.50	0.00
5.90	0.13	0.14	-0.01	0.23	0.24	-0.01	0.50	0.50	0.00
5.92	0.13	0.14	-0.01	0.23	0.24	-0.01	0.50	0.50	0.00
5.93	0.13	0.14	-0.01	0.23	0.24	-0.01	0.50	0.50	0.00
5.95	0.13	0.14	-0.01	0.23	0.24	-0.01	0.50	0.50	0.00
5.97	0.13	0.14	-0.01	0.23	0.24	-0.01	0.50	0.50	0.00
5.98	0.13	0.14	-0.01	0.23	0.24	-0.01	0.51	0.50	0.01
6.00	0.13	0.14	-0.01	0.23	0.24	-0.01	0.51	0.50	0.01
6.02	0.13	0.14	-0.01	0.24	0.24	0.00	0.51	0.51	0.00
6.03	0.13	0.14	-0.01	0.24	0.24	0.00	0.51	0.51	0.00
6.05	0.13	0.14	-0.01	0.24	0.25	-0.01	0.52	0.52	0.00
6.07	0.13	0.14	-0.01	0.24	0.25	-0.01	0.52	0.52	0.00
6.08	0.13	0.14	-0.01	0.24	0.25	-0.01	0.52	0.52	0.00
6.10	0.13	0.14	-0.01	0.24	0.25	-0.01	0.52	0.52	0.00
6.12	0.13	0.15	-0.02	0.24	0.25	-0.01	0.52	0.52	0.00
6.13	0.13	0.15	-0.02	0.24	0.25	-0.01	0.53	0.53	0.00
6.15	0.14	0.15	-0.01	0.25	0.25	0.00	0.53	0.53	0.00
6.17	0.14	0.15	-0.01	0.25	0.25	0.00	0.53	0.53	0.00
6.18	0.14	0.15	-0.01	0.25	0.25	0.00	0.53	0.53	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
6.20	0.10	0.12	-0.02	0.19	0.20	-0.01	0.37	0.37	0.00
6.22	0.10	0.12	-0.02	0.19	0.20	-0.01	0.37	0.37	0.00
6.23	0.10	0.12	-0.02	0.19	0.20	-0.01	0.37	0.37	0.00
6.25	0.11	0.12	-0.01	0.19	0.20	-0.01	0.38	0.38	0.00
6.27	0.11	0.12	-0.01	0.19	0.20	-0.01	0.38	0.38	0.00
6.28	0.11	0.12	-0.01	0.20	0.20	0.00	0.38	0.38	0.00
6.30	0.11	0.12	-0.01	0.20	0.20	0.00	0.38	0.38	0.00
6.32	0.11	0.12	-0.01	0.20	0.21	-0.01	0.38	0.38	0.00
6.33	0.11	0.12	-0.01	0.20	0.21	-0.01	0.38	0.38	0.00
6.35	0.11	0.12	-0.01	0.20	0.21	-0.01	0.39	0.39	0.00
6.37	0.11	0.12	-0.01	0.20	0.21	-0.01	0.39	0.39	0.00
6.38	0.11	0.12	-0.01	0.20	0.21	-0.01	0.39	0.39	0.00
6.40	0.11	0.12	-0.01	0.20	0.21	-0.01	0.39	0.39	0.00
6.42	0.11	0.12	-0.01	0.20	0.21	-0.01	0.39	0.39	0.00
6.43	0.11	0.12	-0.01	0.20	0.21	-0.01	0.39	0.39	0.00
6.45	0.11	0.13	-0.02	0.20	0.21	-0.01	0.40	0.40	0.00
6.47	0.11	0.13	-0.02	0.21	0.21	0.00	0.40	0.40	0.00
6.48	0.11	0.13	-0.02	0.21	0.21	0.00	0.40	0.40	0.00
6.50	0.11	0.13	-0.02	0.21	0.21	0.00	0.40	0.40	0.00
6.52	0.11	0.13	-0.02	0.21	0.22	-0.01	0.40	0.40	0.00
6.53	0.12	0.13	-0.01	0.21	0.22	-0.01	0.40	0.40	0.00
6.55	0.12	0.13	-0.01	0.21	0.22	-0.01	0.41	0.41	0.00
6.57	0.12	0.13	-0.01	0.21	0.22	-0.01	0.41	0.41	0.00
6.58	0.12	0.13	-0.01	0.21	0.22	-0.01	0.41	0.41	0.00
6.60	0.12	0.13	-0.01	0.21	0.22	-0.01	0.41	0.41	0.00
6.62	0.12	0.13	-0.01	0.21	0.22	-0.01	0.41	0.41	0.00
6.63	0.12	0.13	-0.01	0.22	0.22	0.00	0.42	0.41	0.01
6.65	0.12	0.13	-0.01	0.22	0.22	0.00	0.42	0.42	0.00
6.67	0.12	0.13	-0.01	0.22	0.23	-0.01	0.42	0.42	0.00
6.68	0.12	0.13	-0.01	0.22	0.23	-0.01	0.42	0.42	0.00
6.70	0.12	0.13	-0.01	0.22	0.23	-0.01	0.42	0.42	0.00
6.72	0.12	0.13	-0.01	0.22	0.23	-0.01	0.42	0.42	0.00
6.73	0.12	0.14	-0.02	0.22	0.23	-0.01	0.43	0.43	0.00
6.75	0.12	0.14	-0.02	0.22	0.23	-0.01	0.43	0.43	0.00
6.77	0.12	0.14	-0.02	0.22	0.23	-0.01	0.43	0.43	0.00
6.78	0.12	0.14	-0.02	0.22	0.23	-0.01	0.43	0.43	0.00
6.80	0.12	0.14	-0.02	0.22	0.23	-0.01	0.43	0.43	0.00
6.82	0.13	0.14	-0.01	0.23	0.23	0.00	0.43	0.43	0.00
6.83	0.13	0.14	-0.01	0.23	0.23	0.00	0.44	0.44	0.00
6.85	0.13	0.14	-0.01	0.23	0.24	-0.01	0.44	0.44	0.00
6.87	0.13	0.14	-0.01	0.23	0.24	-0.01	0.44	0.44	0.00
6.88	0.13	0.14	-0.01	0.23	0.24	-0.01	0.44	0.44	0.00
6.90	0.13	0.14	-0.01	0.23	0.24	-0.01	0.44	0.44	0.00
6.92	0.13	0.14	-0.01	0.23	0.24	-0.01	0.44	0.44	0.00
6.93	0.13	0.14	-0.01	0.23	0.24	-0.01	0.45	0.45	0.00
6.95	0.13	0.14	-0.01	0.23	0.24	-0.01	0.45	0.45	0.00
6.97	0.13	0.14	-0.01	0.24	0.24	0.00	0.45	0.45	0.00
6.98	0.13	0.14	-0.01	0.24	0.24	0.00	0.45	0.45	0.00
7.00	0.13	0.14	-0.01	0.24	0.24	0.00	0.45	0.45	0.00
7.02	0.13	0.15	-0.02	0.24	0.24	0.00	0.46	0.45	0.01
7.03	0.13	0.15	-0.02	0.24	0.25	-0.01	0.46	0.46	0.00
7.05	0.14	0.15	-0.01	0.24	0.25	-0.01	0.46	0.46	0.00
7.07	0.14	0.15	-0.01	0.24	0.25	-0.01	0.46	0.46	0.00
7.08	0.14	0.15	-0.01	0.24	0.25	-0.01	0.46	0.46	0.00
7.10	0.14	0.15	-0.01	0.24	0.25	-0.01	0.46	0.46	0.00
7.12	0.14	0.15	-0.01	0.24	0.25	-0.01	0.47	0.46	0.01
7.13	0.14	0.15	-0.01	0.25	0.25	0.00	0.47	0.47	0.00
7.15	0.14	0.15	-0.01	0.25	0.25	0.00	0.47	0.47	0.00
7.17	0.14	0.15	-0.01	0.25	0.25	0.00	0.47	0.47	0.00
7.18	0.14	0.15	-0.01	0.25	0.25	0.00	0.47	0.47	0.00
7.20	0.14	0.15	-0.01	0.25	0.25	0.00	0.47	0.47	0.00
7.22	0.14	0.15	-0.01	0.25	0.26	-0.01	0.48	0.47	0.01
7.23	0.14	0.15	-0.01	0.25	0.26	-0.01	0.48	0.48	0.00
7.25	0.14	0.15	-0.01	0.25	0.26	-0.01	0.48	0.48	0.00
7.27	0.14	0.16	-0.02	0.25	0.26	-0.01	0.48	0.48	0.00
7.28	0.14	0.16	-0.02	0.25	0.26	-0.01	0.48	0.48	0.00
7.30	0.14	0.16	-0.02	0.25	0.26	-0.01	0.48	0.48	0.00
7.32	0.14	0.16	-0.02	0.26	0.26	0.00	0.49	0.48	0.01
7.33	0.15	0.16	-0.01	0.26	0.26	0.00	0.49	0.49	0.00
7.35	0.15	0.16	-0.01	0.26	0.26	0.00	0.49	0.49	0.00
7.37	0.15	0.16	-0.01	0.26	0.27	-0.01	0.50	0.49	0.01
7.38	0.15	0.16	-0.01	0.26	0.27	-0.01	0.50	0.49	0.01
7.40	0.15	0.16	-0.01	0.26	0.27	-0.01	0.50	0.49	0.01
7.42	0.15	0.16	-0.01	0.26	0.27	-0.01	0.50	0.50	0.00
7.43	0.15	0.16	-0.01	0.26	0.27	-0.01	0.50	0.50	0.00
7.45	0.15	0.16	-0.01	0.26	0.27	-0.01	0.50	0.50	0.00
7.47	0.15	0.16	-0.01	0.27	0.27	0.00	0.51	0.50	0.01
7.48	0.15	0.16	-0.01	0.27	0.27	0.00	0.51	0.50	0.01
7.50	0.15	0.16	-0.01	0.27	0.27	0.00	0.51	0.50	0.01
7.52	0.15	0.16	-0.01	0.27	0.27	0.00	0.51	0.51	0.00
7.53	0.15	0.16	-0.01	0.27	0.27	0.00	0.51	0.51	0.00
7.55	0.15	0.17	-0.02	0.27	0.28	-0.01	0.51	0.51	0.00
7.57	0.15	0.17	-0.02	0.27	0.28	-0.01	0.52	0.51	0.01
7.58	0.16	0.17	-0.01	0.27	0.28	-0.01	0.52	0.51	0.01
7.60	0.16	0.17	-0.01	0.27	0.28	-0.01	0.52	0.51	0.01
7.62	0.16	0.17	-0.01	0.27	0.28	-0.01	0.52	0.52	0.00
7.63	0.16	0.17	-0.01	0.28	0.28	0.00	0.52	0.52	0.00
7.65	0.16	0.17	-0.01	0.28	0.28	0.00	0.53	0.52	0.01
7.67	0.16	0.17	-0.01	0.28	0.28	0.00	0.53	0.52	0.01
7.68	0.16	0.17	-0.01	0.28	0.28	0.00	0.53	0.52	0.01
7.70	0.16	0.17	-0.01	0.28	0.28	0.00	0.53	0.53	0.00
7.72	0.16	0.17	-0.01	0.28	0.28	0.00	0.53	0.53	0.00
7.73	0.16	0.17	-0.01	0.28	0.29	-0.01	0.54	0.53	0.01

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
6.20	0.14	0.15	-0.01	0.25	0.25	0.00	0.53	0.53	0.00
6.22	0.14	0.15	-0.01	0.25	0.26	-0.01	0.54	0.53	0.01
6.23	0.14	0.15	-0.01	0.25	0.26	-0.01	0.54	0.54	0.00
6.25	0.14	0.15	-0.01	0.25	0.26	-0.01	0.55	0.54	0.01
6.27	0.14	0.15	-0.01	0.26	0.26	0.00	0.55	0.55	0.00
6.28	0.14	0.15	-0.01	0.26	0.26	0.00	0.55	0.55	0.00
6.30	0.14	0.15	-0.01	0.26	0.26	0.00	0.55	0.55	0.00
6.32	0.14	0.15	-0.01	0.26	0.26	0.00	0.55	0.55	0.00
6.33	0.14	0.16	-0.02	0.26	0.27	-0.01	0.56	0.55	0.01
6.35	0.14	0.16	-0.02	0.26	0.27	-0.01	0.56	0.56	0.00
6.37	0.15	0.16	-0.01	0.26	0.27	-0.01	0.56	0.56	0.00
6.38	0.15	0.16	-0.01	0.26	0.27	-0.01	0.56	0.56	0.00
6.40	0.15	0.16	-0.01	0.26	0.27	-0.01	0.56	0.56	0.00
6.42	0.15	0.16	-0.01	0.26	0.27	-0.01	0.57	0.56	0.01
6.43	0.15	0.16	-0.01	0.27	0.27	0.00	0.57	0.57	0.00
6.45	0.15	0.16	-0.01	0.27	0.27	0.00	0.58	0.57	0.01
6.47	0.15	0.16	-0.01	0.27	0.27	0.00	0.58	0.57	0.01
6.48	0.15	0.16	-0.01	0.27	0.27	0.00	0.58	0.57	0.01
6.50	0.15	0.16	-0.01	0.27	0.27	0.00	0.58	0.57	0.01
6.52	0.15	0.16	-0.01	0.27	0.28	-0.01	0.58	0.58	0.00
6.53	0.15	0.16	-0.01	0.27	0.28	-0.01	0.59	0.58	0.01
6.55	0.15	0.17	-0.02	0.28	0.28	0.00	0.59	0.59	0.00
6.57	0.15	0.17	-0.02	0.28	0.28	0.00	0.59	0.59	0.00
6.58	0.15	0.17	-0.02	0.28	0.28	0.00	0.59	0.59	0.00
6.60	0.15	0.17	-0.02	0.28	0.28	0.00	0.59	0.59	0.00
6.62	0.16	0.17	-0.01	0.28	0.28	0.00	0.60	0.59	0.01
6.63	0.16	0.17	-0.01	0.28	0.29	-0.01	0.60	0.60	0.00
6.65	0.16	0.17	-0.01	0.28	0.29	-0.01	0.60	0.60	0.00
6.67	0.16	0.17	-0.01	0.28	0.29	-0.01	0.61	0.60	0.01
6.68	0.16	0.17	-0.01	0.28	0.29	-0.01	0.61	0.60	0.01
6.70	0.16	0.17	-0.01	0.28	0.29	-0.01	0.61	0.60	0.01
6.72	0.16	0.17	-0.01	0.29	0.29	0.00	0.61	0.61	0.00
6.73	0.16	0.17	-0.01	0.29	0.29	0.00	0.62	0.61	0.01
6.75	0.16	0.17	-0.01	0.29	0.29	0.00	0.62	0.62	0.00
6.77	0.16	0.17	-0.01	0.29	0.30	-0.01	0.62	0.62	0.00
6.78	0.16	0.17	-0.01	0.29	0.30	-0.01	0.62	0.62	0.00
6.80	0.16	0.17	-0.01	0.29	0.30	-0.01	0.62	0.62	0.00
6.82	0.16	0.18	-0.02	0.29	0.30	-0.01	0.63	0.62	0.01
6.83	0.17	0.18	-0.01	0.30	0.30	0.00	0.63	0.63	0.00
6.85	0.17	0.18	-0.01	0.30	0.30	0.00	0.63	0.63	0.00
6.87	0.17	0.18	-0.01	0.30	0.30	0.00	0.64	0.63	0.01
6.88	0.17	0.18	-0.01	0.30	0.30	0.00	0.64	0.63	0.01
6.90	0.17	0.18	-0.01	0.30	0.30	0.00	0.64	0.63	0.01
6.92	0.17	0.18	-0.01	0.30	0.30	0.00	0.64	0.63	0.01
6.93	0.17	0.18	-0.01	0.30	0.31	-0.01	0.65	0.64	0.01
6.95	0.17	0.18	-0.01	0.31	0.31	0.00	0.65	0.64	0.01
6.97	0.17	0.18	-0.01	0.31	0.31	0.00	0.65	0.65	0.00
6.98	0.17	0.18	-0.01	0.31	0.31	0.00	0.65	0.65	0.00
7.00	0.17	0.18	-0.01	0.31	0.31	0.00	0.65	0.65	0.00
7.02	0.17	0.18	-0.01	0.31	0.31	0.00	0.66	0.65	0.01
7.03	0.18	0.19	-0.01	0.31	0.31	0.00	0.66	0.66	0.00
7.05	0.18	0.19	-0.01	0.31	0.32	-0.01	0.66	0.66	0.00
7.07	0.18	0.19	-0.01	0.31	0.32	-0.01	0.67	0.66	0.01
7.08	0.18	0.19	-0.01	0.31	0.32	-0.01	0.67	0.66	0.01
7.10	0.18	0.19	-0.01	0.31	0.32	-0.01	0.67	0.66	0.01
7.12	0.18	0.19	-0.01	0.32	0.32	0.00	0.67	0.66	0.01
7.13	0.18	0.19	-0.01	0.32	0.32	0.00	0.68	0.67	0.01
7.15	0.18	0.19	-0.01	0.32	0.32	0.00	0.68	0.67	0.01
7.17	0.18	0.19	-0.01	0.32	0.32	0.00	0.68	0.68	0.00
7.18	0.18	0.19	-0.01	0.32	0.32	0.00	0.68	0.68	0.00
7.20	0.18	0.19	-0.01	0.32	0.33	-0.01	0.68	0.68	0.00
7.22	0.18	0.19	-0.01	0.32	0.33	-0.01	0.69	0.68	0.01
7.23	0.19	0.20	-0.01	0.33	0.33	0.00	0.69	0.68	0.01
7.25	0.19	0.20	-0.01	0.33	0.33	0.00	0.70	0.69	0.01
7.27	0.19	0.20	-0.01	0.33	0.33	0.00	0.70	0.69	0.01
7.28	0.19	0.20	-0.01	0.33	0.33	0.00	0.70	0.69	0.01
7.30	0.19	0.20	-0.01	0.33	0.33	0.00	0.70	0.69	0.01
7.32	0.19	0.20	-0.01	0.33	0.33	0.00	0.70	0.69	0.01
7.33	0.19	0.20	-0.01	0.33	0.34	-0.01	0.71	0.70	0.01
7.35	0.19	0.20	-0.01	0.34	0.34	0.00	0.71	0.70	0.01
7.37	0.19	0.20	-0.01	0.34	0.34	0.00	0.71	0.71	0.00
7.38	0.19	0.20	-0.01	0.34	0.34	0.00	0.71	0.71	0.00
7.40	0.19	0.20	-0.01	0.34	0.34	0.00	0.71	0.71	0.00
7.42	0.19	0.20	-0.01	0.34	0.34	0.00	0.72	0.71	0.01
7.43	0.19	0.20	-0.01	0.34	0.34	0.00	0.72	0.71	0.01
7.45	0.20	0.21	-0.01	0.34	0.35	-0.01	0.73	0.72	0.01
7.47	0.20	0.21	-0.01	0.35	0.35	0.00	0.73	0.72	0.01
7.48	0.20	0.21	-0.01	0.35	0.35	0.00	0.73	0.72	0.01
7.50	0.20	0.21	-0.01	0.35	0.35	0.00	0.73	0.72	0.01
7.52	0.20	0.21	-0.01	0.35	0.35	0.00	0.73	0.72	0.01
7.53	0.20	0.21	-0.01	0.35	0.35	0.00	0.74	0.73	0.01
7.55	0.20	0.21	-0.01	0.35	0.35	0.00	0.74	0.73	0.01
7.57	0.20	0.21	-0.01	0.35	0.35	0.00	0.74	0.73	0.01
7.58	0.20	0.21	-0.01	0.35	0.35	0.00	0.74	0.73	0.01
7.60	0.20	0.21	-0.01	0.35	0.35	0.00	0.74	0.73	0.01
7.62	0.20	0.21	-0.01	0.35	0.36	-0.01	0.75	0.74	0.01
7.63	0.20	0.21	-0.01	0.36	0.36	0.00	0.75	0.74	0.01
7.65	0.21	0.21	0.00	0.36	0.36	0.00	0.76	0.75	0.01
7.67	0.21	0.21	0.00	0.36	0.36	0.00	0.76	0.75	0.01
7.68	0.21	0.21	0.00	0.36	0.36	0.00	0.76	0.75	0.01
7.70	0.21	0.21	0.00	0.36	0.36	0.00	0.76	0.75	0.01
7.72	0.21	0.22	-0.01	0.36	0.36	0.00	0.76	0.75	0.01
7.73	0.21	0.22	-0.01	0.37	0.37	0.00	0.77	0.76	0.01

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
7.75	0.16	0.17	-0.01	0.28	0.29	-0.01	0.54	0.53	0.01
7.77	0.16	0.17	-0.01	0.28	0.29	-0.01	0.54	0.54	0.00
7.78	0.16	0.17	-0.01	0.28	0.29	-0.01	0.54	0.54	0.00
7.80	0.16	0.17	-0.01	0.28	0.29	-0.01	0.54	0.54	0.00
7.82	0.16	0.17	-0.01	0.29	0.29	0.00	0.54	0.54	0.00
7.83	0.17	0.18	-0.01	0.29	0.29	0.00	0.55	0.54	0.01
7.85	0.17	0.18	-0.01	0.29	0.29	0.00	0.55	0.54	0.01
7.87	0.17	0.18	-0.01	0.29	0.29	0.00	0.55	0.54	0.01
7.88	0.17	0.18	-0.01	0.29	0.29	0.00	0.55	0.54	0.01
7.90	0.17	0.18	-0.01	0.29	0.29	0.00	0.55	0.54	0.01
7.92	0.17	0.18	-0.01	0.29	0.29	0.00	0.55	0.55	0.00
7.93	0.17	0.18	-0.01	0.29	0.30	-0.01	0.56	0.55	0.01
7.95	0.17	0.18	-0.01	0.30	0.30	0.00	0.56	0.56	0.00
7.97	0.17	0.18	-0.01	0.30	0.30	0.00	0.56	0.56	0.00
7.98	0.17	0.18	-0.01	0.30	0.30	0.00	0.56	0.56	0.00
8.00	0.17	0.18	-0.01	0.30	0.30	0.00	0.56	0.56	0.00
8.02	0.17	0.18	-0.01	0.30	0.30	0.00	0.57	0.56	0.01
8.03	0.17	0.18	-0.01	0.30	0.30	0.00	0.57	0.56	0.01
8.05	0.17	0.18	-0.01	0.30	0.31	-0.01	0.57	0.57	0.00
8.07	0.18	0.19	-0.01	0.30	0.31	-0.01	0.57	0.57	0.00
8.08	0.18	0.19	-0.01	0.30	0.31	-0.01	0.57	0.57	0.00
8.10	0.18	0.19	-0.01	0.30	0.31	-0.01	0.57	0.57	0.00
8.12	0.18	0.19	-0.01	0.30	0.31	-0.01	0.58	0.57	0.01
8.13	0.18	0.19	-0.01	0.31	0.31	0.00	0.58	0.57	0.01
8.15	0.18	0.19	-0.01	0.31	0.31	0.00	0.58	0.58	0.00
8.17	0.18	0.19	-0.01	0.31	0.31	0.00	0.58	0.58	0.00
8.18	0.18	0.19	-0.01	0.31	0.31	0.00	0.58	0.58	0.00
8.20	0.18	0.19	-0.01	0.31	0.31	0.00	0.58	0.58	0.00
8.22	0.18	0.19	-0.01	0.31	0.31	0.00	0.59	0.58	0.01
8.23	0.18	0.19	-0.01	0.31	0.32	-0.01	0.59	0.58	0.01
8.25	0.18	0.19	-0.01	0.31	0.32	-0.01	0.59	0.59	0.00
8.27	0.18	0.19	-0.01	0.31	0.32	-0.01	0.59	0.59	0.00
8.28	0.18	0.19	-0.01	0.32	0.32	0.00	0.59	0.59	0.00
8.30	0.18	0.19	-0.01	0.32	0.32	0.00	0.59	0.59	0.00
8.32	0.18	0.19	-0.01	0.32	0.32	0.00	0.60	0.59	0.01
8.33	0.19	0.19	0.00	0.32	0.32	0.00	0.60	0.60	0.00
8.35	0.19	0.20	-0.01	0.32	0.32	0.00	0.61	0.60	0.01
8.37	0.19	0.20	-0.01	0.32	0.33	-0.01	0.61	0.60	0.01
8.38	0.19	0.20	-0.01	0.32	0.33	-0.01	0.61	0.60	0.01
8.40	0.19	0.20	-0.01	0.32	0.33	-0.01	0.61	0.60	0.01
8.42	0.19	0.20	-0.01	0.32	0.33	-0.01	0.61	0.60	0.01
8.43	0.19	0.20	-0.01	0.33	0.33	0.00	0.61	0.61	0.00
8.45	0.19	0.20	-0.01	0.33	0.33	0.00	0.61	0.61	0.00
8.47	0.19	0.20	-0.01	0.33	0.33	0.00	0.62	0.61	0.01
8.48	0.19	0.20	-0.01	0.33	0.33	0.00	0.62	0.61	0.01
8.50	0.19	0.20	-0.01	0.33	0.33	0.00	0.62	0.61	0.01
8.52	0.19	0.20	-0.01	0.33	0.33	0.00	0.62	0.61	0.01
8.53	0.19	0.20	-0.01	0.33	0.33	0.00	0.62	0.62	0.00
8.55	0.19	0.20	-0.01	0.33	0.34	-0.01	0.63	0.62	0.01
8.57	0.20	0.20	0.00	0.34	0.34	0.00	0.63	0.62	0.01
8.58	0.20	0.20	0.00	0.34	0.34	0.00	0.63	0.62	0.01
8.60	0.20	0.20	0.00	0.34	0.34	0.00	0.63	0.62	0.01
8.62	0.20	0.20	0.00	0.34	0.34	0.00	0.63	0.62	0.01
8.63	0.20	0.21	-0.01	0.34	0.34	0.00	0.64	0.63	0.01
8.65	0.20	0.21	-0.01	0.34	0.34	0.00	0.64	0.63	0.01
8.67	0.20	0.21	-0.01	0.34	0.34	0.00	0.64	0.63	0.01
8.68	0.20	0.21	-0.01	0.34	0.34	0.00	0.64	0.63	0.01
8.70	0.20	0.21	-0.01	0.34	0.34	0.00	0.64	0.63	0.01
8.72	0.20	0.21	-0.01	0.34	0.34	0.00	0.64	0.64	0.00
8.73	0.20	0.21	-0.01	0.35	0.35	0.00	0.65	0.64	0.01
8.75	0.20	0.21	-0.01	0.35	0.35	0.00	0.65	0.64	0.01
8.77	0.20	0.21	-0.01	0.35	0.35	0.00	0.65	0.64	0.01
8.78	0.20	0.21	-0.01	0.35	0.35	0.00	0.65	0.64	0.01
8.80	0.20	0.21	-0.01	0.35	0.35	0.00	0.65	0.64	0.01
8.82	0.20	0.21	-0.01	0.35	0.35	0.00	0.65	0.65	0.00
8.83	0.21	0.21	0.00	0.35	0.35	0.00	0.66	0.65	0.01
8.85	0.21	0.21	0.00	0.35	0.35	0.00	0.66	0.65	0.01
8.87	0.21	0.21	0.00	0.35	0.35	0.00	0.66	0.65	0.01
8.88	0.21	0.21	0.00	0.35	0.36	-0.01	0.66	0.65	0.01
8.90	0.21	0.21	0.00	0.35	0.36	-0.01	0.66	0.65	0.01
8.92	0.21	0.22	-0.01	0.36	0.36	0.00	0.66	0.66	0.00
8.93	0.21	0.22	-0.01	0.36	0.36	0.00	0.67	0.66	0.01
8.95	0.21	0.22	-0.01	0.36	0.36	0.00	0.67	0.66	0.01
8.97	0.21	0.22	-0.01	0.36	0.36	0.00	0.67	0.67	0.00
8.98	0.21	0.22	-0.01	0.36	0.36	0.00	0.67	0.67	0.00
9.00	0.21	0.22	-0.01	0.36	0.36	0.00	0.67	0.67	0.00
9.02	0.21	0.22	-0.01	0.37	0.37	0.00	0.68	0.67	0.01
9.03	0.22	0.23	-0.01	0.37	0.37	0.00	0.69	0.69	0.00
9.05	0.22	0.23	-0.01	0.38	0.38	0.00	0.70	0.70	0.00
9.07	0.22	0.23	-0.01	0.38	0.38	0.00	0.71	0.70	0.01
9.08	0.22	0.23	-0.01	0.38	0.38	0.00	0.71	0.70	0.01
9.10	0.22	0.23	-0.01	0.38	0.38	0.00	0.71	0.70	0.01
9.12	0.23	0.23	0.00	0.39	0.39	0.00	0.72	0.71	0.01
9.13	0.23	0.24	-0.01	0.39	0.39	0.00	0.73	0.72	0.01
9.15	0.23	0.24	-0.01	0.40	0.40	0.00	0.74	0.73	0.01
9.17	0.24	0.24	0.00	0.40	0.40	0.00	0.74	0.74	0.00
9.18	0.24	0.24	0.00	0.40	0.40	0.00	0.74	0.74	0.00
9.20	0.24	0.24	0.00	0.40	0.40	0.00	0.74	0.74	0.00
9.22	0.24	0.24	0.00	0.41	0.41	0.00	0.75	0.74	0.01
9.23	0.24	0.25	-0.01	0.41	0.41	0.00	0.77	0.76	0.01
9.25	0.25	0.25	0.00	0.42	0.42	0.00	0.78	0.77	0.01
9.27	0.25	0.25	0.00	0.42	0.42	0.00	0.78	0.77	0.01
9.28	0.25	0.25	0.00	0.42	0.42	0.00	0.78	0.77	0.01

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
7.75	0.21	0.22	-0.01	0.37	0.37	0.00	0.77	0.76	0.01
7.77	0.21	0.22	-0.01	0.37	0.37	0.00	0.77	0.77	0.00
7.78	0.21	0.22	-0.01	0.37	0.37	0.00	0.78	0.77	0.01
7.80	0.21	0.22	-0.01	0.37	0.37	0.00	0.78	0.77	0.01
7.82	0.21	0.22	-0.01	0.37	0.37	0.00	0.78	0.77	0.01
7.83	0.21	0.22	-0.01	0.37	0.37	0.00	0.78	0.77	0.01
7.85	0.21	0.22	-0.01	0.37	0.38	-0.01	0.78	0.78	0.00
7.87	0.22	0.22	0.00	0.38	0.38	0.00	0.79	0.78	0.01
7.88	0.22	0.22	0.00	0.38	0.38	0.00	0.79	0.78	0.01
7.90	0.22	0.22	0.00	0.38	0.38	0.00	0.79	0.78	0.01
7.92	0.22	0.22	0.00	0.38	0.38	0.00	0.79	0.78	0.01
7.93	0.22	0.23	-0.01	0.38	0.38	0.00	0.80	0.79	0.01
7.95	0.22	0.23	-0.01	0.38	0.38	0.00	0.80	0.79	0.01
7.97	0.22	0.23	-0.01	0.39	0.39	0.00	0.81	0.80	0.01
7.98	0.22	0.23	-0.01	0.39	0.39	0.00	0.81	0.80	0.01
8.00	0.22	0.23	-0.01	0.39	0.39	0.00	0.81	0.80	0.01
8.02	0.22	0.23	-0.01	0.39	0.39	0.00	0.81	0.80	0.01
8.03	0.22	0.23	-0.01	0.39	0.39	0.00	0.81	0.81	0.00
8.05	0.22	0.23	-0.01	0.39	0.39	0.00	0.82	0.81	0.01
8.07	0.23	0.23	0.00	0.39	0.39	0.00	0.82	0.81	0.01
8.08	0.23	0.23	0.00	0.39	0.39	0.00	0.82	0.81	0.01
8.10	0.23	0.23	0.00	0.39	0.39	0.00	0.82	0.81	0.01
8.12	0.23	0.23	0.00	0.40	0.39	0.01	0.82	0.81	0.01
8.13	0.23	0.24	-0.01	0.40	0.40	0.00	0.83	0.82	0.01
8.15	0.23	0.24	-0.01	0.40	0.40	0.00	0.83	0.82	0.01
8.17	0.23	0.24	-0.01	0.40	0.40	0.00	0.83	0.82	0.01
8.18	0.23	0.24	-0.01	0.40	0.40	0.00	0.83	0.83	0.00
8.20	0.23	0.24	-0.01	0.40	0.40	0.00	0.83	0.83	0.00
8.22	0.23	0.24	-0.01	0.40	0.40	0.00	0.84	0.83	0.01
8.23	0.23	0.24	-0.01	0.40	0.40	0.00	0.84	0.83	0.01
8.25	0.23	0.24	-0.01	0.41	0.41	0.00	0.85	0.84	0.01
8.27	0.23	0.24	-0.01	0.41	0.41	0.00	0.85	0.84	0.01
8.28	0.23	0.24	-0.01	0.41	0.41	0.00	0.85	0.84	0.01
8.30	0.23	0.24	-0.01	0.41	0.41	0.00	0.85	0.84	0.01
8.32	0.24	0.24	0.00	0.41	0.41	0.00	0.85	0.84	0.01
8.33	0.24	0.24	0.00	0.41	0.41	0.00	0.86	0.85	0.01
8.35	0.24	0.25	-0.01	0.42	0.42	0.00	0.86	0.86	0.00
8.37	0.24	0.25	-0.01	0.42	0.42	0.00	0.87	0.86	0.01
8.38	0.24	0.25	-0.01	0.42	0.42	0.00	0.87	0.86	0.01
8.40	0.24	0.25	-0.01	0.42	0.42	0.00	0.87	0.86	0.01
8.42	0.24	0.25	-0.01	0.42	0.42	0.00	0.87	0.86	0.01
8.43	0.24	0.25	-0.01	0.42	0.42	0.00	0.87	0.86	0.01
8.45	0.24	0.25	-0.01	0.42	0.42	0.00	0.88	0.87	0.01
8.47	0.24	0.25	-0.01	0.42	0.42	0.00	0.88	0.87	0.01
8.48	0.24	0.25	-0.01	0.42	0.42	0.00	0.88	0.87	0.01
8.50	0.24	0.25	-0.01	0.42	0.42	0.00	0.88	0.87	0.01
8.52	0.25	0.25	0.00	0.43	0.42	0.01	0.88	0.87	0.01
8.53	0.25	0.25	0.00	0.43	0.43	0.00	0.89	0.88	0.01
8.55	0.25	0.25	0.00	0.43	0.43	0.00	0.89	0.88	0.01
8.57	0.25	0.26	-0.01	0.43	0.43	0.00	0.90	0.89	0.01
8.58	0.25	0.26	-0.01	0.43	0.43	0.00	0.90	0.89	0.01
8.60	0.25	0.26	-0.01	0.43	0.43	0.00	0.90	0.89	0.01
8.62	0.25	0.26	-0.01	0.44	0.43	0.01	0.90	0.89	0.01
8.63	0.25	0.26	-0.01	0.44	0.44	0.00	0.91	0.90	0.01
8.65	0.25	0.26	-0.01	0.44	0.44	0.00	0.91	0.90	0.01
8.67	0.26	0.26	0.00	0.44	0.44	0.00	0.91	0.90	0.01
8.68	0.26	0.26	0.00	0.44	0.44	0.00	0.91	0.90	0.01
8.70	0.26	0.26	0.00	0.44	0.44	0.00	0.91	0.90	0.01
8.72	0.26	0.26	0.00	0.44	0.44	0.00	0.92	0.91	0.01
8.73	0.26	0.26	0.00	0.45	0.44	0.01	0.92	0.91	0.01
8.75	0.26	0.26	0.00	0.45	0.45	0.00	0.92	0.91	0.01
8.77	0.26	0.26	0.00	0.45	0.45	0.00	0.93	0.92	0.01
8.78	0.26	0.26	0.00	0.45	0.45	0.00	0.93	0.92	0.01
8.80	0.26	0.26	0.00	0.45	0.45	0.00	0.93	0.92	0.01
8.82	0.26	0.27	-0.01	0.45	0.45	0.00	0.93	0.92	0.01
8.83	0.26	0.27	-0.01	0.45	0.45	0.00	0.93	0.93	0.00
8.85	0.26	0.27	-0.01	0.46	0.45	0.01	0.94	0.93	0.01
8.87	0.26	0.27	-0.01	0.46	0.45	0.01	0.94	0.93	0.01
8.88	0.26	0.27	-0.01	0.46	0.45	0.01	0.94	0.93	0.01
8.90	0.26	0.27	-0.01	0.46	0.45	0.01	0.94	0.93	0.01
8.92	0.27	0.27	0.00	0.46	0.46	0.00	0.94	0.93	0.01
8.93	0.27	0.27	0.00	0.46	0.46	0.00	0.95	0.94	0.01
8.95	0.27	0.27	0.00	0.46	0.46	0.00	0.95	0.95	0.00
8.97	0.27	0.27	0.00	0.47	0.46	0.01	0.96	0.95	0.01
8.98	0.27	0.27	0.00	0.47	0.46	0.01	0.96	0.95	0.01
9.00	0.27	0.27	0.00	0.47	0.46	0.01	0.96	0.95	0.01
9.02	0.27	0.28	-0.01	0.47	0.47	0.00	0.97	0.96	0.01
9.03	0.28	0.28	0.00	0.48	0.48	0.00	0.99	0.98	0.01
9.05	0.28	0.29	-0.01	0.49	0.48	0.01	1.00	0.99	0.01
9.07	0.28	0.29	-0.01	0.49	0.49	0.00	1.01	1.00	0.01
9.08	0.28	0.29	-0.01	0.49	0.49	0.00	1.01	1.00	0.01
9.10	0.28	0.29	-0.01	0.49	0.49	0.00	1.01	1.00	0.01
9.12	0.29	0.29	0.00	0.50	0.49	0.01	1.02	1.01	0.01
9.13	0.29	0.30	-0.01	0.51	0.50	0.01	1.04	1.03	0.01
9.15	0.30	0.30	0.00	0.51	0.51	0.00	1.05	1.04	0.01
9.17	0.30	0.30	0.00	0.52	0.51	0.01	1.06	1.04	0.02
9.18	0.30	0.30	0.00	0.52	0.51	0.01	1.06	1.05	0.01
9.20	0.30	0.30	0.00	0.52	0.51	0.01	1.06	1.05	0.01
9.22	0.30	0.31	-0.01	0.52	0.52	0.00	1.07	1.06	0.01
9.23	0.31	0.31	0.00	0.53	0.53	0.00	1.09	1.08	0.01
9.25	0.31	0.32	-0.01	0.54	0.53	0.01	1.10	1.09	0.01
9.27	0.32	0.32	0.00	0.54	0.54	0.00	1.11	1.10	0.01
9.28	0.32	0.32	0.00	0.54	0.54	0.00	1.11	1.10	0.01

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
9.30	0.25	0.26	-0.01	0.42	0.42	0.00	0.78	0.78	0.00
9.32	0.25	0.26	-0.01	0.43	0.43	0.00	0.79	0.78	0.01
9.33	0.26	0.26	0.00	0.43	0.43	0.00	0.80	0.79	0.01
9.35	0.26	0.26	0.00	0.44	0.44	0.00	0.81	0.80	0.01
9.37	0.26	0.27	-0.01	0.44	0.44	0.00	0.82	0.81	0.01
9.38	0.26	0.27	-0.01	0.44	0.44	0.00	0.82	0.81	0.01
9.40	0.26	0.27	-0.01	0.44	0.44	0.00	0.82	0.81	0.01
9.42	0.26	0.27	-0.01	0.45	0.45	0.00	0.83	0.82	0.01
9.43	0.27	0.27	0.00	0.45	0.45	0.00	0.84	0.83	0.01
9.45	0.27	0.28	-0.01	0.46	0.46	0.00	0.85	0.84	0.01
9.47	0.27	0.28	-0.01	0.46	0.46	0.00	0.85	0.84	0.01
9.48	0.27	0.28	-0.01	0.46	0.46	0.00	0.85	0.85	0.00
9.50	0.27	0.28	-0.01	0.46	0.46	0.00	0.86	0.85	0.01
9.52	0.28	0.28	0.00	0.47	0.47	0.00	0.86	0.85	0.01
9.53	0.28	0.29	-0.01	0.48	0.47	0.01	0.88	0.87	0.01
9.55	0.28	0.29	-0.01	0.48	0.48	0.00	0.89	0.88	0.01
9.57	0.28	0.29	-0.01	0.48	0.48	0.00	0.89	0.88	0.01
9.58	0.29	0.29	0.00	0.48	0.48	0.00	0.89	0.88	0.01
9.60	0.29	0.29	0.00	0.48	0.48	0.00	0.89	0.88	0.01
9.62	0.29	0.29	0.00	0.49	0.49	0.00	0.90	0.89	0.01
9.63	0.29	0.30	-0.01	0.50	0.49	0.01	0.91	0.90	0.01
9.65	0.30	0.30	0.00	0.50	0.50	0.00	0.92	0.91	0.01
9.67	0.30	0.30	0.00	0.50	0.50	0.00	0.93	0.92	0.01
9.68	0.30	0.30	0.00	0.50	0.50	0.00	0.93	0.92	0.01
9.70	0.30	0.30	0.00	0.50	0.50	0.00	0.93	0.92	0.01
9.72	0.30	0.31	-0.01	0.51	0.51	0.00	0.94	0.93	0.01
9.73	0.30	0.31	-0.01	0.52	0.51	0.01	0.95	0.94	0.01
9.75	0.31	0.31	0.00	0.52	0.52	0.00	0.96	0.95	0.01
9.77	0.31	0.32	-0.01	0.53	0.52	0.01	0.97	0.96	0.01
9.78	0.31	0.32	-0.01	0.53	0.52	0.01	0.97	0.96	0.01
9.80	0.31	0.32	-0.01	0.53	0.52	0.01	0.97	0.96	0.01
9.82	0.31	0.32	-0.01	0.53	0.53	0.00	0.97	0.96	0.01
9.83	0.32	0.32	0.00	0.54	0.53	0.01	0.99	0.98	0.01
9.85	0.32	0.33	-0.01	0.54	0.54	0.00	1.00	0.99	0.01
9.87	0.32	0.33	-0.01	0.55	0.54	0.01	1.00	0.99	0.01
9.88	0.32	0.33	-0.01	0.55	0.54	0.01	1.00	0.99	0.01
9.90	0.32	0.33	-0.01	0.55	0.54	0.01	1.00	0.99	0.01
9.92	0.33	0.33	0.00	0.55	0.55	0.00	1.01	1.00	0.01
9.93	0.33	0.33	0.00	0.56	0.56	0.00	1.02	1.01	0.01
9.95	0.33	0.34	-0.01	0.56	0.56	0.00	1.03	1.02	0.01
9.97	0.34	0.34	0.00	0.57	0.56	0.01	1.04	1.03	0.01
9.98	0.34	0.34	0.00	0.57	0.56	0.01	1.04	1.03	0.01
10.00	0.34	0.34	0.00	0.57	0.56	0.01	1.04	1.03	0.01
10.02	0.34	0.34	0.00	0.57	0.57	0.00	1.05	1.04	0.01
10.03	0.34	0.35	-0.01	0.58	0.58	0.00	1.06	1.05	0.01
10.05	0.35	0.35	0.00	0.59	0.58	0.01	1.07	1.06	0.01
10.07	0.35	0.35	0.00	0.59	0.58	0.01	1.08	1.07	0.01
10.08	0.35	0.35	0.00	0.59	0.59	0.00	1.08	1.07	0.01
10.10	0.35	0.35	0.00	0.59	0.59	0.00	1.08	1.07	0.01
10.12	0.35	0.36	-0.01	0.59	0.59	0.00	1.09	1.07	0.02
10.13	0.36	0.36	0.00	0.60	0.60	0.00	1.10	1.09	0.01
10.15	0.36	0.36	0.00	0.61	0.60	0.01	1.11	1.10	0.01
10.17	0.36	0.36	0.00	0.61	0.60	0.01	1.11	1.10	0.01
10.18	0.36	0.37	-0.01	0.61	0.61	0.00	1.11	1.10	0.01
10.20	0.36	0.37	-0.01	0.61	0.61	0.00	1.12	1.10	0.02
10.22	0.37	0.37	0.00	0.61	0.61	0.00	1.12	1.11	0.01
10.23	0.37	0.37	0.00	0.62	0.62	0.00	1.14	1.13	0.01
10.25	0.37	0.38	-0.01	0.63	0.62	0.01	1.15	1.14	0.01
10.27	0.38	0.38	0.00	0.63	0.63	0.00	1.15	1.14	0.01
10.28	0.38	0.38	0.00	0.63	0.63	0.00	1.15	1.14	0.01
10.30	0.38	0.38	0.00	0.63	0.63	0.00	1.16	1.14	0.02
10.32	0.38	0.38	0.00	0.64	0.63	0.01	1.16	1.15	0.01
10.33	0.38	0.39	-0.01	0.64	0.64	0.00	1.18	1.16	0.02
10.35	0.39	0.39	0.00	0.65	0.64	0.01	1.19	1.17	0.02
10.37	0.39	0.39	0.00	0.65	0.65	0.00	1.19	1.18	0.01
10.38	0.39	0.39	0.00	0.65	0.65	0.00	1.19	1.18	0.01
10.40	0.39	0.39	0.00	0.65	0.65	0.00	1.19	1.18	0.01
10.42	0.39	0.39	0.00	0.66	0.65	0.01	1.20	1.19	0.01
10.43	0.40	0.40	0.00	0.67	0.66	0.01	1.21	1.20	0.01
10.45	0.40	0.40	0.00	0.67	0.67	0.00	1.22	1.21	0.01
10.47	0.40	0.41	-0.01	0.67	0.67	0.00	1.23	1.22	0.01
10.48	0.40	0.41	-0.01	0.68	0.67	0.01	1.23	1.22	0.01
10.50	0.40	0.41	-0.01	0.68	0.67	0.01	1.23	1.22	0.01
10.52	0.41	0.41	0.00	0.69	0.68	0.01	1.26	1.24	0.02
10.53	0.43	0.43	0.00	0.72	0.71	0.01	1.31	1.29	0.02
10.55	0.44	0.44	0.00	0.74	0.73	0.01	1.34	1.33	0.01
10.57	0.45	0.45	0.00	0.75	0.74	0.01	1.36	1.34	0.02
10.58	0.45	0.45	0.00	0.75	0.74	0.01	1.36	1.35	0.01
10.60	0.45	0.45	0.00	0.75	0.74	0.01	1.36	1.35	0.01
10.62	0.46	0.46	0.00	0.76	0.76	0.00	1.39	1.37	0.02
10.63	0.48	0.48	0.00	0.79	0.79	0.00	1.44	1.42	0.02
10.65	0.49	0.49	0.00	0.81	0.80	0.01	1.47	1.46	0.01
10.67	0.49	0.49	0.00	0.82	0.82	0.00	1.49	1.48	0.01
10.68	0.49	0.50	-0.01	0.82	0.82	0.00	1.50	1.48	0.02
10.70	0.49	0.50	-0.01	0.82	0.82	0.00	1.50	1.48	0.02
10.72	0.50	0.50	0.00	0.84	0.83	0.01	1.52	1.51	0.01
10.73	0.52	0.52	0.00	0.87	0.86	0.01	1.57	1.56	0.01
10.75	0.53	0.53	0.00	0.89	0.88	0.01	1.61	1.59	0.02
10.77	0.54	0.54	0.00	0.90	0.89	0.01	1.63	1.61	0.02
10.78	0.54	0.54	0.00	0.90	0.89	0.01	1.63	1.61	0.02
10.80	0.54	0.54	0.00	0.90	0.89	0.01	1.63	1.62	0.01
10.82	0.55	0.55	0.00	0.92	0.91	0.01	1.66	1.64	0.02
10.83	0.57	0.57	0.00	0.94	0.93	0.01	1.71	1.69	0.02

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
9.30	0.32	0.32	0.00	0.54	0.54	0.00	1.11	1.10	0.01
9.32	0.32	0.32	0.00	0.55	0.54	0.01	1.12	1.11	0.01
9.33	0.32	0.33	-0.01	0.56	0.55	0.01	1.14	1.13	0.01
9.35	0.33	0.33	0.00	0.56	0.56	0.00	1.15	1.14	0.01
9.37	0.33	0.33	0.00	0.57	0.56	0.01	1.16	1.15	0.01
9.38	0.33	0.33	0.00	0.57	0.56	0.01	1.16	1.15	0.01
9.40	0.33	0.33	0.00	0.57	0.56	0.01	1.16	1.15	0.01
9.42	0.33	0.34	-0.01	0.57	0.57	0.00	1.17	1.16	0.01
9.43	0.34	0.34	0.00	0.58	0.58	0.00	1.19	1.18	0.01
9.45	0.34	0.35	-0.01	0.59	0.59	0.00	1.20	1.19	0.01
9.47	0.35	0.35	0.00	0.59	0.59	0.00	1.21	1.20	0.01
9.48	0.35	0.35	0.00	0.59	0.59	0.00	1.21	1.20	0.01
9.50	0.35	0.35	0.00	0.59	0.59	0.00	1.21	1.20	0.01
9.52	0.35	0.35	0.00	0.60	0.59	0.01	1.22	1.21	0.01
9.53	0.36	0.36	0.00	0.61	0.60	0.01	1.24	1.23	0.01
9.55	0.36	0.36	0.00	0.62	0.61	0.01	1.26	1.24	0.02
9.57	0.36	0.36	0.00	0.62	0.61	0.01	1.26	1.25	0.01
9.58	0.36	0.36	0.00	0.62	0.62	0.00	1.26	1.25	0.01
9.60	0.36	0.36	0.00	0.62	0.62	0.00	1.27	1.25	0.02
9.62	0.37	0.37	0.00	0.63	0.62	0.01	1.27	1.26	0.01
9.63	0.37	0.37	0.00	0.63	0.63	0.00	1.29	1.28	0.01
9.65	0.38	0.38	0.00	0.64	0.64	0.00	1.31	1.29	0.02
9.67	0.38	0.38	0.00	0.64	0.64	0.00	1.31	1.30	0.01
9.68	0.38	0.38	0.00	0.65	0.64	0.01	1.31	1.30	0.01
9.70	0.38	0.38	0.00	0.65	0.64	0.01	1.31	1.30	0.01
9.72	0.38	0.38	0.00	0.65	0.65	0.00	1.33	1.31	0.02
9.73	0.39	0.39	0.00	0.66	0.66	0.00	1.35	1.33	0.02
9.75	0.39	0.39	0.00	0.67	0.66	0.01	1.36	1.35	0.01
9.77	0.39	0.40	-0.01	0.67	0.67	0.00	1.37	1.36	0.01
9.78	0.39	0.40	-0.01	0.67	0.67	0.00	1.37	1.36	0.01
9.80	0.40	0.40	0.00	0.67	0.67	0.00	1.37	1.36	0.01
9.82	0.40	0.40	0.00	0.68	0.67	0.01	1.38	1.37	0.01
9.83	0.40	0.41	-0.01	0.69	0.68	0.01	1.40	1.39	0.01
9.85	0.41	0.41	0.00	0.69	0.69	0.00	1.41	1.40	0.01
9.87	0.41	0.41	0.00	0.70	0.69	0.01	1.42	1.40	0.02
9.88	0.41	0.41	0.00	0.70	0.69	0.01	1.42	1.41	0.01
9.90	0.41	0.41	0.00	0.70	0.69	0.01	1.42	1.41	0.01
9.92	0.41	0.42	-0.01	0.70	0.70	0.00	1.43	1.42	0.01
9.93	0.42	0.42	0.00	0.71	0.71	0.00	1.45	1.44	0.01
9.95	0.42	0.43	-0.01	0.72	0.71	0.01	1.46	1.45	0.01
9.97	0.43	0.43	0.00	0.73	0.72	0.01	1.47	1.46	0.01
9.98	0.43	0.43	0.00	0.73	0.72	0.01	1.47	1.46	0.01
10.00	0.43	0.43	0.00	0.73	0.72	0.01	1.47	1.46	0.01
10.02	0.43	0.43	0.00	0.73	0.72	0.01	1.48	1.47	0.01
10.03	0.44	0.44	0.00	0.74	0.73	0.01	1.50	1.49	0.01
10.05	0.44	0.44	0.00	0.75	0.74	0.01	1.52	1.50	0.02
10.07	0.44	0.44	0.00	0.75	0.74	0.01	1.52	1.51	0.01
10.08	0.44	0.44	0.00	0.75	0.75	0.00	1.52	1.51	0.01
10.10	0.44	0.44	0.00	0.75	0.75	0.00	1.53	1.51	0.02
10.12	0.45	0.45	0.00	0.76	0.75	0.01	1.54	1.52	0.02
10.13	0.45	0.45	0.00	0.77	0.76	0.01	1.55	1.54	0.01
10.15	0.46	0.46	0.00	0.77	0.77	0.00	1.57	1.55	0.02
10.17	0.46	0.46	0.00	0.78	0.77	0.01	1.57	1.56	0.01
10.18	0.46	0.46	0.00	0.78	0.77	0.01	1.57	1.56	0.01
10.20	0.46	0.46	0.00	0.78	0.77	0.01	1.58	1.56	0.02
10.22	0.46	0.46	0.00	0.78	0.78	0.00	1.59	1.57	0.02
10.23	0.47	0.47	0.00	0.80	0.79	0.01	1.61	1.59	0.02
10.25	0.47	0.47	0.00	0.80	0.79	0.01	1.62	1.61	0.01
10.27	0.48	0.48	0.00	0.81	0.80	0.01	1.63	1.62	0.01
10.28	0.48	0.48	0.00	0.81	0.80	0.01	1.63	1.62	0.01
10.30	0.48	0.48	0.00	0.81	0.80	0.01	1.63	1.62	0.01
10.32	0.48	0.48	0.00	0.81	0.80	0.01	1.64	1.63	0.01
10.33	0.49	0.49	0.00	0.82	0.81	0.01	1.66	1.65	0.01
10.35	0.49	0.49	0.00	0.83	0.82	0.01	1.67	1.66	0.01
10.37	0.49	0.49	0.00	0.83	0.82	0.01	1.68	1.67	0.01
10.38	0.49	0.49	0.00	0.83	0.82	0.01	1.68	1.67	0.01
10.40	0.49	0.49	0.00	0.83	0.83	0.00	1.68	1.67	0.01
10.42	0.50	0.50	0.00	0.84	0.83	0.01	1.69	1.68	0.01
10.43	0.50	0.50	0.00	0.85	0.84	0.01	1.71	1.70	0.01
10.45	0.51	0.51	0.00	0.86	0.85	0.01	1.73	1.71	0.02
10.47	0.51	0.51	0.00	0.86	0.85	0.01	1.73	1.72	0.01
10.48	0.51	0.51	0.00	0.86	0.85	0.01	1.73	1.72	0.01
10.50	0.51	0.51	0.00	0.86	0.85	0.01	1.74	1.72	0.02
10.52	0.52	0.52	0.00	0.88	0.87	0.01	1.77	1.76	0.01
10.53	0.54	0.54	0.00	0.92	0.91	0.01	1.84	1.82	0.02
10.55	0.56	0.56	0.00	0.94	0.93	0.01	1.89	1.87	0.02
10.57	0.57	0.56	0.01	0.95	0.94	0.01	1.92	1.90	0.02
10.58	0.57	0.56	0.01	0.95	0.94	0.01	1.92	1.90	0.02
10.60	0.57	0.57	0.00	0.95	0.94	0.01	1.92	1.90	0.02
10.62	0.58	0.58	0.00	0.97	0.96	0.01	1.96	1.94	0.02
10.63	0.60	0.60	0.00	1.01	1.00	0.01	2.03	2.01	0.02
10.65	0.62	0.61	0.01	1.03	1.02	0.01	2.08	2.06	0.02
10.67	0.62	0.62	0.00	1.05	1.04	0.01	2.10	2.08	0.02
10.68	0.62	0.62	0.00	1.05	1.04	0.01	2.11	2.09	0.02
10.70	0.62	0.62	0.00	1.05	1.04	0.01	2.11	2.09	0.02
10.72	0.64	0.63	0.01	1.07	1.06	0.01	2.15	2.13	0.02
10.73	0.66	0.65	0.01	1.10	1.09	0.01	2.22	2.20	0.02
10.75	0.67	0.67	0.00	1.13	1.12	0.01	2.27	2.25	0.02
10.77	0.68	0.68	0.00	1.14	1.13	0.01	2.29	2.27	0.02
10.78	0.68	0.68	0.00	1.14	1.13	0.01	2.29	2.28	0.01
10.80	0.68	0.68	0.00	1.15	1.13	0.02	2.30	2.28	0.02
10.82	0.69	0.69	0.00	1.16	1.15	0.01	2.33	2.32	0.01
10.83	0.72	0.71	0.01	1.20	1.19	0.01	2.41	2.39	0.02

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
10.85	0.58	0.58	0.00	0.96	0.95	0.01	1.74	1.73	0.01
10.87	0.59	0.59	0.00	0.97	0.96	0.01	1.76	1.75	0.01
10.88	0.59	0.59	0.00	0.98	0.97	0.01	1.77	1.75	0.02
10.90	0.59	0.59	0.00	0.98	0.97	0.01	1.77	1.75	0.02
10.92	0.60	0.60	0.00	0.99	0.98	0.01	1.79	1.78	0.01
10.93	0.61	0.61	0.00	1.02	1.01	0.01	1.84	1.83	0.01
10.95	0.63	0.63	0.00	1.04	1.03	0.01	1.88	1.86	0.02
10.97	0.63	0.63	0.00	1.05	1.04	0.01	1.90	1.88	0.02
10.98	0.63	0.63	0.00	1.05	1.04	0.01	1.90	1.88	0.02
11.00	0.63	0.63	0.00	1.05	1.04	0.01	1.90	1.88	0.02
11.02	0.65	0.65	0.00	1.08	1.07	0.01	1.95	1.93	0.02
11.03	0.68	0.68	0.00	1.13	1.12	0.01	2.04	2.02	0.02
11.05	0.70	0.70	0.00	1.16	1.15	0.01	2.10	2.08	0.02
11.07	0.72	0.71	0.01	1.18	1.17	0.01	2.13	2.11	0.02
11.08	0.72	0.71	0.01	1.18	1.17	0.01	2.14	2.12	0.02
11.10	0.72	0.72	0.00	1.19	1.17	0.02	2.14	2.12	0.02
11.12	0.73	0.73	0.00	1.21	1.20	0.01	2.19	2.16	0.03
11.13	0.76	0.76	0.00	1.26	1.25	0.01	2.28	2.25	0.03
11.15	0.79	0.78	0.01	1.30	1.28	0.02	2.34	2.31	0.03
11.17	0.80	0.79	0.01	1.32	1.30	0.02	2.37	2.35	0.02
11.18	0.80	0.80	0.00	1.32	1.30	0.02	2.37	2.35	0.02
11.20	0.80	0.80	0.00	1.32	1.31	0.01	2.38	2.35	0.03
11.22	0.82	0.81	0.01	1.35	1.33	0.02	2.42	2.40	0.02
11.23	0.85	0.84	0.01	1.40	1.38	0.02	2.51	2.49	0.02
11.25	0.87	0.87	0.00	1.43	1.42	0.01	2.58	2.55	0.03
11.27	0.88	0.88	0.00	1.45	1.43	0.02	2.61	2.58	0.03
11.28	0.88	0.88	0.00	1.45	1.44	0.01	2.61	2.59	0.02
11.30	0.88	0.88	0.00	1.45	1.44	0.01	2.62	2.59	0.03
11.32	0.90	0.90	0.00	1.48	1.47	0.01	2.66	2.64	0.02
11.33	0.93	0.93	0.00	1.53	1.52	0.01	2.76	2.73	0.03
11.35	0.95	0.95	0.00	1.57	1.55	0.02	2.82	2.79	0.03
11.37	0.97	0.96	0.01	1.59	1.57	0.02	2.85	2.82	0.03
11.38	0.97	0.96	0.01	1.59	1.57	0.02	2.86	2.83	0.03
11.40	0.97	0.96	0.01	1.59	1.57	0.02	2.86	2.83	0.03
11.42	0.99	0.98	0.01	1.62	1.60	0.02	2.91	2.88	0.03
11.43	1.02	1.01	0.01	1.67	1.65	0.02	3.00	2.97	0.03
11.45	1.04	1.03	0.01	1.71	1.69	0.02	3.06	3.03	0.03
11.47	1.05	1.04	0.01	1.72	1.70	0.02	3.09	3.06	0.03
11.48	1.05	1.05	0.00	1.73	1.71	0.02	3.10	3.07	0.03
11.50	1.05	1.05	0.00	1.73	1.71	0.02	3.10	3.07	0.03
11.52	1.13	1.12	0.01	1.85	1.82	0.03	3.31	3.28	0.03
11.53	1.27	1.26	0.01	2.08	2.05	0.03	3.71	3.67	0.04
11.55	1.37	1.36	0.01	2.24	2.21	0.03	3.99	3.94	0.05
11.57	1.42	1.41	0.01	2.32	2.29	0.03	4.14	4.10	0.04
11.58	1.43	1.41	0.02	2.33	2.30	0.03	4.16	4.12	0.04
11.60	1.43	1.42	0.01	2.33	2.31	0.02	4.17	4.13	0.04
11.62	1.45	1.43	0.02	2.36	2.33	0.03	4.22	4.19	0.03
11.63	1.48	1.47	0.01	2.41	2.39	0.02	4.32	4.28	0.04
11.65	1.50	1.49	0.01	2.45	2.42	0.03	4.38	4.34	0.04
11.67	1.51	1.50	0.01	2.47	2.44	0.03	4.41	4.38	0.03
11.68	1.52	1.50	0.02	2.47	2.45	0.02	4.42	4.39	0.03
11.70	1.52	1.50	0.02	2.48	2.45	0.03	4.42	4.39	0.03
11.72	1.63	1.61	0.02	2.65	2.62	0.03	4.74	4.70	0.04
11.73	1.85	1.83	0.02	3.01	2.97	0.04	5.36	5.30	0.06
11.75	2.00	1.98	0.02	3.25	3.21	0.04	5.78	5.71	0.07
11.77	2.08	2.06	0.02	3.38	3.33	0.05	6.01	5.95	0.06
11.78	2.09	2.07	0.02	3.39	3.35	0.04	6.04	5.98	0.06
11.80	2.09	2.07	0.02	3.40	3.36	0.04	6.06	6.01	0.05
11.82	2.26	2.23	0.03	3.67	3.62	0.05	6.52	6.46	0.06
11.83	2.58	2.55	0.03	4.18	4.12	0.06	7.42	7.33	0.09
11.85	2.80	2.76	0.04	4.53	4.46	0.07	8.03	7.94	0.09
11.87	2.92	2.88	0.04	4.72	4.65	0.07	8.37	8.28	0.09
11.88	2.93	2.89	0.04	4.74	4.68	0.06	8.41	8.33	0.08
11.90	2.93	2.90	0.03	4.75	4.70	0.05	8.44	8.37	0.07
11.92	3.36	3.31	0.05	5.43	5.35	0.08	9.61	9.52	0.09
11.93	4.20	4.13	0.07	6.76	6.65	0.11	11.94	11.77	0.17
11.95	4.77	4.69	0.08	7.67	7.54	0.13	13.53	13.34	0.19
11.97	5.07	4.99	0.08	8.16	8.03	0.13	14.40	14.21	0.19
11.98	5.09	5.02	0.07	8.20	8.09	0.11	14.49	14.34	0.15
12.00	5.12	5.05	0.07	8.25	8.14	0.11	14.58	14.46	0.12
12.02	5.81	5.72	0.09	9.34	9.21	0.13	16.48	16.32	0.16
12.03	7.16	7.04	0.12	11.48	11.30	0.18	20.21	19.95	0.26
12.05	8.08	7.95	0.13	12.95	12.74	0.21	22.77	22.47	0.30
12.07	8.58	8.44	0.14	13.74	13.53	0.21	24.17	23.89	0.28
12.08	8.63	8.50	0.13	13.83	13.65	0.18	24.34	24.11	0.23
12.10	8.68	8.56	0.12	13.91	13.75	0.16	24.48	24.31	0.17
12.12	7.62	7.54	0.08	12.25	12.16	0.09	21.60	21.57	0.03
12.13	5.47	5.46	0.01	8.85	8.89	-0.04	15.71	15.90	-0.19
12.15	4.00	4.03	-0.03	6.53	6.64	-0.11	11.66	11.97	-0.31
12.17	3.24	3.27	-0.03	5.29	5.40	-0.11	9.46	9.76	-0.30
12.18	3.19	3.21	-0.02	5.18	5.26	-0.08	9.23	9.44	-0.21
12.20	3.15	3.16	-0.01	5.10	5.13	-0.03	9.03	9.17	-0.14
12.22	2.96	2.95	0.01	4.77	4.79	-0.02	8.43	8.52	-0.09
12.23	2.61	2.60	0.01	4.20	4.21	-0.01	7.42	7.49	-0.07
12.25	2.37	2.36	0.01	3.81	3.82	-0.01	6.73	6.79	-0.06
12.27	2.25	2.24	0.01	3.61	3.61	0.00	6.36	6.39	-0.03
12.28	2.24	2.23	0.01	3.59	3.59	0.00	6.32	6.35	-0.03
12.30	2.23	2.22	0.01	3.58	3.57	0.01	6.29	6.30	-0.01
12.32	2.11	2.10	0.01	3.39	3.38	0.01	5.96	5.97	-0.01
12.33	1.88	1.87	0.01	3.02	3.02	0.00	5.31	5.34	-0.03
12.35	1.73	1.72	0.01	2.77	2.77	0.00	4.88	4.91	-0.03
12.37	1.64	1.64	0.00	2.63	2.64	-0.01	4.64	4.67	-0.03
12.38	1.64	1.63	0.01	2.62	2.62	0.00	4.61	4.63	-0.02

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
10.85	0.73	0.73	0.00	1.23	1.21	0.02	2.45	2.43	0.02
10.87	0.74	0.74	0.00	1.24	1.22	0.02	2.48	2.46	0.02
10.88	0.74	0.74	0.00	1.24	1.23	0.01	2.48	2.47	0.01
10.90	0.74	0.74	0.00	1.24	1.23	0.01	2.49	2.47	0.02
10.92	0.75	0.75	0.00	1.26	1.25	0.01	2.52	2.51	0.01
10.93	0.77	0.77	0.00	1.30	1.28	0.02	2.59	2.57	0.02
10.95	0.79	0.78	0.01	1.32	1.31	0.01	2.64	2.62	0.02
10.97	0.80	0.79	0.01	1.33	1.32	0.01	2.67	2.65	0.02
10.98	0.80	0.79	0.01	1.34	1.32	0.02	2.67	2.65	0.02
11.00	0.80	0.79	0.01	1.34	1.32	0.02	2.67	2.66	0.01
11.02	0.82	0.81	0.01	1.37	1.35	0.02	2.74	2.72	0.02
11.03	0.86	0.85	0.01	1.43	1.42	0.01	2.86	2.84	0.02
11.05	0.89	0.88	0.01	1.48	1.46	0.02	2.95	2.93	0.02
11.07	0.90	0.89	0.01	1.50	1.48	0.02	3.00	2.97	0.03
11.08	0.90	0.89	0.01	1.50	1.49	0.01	3.00	2.98	0.02
11.10	0.90	0.90	0.00	1.51	1.49	0.02	3.01	2.99	0.02
11.12	0.92	0.92	0.00	1.54	1.52	0.02	3.07	3.05	0.02
11.13	0.96	0.95	0.01	1.60	1.58	0.02	3.20	3.17	0.03
11.15	0.99	0.98	0.01	1.65	1.63	0.02	3.28	3.26	0.02
11.17	1.00	0.99	0.01	1.67	1.65	0.02	3.33	3.30	0.03
11.18	1.00	1.00	0.00	1.67	1.65	0.02	3.33	3.31	0.02
11.20	1.00	1.00	0.00	1.67	1.66	0.01	3.34	3.32	0.02
11.22	1.03	1.02	0.01	1.71	1.69	0.02	3.40	3.38	0.02
11.23	1.06	1.06	0.00	1.77	1.75	0.02	3.53	3.50	0.03
11.25	1.09	1.08	0.01	1.82	1.79	0.03	3.62	3.59	0.03
11.27	1.11	1.10	0.01	1.84	1.82	0.02	3.66	3.64	0.02
11.28	1.11	1.10	0.01	1.84	1.82	0.02	3.67	3.64	0.03
11.30	1.11	1.10	0.01	1.84	1.82	0.02	3.67	3.65	0.02
11.32	1.13	1.12	0.01	1.88	1.86	0.02	3.74	3.72	0.02
11.33	1.17	1.16	0.01	1.94	1.92	0.02	3.86	3.84	0.02
11.35	1.20	1.19	0.01	1.99	1.96	0.03	3.95	3.92	0.03
11.37	1.21	1.20	0.01	2.01	1.99	0.02	4.00	3.97	0.03
11.38	1.21	1.20	0.01	2.01	1.99	0.02	4.00	3.98	0.02
11.40	1.21	1.20	0.01	2.02	1.99	0.03	4.01	3.99	0.02
11.42	1.24	1.22	0.02	2.05	2.03	0.02	4.07	4.05	0.02
11.43	1.28	1.26	0.02	2.11	2.09	0.02	4.20	4.17	0.03
11.45	1.30	1.29	0.01	2.16	2.13	0.03	4.29	4.26	0.03
11.47	1.32	1.30	0.02	2.18	2.16	0.02	4.33	4.31	0.02
11.48	1.32	1.31	0.01	2.19	2.16	0.03	4.34	4.31	0.03
11.50	1.32	1.31	0.01	2.19	2.17	0.02	4.34	4.32	0.02
11.52	1.41	1.40	0.01	2.34	2.31	0.03	4.63	4.60	0.03
11.53	1.59	1.57	0.02	2.63	2.59	0.04	5.20	5.15	0.05
11.55	1.71	1.69	0.02	2.83	2.79	0.04	5.58	5.53	0.05
11.57	1.78	1.76	0.02	2.93	2.89	0.04	5.80	5.74	0.06
11.58	1.78	1.76	0.02	2.94	2.91	0.03	5.82	5.77	0.05
11.60	1.79	1.77	0.02	2.95	2.92	0.03	5.84	5.80	0.04
11.62	1.81	1.79	0.02	2.99	2.95	0.04	5.91	5.88	0.03
11.63	1.85	1.83	0.02	3.05	3.02	0.03	6.04	6.01	0.03
11.65	1.88	1.85	0.03	3.10	3.06	0.04	6.13	6.09	0.04
11.67	1.89	1.87	0.02	3.12	3.09	0.03	6.18	6.15	0.03
11.68	1.89	1.87	0.02	3.12	3.09	0.03	6.18	6.15	0.03
11.70	1.90	1.88	0.02	3.13	3.10	0.03	6.19	6.16	0.03
11.72	2.03	2.01	0.02	3.35	3.32	0.03	6.62	6.58	0.04
11.73	2.31	2.28	0.03	3.80	3.75	0.05	7.48	7.42	0.06
11.75	2.50	2.46	0.04	4.10	4.05	0.05	8.07	8.00	0.07
11.77	2.60	2.56	0.04	4.26	4.21	0.05	8.40	8.32	0.08
11.78	2.60	2.57	0.03	4.28	4.23	0.05	8.43	8.37	0.06
11.80	2.61	2.58	0.03	4.29	4.25	0.04	8.46	8.41	0.05
11.82	2.81	2.78	0.03	4.62	4.57	0.05	9.10	9.04	0.06
11.83	3.21	3.17	0.04	5.27	5.20	0.07	10.35	10.26	0.09
11.85	3.48	3.43	0.05	5.71	5.63	0.08	11.21	11.10	0.11
11.87	3.63	3.58	0.05	5.94	5.87	0.07	11.67	11.57	0.10
11.88	3.64	3.59	0.05	5.97	5.90	0.07	11.73	11.65	0.08
11.90	3.65	3.61	0.04	5.99	5.93	0.06	11.77	11.71	0.06
11.92	4.17	4.12	0.05	6.83	6.75	0.08	13.40	13.30	0.10
11.93	5.21	5.12	0.09	8.50	8.37	0.13	16.62	16.43	0.19
11.95	5.91	5.82	0.09	9.64	9.48	0.16	18.84	18.60	0.24
11.97	6.29	6.19	0.10	10.25	10.10	0.15	20.04	19.83	0.21
11.98	6.32	6.23	0.09	10.32	10.18	0.14	20.18	20.02	0.16
12.00	6.35	6.27	0.08	10.37	10.26	0.11	20.31	20.18	0.13
12.02	7.20	7.10	0.10	11.74	11.59	0.15	22.94	22.77	0.17
12.03	8.87	8.72	0.15	14.41	14.20	0.21	28.10	27.79	0.31
12.05	10.01	9.84	0.17	16.25	16.00	0.25	31.65	31.29	0.36
12.07	10.62	10.45	0.17	17.24	17.01	0.23	33.60	33.27	0.33
12.08	10.69	10.53	0.16	17.36	17.16	0.20	33.83	33.59	0.24
12.10	10.74	10.60	0.14	17.46	17.29	0.17	34.04	33.87	0.17
12.12	9.45	9.36	0.09	15.39	15.32	0.07	30.06	30.09	-0.03
12.13	6.80	6.81	-0.01	11.15	11.24	-0.09	21.91	22.26	-0.35
12.15	5.00	5.06	-0.06	8.25	8.42	-0.17	16.30	16.80	-0.50
12.17	4.05	4.11	-0.06	6.69	6.86	-0.17	13.24	13.71	-0.47
12.18	3.98	4.01	-0.03	6.54	6.66	-0.12	12.88	13.22	-0.34
12.20	3.92	3.93	-0.01	6.42	6.49	-0.07	12.59	12.82	-0.23
12.22	3.67	3.67	0.00	6.00	6.04	-0.04	11.74	11.90	-0.16
12.23	3.24	3.24	0.00	5.28	5.31	-0.03	10.33	10.46	-0.13
12.25	2.94	2.94	0.00	4.79	4.82	-0.03	9.36	9.46	-0.10
12.27	2.78	2.78	0.00	4.53	4.54	-0.01	8.84	8.91	-0.07
12.28	2.77	2.76	0.01	4.51	4.51	0.00	8.79	8.84	-0.05
12.30	2.76	2.75	0.01	4.49	4.49	0.00	8.74	8.78	-0.04
12.32	2.62	2.60	0.02	4.25	4.25	0.00	8.28	8.31	-0.03
12.33	2.33	2.33	0.00	3.79	3.80	-0.01	7.39	7.44	-0.05
12.35	2.14	2.13	0.01	3.48	3.49	-0.01	6.78	6.84	-0.06
12.37	2.03	2.03	0.00	3.31	3.32	-0.01	6.44	6.50	-0.06
12.38	2.03	2.02	0.01	3.29	3.29	0.00	6.41	6.45	-0.04

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
12.40	1.63	1.62	0.01	2.61	2.61	0.00	4.59	4.60	-0.01
12.42	1.61	1.60	0.01	2.58	2.57	0.01	4.53	4.54	-0.01
12.43	1.58	1.57	0.01	2.53	2.52	0.01	4.44	4.44	0.00
12.45	1.56	1.55	0.01	2.49	2.48	0.01	4.37	4.37	0.00
12.47	1.55	1.53	0.02	2.47	2.46	0.01	4.33	4.33	0.00
12.48	1.55	1.53	0.02	2.47	2.46	0.01	4.33	4.33	0.00
12.50	1.55	1.53	0.02	2.47	2.46	0.01	4.33	4.33	0.00
12.52	1.47	1.46	0.01	2.35	2.34	0.01	4.12	4.13	-0.01
12.53	1.32	1.31	0.01	2.11	2.11	0.00	3.71	3.73	-0.02
12.55	1.22	1.21	0.01	1.95	1.95	0.00	3.43	3.45	-0.02
12.57	1.16	1.16	0.00	1.86	1.86	0.00	3.27	3.29	-0.02
12.58	1.16	1.15	0.01	1.85	1.85	0.00	3.26	3.27	-0.01
12.60	1.16	1.15	0.01	1.85	1.84	0.01	3.24	3.25	-0.01
12.62	1.14	1.13	0.01	1.82	1.81	0.01	3.19	3.19	0.00
12.63	1.10	1.10	0.00	1.76	1.76	0.00	3.09	3.09	0.00
12.65	1.08	1.07	0.01	1.72	1.72	0.00	3.02	3.03	-0.01
12.67	1.07	1.06	0.01	1.70	1.70	0.00	2.99	2.99	0.00
12.68	1.07	1.06	0.01	1.70	1.69	0.01	2.98	2.98	0.00
12.70	1.07	1.06	0.01	1.70	1.69	0.01	2.98	2.98	0.00
12.72	1.05	1.04	0.01	1.67	1.67	0.00	2.93	2.93	0.00
12.73	1.02	1.01	0.01	1.62	1.62	0.00	2.84	2.84	0.00
12.75	0.99	0.99	0.00	1.58	1.58	0.00	2.78	2.78	0.00
12.77	0.98	0.97	0.01	1.57	1.56	0.01	2.74	2.75	-0.01
12.78	0.98	0.97	0.01	1.56	1.56	0.00	2.74	2.74	0.00
12.80	0.98	0.97	0.01	1.56	1.56	0.00	2.74	2.74	0.00
12.82	0.96	0.96	0.00	1.54	1.53	0.01	2.69	2.69	0.00
12.83	0.93	0.92	0.01	1.48	1.48	0.00	2.60	2.60	0.00
12.85	0.91	0.90	0.01	1.45	1.44	0.01	2.53	2.54	-0.01
12.87	0.90	0.89	0.01	1.43	1.42	0.01	2.50	2.50	0.00
12.88	0.89	0.89	0.00	1.43	1.42	0.01	2.50	2.50	0.00
12.90	0.89	0.89	0.00	1.42	1.42	0.00	2.49	2.49	0.00
12.92	0.88	0.87	0.01	1.40	1.39	0.01	2.45	2.45	0.00
12.93	0.84	0.84	0.00	1.34	1.34	0.00	2.36	2.36	0.00
12.95	0.82	0.82	0.00	1.31	1.31	0.00	2.29	2.30	-0.01
12.97	0.81	0.80	0.01	1.29	1.29	0.00	2.26	2.26	0.00
12.98	0.81	0.80	0.01	1.29	1.28	0.01	2.26	2.26	0.00
13.00	0.81	0.80	0.01	1.29	1.28	0.01	2.25	2.25	0.00
13.02	0.79	0.78	0.01	1.26	1.26	0.00	2.20	2.21	-0.01
13.03	0.76	0.75	0.01	1.21	1.20	0.01	2.11	2.12	-0.01
13.05	0.73	0.73	0.00	1.17	1.17	0.00	2.05	2.05	0.00
13.07	0.72	0.72	0.00	1.15	1.15	0.00	2.01	2.02	-0.01
13.08	0.72	0.72	0.00	1.15	1.14	0.01	2.01	2.01	0.00
13.10	0.72	0.71	0.01	1.15	1.14	0.01	2.01	2.01	0.00
13.12	0.71	0.70	0.01	1.13	1.13	0.00	1.98	1.98	0.00
13.13	0.69	0.69	0.00	1.10	1.10	0.00	1.93	1.93	0.00
13.15	0.68	0.67	0.01	1.08	1.08	0.00	1.89	1.89	0.00
13.17	0.67	0.67	0.00	1.07	1.07	0.00	1.87	1.87	0.00
13.18	0.67	0.67	0.00	1.07	1.06	0.01	1.87	1.87	0.00
13.20	0.67	0.67	0.00	1.07	1.06	0.01	1.87	1.87	0.00
13.22	0.66	0.66	0.00	1.05	1.05	0.00	1.84	1.84	0.00
13.23	0.64	0.64	0.00	1.02	1.02	0.00	1.79	1.79	0.00
13.25	0.63	0.62	0.01	1.00	1.00	0.00	1.75	1.76	-0.01
13.27	0.62	0.62	0.00	0.99	0.99	0.00	1.73	1.74	-0.01
13.28	0.62	0.62	0.00	0.99	0.99	0.00	1.73	1.73	0.00
13.30	0.62	0.62	0.00	0.99	0.99	0.00	1.73	1.73	0.00
13.32	0.61	0.61	0.00	0.97	0.97	0.00	1.70	1.70	0.00
13.33	0.59	0.59	0.00	0.94	0.94	0.00	1.65	1.65	0.00
13.35	0.58	0.58	0.00	0.92	0.92	0.00	1.61	1.62	-0.01
13.37	0.57	0.57	0.00	0.91	0.91	0.00	1.59	1.60	-0.01
13.38	0.57	0.57	0.00	0.91	0.91	0.00	1.59	1.59	0.00
13.40	0.57	0.57	0.00	0.91	0.91	0.00	1.59	1.59	0.00
13.42	0.56	0.56	0.00	0.89	0.89	0.00	1.56	1.56	0.00
13.43	0.54	0.54	0.00	0.86	0.86	0.00	1.51	1.51	0.00
13.45	0.53	0.53	0.00	0.84	0.84	0.00	1.48	1.48	0.00
13.47	0.52	0.52	0.00	0.83	0.83	0.00	1.46	1.46	0.00
13.48	0.52	0.52	0.00	0.83	0.83	0.00	1.45	1.46	-0.01
13.50	0.52	0.52	0.00	0.83	0.83	0.00	1.45	1.45	0.00
13.52	0.51	0.51	0.00	0.81	0.81	0.00	1.42	1.43	-0.01
13.53	0.49	0.49	0.00	0.78	0.78	0.00	1.37	1.38	-0.01
13.55	0.48	0.48	0.00	0.76	0.76	0.00	1.34	1.34	0.00
13.57	0.47	0.47	0.00	0.75	0.75	0.00	1.32	1.32	0.00
13.58	0.47	0.47	0.00	0.75	0.75	0.00	1.31	1.32	-0.01
13.60	0.47	0.47	0.00	0.75	0.75	0.00	1.31	1.31	0.00
13.62	0.47	0.47	0.00	0.75	0.74	0.01	1.30	1.31	-0.01
13.63	0.46	0.46	0.00	0.74	0.74	0.00	1.29	1.29	0.00
13.65	0.46	0.46	0.00	0.73	0.73	0.00	1.28	1.28	0.00
13.67	0.46	0.45	0.01	0.73	0.73	0.00	1.27	1.27	0.00
13.68	0.46	0.45	0.01	0.73	0.73	0.00	1.27	1.27	0.00
13.70	0.46	0.45	0.01	0.73	0.73	0.00	1.27	1.27	0.00
13.72	0.46	0.45	0.01	0.72	0.72	0.00	1.27	1.27	0.00
13.73	0.45	0.45	0.00	0.72	0.71	0.01	1.25	1.25	0.00
13.75	0.45	0.44	0.01	0.71	0.71	0.00	1.24	1.24	0.00
13.77	0.45	0.44	0.01	0.71	0.71	0.00	1.24	1.24	0.00
13.78	0.45	0.44	0.01	0.71	0.71	0.00	1.24	1.24	0.00
13.80	0.45	0.44	0.01	0.71	0.71	0.00	1.24	1.24	0.00
13.82	0.44	0.44	0.00	0.70	0.70	0.00	1.23	1.23	0.00
13.83	0.44	0.43	0.01	0.69	0.69	0.00	1.21	1.21	0.00
13.85	0.43	0.43	0.00	0.69	0.69	0.00	1.20	1.20	0.00
13.87	0.43	0.43	0.00	0.69	0.68	0.01	1.20	1.20	0.00
13.88	0.43	0.43	0.00	0.68	0.68	0.00	1.20	1.20	0.00
13.90	0.43	0.43	0.00	0.68	0.68	0.00	1.20	1.20	0.00
13.92	0.43	0.43	0.00	0.68	0.68	0.00	1.19	1.19	0.00
13.93	0.42	0.42	0.00	0.67	0.67	0.00	1.18	1.18	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
12.40	2.02	2.01	0.01	3.28	3.28	0.00	6.38	6.40	-0.02
12.42	2.00	1.98	0.02	3.24	3.23	0.01	6.29	6.31	-0.02
12.43	1.96	1.94	0.02	3.17	3.16	0.01	6.16	6.18	-0.02
12.45	1.93	1.91	0.02	3.12	3.12	0.00	6.07	6.08	-0.01
12.47	1.91	1.90	0.01	3.10	3.09	0.01	6.02	6.03	-0.01
12.48	1.91	1.90	0.01	3.10	3.09	0.01	6.01	6.02	-0.01
12.50	1.91	1.90	0.01	3.09	3.08	0.01	6.01	6.02	-0.01
12.52	1.82	1.81	0.01	2.95	2.94	0.01	5.72	5.74	-0.02
12.53	1.63	1.63	0.00	2.65	2.65	0.00	5.15	5.19	-0.04
12.55	1.51	1.50	0.01	2.45	2.45	0.00	4.76	4.80	-0.04
12.57	1.44	1.44	0.00	2.34	2.34	0.00	4.55	4.58	-0.03
12.58	1.43	1.43	0.00	2.33	2.33	0.00	4.52	4.55	-0.03
12.60	1.43	1.42	0.01	2.32	2.32	0.00	4.50	4.52	-0.02
12.62	1.41	1.40	0.01	2.28	2.27	0.01	4.42	4.44	-0.02
12.63	1.36	1.36	0.00	2.21	2.21	0.00	4.29	4.30	-0.01
12.65	1.33	1.33	0.00	2.16	2.16	0.00	4.19	4.21	-0.02
12.67	1.32	1.31	0.01	2.13	2.13	0.00	4.14	4.15	-0.01
12.68	1.32	1.31	0.01	2.13	2.13	0.00	4.14	4.15	-0.01
12.70	1.32	1.31	0.01	2.13	2.13	0.00	4.13	4.14	-0.01
12.72	1.30	1.29	0.01	2.10	2.09	0.01	4.07	4.08	-0.01
12.73	1.26	1.25	0.01	2.03	2.03	0.00	3.94	3.95	-0.01
12.75	1.23	1.22	0.01	1.99	1.98	0.01	3.85	3.87	-0.02
12.77	1.21	1.21	0.00	1.96	1.96	0.00	3.81	3.82	-0.01
12.78	1.21	1.20	0.01	1.96	1.96	0.00	3.80	3.81	-0.01
12.80	1.21	1.20	0.01	1.96	1.95	0.01	3.80	3.80	0.00
12.82	1.19	1.18	0.01	1.92	1.92	0.00	3.73	3.74	-0.01
12.83	1.15	1.14	0.01	1.86	1.86	0.00	3.60	3.61	-0.01
12.85	1.12	1.11	0.01	1.81	1.81	0.00	3.52	3.53	-0.01
12.87	1.11	1.10	0.01	1.79	1.79	0.00	3.47	3.48	-0.01
12.88	1.10	1.10	0.00	1.79	1.78	0.01	3.46	3.47	-0.01
12.90	1.10	1.10	0.00	1.78	1.78	0.00	3.46	3.47	-0.01
12.92	1.08	1.08	0.00	1.75	1.75	0.00	3.39	3.40	-0.01
12.93	1.04	1.04	0.00	1.68	1.68	0.00	3.27	3.28	-0.01
12.95	1.01	1.01	0.00	1.64	1.64	0.00	3.18	3.19	-0.01
12.97	1.00	0.99	0.01	1.62	1.61	0.01	3.13	3.14	-0.01
12.98	1.00	0.99	0.01	1.61	1.61	0.00	3.13	3.14	-0.01
13.00	1.00	0.99	0.01	1.61	1.61	0.00	3.12	3.13	-0.01
13.02	0.98	0.97	0.01	1.58	1.57	0.01	3.06	3.06	0.00
13.03	0.93	0.93	0.00	1.51	1.51	0.00	2.93	2.94	-0.01
13.05	0.91	0.90	0.01	1.46	1.46	0.00	2.84	2.85	-0.01
13.07	0.89	0.89	0.00	1.44	1.44	0.00	2.79	2.80	-0.01
13.08	0.89	0.89	0.00	1.44	1.44	0.00	2.79	2.80	-0.01
13.10	0.89	0.88	0.01	1.44	1.43	0.01	2.78	2.79	-0.01
13.12	0.88	0.87	0.01	1.42	1.41	0.01	2.74	2.75	-0.01
13.13	0.85	0.85	0.00	1.38	1.38	0.00	2.67	2.68	-0.01
13.15	0.84	0.83	0.01	1.35	1.35	0.00	2.62	2.63	-0.01
13.17	0.83	0.82	0.01	1.34	1.34	0.00	2.59	2.60	-0.01
13.18	0.83	0.82	0.01	1.34	1.34	0.00	2.59	2.60	-0.01
13.20	0.83	0.82	0.01	1.34	1.33	0.01	2.59	2.59	0.00
13.22	0.82	0.81	0.01	1.32	1.31	0.01	2.55	2.56	-0.01
13.23	0.79	0.79	0.00	1.28	1.28	0.00	2.48	2.49	-0.01
13.25	0.78	0.77	0.01	1.25	1.25	0.00	2.43	2.44	-0.01
13.27	0.77	0.76	0.01	1.24	1.24	0.00	2.40	2.41	-0.01
13.28	0.77	0.76	0.01	1.24	1.24	0.00	2.40	2.41	-0.01
13.30	0.77	0.76	0.01	1.24	1.24	0.00	2.40	2.40	0.00
13.32	0.75	0.75	0.00	1.22	1.22	0.00	2.36	2.37	-0.01
13.33	0.73	0.73	0.00	1.18	1.18	0.00	2.29	2.29	0.00
13.35	0.72	0.71	0.01	1.16	1.15	0.01	2.24	2.25	-0.01
13.37	0.71	0.70	0.01	1.14	1.14	0.00	2.21	2.22	-0.01
13.38	0.71	0.70	0.01	1.14	1.14	0.00	2.21	2.21	0.00
13.40	0.71	0.70	0.01	1.14	1.14	0.00	2.20	2.21	-0.01
13.42	0.69	0.69	0.00	1.12	1.12	0.00	2.17	2.17	0.00
13.43	0.67	0.67	0.00	1.08	1.08	0.00	2.10	2.10	0.00
13.45	0.65	0.65	0.00	1.06	1.06	0.00	2.05	2.05	0.00
13.47	0.65	0.64	0.01	1.04	1.04	0.00	2.02	2.03	-0.01
13.48	0.64	0.64	0.00	1.04	1.04	0.00	2.02	2.02	0.00
13.50	0.64	0.64	0.00	1.04	1.04	0.00	2.01	2.02	-0.01
13.52	0.63	0.63	0.00	1.02	1.02	0.00	1.97	1.98	-0.01
13.53	0.61	0.61	0.00	0.98	0.98	0.00	1.90	1.91	-0.01
13.55	0.59	0.59	0.00	0.96	0.96	0.00	1.85	1.86	-0.01
13.57	0.58	0.58	0.00	0.94	0.94	0.00	1.83	1.83	0.00
13.58	0.58	0.58	0.00	0.94	0.94	0.00	1.82	1.83	-0.01
13.60	0.58	0.58	0.00	0.94	0.94	0.00	1.82	1.82	0.00
13.62	0.58	0.58	0.00	0.93	0.93	0.00	1.81	1.81	0.00
13.63	0.57	0.57	0.00	0.92	0.92	0.00	1.79	1.79	0.00
13.65	0.57	0.56	0.01	0.92	0.91	0.01	1.77	1.78	-0.01
13.67	0.57	0.56	0.01	0.91	0.91	0.00	1.76	1.77	-0.01
13.68	0.57	0.56	0.01	0.91	0.91	0.00	1.76	1.77	-0.01
13.70	0.56	0.56	0.00	0.91	0.91	0.00	1.76	1.77	-0.01
13.72	0.56	0.56	0.00	0.91	0.90	0.01	1.75	1.76	-0.01
13.73	0.56	0.55	0.01	0.90	0.89	0.01	1.73	1.74	-0.01
13.75	0.55	0.55	0.00	0.89	0.89	0.00	1.72	1.73	-0.01
13.77	0.55	0.55	0.00	0.89	0.88	0.01	1.71	1.72	-0.01
13.78	0.55	0.55	0.00	0.89	0.88	0.01	1.71	1.72	-0.01
13.80	0.55	0.55	0.00	0.89	0.88	0.01	1.71	1.72	-0.01
13.82	0.55	0.54	0.01	0.88	0.88	0.00	1.70	1.71	-0.01
13.83	0.54	0.54	0.00	0.87	0.87	0.00	1.68	1.68	0.00
13.85	0.53	0.53	0.00	0.86	0.86	0.00	1.67	1.67	0.00
13.87	0.53	0.53	0.00	0.86	0.86	0.00	1.66	1.66	0.00
13.88	0.53	0.53	0.00	0.86	0.86	0.00	1.66	1.66	0.00
13.90	0.53	0.53	0.00	0.86	0.85	0.01	1.66	1.66	0.00
13.92	0.53	0.53	0.00	0.85	0.85	0.00	1.65	1.65	0.00
13.93	0.52	0.52	0.00	0.84	0.84	0.00	1.63	1.63	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
13.95	0.42	0.42	0.00	0.67	0.67	0.00	1.17	1.17	0.00
13.97	0.42	0.42	0.00	0.66	0.66	0.00	1.16	1.16	0.00
13.98	0.42	0.42	0.00	0.66	0.66	0.00	1.16	1.16	0.00
14.00	0.42	0.41	0.01	0.66	0.66	0.00	1.16	1.16	0.00
14.02	0.42	0.41	0.01	0.66	0.66	0.00	1.15	1.15	0.00
14.03	0.41	0.41	0.00	0.65	0.65	0.00	1.14	1.14	0.00
14.05	0.41	0.40	0.01	0.65	0.64	0.01	1.13	1.13	0.00
14.07	0.40	0.40	0.00	0.64	0.64	0.00	1.12	1.12	0.00
14.08	0.40	0.40	0.00	0.64	0.64	0.00	1.12	1.12	0.00
14.10	0.40	0.40	0.00	0.64	0.64	0.00	1.12	1.12	0.00
14.12	0.40	0.40	0.00	0.64	0.64	0.00	1.11	1.11	0.00
14.13	0.40	0.39	0.01	0.63	0.63	0.00	1.10	1.10	0.00
14.15	0.39	0.39	0.00	0.62	0.62	0.00	1.09	1.09	0.00
14.17	0.39	0.39	0.00	0.62	0.62	0.00	1.08	1.09	-0.01
14.18	0.39	0.39	0.00	0.62	0.62	0.00	1.08	1.08	0.00
14.20	0.39	0.39	0.00	0.62	0.62	0.00	1.08	1.08	0.00
14.22	0.39	0.39	0.00	0.62	0.61	0.01	1.08	1.08	0.00
14.23	0.38	0.38	0.00	0.61	0.61	0.00	1.06	1.06	0.00
14.25	0.38	0.38	0.00	0.60	0.60	0.00	1.05	1.05	0.00
14.27	0.38	0.38	0.00	0.60	0.60	0.00	1.05	1.05	0.00
14.28	0.38	0.38	0.00	0.60	0.60	0.00	1.05	1.05	0.00
14.30	0.38	0.38	0.00	0.60	0.60	0.00	1.05	1.05	0.00
14.32	0.37	0.37	0.00	0.60	0.59	0.01	1.04	1.04	0.00
14.33	0.37	0.37	0.00	0.59	0.59	0.00	1.02	1.03	-0.01
14.35	0.37	0.36	0.01	0.58	0.58	0.00	1.01	1.02	-0.01
14.37	0.36	0.36	0.00	0.58	0.58	0.00	1.01	1.01	0.00
14.38	0.36	0.36	0.00	0.58	0.58	0.00	1.01	1.01	0.00
14.40	0.36	0.36	0.00	0.58	0.58	0.00	1.01	1.01	0.00
14.42	0.36	0.36	0.00	0.57	0.57	0.00	1.00	1.00	0.00
14.43	0.36	0.35	0.01	0.57	0.56	0.01	0.99	0.99	0.00
14.45	0.35	0.35	0.00	0.56	0.56	0.00	0.98	0.98	0.00
14.47	0.35	0.35	0.00	0.56	0.56	0.00	0.97	0.97	0.00
14.48	0.35	0.35	0.00	0.56	0.55	0.01	0.97	0.97	0.00
14.50	0.35	0.35	0.00	0.56	0.55	0.01	0.97	0.97	0.00
14.52	0.35	0.35	0.00	0.55	0.55	0.00	0.96	0.96	0.00
14.53	0.34	0.34	0.00	0.54	0.54	0.00	0.95	0.95	0.00
14.55	0.34	0.34	0.00	0.54	0.54	0.00	0.94	0.94	0.00
14.57	0.34	0.33	0.01	0.53	0.53	0.00	0.93	0.93	0.00
14.58	0.34	0.33	0.01	0.53	0.53	0.00	0.93	0.93	0.00
14.60	0.34	0.33	0.01	0.53	0.53	0.00	0.93	0.93	0.00
14.62	0.33	0.33	0.00	0.53	0.53	0.00	0.93	0.93	0.00
14.63	0.33	0.33	0.00	0.52	0.52	0.00	0.91	0.91	0.00
14.65	0.33	0.32	0.01	0.52	0.51	0.01	0.90	0.90	0.00
14.67	0.32	0.32	0.00	0.51	0.51	0.00	0.90	0.90	0.00
14.68	0.32	0.32	0.00	0.51	0.51	0.00	0.89	0.90	-0.01
14.70	0.32	0.32	0.00	0.51	0.51	0.00	0.89	0.90	-0.01
14.72	0.32	0.32	0.00	0.51	0.51	0.00	0.89	0.89	0.00
14.73	0.32	0.31	0.01	0.50	0.50	0.00	0.87	0.87	0.00
14.75	0.31	0.31	0.00	0.50	0.49	0.01	0.86	0.87	-0.01
14.77	0.31	0.31	0.00	0.49	0.49	0.00	0.86	0.86	0.00
14.78	0.31	0.31	0.00	0.49	0.49	0.00	0.86	0.86	0.00
14.80	0.31	0.31	0.00	0.49	0.49	0.00	0.86	0.86	0.00
14.82	0.31	0.30	0.01	0.49	0.49	0.00	0.85	0.85	0.00
14.83	0.30	0.30	0.00	0.48	0.48	0.00	0.84	0.84	0.00
14.85	0.30	0.30	0.00	0.47	0.47	0.00	0.82	0.83	-0.01
14.87	0.30	0.29	0.01	0.47	0.47	0.00	0.82	0.82	0.00
14.88	0.30	0.29	0.01	0.47	0.47	0.00	0.82	0.82	0.00
14.90	0.30	0.29	0.01	0.47	0.47	0.00	0.82	0.82	0.00
14.92	0.29	0.29	0.00	0.46	0.46	0.00	0.81	0.81	0.00
14.93	0.29	0.29	0.00	0.46	0.46	0.00	0.80	0.80	0.00
14.95	0.28	0.28	0.00	0.45	0.45	0.00	0.79	0.79	0.00
14.97	0.28	0.28	0.00	0.45	0.45	0.00	0.78	0.78	0.00
14.98	0.28	0.28	0.00	0.45	0.45	0.00	0.78	0.78	0.00
15.00	0.28	0.28	0.00	0.45	0.45	0.00	0.78	0.78	0.00
15.02	0.28	0.28	0.00	0.44	0.44	0.00	0.77	0.77	0.00
15.03	0.27	0.27	0.00	0.44	0.43	0.01	0.76	0.76	0.00
15.05	0.27	0.27	0.00	0.43	0.43	0.00	0.75	0.75	0.00
15.07	0.27	0.27	0.00	0.43	0.43	0.00	0.74	0.75	-0.01
15.08	0.27	0.27	0.00	0.43	0.43	0.00	0.74	0.74	0.00
15.10	0.27	0.27	0.00	0.43	0.42	0.01	0.74	0.74	0.00
15.12	0.27	0.27	0.00	0.42	0.42	0.00	0.74	0.74	0.00
15.13	0.27	0.26	0.01	0.42	0.42	0.00	0.74	0.74	0.00
15.15	0.26	0.26	0.00	0.42	0.42	0.00	0.73	0.73	0.00
15.17	0.26	0.26	0.00	0.42	0.42	0.00	0.73	0.73	0.00
15.18	0.26	0.26	0.00	0.42	0.42	0.00	0.73	0.73	0.00
15.20	0.26	0.26	0.00	0.42	0.42	0.00	0.73	0.73	0.00
15.22	0.26	0.26	0.00	0.42	0.42	0.00	0.73	0.73	0.00
15.23	0.26	0.26	0.00	0.42	0.41	0.01	0.73	0.73	0.00
15.25	0.26	0.26	0.00	0.41	0.41	0.00	0.72	0.72	0.00
15.27	0.26	0.26	0.00	0.41	0.41	0.00	0.72	0.72	0.00
15.28	0.26	0.26	0.00	0.41	0.41	0.00	0.72	0.72	0.00
15.30	0.26	0.26	0.00	0.41	0.41	0.00	0.72	0.72	0.00
15.32	0.26	0.26	0.00	0.41	0.41	0.00	0.72	0.72	0.00
15.33	0.26	0.26	0.00	0.41	0.41	0.00	0.72	0.72	0.00
15.35	0.26	0.26	0.00	0.41	0.41	0.00	0.71	0.71	0.00
15.37	0.26	0.26	0.00	0.41	0.41	0.00	0.71	0.71	0.00
15.38	0.26	0.26	0.00	0.41	0.41	0.00	0.71	0.71	0.00
15.40	0.26	0.26	0.00	0.41	0.41	0.00	0.71	0.71	0.00
15.42	0.26	0.25	0.01	0.41	0.41	0.00	0.71	0.71	0.00
15.43	0.25	0.25	0.00	0.40	0.40	0.00	0.70	0.71	-0.01
15.45	0.25	0.25	0.00	0.40	0.40	0.00	0.70	0.70	0.00
15.47	0.25	0.25	0.00	0.40	0.40	0.00	0.70	0.70	0.00
15.48	0.25	0.25	0.00	0.40	0.40	0.00	0.70	0.70	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
13.95	0.52	0.52	0.00	0.84	0.83	0.01	1.62	1.62	0.00
13.97	0.52	0.51	0.01	0.83	0.83	0.00	1.61	1.61	0.00
13.98	0.52	0.51	0.01	0.83	0.83	0.00	1.61	1.61	0.00
14.00	0.52	0.51	0.01	0.83	0.83	0.00	1.61	1.61	0.00
14.02	0.51	0.51	0.00	0.83	0.82	0.01	1.60	1.60	0.00
14.03	0.51	0.50	0.01	0.82	0.81	0.01	1.58	1.58	0.00
14.05	0.50	0.50	0.00	0.81	0.81	0.00	1.56	1.57	-0.01
14.07	0.50	0.50	0.00	0.80	0.80	0.00	1.56	1.56	0.00
14.08	0.50	0.50	0.00	0.80	0.80	0.00	1.56	1.56	0.00
14.10	0.50	0.50	0.00	0.80	0.80	0.00	1.55	1.56	-0.01
14.12	0.50	0.49	0.01	0.80	0.80	0.00	1.54	1.55	-0.01
14.13	0.49	0.49	0.00	0.79	0.79	0.00	1.52	1.53	-0.01
14.15	0.48	0.48	0.00	0.78	0.78	0.00	1.51	1.51	0.00
14.17	0.48	0.48	0.00	0.78	0.78	0.00	1.50	1.51	-0.01
14.18	0.48	0.48	0.00	0.78	0.78	0.00	1.50	1.51	-0.01
14.20	0.48	0.48	0.00	0.78	0.77	0.01	1.50	1.50	0.00
14.22	0.48	0.48	0.00	0.77	0.77	0.00	1.49	1.49	0.00
14.23	0.47	0.47	0.00	0.76	0.76	0.00	1.47	1.48	-0.01
14.25	0.47	0.47	0.00	0.75	0.75	0.00	1.46	1.46	0.00
14.27	0.47	0.46	0.01	0.75	0.75	0.00	1.45	1.46	-0.01
14.28	0.47	0.46	0.01	0.75	0.75	0.00	1.45	1.45	0.00
14.30	0.47	0.46	0.01	0.75	0.75	0.00	1.45	1.45	0.00
14.32	0.46	0.46	0.00	0.74	0.74	0.00	1.44	1.44	0.00
14.33	0.46	0.45	0.01	0.73	0.73	0.00	1.42	1.42	0.00
14.35	0.45	0.45	0.00	0.73	0.73	0.00	1.40	1.41	-0.01
14.37	0.45	0.45	0.00	0.72	0.72	0.00	1.40	1.40	0.00
14.38	0.45	0.45	0.00	0.72	0.72	0.00	1.40	1.40	0.00
14.40	0.45	0.45	0.00	0.72	0.72	0.00	1.40	1.40	0.00
14.42	0.44	0.44	0.00	0.72	0.72	0.00	1.39	1.39	0.00
14.43	0.44	0.44	0.00	0.71	0.71	0.00	1.37	1.37	0.00
14.45	0.43	0.43	0.00	0.70	0.70	0.00	1.35	1.36	-0.01
14.47	0.43	0.43	0.00	0.70	0.70	0.00	1.35	1.35	0.00
14.48	0.43	0.43	0.00	0.70	0.70	0.00	1.35	1.35	0.00
14.50	0.43	0.43	0.00	0.70	0.69	0.01	1.35	1.35	0.00
14.52	0.43	0.43	0.00	0.69	0.69	0.00	1.33	1.34	-0.01
14.53	0.42	0.42	0.00	0.68	0.68	0.00	1.31	1.32	-0.01
14.55	0.42	0.42	0.00	0.67	0.67	0.00	1.30	1.30	0.00
14.57	0.42	0.41	0.01	0.67	0.67	0.00	1.29	1.30	-0.01
14.58	0.42	0.41	0.01	0.67	0.67	0.00	1.29	1.30	-0.01
14.60	0.41	0.41	0.00	0.67	0.67	0.00	1.29	1.29	0.00
14.62	0.41	0.41	0.00	0.66	0.66	0.00	1.28	1.28	0.00
14.63	0.41	0.40	0.01	0.65	0.65	0.00	1.26	1.27	-0.01
14.65	0.40	0.40	0.00	0.65	0.64	0.01	1.25	1.25	0.00
14.67	0.40	0.40	0.00	0.64	0.64	0.00	1.24	1.24	0.00
14.68	0.40	0.40	0.00	0.64	0.64	0.00	1.24	1.24	0.00
14.70	0.40	0.40	0.00	0.64	0.64	0.00	1.24	1.24	0.00
14.72	0.39	0.39	0.00	0.64	0.64	0.00	1.23	1.23	0.00
14.73	0.39	0.39	0.00	0.63	0.63	0.00	1.21	1.21	0.00
14.75	0.38	0.38	0.00	0.62	0.62	0.00	1.20	1.20	0.00
14.77	0.38	0.38	0.00	0.62	0.62	0.00	1.19	1.19	0.00
14.78	0.38	0.38	0.00	0.62	0.61	0.01	1.19	1.19	0.00
14.80	0.38	0.38	0.00	0.62	0.61	0.01	1.19	1.19	0.00
14.82	0.38	0.38	0.00	0.61	0.61	0.00	1.18	1.18	0.00
14.83	0.37	0.37	0.00	0.60	0.60	0.00	1.16	1.16	0.00
14.85	0.37	0.37	0.00	0.59	0.59	0.00	1.14	1.15	-0.01
14.87	0.36	0.36	0.00	0.59	0.59	0.00	1.13	1.14	-0.01
14.88	0.36	0.36	0.00	0.59	0.59	0.00	1.13	1.14	-0.01
14.90	0.36	0.36	0.00	0.59	0.59	0.00	1.13	1.14	-0.01
14.92	0.36	0.36	0.00	0.58	0.58	0.00	1.12	1.13	-0.01
14.93	0.35	0.35	0.00	0.57	0.57	0.00	1.10	1.11	-0.01
14.95	0.35	0.35	0.00	0.56	0.56	0.00	1.09	1.09	0.00
14.97	0.35	0.35	0.00	0.56	0.56	0.00	1.08	1.09	-0.01
14.98	0.35	0.35	0.00	0.56	0.56	0.00	1.08	1.09	-0.01
15.00	0.35	0.35	0.00	0.56	0.56	0.00	1.08	1.09	-0.01
15.02	0.34	0.34	0.00	0.55	0.55	0.00	1.07	1.07	0.00
15.03	0.34	0.34	0.00	0.54	0.54	0.00	1.05	1.06	-0.01
15.05	0.33	0.33	0.00	0.54	0.54	0.00	1.04	1.04	0.00
15.07	0.33	0.33	0.00	0.53	0.53	0.00	1.03	1.03	0.00
15.08	0.33	0.33	0.00	0.53	0.53	0.00	1.03	1.03	0.00
15.10	0.33	0.33	0.00	0.53	0.53	0.00	1.03	1.03	0.00
15.12	0.33	0.33	0.00	0.53	0.53	0.00	1.03	1.03	0.00
15.13	0.33	0.33	0.00	0.53	0.53	0.00	1.02	1.02	0.00
15.15	0.33	0.32	0.01	0.53	0.52	0.01	1.02	1.02	0.00
15.17	0.33	0.32	0.01	0.52	0.52	0.00	1.01	1.01	0.00
15.18	0.33	0.32	0.01	0.52	0.52	0.00	1.01	1.01	0.00
15.20	0.33	0.32	0.01	0.52	0.52	0.00	1.01	1.01	0.00
15.22	0.32	0.32	0.00	0.52	0.52	0.00	1.01	1.01	0.00
15.23	0.32	0.32	0.00	0.52	0.52	0.00	1.00	1.01	-0.01
15.25	0.32	0.32	0.00	0.52	0.52	0.00	1.00	1.00	0.00
15.27	0.32	0.32	0.00	0.52	0.52	0.00	1.00	1.00	0.00
15.28	0.32	0.32	0.00	0.52	0.52	0.00	1.00	1.00	0.00
15.30	0.32	0.32	0.00	0.52	0.52	0.00	1.00	1.00	0.00
15.32	0.32	0.32	0.00	0.52	0.51	0.01	1.00	1.00	0.00
15.33	0.32	0.32	0.00	0.51	0.51	0.00	0.99	0.99	0.00
15.35	0.32	0.32	0.00	0.51	0.51	0.00	0.99	0.99	0.00
15.37	0.32	0.32	0.00	0.51	0.51	0.00	0.99	0.99	0.00
15.38	0.32	0.32	0.00	0.51	0.51	0.00	0.99	0.99	0.00
15.40	0.32	0.32	0.00	0.51	0.51	0.00	0.99	0.99	0.00
15.42	0.32	0.31	0.01	0.51	0.51	0.00	0.98	0.98	0.00
15.43	0.31	0.31	0.00	0.51	0.50	0.01	0.98	0.98	0.00
15.45	0.31	0.31	0.00	0.50	0.50	0.00	0.97	0.97	0.00
15.47	0.31	0.31	0.00	0.50	0.50	0.00	0.97	0.97	0.00
15.48	0.31	0.31	0.00	0.50	0.50	0.00	0.97	0.97	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
15.50	0.25	0.25	0.00	0.40	0.40	0.00	0.70	0.70	0.00
15.52	0.25	0.25	0.00	0.40	0.40	0.00	0.70	0.70	0.00
15.53	0.25	0.25	0.00	0.40	0.40	0.00	0.69	0.69	0.00
15.55	0.25	0.25	0.00	0.40	0.39	0.01	0.69	0.69	0.00
15.57	0.25	0.25	0.00	0.39	0.39	0.00	0.69	0.69	0.00
15.58	0.25	0.25	0.00	0.39	0.39	0.00	0.69	0.69	0.00
15.60	0.25	0.25	0.00	0.39	0.39	0.00	0.69	0.69	0.00
15.62	0.25	0.25	0.00	0.39	0.39	0.00	0.69	0.69	0.00
15.63	0.25	0.25	0.00	0.39	0.39	0.00	0.68	0.68	0.00
15.65	0.25	0.24	0.01	0.39	0.39	0.00	0.68	0.68	0.00
15.67	0.25	0.24	0.01	0.39	0.39	0.00	0.68	0.68	0.00
15.68	0.25	0.24	0.01	0.39	0.39	0.00	0.68	0.68	0.00
15.70	0.25	0.24	0.01	0.39	0.39	0.00	0.68	0.68	0.00
15.72	0.25	0.24	0.01	0.39	0.39	0.00	0.68	0.68	0.00
15.73	0.24	0.24	0.00	0.39	0.38	0.01	0.67	0.67	0.00
15.75	0.24	0.24	0.00	0.38	0.38	0.00	0.67	0.67	0.00
15.77	0.24	0.24	0.00	0.38	0.38	0.00	0.67	0.67	0.00
15.78	0.24	0.24	0.00	0.38	0.38	0.00	0.67	0.67	0.00
15.80	0.24	0.24	0.00	0.38	0.38	0.00	0.67	0.67	0.00
15.82	0.24	0.24	0.00	0.38	0.38	0.00	0.66	0.66	0.00
15.83	0.24	0.24	0.00	0.38	0.38	0.00	0.66	0.66	0.00
15.85	0.24	0.24	0.00	0.38	0.38	0.00	0.66	0.66	0.00
15.87	0.24	0.24	0.00	0.38	0.38	0.00	0.66	0.66	0.00
15.88	0.24	0.24	0.00	0.38	0.38	0.00	0.66	0.66	0.00
15.90	0.24	0.24	0.00	0.38	0.38	0.00	0.66	0.66	0.00
15.92	0.24	0.24	0.00	0.38	0.37	0.01	0.65	0.66	-0.01
15.93	0.24	0.23	0.01	0.37	0.37	0.00	0.65	0.65	0.00
15.95	0.23	0.23	0.00	0.37	0.37	0.00	0.65	0.65	0.00
15.97	0.23	0.23	0.00	0.37	0.37	0.00	0.65	0.65	0.00
15.98	0.23	0.23	0.00	0.37	0.37	0.00	0.65	0.65	0.00
16.00	0.23	0.23	0.00	0.37	0.37	0.00	0.65	0.65	0.00
16.02	0.23	0.23	0.00	0.37	0.37	0.00	0.65	0.65	0.00
16.03	0.23	0.23	0.00	0.37	0.37	0.00	0.64	0.64	0.00
16.05	0.23	0.23	0.00	0.37	0.37	0.00	0.64	0.64	0.00
16.07	0.23	0.23	0.00	0.37	0.36	0.01	0.64	0.64	0.00
16.08	0.23	0.23	0.00	0.37	0.36	0.01	0.64	0.64	0.00
16.10	0.23	0.23	0.00	0.37	0.36	0.01	0.64	0.64	0.00
16.12	0.23	0.23	0.00	0.36	0.36	0.00	0.63	0.64	-0.01
16.13	0.23	0.23	0.00	0.36	0.36	0.00	0.63	0.63	0.00
16.15	0.23	0.22	0.01	0.36	0.36	0.00	0.63	0.63	0.00
16.17	0.23	0.22	0.01	0.36	0.36	0.00	0.62	0.62	0.00
16.18	0.23	0.22	0.01	0.36	0.36	0.00	0.62	0.62	0.00
16.20	0.23	0.22	0.01	0.36	0.36	0.00	0.62	0.62	0.00
16.22	0.23	0.22	0.01	0.36	0.36	0.00	0.62	0.62	0.00
16.23	0.22	0.22	0.00	0.36	0.35	0.01	0.62	0.62	0.00
16.25	0.22	0.22	0.00	0.35	0.35	0.00	0.62	0.62	0.00
16.27	0.22	0.22	0.00	0.35	0.35	0.00	0.62	0.62	0.00
16.28	0.22	0.22	0.00	0.35	0.35	0.00	0.62	0.62	0.00
16.30	0.22	0.22	0.00	0.35	0.35	0.00	0.62	0.62	0.00
16.32	0.22	0.22	0.00	0.35	0.35	0.00	0.61	0.61	0.00
16.33	0.22	0.22	0.00	0.35	0.35	0.00	0.61	0.61	0.00
16.35	0.22	0.22	0.00	0.35	0.35	0.00	0.61	0.61	0.00
16.37	0.22	0.22	0.00	0.35	0.35	0.00	0.60	0.60	0.00
16.38	0.22	0.22	0.00	0.35	0.35	0.00	0.60	0.60	0.00
16.40	0.22	0.22	0.00	0.35	0.35	0.00	0.60	0.60	0.00
16.42	0.22	0.22	0.00	0.35	0.34	0.01	0.60	0.60	0.00
16.43	0.22	0.21	0.01	0.34	0.34	0.00	0.60	0.60	0.00
16.45	0.22	0.21	0.01	0.34	0.34	0.00	0.59	0.59	0.00
16.47	0.21	0.21	0.00	0.34	0.34	0.00	0.59	0.59	0.00
16.48	0.21	0.21	0.00	0.34	0.34	0.00	0.59	0.59	0.00
16.50	0.21	0.21	0.00	0.34	0.34	0.00	0.59	0.59	0.00
16.52	0.21	0.21	0.00	0.34	0.34	0.00	0.59	0.59	0.00
16.53	0.21	0.21	0.00	0.34	0.34	0.00	0.59	0.59	0.00
16.55	0.21	0.21	0.00	0.34	0.33	0.01	0.58	0.58	0.00
16.57	0.21	0.21	0.00	0.33	0.33	0.00	0.58	0.58	0.00
16.58	0.21	0.21	0.00	0.33	0.33	0.00	0.58	0.58	0.00
16.60	0.21	0.21	0.00	0.33	0.33	0.00	0.58	0.58	0.00
16.62	0.21	0.21	0.00	0.33	0.33	0.00	0.58	0.58	0.00
16.63	0.21	0.21	0.00	0.33	0.33	0.00	0.58	0.58	0.00
16.65	0.21	0.21	0.00	0.33	0.33	0.00	0.57	0.57	0.00
16.67	0.21	0.21	0.00	0.33	0.33	0.00	0.57	0.57	0.00
16.68	0.21	0.21	0.00	0.33	0.33	0.00	0.57	0.57	0.00
16.70	0.21	0.21	0.00	0.33	0.33	0.00	0.57	0.57	0.00
16.72	0.21	0.21	0.00	0.33	0.33	0.00	0.57	0.57	0.00
16.73	0.20	0.20	0.00	0.32	0.32	0.00	0.57	0.57	0.00
16.75	0.20	0.20	0.00	0.32	0.32	0.00	0.56	0.56	0.00
16.77	0.20	0.20	0.00	0.32	0.32	0.00	0.56	0.56	0.00
16.78	0.20	0.20	0.00	0.32	0.32	0.00	0.56	0.56	0.00
16.80	0.20	0.20	0.00	0.32	0.32	0.00	0.56	0.56	0.00
16.82	0.20	0.20	0.00	0.32	0.32	0.00	0.56	0.56	0.00
16.83	0.20	0.20	0.00	0.32	0.32	0.00	0.56	0.56	0.00
16.85	0.20	0.20	0.00	0.32	0.32	0.00	0.55	0.55	0.00
16.87	0.20	0.20	0.00	0.32	0.32	0.00	0.55	0.55	0.00
16.88	0.20	0.20	0.00	0.32	0.32	0.00	0.55	0.55	0.00
16.90	0.20	0.20	0.00	0.32	0.32	0.00	0.55	0.55	0.00
16.92	0.20	0.20	0.00	0.32	0.31	0.01	0.55	0.55	0.00
16.93	0.20	0.20	0.00	0.31	0.31	0.00	0.54	0.54	0.00
16.95	0.20	0.19	0.01	0.31	0.31	0.00	0.54	0.54	0.00
16.97	0.20	0.19	0.01	0.31	0.31	0.00	0.54	0.54	0.00
16.98	0.20	0.19	0.01	0.31	0.31	0.00	0.54	0.54	0.00
17.00	0.20	0.19	0.01	0.31	0.31	0.00	0.54	0.54	0.00
17.02	0.19	0.19	0.00	0.31	0.31	0.00	0.54	0.54	0.00
17.03	0.19	0.19	0.00	0.31	0.31	0.00	0.53	0.53	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
15.50	0.31	0.31	0.00	0.50	0.50	0.00	0.97	0.97	0.00
15.52	0.31	0.31	0.00	0.50	0.50	0.00	0.97	0.97	0.00
15.53	0.31	0.31	0.00	0.50	0.50	0.00	0.96	0.96	0.00
15.55	0.31	0.31	0.00	0.49	0.49	0.00	0.96	0.96	0.00
15.57	0.31	0.30	0.01	0.49	0.49	0.00	0.95	0.95	0.00
15.58	0.31	0.30	0.01	0.49	0.49	0.00	0.95	0.95	0.00
15.60	0.31	0.30	0.01	0.49	0.49	0.00	0.95	0.95	0.00
15.62	0.31	0.30	0.01	0.49	0.49	0.00	0.95	0.95	0.00
15.63	0.30	0.30	0.00	0.49	0.49	0.00	0.95	0.95	0.00
15.65	0.30	0.30	0.00	0.49	0.49	0.00	0.94	0.95	-0.01
15.67	0.30	0.30	0.00	0.49	0.49	0.00	0.94	0.94	0.00
15.68	0.30	0.30	0.00	0.49	0.49	0.00	0.94	0.94	0.00
15.70	0.30	0.30	0.00	0.49	0.49	0.00	0.94	0.94	0.00
15.72	0.30	0.30	0.00	0.49	0.49	0.00	0.94	0.94	0.00
15.73	0.30	0.30	0.00	0.48	0.48	0.00	0.93	0.93	0.00
15.75	0.30	0.30	0.00	0.48	0.48	0.00	0.93	0.93	0.00
15.77	0.30	0.30	0.00	0.48	0.48	0.00	0.92	0.93	-0.01
15.78	0.30	0.30	0.00	0.48	0.48	0.00	0.92	0.92	0.00
15.80	0.30	0.30	0.00	0.48	0.48	0.00	0.92	0.92	0.00
15.82	0.30	0.29	0.01	0.48	0.48	0.00	0.92	0.92	0.00
15.83	0.29	0.29	0.00	0.47	0.47	0.00	0.91	0.92	-0.01
15.85	0.29	0.29	0.00	0.47	0.47	0.00	0.91	0.91	0.00
15.87	0.29	0.29	0.00	0.47	0.47	0.00	0.91	0.91	0.00
15.88	0.29	0.29	0.00	0.47	0.47	0.00	0.91	0.91	0.00
15.90	0.29	0.29	0.00	0.47	0.47	0.00	0.91	0.91	0.00
15.92	0.29	0.29	0.00	0.47	0.47	0.00	0.91	0.91	0.00
15.93	0.29	0.29	0.00	0.47	0.47	0.00	0.90	0.90	0.00
15.95	0.29	0.29	0.00	0.47	0.46	0.01	0.90	0.90	0.00
15.97	0.29	0.29	0.00	0.46	0.46	0.00	0.90	0.90	0.00
15.98	0.29	0.29	0.00	0.46	0.46	0.00	0.90	0.90	0.00
16.00	0.29	0.29	0.00	0.46	0.46	0.00	0.90	0.90	0.00
16.02	0.29	0.29	0.00	0.46	0.46	0.00	0.89	0.90	-0.01
16.03	0.29	0.28	0.01	0.46	0.46	0.00	0.89	0.89	0.00
16.05	0.28	0.28	0.00	0.46	0.46	0.00	0.88	0.89	-0.01
16.07	0.28	0.28	0.00	0.46	0.46	0.00	0.88	0.88	0.00
16.08	0.28	0.28	0.00	0.46	0.46	0.00	0.88	0.88	0.00
16.10	0.28	0.28	0.00	0.46	0.46	0.00	0.88	0.88	0.00
16.12	0.28	0.28	0.00	0.46	0.45	0.01	0.88	0.88	0.00
16.13	0.28	0.28	0.00	0.45	0.45	0.00	0.87	0.87	0.00
16.15	0.28	0.28	0.00	0.45	0.45	0.00	0.87	0.87	0.00
16.17	0.28	0.28	0.00	0.45	0.45	0.00	0.86	0.87	-0.01
16.18	0.28	0.28	0.00	0.45	0.45	0.00	0.86	0.87	-0.01
16.20	0.28	0.28	0.00	0.45	0.45	0.00	0.86	0.86	0.00
16.22	0.28	0.28	0.00	0.45	0.45	0.00	0.86	0.86	0.00
16.23	0.28	0.27	0.01	0.44	0.44	0.00	0.86	0.86	0.00
16.25	0.28	0.27	0.01	0.44	0.44	0.00	0.85	0.86	-0.01
16.27	0.27	0.27	0.00	0.44	0.44	0.00	0.85	0.85	0.00
16.28	0.27	0.27	0.00	0.44	0.44	0.00	0.85	0.85	0.00
16.30	0.27	0.27	0.00	0.44	0.44	0.00	0.85	0.85	0.00
16.32	0.27	0.27	0.00	0.44	0.44	0.00	0.85	0.85	0.00
16.33	0.27	0.27	0.00	0.44	0.44	0.00	0.84	0.85	-0.01
16.35	0.27	0.27	0.00	0.43	0.43	0.00	0.84	0.84	0.00
16.37	0.27	0.27	0.00	0.43	0.43	0.00	0.84	0.84	0.00
16.38	0.27	0.27	0.00	0.43	0.43	0.00	0.84	0.84	0.00
16.40	0.27	0.27	0.00	0.43	0.43	0.00	0.84	0.84	0.00
16.42	0.27	0.27	0.00	0.43	0.43	0.00	0.83	0.83	0.00
16.43	0.27	0.26	0.01	0.43	0.43	0.00	0.83	0.83	0.00
16.45	0.26	0.26	0.00	0.43	0.43	0.00	0.82	0.82	0.00
16.47	0.26	0.26	0.00	0.42	0.42	0.00	0.82	0.82	0.00
16.48	0.26	0.26	0.00	0.42	0.42	0.00	0.82	0.82	0.00
16.50	0.26	0.26	0.00	0.42	0.42	0.00	0.82	0.82	0.00
16.52	0.26	0.26	0.00	0.42	0.42	0.00	0.82	0.82	0.00
16.53	0.26	0.26	0.00	0.42	0.42	0.00	0.81	0.81	0.00
16.55	0.26	0.26	0.00	0.42	0.42	0.00	0.81	0.81	0.00
16.57	0.26	0.26	0.00	0.42	0.42	0.00	0.81	0.81	0.00
16.58	0.26	0.26	0.00	0.42	0.42	0.00	0.81	0.81	0.00
16.60	0.26	0.26	0.00	0.42	0.42	0.00	0.81	0.81	0.00
16.62	0.26	0.26	0.00	0.42	0.42	0.00	0.80	0.81	-0.01
16.63	0.26	0.26	0.00	0.41	0.41	0.00	0.80	0.80	0.00
16.65	0.26	0.25	0.01	0.41	0.41	0.00	0.80	0.80	0.00
16.67	0.26	0.25	0.01	0.41	0.41	0.00	0.79	0.80	-0.01
16.68	0.26	0.25	0.01	0.41	0.41	0.00	0.79	0.79	0.00
16.70	0.26	0.25	0.01	0.41	0.41	0.00	0.79	0.79	0.00
16.72	0.25	0.25	0.00	0.41	0.41	0.00	0.79	0.79	0.00
16.73	0.25	0.25	0.00	0.41	0.41	0.00	0.78	0.79	-0.01
16.75	0.25	0.25	0.00	0.40	0.40	0.00	0.78	0.78	0.00
16.77	0.25	0.25	0.00	0.40	0.40	0.00	0.78	0.78	0.00
16.78	0.25	0.25	0.00	0.40	0.40	0.00	0.78	0.78	0.00
16.80	0.25	0.25	0.00	0.40	0.40	0.00	0.78	0.78	0.00
16.82	0.25	0.25	0.00	0.40	0.40	0.00	0.77	0.78	-0.01
16.83	0.25	0.25	0.00	0.40	0.40	0.00	0.77	0.77	0.00
16.85	0.25	0.25	0.00	0.40	0.40	0.00	0.77	0.77	0.00
16.87	0.25	0.24	0.01	0.40	0.40	0.00	0.76	0.77	-0.01
16.88	0.25	0.24	0.01	0.40	0.40	0.00	0.76	0.76	0.00
16.90	0.25	0.24	0.01	0.40	0.39	0.01	0.76	0.76	0.00
16.92	0.24	0.24	0.00	0.39	0.39	0.00	0.76	0.76	0.00
16.93	0.24	0.24	0.00	0.39	0.39	0.00	0.75	0.76	-0.01
16.95	0.24	0.24	0.00	0.39	0.39	0.00	0.75	0.75	0.00
16.97	0.24	0.24	0.00	0.39	0.39	0.00	0.75	0.75	0.00
16.98	0.24	0.24	0.00	0.39	0.39	0.00	0.75	0.75	0.00
17.00	0.24	0.24	0.00	0.39	0.39	0.00	0.75	0.75	0.00
17.02	0.24	0.24	0.00	0.39	0.39	0.00	0.74	0.75	-0.01
17.03	0.24	0.24	0.00	0.38	0.38	0.00	0.74	0.74	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
17.05	0.19	0.19	0.00	0.30	0.30	0.00	0.53	0.53	0.00
17.07	0.19	0.19	0.00	0.30	0.30	0.00	0.53	0.53	0.00
17.08	0.19	0.19	0.00	0.30	0.30	0.00	0.53	0.53	0.00
17.10	0.19	0.19	0.00	0.30	0.30	0.00	0.53	0.53	0.00
17.12	0.19	0.19	0.00	0.30	0.30	0.00	0.53	0.53	0.00
17.13	0.19	0.19	0.00	0.30	0.30	0.00	0.52	0.52	0.00
17.15	0.19	0.19	0.00	0.30	0.30	0.00	0.52	0.52	0.00
17.17	0.19	0.19	0.00	0.30	0.30	0.00	0.52	0.52	0.00
17.18	0.19	0.19	0.00	0.30	0.30	0.00	0.52	0.52	0.00
17.20	0.19	0.19	0.00	0.30	0.30	0.00	0.52	0.52	0.00
17.22	0.19	0.19	0.00	0.30	0.30	0.00	0.52	0.52	0.00
17.23	0.19	0.18	0.01	0.29	0.29	0.00	0.51	0.51	0.00
17.25	0.18	0.18	0.00	0.29	0.29	0.00	0.51	0.51	0.00
17.27	0.18	0.18	0.00	0.29	0.29	0.00	0.51	0.51	0.00
17.28	0.18	0.18	0.00	0.29	0.29	0.00	0.51	0.51	0.00
17.30	0.18	0.18	0.00	0.29	0.29	0.00	0.51	0.51	0.00
17.32	0.18	0.18	0.00	0.29	0.29	0.00	0.51	0.51	0.00
17.33	0.18	0.18	0.00	0.29	0.29	0.00	0.50	0.50	0.00
17.35	0.18	0.18	0.00	0.29	0.29	0.00	0.50	0.50	0.00
17.37	0.18	0.18	0.00	0.29	0.28	0.01	0.50	0.50	0.00
17.38	0.18	0.18	0.00	0.28	0.28	0.00	0.50	0.50	0.00
17.40	0.18	0.18	0.00	0.28	0.28	0.00	0.50	0.50	0.00
17.42	0.18	0.18	0.00	0.28	0.28	0.00	0.49	0.49	0.00
17.43	0.18	0.18	0.00	0.28	0.28	0.00	0.49	0.49	0.00
17.45	0.18	0.18	0.00	0.28	0.28	0.00	0.49	0.49	0.00
17.47	0.18	0.18	0.00	0.28	0.28	0.00	0.49	0.49	0.00
17.48	0.18	0.18	0.00	0.28	0.28	0.00	0.49	0.49	0.00
17.50	0.18	0.18	0.00	0.28	0.28	0.00	0.49	0.49	0.00
17.52	0.18	0.17	0.01	0.28	0.28	0.00	0.48	0.48	0.00
17.53	0.17	0.17	0.00	0.28	0.27	0.01	0.48	0.48	0.00
17.55	0.17	0.17	0.00	0.27	0.27	0.00	0.48	0.48	0.00
17.57	0.17	0.17	0.00	0.27	0.27	0.00	0.47	0.48	-0.01
17.58	0.17	0.17	0.00	0.27	0.27	0.00	0.47	0.48	-0.01
17.60	0.17	0.17	0.00	0.27	0.27	0.00	0.47	0.47	0.00
17.62	0.17	0.17	0.00	0.27	0.27	0.00	0.47	0.47	0.00
17.63	0.17	0.17	0.00	0.27	0.27	0.00	0.47	0.47	0.00
17.65	0.17	0.17	0.00	0.27	0.27	0.00	0.47	0.47	0.00
17.67	0.17	0.17	0.00	0.27	0.27	0.00	0.47	0.47	0.00
17.68	0.17	0.17	0.00	0.27	0.27	0.00	0.46	0.47	-0.01
17.70	0.17	0.17	0.00	0.27	0.27	0.00	0.46	0.47	-0.01
17.72	0.17	0.17	0.00	0.27	0.27	0.00	0.46	0.46	0.00
17.73	0.17	0.17	0.00	0.26	0.26	0.00	0.46	0.46	0.00
17.75	0.17	0.16	0.01	0.26	0.26	0.00	0.46	0.46	0.00
17.77	0.17	0.16	0.01	0.26	0.26	0.00	0.46	0.46	0.00
17.78	0.17	0.16	0.01	0.26	0.26	0.00	0.46	0.46	0.00
17.80	0.17	0.16	0.01	0.26	0.26	0.00	0.46	0.46	0.00
17.82	0.16	0.16	0.00	0.26	0.26	0.00	0.45	0.45	0.00
17.83	0.16	0.16	0.00	0.26	0.26	0.00	0.45	0.45	0.00
17.85	0.16	0.16	0.00	0.26	0.26	0.00	0.45	0.45	0.00
17.87	0.16	0.16	0.00	0.25	0.25	0.00	0.44	0.44	0.00
17.88	0.16	0.16	0.00	0.25	0.25	0.00	0.44	0.44	0.00
17.90	0.16	0.16	0.00	0.25	0.25	0.00	0.44	0.44	0.00
17.92	0.16	0.16	0.00	0.25	0.25	0.00	0.44	0.44	0.00
17.93	0.16	0.16	0.00	0.25	0.25	0.00	0.44	0.44	0.00
17.95	0.16	0.16	0.00	0.25	0.25	0.00	0.44	0.44	0.00
17.97	0.16	0.16	0.00	0.25	0.25	0.00	0.43	0.43	0.00
17.98	0.16	0.16	0.00	0.25	0.25	0.00	0.43	0.43	0.00
18.00	0.16	0.16	0.00	0.25	0.25	0.00	0.43	0.43	0.00
18.02	0.16	0.16	0.00	0.25	0.25	0.00	0.43	0.43	0.00
18.03	0.15	0.15	0.00	0.25	0.24	0.01	0.43	0.43	0.00
18.05	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.07	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.08	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.10	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.12	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.13	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.15	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.17	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.18	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.20	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.22	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.23	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.25	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.27	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.28	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.30	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.32	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.33	0.15	0.15	0.00	0.24	0.24	0.00	0.42	0.42	0.00
18.35	0.15	0.15	0.00	0.24	0.24	0.00	0.41	0.42	-0.01
18.37	0.15	0.15	0.00	0.24	0.24	0.00	0.41	0.41	0.00
18.38	0.15	0.15	0.00	0.24	0.24	0.00	0.41	0.41	0.00
18.40	0.15	0.15	0.00	0.24	0.24	0.00	0.41	0.41	0.00
18.42	0.15	0.15	0.00	0.24	0.24	0.00	0.41	0.41	0.00
18.43	0.15	0.15	0.00	0.24	0.24	0.00	0.41	0.41	0.00
18.45	0.15	0.15	0.00	0.24	0.24	0.00	0.41	0.41	0.00
18.47	0.15	0.15	0.00	0.24	0.23	0.01	0.41	0.41	0.00
18.48	0.15	0.15	0.00	0.24	0.23	0.01	0.41	0.41	0.00
18.50	0.15	0.15	0.00	0.24	0.23	0.01	0.41	0.41	0.00
18.52	0.15	0.15	0.00	0.24	0.23	0.01	0.41	0.41	0.00
18.53	0.15	0.15	0.00	0.24	0.23	0.01	0.41	0.41	0.00
18.55	0.15	0.15	0.00	0.24	0.23	0.01	0.41	0.41	0.00
18.57	0.15	0.15	0.00	0.24	0.23	0.01	0.41	0.41	0.00
18.58	0.15	0.15	0.00	0.24	0.23	0.01	0.41	0.41	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
17.05	0.24	0.24	0.00	0.38	0.38	0.00	0.74	0.74	0.00
17.07	0.24	0.24	0.00	0.38	0.38	0.00	0.73	0.74	-0.01
17.08	0.24	0.24	0.00	0.38	0.38	0.00	0.73	0.73	0.00
17.10	0.24	0.24	0.00	0.38	0.38	0.00	0.73	0.73	0.00
17.12	0.24	0.23	0.01	0.38	0.38	0.00	0.73	0.73	0.00
17.13	0.23	0.23	0.00	0.37	0.37	0.00	0.72	0.73	-0.01
17.15	0.23	0.23	0.00	0.37	0.37	0.00	0.72	0.72	0.00
17.17	0.23	0.23	0.00	0.37	0.37	0.00	0.72	0.72	0.00
17.18	0.23	0.23	0.00	0.37	0.37	0.00	0.72	0.72	0.00
17.20	0.23	0.23	0.00	0.37	0.37	0.00	0.72	0.72	0.00
17.22	0.23	0.23	0.00	0.37	0.37	0.00	0.71	0.72	-0.01
17.23	0.23	0.23	0.00	0.37	0.37	0.00	0.71	0.71	0.00
17.25	0.23	0.23	0.00	0.37	0.37	0.00	0.71	0.71	0.00
17.27	0.23	0.23	0.00	0.36	0.36	0.00	0.70	0.71	-0.01
17.28	0.23	0.23	0.00	0.36	0.36	0.00	0.70	0.70	0.00
17.30	0.23	0.23	0.00	0.36	0.36	0.00	0.70	0.70	0.00
17.32	0.23	0.22	0.01	0.36	0.36	0.00	0.70	0.70	0.00
17.33	0.22	0.22	0.00	0.36	0.36	0.00	0.69	0.70	-0.01
17.35	0.22	0.22	0.00	0.36	0.36	0.00	0.69	0.69	0.00
17.37	0.22	0.22	0.00	0.36	0.36	0.00	0.69	0.69	0.00
17.38	0.22	0.22	0.00	0.36	0.36	0.00	0.69	0.69	0.00
17.40	0.22	0.22	0.00	0.36	0.36	0.00	0.69	0.69	0.00
17.42	0.22	0.22	0.00	0.35	0.35	0.00	0.68	0.69	-0.01
17.43	0.22	0.22	0.00	0.35	0.35	0.00	0.68	0.68	0.00
17.45	0.22	0.22	0.00	0.35	0.35	0.00	0.68	0.68	0.00
17.47	0.22	0.22	0.00	0.35	0.35	0.00	0.67	0.68	-0.01
17.48	0.22	0.22	0.00	0.35	0.35	0.00	0.67	0.67	0.00
17.50	0.22	0.22	0.00	0.35	0.35	0.00	0.67	0.67	0.00
17.52	0.22	0.22	0.00	0.35	0.35	0.00	0.67	0.67	0.00
17.53	0.21	0.21	0.00	0.34	0.34	0.00	0.66	0.67	-0.01
17.55	0.21	0.21	0.00	0.34	0.34	0.00	0.66	0.66	0.00
17.57	0.21	0.21	0.00	0.34	0.34	0.00	0.66	0.66	0.00
17.58	0.21	0.21	0.00	0.34	0.34	0.00	0.66	0.66	0.00
17.60	0.21	0.21	0.00	0.34	0.34	0.00	0.66	0.66	0.00
17.62	0.21	0.21	0.00	0.34	0.34	0.00	0.65	0.66	-0.01
17.63	0.21	0.21	0.00	0.34	0.34	0.00	0.65	0.65	0.00
17.65	0.21	0.21	0.00	0.33	0.33	0.00	0.65	0.65	0.00
17.67	0.21	0.21	0.00	0.33	0.33	0.00	0.64	0.65	-0.01
17.68	0.21	0.21	0.00	0.33	0.33	0.00	0.64	0.65	-0.01
17.70	0.21	0.21	0.00	0.33	0.33	0.00	0.64	0.64	0.00
17.72	0.21	0.21	0.00	0.33	0.33	0.00	0.64	0.64	0.00
17.73	0.21	0.20	0.01	0.33	0.33	0.00	0.64	0.64	0.00
17.75	0.20	0.20	0.00	0.33	0.33	0.00	0.63	0.63	0.00
17.77	0.20	0.20	0.00	0.33	0.33	0.00	0.63	0.63	0.00
17.78	0.20	0.20	0.00	0.33	0.33	0.00	0.63	0.63	0.00
17.80	0.20	0.20	0.00	0.33	0.33	0.00	0.63	0.63	0.00
17.82	0.20	0.20	0.00	0.32	0.32	0.00	0.63	0.63	0.00
17.83	0.20	0.20	0.00	0.32	0.32	0.00	0.62	0.62	0.00
17.85	0.20	0.20	0.00	0.32	0.32	0.00	0.62	0.62	0.00
17.87	0.20	0.20	0.00	0.32	0.32	0.00	0.61	0.62	-0.01
17.88	0.20	0.20	0.00	0.32	0.32	0.00	0.61	0.62	-0.01
17.90	0.20	0.20	0.00	0.32	0.32	0.00	0.61	0.61	0.00
17.92	0.20	0.20	0.00	0.32	0.32	0.00	0.61	0.61	0.00
17.93	0.20	0.19	0.01	0.31	0.31	0.00	0.61	0.61	0.00
17.95	0.19	0.19	0.00	0.31	0.31	0.00	0.60	0.60	0.00
17.97	0.19	0.19	0.00	0.31	0.31	0.00	0.60	0.60	0.00
17.98	0.19	0.19	0.00	0.31	0.31	0.00	0.60	0.60	0.00
18.00	0.19	0.19	0.00	0.31	0.31	0.00	0.60	0.60	0.00
18.02	0.19	0.19	0.00	0.31	0.31	0.00	0.60	0.60	0.00
18.03	0.19	0.19	0.00	0.31	0.31	0.00	0.59	0.59	0.00
18.05	0.19	0.19	0.00	0.30	0.30	0.00	0.59	0.59	0.00
18.07	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.59	-0.01
18.08	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.59	-0.01
18.10	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.12	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.13	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.15	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.17	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.18	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.20	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.22	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.23	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.25	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.27	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.28	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.30	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.32	0.19	0.19	0.00	0.30	0.30	0.00	0.58	0.58	0.00
18.33	0.19	0.18	0.01	0.30	0.30	0.00	0.57	0.58	-0.01
18.35	0.19	0.18	0.01	0.30	0.30	0.00	0.57	0.57	0.00
18.37	0.19	0.18	0.01	0.30	0.30	0.00	0.57	0.57	0.00
18.38	0.19	0.18	0.01	0.30	0.30	0.00	0.57	0.57	0.00
18.40	0.19	0.18	0.01	0.30	0.30	0.00	0.57	0.57	0.00
18.42	0.18	0.18	0.00	0.30	0.30	0.00	0.57	0.57	0.00
18.43	0.18	0.18	0.00	0.30	0.30	0.00	0.57	0.57	0.00
18.45	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00
18.47	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00
18.48	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00
18.50	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00
18.52	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00
18.53	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00
18.55	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00
18.57	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00
18.58	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
18.60	0.15	0.15	0.00	0.24	0.23	0.01	0.41	0.41	0.00
18.62	0.15	0.15	0.00	0.23	0.23	0.00	0.41	0.41	0.00
18.63	0.15	0.15	0.00	0.23	0.23	0.00	0.41	0.41	0.00
18.65	0.15	0.15	0.00	0.23	0.23	0.00	0.41	0.41	0.00
18.67	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.41	-0.01
18.68	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.41	-0.01
18.70	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.41	-0.01
18.72	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.41	-0.01
18.73	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.41	-0.01
18.75	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.40	0.00
18.77	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.40	0.00
18.78	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.40	0.00
18.80	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.40	0.00
18.82	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.40	0.00
18.83	0.15	0.15	0.00	0.23	0.23	0.00	0.40	0.40	0.00
18.85	0.15	0.14	0.01	0.23	0.23	0.00	0.40	0.40	0.00
18.87	0.15	0.14	0.01	0.23	0.23	0.00	0.40	0.40	0.00
18.88	0.15	0.14	0.01	0.23	0.23	0.00	0.40	0.40	0.00
18.90	0.15	0.14	0.01	0.23	0.23	0.00	0.40	0.40	0.00
18.92	0.15	0.14	0.01	0.23	0.23	0.00	0.40	0.40	0.00
18.93	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
18.95	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
18.97	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
18.98	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
19.00	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
19.02	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
19.03	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
19.05	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
19.07	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
19.08	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
19.10	0.14	0.14	0.00	0.23	0.23	0.00	0.40	0.40	0.00
19.12	0.14	0.14	0.00	0.23	0.23	0.00	0.39	0.39	0.00
19.13	0.14	0.14	0.00	0.23	0.23	0.00	0.39	0.39	0.00
19.15	0.14	0.14	0.00	0.23	0.23	0.00	0.39	0.39	0.00
19.17	0.14	0.14	0.00	0.23	0.23	0.00	0.39	0.39	0.00
19.18	0.14	0.14	0.00	0.23	0.23	0.00	0.39	0.39	0.00
19.20	0.14	0.14	0.00	0.23	0.23	0.00	0.39	0.39	0.00
19.22	0.14	0.14	0.00	0.23	0.22	0.01	0.39	0.39	0.00
19.23	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.25	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.27	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.28	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.30	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.32	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.33	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.35	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.37	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.38	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.40	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.42	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.43	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.45	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.47	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.48	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.50	0.14	0.14	0.00	0.22	0.22	0.00	0.39	0.39	0.00
19.52	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.53	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.55	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.57	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.58	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.60	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.62	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.63	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.65	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.67	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.68	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.70	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.72	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.73	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.75	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.77	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.78	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.80	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.82	0.14	0.14	0.00	0.22	0.22	0.00	0.38	0.38	0.00
19.83	0.14	0.14	0.00	0.22	0.21	0.01	0.37	0.37	0.00
19.85	0.14	0.14	0.00	0.21	0.21	0.00	0.37	0.37	0.00
19.87	0.14	0.13	0.01	0.21	0.21	0.00	0.37	0.37	0.00
19.88	0.14	0.13	0.01	0.21	0.21	0.00	0.37	0.37	0.00
19.90	0.14	0.13	0.01	0.21	0.21	0.00	0.37	0.37	0.00
19.92	0.14	0.13	0.01	0.21	0.21	0.00	0.37	0.37	0.00
19.93	0.14	0.13	0.01	0.21	0.21	0.00	0.37	0.37	0.00
19.95	0.14	0.13	0.01	0.21	0.21	0.00	0.37	0.37	0.00
19.97	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
19.98	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.00	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.02	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.03	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.05	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.07	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.08	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.10	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.12	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.13	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
18.60	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00
18.62	0.18	0.18	0.00	0.29	0.29	0.00	0.57	0.57	0.00
18.63	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.65	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.67	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.68	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.70	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.72	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.73	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.75	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.77	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.78	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.80	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.82	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.83	0.18	0.18	0.00	0.29	0.29	0.00	0.56	0.56	0.00
18.85	0.18	0.18	0.00	0.29	0.29	0.00	0.55	0.56	-0.01
18.87	0.18	0.18	0.00	0.29	0.29	0.00	0.55	0.55	0.00
18.88	0.18	0.18	0.00	0.29	0.29	0.00	0.55	0.55	0.00
18.90	0.18	0.18	0.00	0.29	0.29	0.00	0.55	0.55	0.00
18.92	0.18	0.18	0.00	0.29	0.29	0.00	0.55	0.55	0.00
18.93	0.18	0.18	0.00	0.29	0.29	0.00	0.55	0.55	0.00
18.95	0.18	0.18	0.00	0.29	0.29	0.00	0.55	0.55	0.00
18.97	0.18	0.18	0.00	0.29	0.29	0.00	0.55	0.55	0.00
18.98	0.18	0.18	0.00	0.29	0.29	0.00	0.55	0.55	0.00
19.00	0.18	0.18	0.00	0.29	0.28	0.01	0.55	0.55	0.00
19.02	0.18	0.18	0.00	0.28	0.28	0.00	0.55	0.55	0.00
19.03	0.18	0.18	0.00	0.28	0.28	0.00	0.55	0.55	0.00
19.05	0.18	0.18	0.00	0.28	0.28	0.00	0.55	0.55	0.00
19.07	0.18	0.18	0.00	0.28	0.28	0.00	0.55	0.55	0.00
19.08	0.18	0.18	0.00	0.28	0.28	0.00	0.55	0.55	0.00
19.10	0.18	0.18	0.00	0.28	0.28	0.00	0.55	0.55	0.00
19.12	0.18	0.18	0.00	0.28	0.28	0.00	0.55	0.55	0.00
19.13	0.18	0.18	0.00	0.28	0.28	0.00	0.54	0.55	-0.01
19.15	0.18	0.17	0.01	0.28	0.28	0.00	0.54	0.55	-0.01
19.17	0.18	0.17	0.01	0.28	0.28	0.00	0.54	0.54	0.00
19.18	0.18	0.17	0.01	0.28	0.28	0.00	0.54	0.54	0.00
19.20	0.18	0.17	0.01	0.28	0.28	0.00	0.54	0.54	0.00
19.22	0.18	0.17	0.01	0.28	0.28	0.00	0.54	0.54	0.00
19.23	0.17	0.17	0.00	0.28	0.28	0.00	0.54	0.54	0.00
19.25	0.17	0.17	0.00	0.28	0.28	0.00	0.54	0.54	0.00
19.27	0.17	0.17	0.00	0.28	0.28	0.00	0.54	0.54	0.00
19.28	0.17	0.17	0.00	0.28	0.28	0.00	0.54	0.54	0.00
19.30	0.17	0.17	0.00	0.28	0.28	0.00	0.54	0.54	0.00
19.32	0.17	0.17	0.00	0.28	0.28	0.00	0.54	0.54	0.00
19.33	0.17	0.17	0.00	0.28	0.28	0.00	0.54	0.54	0.00
19.35	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.54	-0.01
19.37	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
19.38	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
19.40	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
19.42	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
19.43	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
19.45	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
19.47	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
19.48	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
19.50	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
19.52	0.17	0.17	0.00	0.28	0.28	0.00	0.53	0.53	0.00
19.53	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.55	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.57	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.58	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.60	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.62	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.63	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.65	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.67	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.68	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.70	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.72	0.17	0.17	0.00	0.27	0.27	0.00	0.53	0.53	0.00
19.73	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.75	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.77	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.78	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.80	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.82	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.83	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.85	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.87	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.88	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.90	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.92	0.17	0.17	0.00	0.27	0.27	0.00	0.52	0.52	0.00
19.93	0.17	0.17	0.00	0.27	0.27	0.00	0.51	0.52	-0.01
19.95	0.17	0.17	0.00	0.27	0.27	0.00	0.51	0.52	-0.01
19.97	0.17	0.17	0.00	0.27	0.27	0.00	0.51	0.51	0.00
19.98	0.17	0.17	0.00	0.27	0.27	0.00	0.51	0.51	0.00
20.00	0.17	0.17	0.00	0.27	0.27	0.00	0.51	0.51	0.00
20.02	0.17	0.17	0.00	0.27	0.27	0.00	0.51	0.51	0.00
20.03	0.17	0.16	0.01	0.27	0.27	0.00	0.51	0.51	0.00
20.05	0.17	0.16	0.01	0.26	0.26	0.00	0.51	0.51	0.00
20.07	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.51	0.00
20.08	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.51	0.00
20.10	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.51	0.00
20.12	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.51	0.00
20.13	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.51	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
20.15	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.17	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.18	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.20	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.22	0.13	0.13	0.00	0.21	0.21	0.00	0.37	0.37	0.00
20.23	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.25	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.27	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.28	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.30	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.32	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.33	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.35	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.37	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.38	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.40	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.42	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.43	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.45	0.13	0.13	0.00	0.21	0.21	0.00	0.36	0.36	0.00
20.47	0.13	0.13	0.00	0.21	0.20	0.01	0.36	0.36	0.00
20.48	0.13	0.13	0.00	0.21	0.20	0.01	0.36	0.36	0.00
20.50	0.13	0.13	0.00	0.21	0.20	0.01	0.36	0.36	0.00
20.52	0.13	0.13	0.00	0.21	0.20	0.01	0.36	0.36	0.00
20.53	0.13	0.13	0.00	0.21	0.20	0.01	0.36	0.36	0.00
20.55	0.13	0.13	0.00	0.21	0.20	0.01	0.36	0.36	0.00
20.57	0.13	0.13	0.00	0.21	0.20	0.01	0.36	0.36	0.00
20.58	0.13	0.13	0.00	0.21	0.20	0.01	0.36	0.36	0.00
20.60	0.13	0.13	0.00	0.21	0.20	0.01	0.36	0.36	0.00
20.62	0.13	0.13	0.00	0.20	0.20	0.00	0.36	0.36	0.00
20.63	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.65	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.67	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.68	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.70	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.72	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.73	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.75	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.77	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.78	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.80	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.82	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.83	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.85	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.87	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.88	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.90	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.92	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.93	0.13	0.13	0.00	0.20	0.20	0.00	0.35	0.35	0.00
20.95	0.13	0.12	0.01	0.20	0.20	0.00	0.35	0.35	0.00
20.97	0.13	0.12	0.01	0.20	0.20	0.00	0.34	0.35	-0.01
20.98	0.13	0.12	0.01	0.20	0.20	0.00	0.34	0.35	-0.01
21.00	0.13	0.12	0.01	0.20	0.20	0.00	0.34	0.35	-0.01
21.02	0.13	0.12	0.01	0.20	0.20	0.00	0.34	0.34	0.00
21.03	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.05	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.07	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.08	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.10	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.12	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.13	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.15	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.17	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.18	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.20	0.12	0.12	0.00	0.20	0.20	0.00	0.34	0.34	0.00
21.22	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.23	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.25	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.27	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.28	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.30	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.32	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.33	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.35	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.37	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.38	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.40	0.12	0.12	0.00	0.19	0.19	0.00	0.34	0.34	0.00
21.42	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.43	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.45	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.47	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.48	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.50	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.52	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.53	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.55	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.57	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.58	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.60	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.62	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.63	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.65	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.67	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.68	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
20.15	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.51	0.00
20.17	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.51	0.00
20.18	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.51	0.00
20.20	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.51	0.00
20.22	0.16	0.16	0.00	0.26	0.26	0.00	0.51	0.51	0.00
20.23	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.25	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.27	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.28	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.30	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.32	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.33	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.35	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.37	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.38	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.40	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.42	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.43	0.16	0.16	0.00	0.26	0.26	0.00	0.50	0.50	0.00
20.45	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.50	-0.01
20.47	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.50	-0.01
20.48	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
20.50	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
20.52	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
20.53	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
20.55	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
20.57	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
20.58	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
20.60	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
20.62	0.16	0.16	0.00	0.26	0.26	0.00	0.49	0.49	0.00
20.63	0.16	0.16	0.00	0.25	0.25	0.00	0.49	0.49	0.00
20.65	0.16	0.16	0.00	0.25	0.25	0.00	0.49	0.49	0.00
20.67	0.16	0.16	0.00	0.25	0.25	0.00	0.49	0.49	0.00
20.68	0.16	0.16	0.00	0.25	0.25	0.00	0.49	0.49	0.00
20.70	0.16	0.16	0.00	0.25	0.25	0.00	0.49	0.49	0.00
20.72	0.16	0.16	0.00	0.25	0.25	0.00	0.49	0.49	0.00
20.73	0.16	0.16	0.00	0.25	0.25	0.00	0.49	0.49	0.00
20.75	0.16	0.16	0.00	0.25	0.25	0.00	0.48	0.49	-0.01
20.77	0.16	0.16	0.00	0.25	0.25	0.00	0.48	0.48	0.00
20.78	0.16	0.16	0.00	0.25	0.25	0.00	0.48	0.48	0.00
20.80	0.16	0.16	0.00	0.25	0.25	0.00	0.48	0.48	0.00
20.82	0.16	0.16	0.00	0.25	0.25	0.00	0.48	0.48	0.00
20.83	0.16	0.16	0.00	0.25	0.25	0.00	0.48	0.48	0.00
20.85	0.16	0.15	0.01	0.25	0.25	0.00	0.48	0.48	0.00
20.87	0.16	0.15	0.01	0.25	0.25	0.00	0.48	0.48	0.00
20.88	0.16	0.15	0.01	0.25	0.25	0.00	0.48	0.48	0.00
20.90	0.16	0.15	0.01	0.25	0.25	0.00	0.48	0.48	0.00
20.92	0.16	0.15	0.01	0.25	0.25	0.00	0.48	0.48	0.00
20.93	0.15	0.15	0.00	0.25	0.25	0.00	0.48	0.48	0.00
20.95	0.15	0.15	0.00	0.25	0.25	0.00	0.48	0.48	0.00
20.97	0.15	0.15	0.00	0.25	0.25	0.00	0.48	0.48	0.00
20.98	0.15	0.15	0.00	0.25	0.25	0.00	0.48	0.48	0.00
21.00	0.15	0.15	0.00	0.25	0.25	0.00	0.48	0.48	0.00
21.02	0.15	0.15	0.00	0.25	0.25	0.00	0.48	0.48	0.00
21.03	0.15	0.15	0.00	0.25	0.25	0.00	0.47	0.47	0.00
21.05	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.07	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.08	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.10	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.12	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.13	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.15	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.17	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.18	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.20	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.22	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.23	0.15	0.15	0.00	0.24	0.24	0.00	0.47	0.47	0.00
21.25	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.47	-0.01
21.27	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.47	-0.01
21.28	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.30	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.32	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.33	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.35	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.37	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.38	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.40	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.42	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.43	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.45	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.47	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.48	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.50	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.52	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.53	0.15	0.15	0.00	0.24	0.24	0.00	0.46	0.46	0.00
21.55	0.15	0.15	0.00	0.24	0.24	0.00	0.45	0.46	-0.01
21.57	0.15	0.15	0.00	0.24	0.24	0.00	0.45	0.45	0.00
21.58	0.15	0.15	0.00	0.24	0.24	0.00	0.45	0.45	0.00
21.60	0.15	0.15	0.00	0.24	0.24	0.00	0.45	0.45	0.00
21.62	0.15	0.15	0.00	0.24	0.23	0.01	0.45	0.45	0.00
21.63	0.15	0.15	0.00	0.23	0.23	0.00	0.45	0.45	0.00
21.65	0.15	0.15	0.00	0.23	0.23	0.00	0.45	0.45	0.00
21.67	0.15	0.15	0.00	0.23	0.23	0.00	0.45	0.45	0.00
21.68	0.15	0.15	0.00	0.23	0.23	0.00	0.45	0.45	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
21.70	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.72	0.12	0.12	0.00	0.19	0.19	0.00	0.33	0.33	0.00
21.73	0.12	0.12	0.00	0.19	0.19	0.00	0.32	0.32	0.00
21.75	0.12	0.12	0.00	0.19	0.19	0.00	0.32	0.32	0.00
21.77	0.12	0.12	0.00	0.19	0.19	0.00	0.32	0.32	0.00
21.78	0.12	0.12	0.00	0.19	0.19	0.00	0.32	0.32	0.00
21.80	0.12	0.12	0.00	0.19	0.19	0.00	0.32	0.32	0.00
21.82	0.12	0.12	0.00	0.19	0.19	0.00	0.32	0.32	0.00
21.83	0.12	0.12	0.00	0.19	0.18	0.01	0.32	0.32	0.00
21.85	0.12	0.12	0.00	0.18	0.18	0.00	0.32	0.32	0.00
21.87	0.12	0.12	0.00	0.18	0.18	0.00	0.32	0.32	0.00
21.88	0.12	0.12	0.00	0.18	0.18	0.00	0.32	0.32	0.00
21.90	0.12	0.12	0.00	0.18	0.18	0.00	0.32	0.32	0.00
21.92	0.12	0.12	0.00	0.18	0.18	0.00	0.32	0.32	0.00
21.93	0.12	0.12	0.00	0.18	0.18	0.00	0.32	0.32	0.00
21.95	0.12	0.12	0.00	0.18	0.18	0.00	0.32	0.32	0.00
21.97	0.12	0.12	0.00	0.18	0.18	0.00	0.32	0.32	0.00
21.98	0.12	0.12	0.00	0.18	0.18	0.00	0.32	0.32	0.00
22.00	0.12	0.12	0.00	0.18	0.18	0.00	0.32	0.32	0.00
22.02	0.12	0.11	0.01	0.18	0.18	0.00	0.32	0.32	0.00
22.03	0.11	0.11	0.00	0.18	0.18	0.00	0.32	0.32	0.00
22.05	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.07	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.08	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.10	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.12	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.13	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.15	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.17	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.18	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.20	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.22	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.23	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.25	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.27	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.28	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.30	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.32	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.33	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.35	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.37	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.38	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.40	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.42	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.43	0.11	0.11	0.00	0.18	0.18	0.00	0.31	0.31	0.00
22.45	0.11	0.11	0.00	0.18	0.17	0.01	0.30	0.30	0.00
22.47	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.48	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.50	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.52	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.53	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.55	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.57	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.58	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.60	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.62	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.63	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.65	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.67	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.68	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.70	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.72	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.73	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.75	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.77	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.78	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.80	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.82	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.83	0.11	0.11	0.00	0.17	0.17	0.00	0.30	0.30	0.00
22.85	0.11	0.11	0.00	0.17	0.17	0.00	0.29	0.30	-0.01
22.87	0.11	0.11	0.00	0.17	0.17	0.00	0.29	0.29	0.00
22.88	0.11	0.11	0.00	0.17	0.17	0.00	0.29	0.29	0.00
22.90	0.11	0.11	0.00	0.17	0.17	0.00	0.29	0.29	0.00
22.92	0.11	0.11	0.00	0.17	0.17	0.00	0.29	0.29	0.00
22.93	0.11	0.11	0.00	0.17	0.17	0.00	0.29	0.29	0.00
22.95	0.11	0.11	0.00	0.17	0.17	0.00	0.29	0.29	0.00
22.97	0.11	0.10	0.01	0.17	0.17	0.00	0.29	0.29	0.00
22.98	0.11	0.10	0.01	0.17	0.17	0.00	0.29	0.29	0.00
23.00	0.11	0.10	0.01	0.17	0.17	0.00	0.29	0.29	0.00
23.02	0.11	0.10	0.01	0.17	0.17	0.00	0.29	0.29	0.00
23.03	0.11	0.10	0.01	0.17	0.17	0.00	0.29	0.29	0.00
23.05	0.11	0.10	0.01	0.17	0.17	0.00	0.29	0.29	0.00
23.07	0.11	0.10	0.01	0.17	0.17	0.00	0.29	0.29	0.00
23.08	0.11	0.10	0.01	0.17	0.17	0.00	0.29	0.29	0.00
23.10	0.11	0.10	0.01	0.17	0.17	0.00	0.29	0.29	0.00
23.12	0.11	0.10	0.01	0.17	0.17	0.00	0.29	0.29	0.00
23.13	0.10	0.10	0.00	0.17	0.16	0.01	0.29	0.29	0.00
23.15	0.10	0.10	0.00	0.16	0.16	0.00	0.29	0.29	0.00
23.17	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.29	-0.01
23.18	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.29	-0.01
23.20	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.29	-0.01
23.22	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.23	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
21.70	0.15	0.15	0.00	0.23	0.23	0.00	0.45	0.45	0.00
21.72	0.15	0.14	0.01	0.23	0.23	0.00	0.45	0.45	0.00
21.73	0.15	0.14	0.01	0.23	0.23	0.00	0.45	0.45	0.00
21.75	0.14	0.14	0.00	0.23	0.23	0.00	0.45	0.45	0.00
21.77	0.14	0.14	0.00	0.23	0.23	0.00	0.45	0.45	0.00
21.78	0.14	0.14	0.00	0.23	0.23	0.00	0.45	0.45	0.00
21.80	0.14	0.14	0.00	0.23	0.23	0.00	0.45	0.45	0.00
21.82	0.14	0.14	0.00	0.23	0.23	0.00	0.45	0.45	0.00
21.83	0.14	0.14	0.00	0.23	0.23	0.00	0.45	0.45	0.00
21.85	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.45	-0.01
21.87	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
21.88	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
21.90	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
21.92	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
21.93	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
21.95	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
21.97	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
21.98	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
22.00	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
22.02	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
22.03	0.14	0.14	0.00	0.23	0.23	0.00	0.44	0.44	0.00
22.05	0.14	0.14	0.00	0.23	0.23	0.00	0.43	0.44	-0.01
22.07	0.14	0.14	0.00	0.23	0.23	0.00	0.43	0.44	-0.01
22.08	0.14	0.14	0.00	0.23	0.23	0.00	0.43	0.43	0.00
22.10	0.14	0.14	0.00	0.23	0.23	0.00	0.43	0.43	0.00
22.12	0.14	0.14	0.00	0.23	0.23	0.00	0.43	0.43	0.00
22.13	0.14	0.14	0.00	0.23	0.22	0.01	0.43	0.43	0.00
22.15	0.14	0.14	0.00	0.23	0.22	0.01	0.43	0.43	0.00
22.17	0.14	0.14	0.00	0.23	0.22	0.01	0.43	0.43	0.00
22.18	0.14	0.14	0.00	0.23	0.22	0.01	0.43	0.43	0.00
22.20	0.14	0.14	0.00	0.23	0.22	0.01	0.43	0.43	0.00
22.22	0.14	0.14	0.00	0.22	0.22	0.00	0.43	0.43	0.00
22.23	0.14	0.14	0.00	0.22	0.22	0.00	0.43	0.43	0.00
22.25	0.14	0.14	0.00	0.22	0.22	0.00	0.43	0.43	0.00
22.27	0.14	0.14	0.00	0.22	0.22	0.00	0.43	0.43	0.00
22.28	0.14	0.14	0.00	0.22	0.22	0.00	0.43	0.43	0.00
22.30	0.14	0.14	0.00	0.22	0.22	0.00	0.43	0.43	0.00
22.32	0.14	0.14	0.00	0.22	0.22	0.00	0.43	0.43	0.00
22.33	0.14	0.14	0.00	0.22	0.22	0.00	0.43	0.43	0.00
22.35	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.43	-0.01
22.37	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.38	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.40	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.42	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.43	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.45	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.47	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.48	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.50	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.52	0.14	0.14	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.53	0.14	0.13	0.01	0.22	0.22	0.00	0.42	0.42	0.00
22.55	0.14	0.13	0.01	0.22	0.22	0.00	0.42	0.42	0.00
22.57	0.14	0.13	0.01	0.22	0.22	0.00	0.42	0.42	0.00
22.58	0.14	0.13	0.01	0.22	0.22	0.00	0.42	0.42	0.00
22.60	0.14	0.13	0.01	0.22	0.22	0.00	0.42	0.42	0.00
22.62	0.13	0.13	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.63	0.13	0.13	0.00	0.22	0.22	0.00	0.42	0.42	0.00
22.65	0.13	0.13	0.00	0.22	0.22	0.00	0.41	0.42	-0.01
22.67	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.68	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.70	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.72	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.73	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.75	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.77	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.78	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.80	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.82	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.83	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.85	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.87	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.88	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.90	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.92	0.13	0.13	0.00	0.21	0.21	0.00	0.41	0.41	0.00
22.93	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
22.95	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
22.97	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
22.98	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
23.00	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
23.02	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
23.03	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
23.05	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
23.07	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
23.08	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
23.10	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
23.12	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
23.13	0.13	0.13	0.00	0.21	0.21	0.00	0.40	0.40	0.00
23.15	0.13	0.13	0.00	0.21	0.21	0.00	0.39	0.40	-0.01
23.17	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.40	-0.01
23.18	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.20	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.22	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.23	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
23.25	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.27	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.28	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.30	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.32	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.33	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.35	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.37	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.38	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.40	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.42	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.43	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.45	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.47	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.48	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.50	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.52	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.53	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.55	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.57	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.58	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.60	0.10	0.10	0.00	0.16	0.16	0.00	0.28	0.28	0.00
23.62	0.10	0.10	0.00	0.16	0.16	0.00	0.27	0.28	-0.01
23.63	0.10	0.10	0.00	0.16	0.16	0.00	0.27	0.27	0.00
23.65	0.10	0.10	0.00	0.16	0.16	0.00	0.27	0.27	0.00
23.67	0.10	0.10	0.00	0.16	0.16	0.00	0.27	0.27	0.00
23.68	0.10	0.10	0.00	0.16	0.16	0.00	0.27	0.27	0.00
23.70	0.10	0.10	0.00	0.16	0.16	0.00	0.27	0.27	0.00
23.72	0.10	0.10	0.00	0.16	0.16	0.00	0.27	0.27	0.00
23.73	0.10	0.10	0.00	0.16	0.16	0.00	0.27	0.27	0.00
23.75	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.77	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.78	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.80	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.82	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.83	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.85	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.87	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.88	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.90	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.92	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.93	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.95	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.97	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
23.98	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00
24.00	0.10	0.10	0.00	0.15	0.15	0.00	0.27	0.27	0.00

WATERSHED 1
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
23.25	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.27	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.28	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.30	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.32	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.33	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.35	0.13	0.13	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.37	0.13	0.12	0.01	0.20	0.20	0.00	0.39	0.39	0.00
23.38	0.13	0.12	0.01	0.20	0.20	0.00	0.39	0.39	0.00
23.40	0.13	0.12	0.01	0.20	0.20	0.00	0.39	0.39	0.00
23.42	0.13	0.12	0.01	0.20	0.20	0.00	0.39	0.39	0.00
23.43	0.12	0.12	0.00	0.20	0.20	0.00	0.39	0.39	0.00
23.45	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.39	-0.01
23.47	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.48	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.50	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.52	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.53	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.55	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.57	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.58	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.60	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.62	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.63	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.65	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.67	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.68	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.70	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.72	0.12	0.12	0.00	0.20	0.20	0.00	0.38	0.38	0.00
23.73	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.75	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.77	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.78	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.80	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.82	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.83	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.85	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.87	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.88	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.90	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.92	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.93	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.95	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.97	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
23.98	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00
24.00	0.12	0.12	0.00	0.19	0.19	0.00	0.37	0.37	0.00

CURVE UNDER CURVE HYDROGRAPHS COMPARISON WATERSHED 2

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.32	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.33	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.52	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.65	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.68	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.70	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.72	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.75	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.77	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.82	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.83	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.93	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.95	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.97	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
0.98	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.05	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.07	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.10	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.13	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.15	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.18	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.20	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.22	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.23	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.25	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.27	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.28	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.30	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.32	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.33	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.35	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.38	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.42	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.43	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.45	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.47	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.48	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.52	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.53	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.85	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.87	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.88	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.92	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.93	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.95	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.97	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.98	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.03	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.05	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.07	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.08	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.12	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.13	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.15	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.17	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.18	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.20	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.22	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.23	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.25	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.27	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.28	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.32	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.33	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.35	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.37	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.38	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.40	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.42	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.43	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.45	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.48	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.50	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.52	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.53	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.55	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.57	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.58	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.62	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.63	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.65	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
2.67	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.68	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.70	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.72	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.73	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.75	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.77	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.78	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.80	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.82	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.83	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.85	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.87	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.88	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.90	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.92	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.93	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.95	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.97	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.98	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.02	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.03	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.05	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.07	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.08	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
1.55	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.57	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.58	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.62	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.63	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.65	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.67	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.68	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.70	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.72	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.73	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.75	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.77	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.78	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.80	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.82	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
1.83	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
1.85	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
1.87	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
1.88	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
1.90	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
1.92	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
1.93	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
1.95	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
1.97	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
1.98	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.02	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.03	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.05	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.07	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.08	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.10	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.12	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.13	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.15	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.17	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.18	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.20	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.22	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.23	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.25	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.27	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.28	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.30	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.32	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.33	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.35	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.37	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.38	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.40	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.42	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.43	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.45	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.47	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.48	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.50	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.52	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.53	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.55	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.57	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.58	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.60	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.62	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
2.63	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.65	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.67	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.68	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.70	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.72	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.73	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.75	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.77	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.78	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.80	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.82	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.83	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.85	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.87	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.88	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.90	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.92	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.93	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.95	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.97	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
2.98	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.00	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.02	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.03	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.05	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.07	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.08	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
3.10	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.12	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.13	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.15	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.17	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.18	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.20	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.22	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.23	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.25	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.27	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.28	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.30	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.32	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.33	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.35	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.37	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.38	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.40	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.42	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.43	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.45	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.47	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.48	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.50	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.52	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.53	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.55	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.57	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.58	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.60	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.62	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.63	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.65	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.67	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.68	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.70	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.72	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.73	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.75	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.77	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.78	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.80	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.82	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.83	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.85	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.87	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.88	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.90	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.92	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.93	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.95	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.97	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
3.98	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.02	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.03	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.05	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.07	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.08	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.10	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.12	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.13	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.15	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.17	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.18	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.20	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.22	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.23	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.25	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.27	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.28	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.30	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.32	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.33	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.35	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.37	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.38	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.40	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.42	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.43	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.45	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.47	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.48	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.50	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.52	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.53	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.55	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.57	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.58	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.60	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.62	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.63	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
3.10	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.12	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.13	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.15	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.17	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.18	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.20	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.22	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.23	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.25	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.27	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.28	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.30	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.32	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.33	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.35	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.37	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.38	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.40	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.42	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.43	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.45	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.47	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.48	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.50	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.52	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.53	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.55	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.57	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.58	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.60	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.62	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.63	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.65	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.67	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.68	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.70	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.72	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.73	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.75	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.77	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.78	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.80	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.82	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.83	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.85	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.87	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.88	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.90	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.92	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.93	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.95	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.97	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
3.98	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.00	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.02	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.03	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.05	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.07	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.08	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.10	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.12	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.15	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.17	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.18	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.20	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.22	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.23	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.25	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.27	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.28	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.32	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.33	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.35	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.37	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.38	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.40	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.42	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
4.65	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.67	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.68	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.70	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.72	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.73	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.75	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.77	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.78	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.80	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.82	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.83	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.85	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.87	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.88	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.90	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.92	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.93	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.95	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.97	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
4.98	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.02	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.03	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.05	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.07	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.08	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.10	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.12	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.13	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.15	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.17	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.18	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.20	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.22	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.23	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.25	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.27	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.28	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.30	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.32	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.33	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.35	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.37	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.38	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.40	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.42	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.43	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.45	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.47	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.48	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.50	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.52	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.53	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.55	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.57	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.58	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.60	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.62	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.63	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.65	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.67	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.68	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.70	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.00
5.72	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.73	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.75	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.77	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.78	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.80	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.82	0.00	0.00	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.02	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.03	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.05	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.07	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.08	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.10	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.12	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.15	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.17	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.18	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
4.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.72	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.73	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.75	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.77	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.78	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.80	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.82	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
4.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.02	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.03	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.05	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.07	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.08	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.10	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.12	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.15	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.17	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.18	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.20	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.22	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.23	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.25	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.27	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.28	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.32	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.33	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.35	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.37	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.38	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.40	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.42	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.72	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.73	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.75	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.77	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.78	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.80	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.82	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
5.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.02	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.03	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.05	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.07	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.08	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.10	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.12	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.15	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.17	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.18	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
6.20	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.22	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.23	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.25	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.27	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.28	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.32	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.33	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.35	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.37	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.38	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.40	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.42	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.72	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.73	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.75	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.77	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.78	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.80	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.82	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
6.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.02	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.03	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.05	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.07	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.08	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.10	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.12	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.15	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.17	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.18	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.20	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.22	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.23	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.25	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.27	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.28	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.32	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.33	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.35	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.37	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.38	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.40	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.42	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
7.70	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.72	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.73	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
6.20	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.22	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.23	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.25	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.27	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.28	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.30	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.32	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.33	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.35	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.37	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.38	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.40	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.42	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.43	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.45	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.47	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.48	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.50	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.52	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.53	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.55	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.57	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.58	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.60	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.62	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.63	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.65	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.67	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.68	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.70	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.72	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.73	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.75	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.77	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.78	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.80	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.82	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.83	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.85	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.87	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.88	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.90	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.92	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.93	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.95	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.97	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
6.98	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.00	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.02	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.03	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.05	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.07	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.08	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.10	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.12	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.13	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.15	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.17	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.18	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.20	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.22	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.23	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.25	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.27	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.28	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.30	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.32	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.33	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.35	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
7.37	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.38	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.40	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.42	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.43	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.45	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.47	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.48	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.50	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.52	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.53	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.55	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.57	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.58	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.60	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.62	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.63	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.65	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.67	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.68	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.70	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.72	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.73	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
7.75	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.77	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.78	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.80	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.82	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.83	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.85	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.87	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.88	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.90	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.92	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.93	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.95	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.97	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
7.98	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.00	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.02	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.03	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.05	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.07	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.08	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.10	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.12	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.13	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.15	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.17	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.18	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.20	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.22	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.23	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.25	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.27	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.28	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.30	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.32	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.33	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.35	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.37	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.38	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.40	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.42	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.43	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.45	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.47	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.48	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.50	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.52	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.53	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
8.55	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.57	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.58	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.60	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.62	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.63	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.65	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.67	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.68	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.70	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.72	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.73	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.75	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.77	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.78	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.80	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.82	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.83	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.85	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.87	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.88	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.90	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.92	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.93	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.95	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.97	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
8.98	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
9.00	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
9.02	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
9.03	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
9.05	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
9.07	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.08	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.10	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.12	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.13	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.15	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.17	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.18	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.20	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.22	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.23	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.25	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.27	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.28	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
7.75	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.77	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.78	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.80	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.82	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.83	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.85	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.87	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.88	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.90	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.92	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.93	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.95	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.97	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
7.98	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.00	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.02	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.03	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.05	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.07	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.08	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.10	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.12	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.13	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.15	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.17	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.18	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.20	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.22	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.23	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.25	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.27	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.28	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.30	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.32	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.33	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.35	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.37	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.38	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.40	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.42	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.43	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.45	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.47	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.48	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.50	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
8.52	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.53	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.55	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.57	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.58	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.60	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.62	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.63	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.65	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.67	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.68	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.70	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.72	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.73	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.75	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.77	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.78	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.80	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.82	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.83	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.85	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.87	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.88	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.90	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.92	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.93	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.95	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.97	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
8.98	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.00	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.02	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.03	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.05	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.07	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.08	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.10	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.12	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.13	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.15	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.17	0.01	0.01	0.00	0.02	0.02	0.00	0.06	0.06	0.00
9.18	0.01	0.01	0.00	0.02	0.02	0.00	0.06	0.06	0.00
9.20	0.01	0.01	0.00	0.02	0.02	0.00	0.06	0.06	0.00
9.22	0.01	0.01	0.00	0.02	0.02	0.00	0.06	0.06	0.00
9.23	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.25	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.27	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.28	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
9.30	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.32	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.33	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.35	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.37	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.38	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.40	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.42	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.43	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.45	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.47	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.48	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.50	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.52	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.53	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.55	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.57	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.58	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.60	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
9.62	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.63	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.65	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.67	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.68	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.70	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.72	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.73	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.75	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.77	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.78	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.80	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.82	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
9.83	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
9.85	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
9.87	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
9.88	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
9.90	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
9.92	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
9.93	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
9.95	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
9.97	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
9.98	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
10.00	0.01	0.01	0.00	0.03	0.03	0.00	0.05	0.05	0.00
10.02	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
10.03	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
10.05	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
10.07	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.08	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.10	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.12	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.13	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.15	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.17	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.18	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.20	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.22	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.23	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.25	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.27	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.28	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.30	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.32	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.33	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.35	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.37	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.38	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.40	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.42	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.43	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.45	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.47	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.48	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.50	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
10.52	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
10.53	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
10.55	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
10.57	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
10.58	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
10.60	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
10.62	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
10.63	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.65	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.67	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.68	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.70	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.72	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.73	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.75	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.77	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.78	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.80	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.82	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.83	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
9.30	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.32	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.33	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.35	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.37	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.38	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.40	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.42	0.01	0.01	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.43	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.45	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.47	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.48	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.50	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.52	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
9.53	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.55	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.57	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.58	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.60	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.62	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.63	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.65	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.67	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.68	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.70	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.72	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.73	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.75	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.77	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.78	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.80	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.82	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.83	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
9.85	0.02	0.02	0.00	0.03	0.03	0.00	0.08	0.08	0.00
9.87	0.02	0.02	0.00	0.03	0.03	0.00	0.08	0.08	0.00
9.88	0.02	0.02	0.00	0.03	0.03	0.00	0.08	0.08	0.00
9.90	0.02	0.02	0.00	0.03	0.03	0.00	0.08	0.08	0.00
9.92	0.02	0.02	0.00	0.03	0.03	0.00	0.08	0.08	0.00
9.93	0.02	0.02	0.00	0.03	0.03	0.00	0.08	0.08	0.00
9.95	0.02	0.02	0.00	0.03	0.03	0.00	0.08	0.08	0.00
9.97	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
9.98	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.00	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.02	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.03	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.05	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.07	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.08	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.10	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.12	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.13	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.15	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.17	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.18	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.20	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
10.22	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.23	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.25	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.27	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.28	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.30	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.32	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.33	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.35	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.37	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.38	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.40	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.42	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.43	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.45	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.47	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.48	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.50	0.02	0.02	0.00	0.04	0.04	0.00	0.09	0.09	0.00
10.52	0.02	0.02	0.00	0.04	0.04	0.00	0.10	0.10	0.00
10.53	0.02	0.02	0.00	0.05	0.05	0.00	0.10	0.10	0.00
10.55	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
10.57	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
10.58	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
10.60	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
10.62	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
10.63	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
10.65	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
10.67	0.03	0.03	0.00	0.05	0.05	0.00	0.12	0.12	0.00
10.68	0.03	0.03	0.00	0.05	0.05	0.00	0.12	0.12	0.00
10.70	0.03	0.03	0.00	0.05	0.05	0.00	0.12	0.12	0.00
10.72	0.03	0.03	0.00	0.05	0.05	0.00	0.12	0.12	0.00
10.73	0.03	0.03	0.00	0.06	0.06	0.00	0.12	0.12	0.00
10.75	0.03	0.03	0.00	0.06	0.06	0.00	0.12	0.12	0.00
10.77	0.03	0.03	0.00	0.06	0.06	0.00	0.13	0.13	0.00
10.78	0.03	0.03	0.00	0.06	0.06	0.00	0.13	0.13	0.00
10.80	0.03	0.03	0.00	0.06	0.06	0.00	0.13	0.13	0.00
10.82	0.03	0.03	0.00	0.06	0.06	0.00	0.13	0.13	0.00
10.83	0.03	0.03	0.00	0.06	0.06	0.00	0.13	0.13	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
10.85	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
10.87	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
10.88	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
10.90	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
10.92	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
10.93	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
10.95	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
10.97	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
10.98	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
11.00	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
11.02	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
11.03	0.03	0.03	0.00	0.06	0.06	0.00	0.11	0.11	0.00
11.05	0.03	0.03	0.00	0.06	0.06	0.00	0.11	0.11	0.00
11.07	0.03	0.03	0.00	0.06	0.06	0.00	0.11	0.11	0.00
11.08	0.03	0.03	0.00	0.06	0.06	0.00	0.11	0.11	0.00
11.10	0.03	0.03	0.00	0.06	0.06	0.00	0.11	0.11	0.00
11.12	0.03	0.03	0.00	0.06	0.06	0.00	0.12	0.12	0.00
11.13	0.03	0.03	0.00	0.06	0.06	0.00	0.12	0.12	0.00
11.15	0.04	0.04	0.00	0.06	0.06	0.00	0.13	0.13	0.00
11.17	0.04	0.04	0.00	0.06	0.06	0.00	0.13	0.13	0.00
11.18	0.04	0.04	0.00	0.06	0.06	0.00	0.13	0.13	0.00
11.20	0.04	0.04	0.00	0.06	0.06	0.00	0.13	0.13	0.00
11.22	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
11.23	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
11.25	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
11.27	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
11.28	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
11.30	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
11.32	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
11.33	0.04	0.04	0.00	0.08	0.08	0.00	0.15	0.15	0.00
11.35	0.04	0.04	0.00	0.08	0.08	0.00	0.15	0.15	0.00
11.37	0.04	0.04	0.00	0.08	0.08	0.00	0.15	0.15	0.00
11.38	0.04	0.04	0.00	0.08	0.08	0.00	0.15	0.15	0.00
11.40	0.04	0.04	0.00	0.08	0.08	0.00	0.15	0.15	0.00
11.42	0.05	0.05	0.00	0.08	0.08	0.00	0.16	0.16	0.00
11.43	0.05	0.05	0.00	0.08	0.08	0.00	0.16	0.16	0.00
11.45	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.17	0.00
11.47	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.17	0.00
11.48	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.17	0.00
11.50	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.17	0.00
11.52	0.05	0.05	0.00	0.09	0.09	0.00	0.18	0.18	0.00
11.53	0.06	0.06	0.00	0.11	0.11	0.00	0.20	0.20	0.00
11.55	0.06	0.06	0.00	0.11	0.11	0.00	0.22	0.22	0.00
11.57	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.23	0.00
11.58	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.23	0.00
11.60	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.23	0.00
11.62	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.23	0.00
11.63	0.07	0.07	0.00	0.12	0.12	0.00	0.24	0.24	0.00
11.65	0.07	0.07	0.00	0.12	0.12	0.00	0.24	0.24	0.00
11.67	0.07	0.07	0.00	0.13	0.13	0.00	0.24	0.24	0.00
11.68	0.07	0.07	0.00	0.13	0.13	0.00	0.24	0.24	0.00
11.70	0.07	0.07	0.00	0.13	0.13	0.00	0.24	0.24	0.00
11.72	0.08	0.08	0.00	0.14	0.14	0.00	0.26	0.26	0.00
11.73	0.09	0.09	0.00	0.16	0.16	0.00	0.30	0.30	0.00
11.75	0.10	0.10	0.00	0.17	0.17	0.00	0.32	0.32	0.00
11.77	0.10	0.10	0.00	0.18	0.18	0.00	0.34	0.34	0.00
11.78	0.10	0.10	0.00	0.18	0.18	0.00	0.34	0.34	0.00
11.80	0.10	0.10	0.00	0.18	0.18	0.00	0.34	0.34	0.00
11.82	0.11	0.11	0.00	0.19	0.19	0.00	0.37	0.37	0.00
11.83	0.12	0.12	0.00	0.22	0.22	0.00	0.42	0.42	0.00
11.85	0.14	0.14	0.00	0.24	0.24	0.00	0.45	0.45	0.00
11.87	0.14	0.14	0.00	0.25	0.25	0.00	0.47	0.47	0.00
11.88	0.14	0.14	0.00	0.25	0.25	0.00	0.47	0.47	0.00
11.90	0.14	0.14	0.00	0.25	0.25	0.00	0.48	0.48	0.00
11.92	0.16	0.16	0.00	0.29	0.29	0.00	0.55	0.55	0.00
11.93	0.21	0.21	0.00	0.36	0.36	0.00	0.69	0.69	0.00
11.95	0.24	0.24	0.00	0.41	0.41	0.00	0.78	0.78	0.00
11.97	0.25	0.25	0.00	0.44	0.44	0.00	0.83	0.83	0.00
11.98	0.25	0.25	0.00	0.44	0.44	0.00	0.83	0.83	0.00
12.00	0.26	0.26	0.00	0.44	0.44	0.00	0.84	0.84	0.00
12.02	0.29	0.29	0.00	0.50	0.50	0.00	0.95	0.95	0.00
12.03	0.36	0.36	0.00	0.63	0.63	0.00	1.18	1.18	0.00
12.05	0.41	0.41	0.00	0.71	0.71	0.00	1.33	1.33	0.00
12.07	0.44	0.44	0.00	0.76	0.76	0.00	1.42	1.42	0.00
12.08	0.44	0.44	0.00	0.76	0.76	0.00	1.42	1.42	0.00
12.10	0.45	0.45	0.00	0.76	0.76	0.00	1.43	1.43	0.00
12.12	0.39	0.39	0.00	0.67	0.67	0.00	1.24	1.24	0.00
12.13	0.27	0.27	0.00	0.47	0.47	0.00	0.87	0.87	0.00
12.15	0.20	0.20	0.00	0.34	0.34	0.00	0.62	0.62	0.00
12.17	0.16	0.16	0.00	0.27	0.27	0.00	0.50	0.50	0.00
12.18	0.16	0.16	0.00	0.27	0.27	0.00	0.50	0.50	0.00
12.20	0.16	0.16	0.00	0.27	0.27	0.00	0.50	0.50	0.00
12.22	0.15	0.15	0.00	0.26	0.26	0.00	0.47	0.47	0.00
12.23	0.13	0.13	0.00	0.23	0.23	0.00	0.42	0.42	0.00
12.25	0.12	0.12	0.00	0.21	0.21	0.00	0.38	0.38	0.00
12.27	0.12	0.12	0.00	0.20	0.20	0.00	0.36	0.36	0.00
12.28	0.12	0.12	0.00	0.20	0.20	0.00	0.36	0.36	0.00
12.30	0.12	0.12	0.00	0.20	0.20	0.00	0.36	0.36	0.00
12.32	0.11	0.11	0.00	0.19	0.19	0.00	0.34	0.34	0.00
12.33	0.10	0.10	0.00	0.17	0.17	0.00	0.30	0.30	0.00
12.35	0.09	0.09	0.00	0.15	0.15	0.00	0.28	0.28	0.00
12.37	0.09	0.09	0.00	0.14	0.14	0.00	0.27	0.27	0.00
12.38	0.09	0.09	0.00	0.14	0.14	0.00	0.27	0.27	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
10.85	0.03	0.03	0.00	0.06	0.06	0.00	0.14	0.14	0.00
10.87	0.03	0.03	0.00	0.06	0.06	0.00	0.14	0.14	0.00
10.88	0.03	0.03	0.00	0.06	0.06	0.00	0.14	0.14	0.00
10.90	0.03	0.03	0.00	0.06	0.06	0.00	0.14	0.14	0.00
10.92	0.04	0.04	0.00	0.06	0.06	0.00	0.14	0.14	0.00
10.93	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
10.95	0.04	0.04	0.00	0.07	0.07	0.00	0.15	0.15	0.00
10.97	0.04	0.04	0.00	0.07	0.07	0.00	0.15	0.15	0.00
10.98	0.04	0.04	0.00	0.07	0.07	0.00	0.15	0.15	0.00
11.00	0.04	0.04	0.00	0.07	0.07	0.00	0.15	0.15	0.00
11.02	0.04	0.04	0.00	0.07	0.07	0.00	0.15	0.15	0.00
11.03	0.04	0.04	0.00	0.07	0.07	0.00	0.16	0.16	0.00
11.05	0.04	0.04	0.00	0.07	0.07	0.00	0.16	0.16	0.00
11.07	0.04	0.04	0.00	0.08	0.08	0.00	0.17	0.17	0.00
11.08	0.04	0.04	0.00	0.08	0.08	0.00	0.17	0.17	0.00
11.10	0.04	0.04	0.00	0.08	0.08	0.00	0.17	0.17	0.00
11.12	0.04	0.04	0.00	0.08	0.08	0.00	0.17	0.17	0.00
11.13	0.05	0.05	0.00	0.08	0.08	0.00	0.18	0.18	0.00
11.15	0.05	0.05	0.00	0.08	0.08	0.00	0.18	0.18	0.00
11.17	0.05	0.05	0.00	0.09	0.09	0.00	0.19	0.19	0.00
11.18	0.05	0.05	0.00	0.09	0.09	0.00	0.19	0.19	0.00
11.20	0.05	0.05	0.00	0.09	0.09	0.00	0.19	0.19	0.00
11.22	0.05	0.05	0.00	0.09	0.09	0.00	0.19	0.19	0.00
11.23	0.05	0.05	0.00	0.09	0.09	0.00	0.20	0.20	0.00
11.25	0.05	0.05	0.00	0.09	0.09	0.00	0.20	0.20	0.00
11.27	0.05	0.05	0.00	0.09	0.09	0.00	0.21	0.21	0.00
11.28	0.05	0.05	0.00	0.09	0.09	0.00	0.21	0.21	0.00
11.30	0.05	0.05	0.00	0.09	0.09	0.00	0.21	0.21	0.00
11.32	0.05	0.05	0.00	0.10	0.10	0.00	0.21	0.21	0.00
11.33	0.06	0.06	0.00	0.10	0.10	0.00	0.22	0.22	0.00
11.35	0.06	0.06	0.00	0.10	0.10	0.00	0.22	0.22	0.00
11.37	0.06	0.06	0.00	0.10	0.10	0.00	0.23	0.23	0.00
11.38	0.06	0.06	0.00	0.10	0.10	0.00	0.23	0.23	0.00
11.40	0.06	0.06	0.00	0.10	0.10	0.00	0.23	0.23	0.00
11.42	0.06	0.06	0.00	0.11	0.11	0.00	0.23	0.23	0.00
11.43	0.06	0.06	0.00	0.11	0.11	0.00	0.24	0.24	0.00
11.45	0.06	0.06	0.00	0.11	0.11	0.00	0.24	0.24	0.00
11.47	0.06	0.06	0.00	0.11	0.11	0.00	0.24	0.24	0.00
11.48	0.06	0.06	0.00	0.11	0.11	0.00	0.25	0.25	0.00
11.50	0.06	0.06	0.00	0.11	0.11	0.00	0.25	0.25	0.00
11.52	0.07	0.07	0.00	0.12	0.12	0.00	0.26	0.26	0.00
11.53	0.08	0.08	0.00	0.14	0.14	0.00	0.30	0.30	0.00
11.55	0.08	0.08	0.00	0.15	0.15	0.00	0.32	0.32	0.00
11.57	0.09	0.09	0.00	0.15	0.15	0.00	0.33	0.33	0.00
11.58	0.09	0.09	0.00	0.15	0.15	0.00	0.33	0.33	0.00
11.60	0.09	0.09	0.00	0.15	0.15	0.00	0.33	0.33	0.00
11.62	0.09	0.09	0.00	0.16	0.16	0.00	0.34	0.34	0.00
11.63	0.09	0.09	0.00	0.16	0.16	0.00	0.34	0.34	0.00
11.65	0.09	0.09	0.00	0.16	0.16	0.00	0.35	0.35	0.00
11.67	0.09	0.09	0.00	0.16	0.16	0.00	0.35	0.35	0.00
11.68	0.09	0.09	0.00	0.16	0.16	0.00	0.35	0.35	0.00
11.70	0.09	0.09	0.00	0.17	0.17	0.00	0.35	0.35	0.00
11.72	0.10	0.10	0.00	0.18	0.18	0.00	0.38	0.38	0.00
11.73	0.11	0.11	0.00	0.20	0.20	0.00	0.43	0.43	0.00
11.75	0.12	0.12	0.00	0.22	0.22	0.00	0.47	0.47	0.00
11.77	0.13	0.13	0.00	0.23	0.23	0.00	0.49	0.49	0.00
11.78	0.13	0.13	0.00	0.23	0.23	0.00	0.49	0.49	0.00
11.80	0.13	0.13	0.00	0.23	0.23	0.00	0.49	0.49	0.00
11.82	0.14	0.14	0.00	0.25	0.25	0.00	0.53	0.53	0.00
11.83	0.16	0.16	0.00	0.28	0.28	0.00	0.60	0.60	0.00
11.85	0.18	0.18	0.00	0.31	0.31	0.00	0.66	0.66	0.00
11.87	0.18	0.18	0.00	0.32	0.32	0.00	0.68	0.68	0.00
11.88	0.18	0.18	0.00	0.32	0.32	0.00	0.68	0.68	0.00
11.90	0.18	0.18	0.00	0.32	0.32	0.00	0.68	0.68	0.00
11.92	0.21	0.21	0.00	0.37	0.37	0.00	0.78	0.78	0.00
11.93	0.27	0.27	0.00	0.47	0.47	0.00	0.99	0.99	0.00
11.95	0.30	0.30	0.00	0.53	0.53	0.00	1.12	1.12	0.00
11.97	0.32	0.32	0.00	0.57	0.57	0.00	1.19	1.19	0.00
11.98	0.33	0.33	0.00	0.57	0.57	0.00	1.19	1.19	0.00
12.00	0.33	0.33	0.00	0.57	0.57	0.00	1.20	1.20	0.00
12.02	0.37	0.37	0.00	0.65	0.65	0.00	1.36	1.36	0.00
12.03	0.47	0.47	0.00	0.81	0.81	0.00	1.68	1.68	0.00
12.05	0.53	0.53	0.00	0.92	0.92	0.00	1.90	1.90	0.00
12.07	0.56	0.56	0.00	0.98	0.98	0.00	2.02	2.02	0.00
12.08	0.57	0.57	0.00	0.98	0.98	0.00	2.02	2.02	0.00
12.10	0.57	0.57	0.00	0.99	0.99	0.00	2.03	2.03	0.00
12.12	0.50	0.50	0.00	0.86	0.86	0.00	1.77	1.77	0.00
12.13	0.35	0.35	0.00	0.60	0.60	0.00	1.24	1.24	0.00
12.15	0.25	0.25	0.00	0.43	0.43	0.00	0.89	0.89	0.00
12.17	0.20	0.20	0.00	0.35	0.35	0.00	0.71	0.71	0.00
12.18	0.20	0.20	0.00	0.35	0.35	0.00	0.71	0.71	0.00
12.20	0.20	0.20	0.00	0.35	0.35	0.00	0.71	0.71	0.00
12.22	0.19	0.19	0.00	0.33	0.33	0.00	0.67	0.67	0.00
12.23	0.17	0.17	0.00	0.29	0.29	0.00	0.59	0.59	0.00
12.25	0.15	0.15	0.00	0.26	0.26	0.00	0.54	0.54	0.00
12.27	0.15	0.15	0.00	0.25	0.25	0.00	0.51	0.51	0.00
12.28	0.15	0.15	0.00	0.25	0.25	0.00	0.51	0.51	0.00
12.30	0.15	0.15	0.00	0.25	0.25	0.00	0.51	0.51	0.00
12.32	0.14	0.14	0.00	0.24	0.24	0.00	0.49	0.49	0.00
12.33	0.12	0.12	0.00	0.21	0.21	0.00	0.43	0.43	0.00
12.35	0.11	0.11	0.00	0.19	0.19	0.00	0.39	0.39	0.00
12.37	0.11	0.11	0.00	0.18	0.18	0.00	0.37	0.37	0.00
12.38	0.11	0.11	0.00	0.18	0.18	0.00	0.38	0.38	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
12.40	0.09	0.09	0.00	0.14	0.14	0.00	0.27	0.27	0.00
12.42	0.08	0.08	0.00	0.14	0.14	0.00	0.26	0.26	0.00
12.43	0.08	0.08	0.00	0.14	0.14	0.00	0.26	0.26	0.00
12.45	0.08	0.08	0.00	0.14	0.14	0.00	0.25	0.25	0.00
12.47	0.08	0.08	0.00	0.14	0.14	0.00	0.25	0.25	0.00
12.48	0.08	0.08	0.00	0.14	0.14	0.00	0.25	0.25	0.00
12.50	0.08	0.08	0.00	0.14	0.14	0.00	0.25	0.25	0.00
12.52	0.08	0.08	0.00	0.13	0.13	0.00	0.24	0.24	0.00
12.53	0.07	0.07	0.00	0.12	0.12	0.00	0.21	0.21	0.00
12.55	0.06	0.06	0.00	0.11	0.11	0.00	0.20	0.20	0.00
12.57	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
12.58	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
12.60	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
12.62	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
12.63	0.06	0.06	0.00	0.10	0.10	0.00	0.18	0.18	0.00
12.65	0.06	0.06	0.00	0.10	0.10	0.00	0.18	0.18	0.00
12.67	0.06	0.06	0.00	0.10	0.10	0.00	0.17	0.17	0.00
12.68	0.06	0.06	0.00	0.10	0.10	0.00	0.17	0.17	0.00
12.70	0.06	0.06	0.00	0.10	0.10	0.00	0.17	0.17	0.00
12.72	0.06	0.06	0.00	0.09	0.09	0.00	0.17	0.17	0.00
12.73	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.17	0.00
12.75	0.05	0.05	0.00	0.09	0.09	0.00	0.16	0.16	0.00
12.77	0.05	0.05	0.00	0.09	0.09	0.00	0.16	0.16	0.00
12.78	0.05	0.05	0.00	0.09	0.09	0.00	0.16	0.16	0.00
12.80	0.05	0.05	0.00	0.09	0.09	0.00	0.16	0.16	0.00
12.82	0.05	0.05	0.00	0.09	0.09	0.00	0.16	0.16	0.00
12.83	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
12.85	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
12.87	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
12.88	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
12.90	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
12.92	0.05	0.05	0.00	0.08	0.08	0.00	0.14	0.14	0.00
12.93	0.05	0.05	0.00	0.08	0.08	0.00	0.14	0.14	0.00
12.95	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
12.97	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
12.98	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
13.00	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
13.02	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
13.03	0.04	0.04	0.00	0.07	0.07	0.00	0.12	0.12	0.00
13.05	0.04	0.04	0.00	0.07	0.07	0.00	0.12	0.12	0.00
13.07	0.04	0.04	0.00	0.06	0.06	0.00	0.12	0.12	0.00
13.08	0.04	0.04	0.00	0.06	0.06	0.00	0.12	0.12	0.00
13.10	0.04	0.04	0.00	0.06	0.06	0.00	0.12	0.12	0.00
13.12	0.04	0.04	0.00	0.06	0.06	0.00	0.12	0.12	0.00
13.13	0.04	0.04	0.00	0.06	0.06	0.00	0.11	0.11	0.00
13.15	0.04	0.04	0.00	0.06	0.06	0.00	0.11	0.11	0.00
13.17	0.04	0.04	0.00	0.06	0.06	0.00	0.11	0.11	0.00
13.18	0.04	0.04	0.00	0.06	0.06	0.00	0.11	0.11	0.00
13.20	0.04	0.04	0.00	0.06	0.06	0.00	0.11	0.11	0.00
13.22	0.04	0.04	0.00	0.06	0.06	0.00	0.11	0.11	0.00
13.23	0.03	0.03	0.00	0.06	0.06	0.00	0.11	0.11	0.00
13.25	0.03	0.03	0.00	0.06	0.06	0.00	0.10	0.10	0.00
13.27	0.03	0.03	0.00	0.06	0.06	0.00	0.10	0.10	0.00
13.28	0.03	0.03	0.00	0.06	0.06	0.00	0.10	0.10	0.00
13.30	0.03	0.03	0.00	0.06	0.06	0.00	0.10	0.10	0.00
13.32	0.03	0.03	0.00	0.06	0.06	0.00	0.10	0.10	0.00
13.33	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.35	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
13.37	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
13.38	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
13.40	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
13.42	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
13.43	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
13.45	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
13.47	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
13.48	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
13.50	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
13.52	0.03	0.03	0.00	0.05	0.05	0.00	0.08	0.08	0.00
13.53	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.55	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.57	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.58	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.60	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.62	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.63	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.65	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.67	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.68	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.70	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
13.72	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.73	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.75	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.77	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.78	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.80	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.82	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.83	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.85	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.87	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.88	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.90	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.92	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.93	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
12.40	0.11	0.11	0.00	0.19	0.19	0.00	0.38	0.38	0.00
12.42	0.11	0.11	0.00	0.18	0.18	0.00	0.37	0.37	0.00
12.43	0.11	0.11	0.00	0.18	0.18	0.00	0.36	0.36	0.00
12.45	0.10	0.10	0.00	0.18	0.18	0.00	0.36	0.36	0.00
12.47	0.10	0.10	0.00	0.18	0.18	0.00	0.36	0.36	0.00
12.48	0.10	0.10	0.00	0.18	0.18	0.00	0.36	0.36	0.00
12.50	0.10	0.10	0.00	0.18	0.18	0.00	0.36	0.36	0.00
12.52	0.10	0.10	0.00	0.17	0.17	0.00	0.34	0.34	0.00
12.53	0.09	0.09	0.00	0.15	0.15	0.00	0.30	0.30	0.00
12.55	0.08	0.08	0.00	0.14	0.14	0.00	0.28	0.28	0.00
12.57	0.08	0.08	0.00	0.13	0.13	0.00	0.27	0.27	0.00
12.58	0.08	0.08	0.00	0.13	0.13	0.00	0.27	0.27	0.00
12.60	0.08	0.08	0.00	0.13	0.13	0.00	0.27	0.27	0.00
12.62	0.08	0.08	0.00	0.13	0.13	0.00	0.26	0.26	0.00
12.63	0.07	0.07	0.00	0.13	0.13	0.00	0.25	0.25	0.00
12.65	0.07	0.07	0.00	0.12	0.12	0.00	0.25	0.25	0.00
12.67	0.07	0.07	0.00	0.12	0.12	0.00	0.25	0.25	0.00
12.68	0.07	0.07	0.00	0.12	0.12	0.00	0.25	0.25	0.00
12.70	0.07	0.07	0.00	0.12	0.12	0.00	0.25	0.25	0.00
12.72	0.07	0.07	0.00	0.12	0.12	0.00	0.24	0.24	0.00
12.73	0.07	0.07	0.00	0.12	0.12	0.00	0.23	0.23	0.00
12.75	0.07	0.07	0.00	0.11	0.11	0.00	0.23	0.23	0.00
12.77	0.07	0.07	0.00	0.11	0.11	0.00	0.23	0.23	0.00
12.78	0.07	0.07	0.00	0.11	0.11	0.00	0.23	0.23	0.00
12.80	0.07	0.07	0.00	0.11	0.11	0.00	0.23	0.23	0.00
12.82	0.07	0.07	0.00	0.11	0.11	0.00	0.22	0.22	0.00
12.83	0.06	0.06	0.00	0.11	0.11	0.00	0.21	0.21	0.00
12.85	0.06	0.06	0.00	0.10	0.10	0.00	0.21	0.21	0.00
12.87	0.06	0.06	0.00	0.10	0.10	0.00	0.21	0.21	0.00
12.88	0.06	0.06	0.00	0.10	0.10	0.00	0.21	0.21	0.00
12.90	0.06	0.06	0.00	0.10	0.10	0.00	0.21	0.21	0.00
12.92	0.06	0.06	0.00	0.10	0.10	0.00	0.20	0.20	0.00
12.93	0.06	0.06	0.00	0.10	0.10	0.00	0.19	0.19	0.00
12.95	0.06	0.06	0.00	0.09	0.09	0.00	0.19	0.19	0.00
12.97	0.05	0.05	0.00	0.09	0.09	0.00	0.19	0.19	0.00
12.98	0.05	0.05	0.00	0.09	0.09	0.00	0.19	0.19	0.00
13.00	0.05	0.05	0.00	0.09	0.09	0.00	0.19	0.19	0.00
13.02	0.05	0.05	0.00	0.09	0.09	0.00	0.18	0.18	0.00
13.03	0.05	0.05	0.00	0.09	0.09	0.00	0.17	0.17	0.00
13.05	0.05	0.05	0.00	0.08	0.08	0.00	0.17	0.17	0.00
13.07	0.05	0.05	0.00	0.08	0.08	0.00	0.17	0.17	0.00
13.08	0.05	0.05	0.00	0.08	0.08	0.00	0.17	0.17	0.00
13.10	0.05	0.05	0.00	0.08	0.08	0.00	0.17	0.17	0.00
13.12	0.05	0.05	0.00	0.08	0.08	0.00	0.16	0.16	0.00
13.13	0.05	0.05	0.00	0.08	0.08	0.00	0.16	0.16	0.00
13.15	0.05	0.05	0.00	0.08	0.08	0.00	0.16	0.16	0.00
13.17	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
13.18	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
13.20	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
13.22	0.05	0.05	0.00	0.08	0.08	0.00	0.15	0.15	0.00
13.23	0.04	0.04	0.00	0.07	0.07	0.00	0.15	0.15	0.00
13.25	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
13.27	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
13.28	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
13.30	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
13.32	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
13.33	0.04	0.04	0.00	0.07	0.07	0.00	0.14	0.14	0.00
13.35	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
13.37	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
13.38	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
13.40	0.04	0.04	0.00	0.07	0.07	0.00	0.13	0.13	0.00
13.42	0.04	0.04	0.00	0.06	0.06	0.00	0.13	0.13	0.00
13.43	0.04	0.04	0.00	0.06	0.06	0.00	0.12	0.12	0.00
13.45	0.04	0.04	0.00	0.06	0.06	0.00	0.12	0.12	0.00
13.47	0.04	0.04	0.00	0.06	0.06	0.00	0.12	0.12	0.00
13.48	0.04	0.04	0.00	0.06	0.06	0.00	0.12	0.12	0.00
13.50	0.04	0.04	0.00	0.06	0.06	0.00	0.12	0.12	0.00
13.52	0.04	0.04	0.00	0.06	0.06	0.00	0.12	0.12	0.00
13.53	0.03	0.03	0.00	0.06	0.06	0.00	0.11	0.11	0.00
13.55	0.03	0.03	0.00	0.06	0.06	0.00	0.11	0.11	0.00
13.57	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
13.58	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
13.60	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
13.62	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
13.63	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
13.65	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
13.67	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
13.68	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
13.70	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
13.72	0.03	0.03	0.00	0.05	0.05	0.00	0.11	0.11	0.00
13.73	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.75	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.77	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.78	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.80	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.82	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.83	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.85	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.87	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.88	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.90	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.92	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.93	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
13.95	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.97	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
13.98	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.00	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.02	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.03	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.05	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.07	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.08	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.10	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.12	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.13	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.15	0.02	0.02	0.00	0.04	0.04	0.00	0.06	0.06	0.00
14.17	0.02	0.02	0.00	0.04	0.04	0.00	0.06	0.06	0.00
14.18	0.02	0.02	0.00	0.04	0.04	0.00	0.06	0.06	0.00
14.20	0.02	0.02	0.00	0.04	0.04	0.00	0.06	0.06	0.00
14.22	0.02	0.02	0.00	0.04	0.04	0.00	0.06	0.06	0.00
14.23	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.25	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.27	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.28	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.30	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.32	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.33	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.35	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.37	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.38	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.40	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.42	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.43	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.45	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.47	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.48	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.50	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.52	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.53	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.55	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.57	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.58	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.60	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.62	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
14.63	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.65	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.67	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.68	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.70	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.72	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.73	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.75	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.77	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.78	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.80	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.82	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.83	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.85	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.87	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.88	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.90	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.92	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.93	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.95	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.97	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
14.98	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.00	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.02	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.03	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.05	0.02	0.02	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.07	0.02	0.02	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.08	0.02	0.02	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.10	0.02	0.02	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.12	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.13	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.15	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.17	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.18	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.20	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.22	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.23	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.25	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.27	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.28	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.30	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.32	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.33	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.35	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.37	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.38	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.40	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.42	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.43	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.45	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.47	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.48	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
13.95	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.97	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
13.98	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
14.00	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
14.02	0.03	0.03	0.00	0.05	0.05	0.00	0.10	0.10	0.00
14.03	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.05	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.07	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.08	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.10	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.12	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.13	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.15	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.17	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.18	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.20	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.22	0.03	0.03	0.00	0.05	0.05	0.00	0.09	0.09	0.00
14.23	0.03	0.03	0.00	0.04	0.04	0.00	0.09	0.09	0.00
14.25	0.03	0.03	0.00	0.04	0.04	0.00	0.09	0.09	0.00
14.27	0.03	0.03	0.00	0.04	0.04	0.00	0.09	0.09	0.00
14.28	0.03	0.03	0.00	0.04	0.04	0.00	0.09	0.09	0.00
14.30	0.03	0.03	0.00	0.04	0.04	0.00	0.09	0.09	0.00
14.32	0.03	0.03	0.00	0.04	0.04	0.00	0.09	0.09	0.00
14.33	0.03	0.03	0.00	0.04	0.04	0.00	0.09	0.09	0.00
14.35	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.37	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.38	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.40	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.42	0.03	0.03	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.43	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.45	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.47	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.48	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.50	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.52	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.53	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.55	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.57	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.58	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.60	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.62	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.63	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.65	0.02	0.02	0.00	0.04	0.04	0.00	0.08	0.08	0.00
14.67	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.68	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.70	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.72	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.73	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.75	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.77	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.78	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.80	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.82	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.83	0.02	0.02	0.00	0.04	0.04	0.00	0.07	0.07	0.00
14.85	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
14.87	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
14.88	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
14.90	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
14.92	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
14.93	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
14.95	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
14.97	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
14.98	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
15.00	0.02	0.02	0.00	0.03	0.03	0.00	0.07	0.07	0.00
15.02	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.03	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.05	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.07	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.08	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.10	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.12	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.13	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.15	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.17	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.18	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.20	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.22	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.23	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.25	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.27	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.28	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.30	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.32	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.33	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.35	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.37	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.38	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.40	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.42	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.43	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.45	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.47	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.48	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
15.50	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.52	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.53	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.55	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.57	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.58	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.60	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.62	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.63	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.65	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.67	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.68	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.70	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.72	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.73	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.75	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.77	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.78	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.80	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.82	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.83	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.85	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.87	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.88	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.90	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.92	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.93	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.95	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.97	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
15.98	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.00	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.02	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.03	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.05	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.07	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.08	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.10	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.12	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.13	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.15	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.17	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.18	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.20	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.22	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.23	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.25	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.27	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.28	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.30	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.32	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.33	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.35	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.37	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.38	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.40	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.42	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.43	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.45	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.47	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.48	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.50	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.52	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.53	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.55	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
16.57	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.58	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.60	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.62	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.63	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.65	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.67	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.68	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.70	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.72	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.73	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.75	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.77	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.78	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.80	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.82	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.83	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.85	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.87	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.88	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.90	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.92	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.93	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.95	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.97	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
16.98	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.00	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.02	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.03	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
15.50	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.52	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.53	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.55	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.57	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.58	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.60	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.62	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.63	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.65	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.67	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.68	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.70	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.72	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.73	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.75	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.77	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.78	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.80	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.82	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.83	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.85	0.02	0.02	0.00	0.03	0.03	0.00	0.06	0.06	0.00
15.87	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.88	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.90	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.92	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.93	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.95	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.97	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
15.98	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.00	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.02	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.03	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.05	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.07	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.08	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.10	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.12	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.13	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.15	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.17	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.18	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.20	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.22	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.23	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.25	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.27	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.28	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.30	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.32	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.33	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.35	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.37	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.38	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.40	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.42	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.43	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.45	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.47	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.48	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.50	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.52	0.02	0.02	0.00	0.03	0.03	0.00	0.05	0.05	0.00
16.53	0.02	0.02	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.55	0.02	0.02	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.57	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.58	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.60	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.62	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.63	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.65	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.67	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.68	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.70	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.72	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.73	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.75	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.77	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.78	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.80	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.82	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.83	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.85	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.87	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.88	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.90	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.92	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.93	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.95	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.97	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
16.98	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
17.00	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
17.02	0.01	0.01	0.00	0.02	0.02	0.00	0.05	0.05	0.00
17.03	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
17.05	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.07	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.08	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.10	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.12	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.13	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.15	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.17	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.18	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.20	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.22	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.23	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.25	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.27	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.28	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.30	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.32	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.33	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.35	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.37	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.38	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.40	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.42	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.43	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.45	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.47	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.48	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.50	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.52	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.53	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.55	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.57	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.58	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.60	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.62	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.63	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.65	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.67	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.68	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.70	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.72	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.73	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.75	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.77	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.78	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.80	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.82	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.83	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.85	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.87	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.88	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.90	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.92	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
17.93	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
17.95	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
17.97	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
17.98	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.00	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.02	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.03	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.05	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.07	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.08	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.10	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.12	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.13	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.15	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.17	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.18	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.20	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.22	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.23	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.25	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.27	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.28	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.30	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.32	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.33	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.35	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.37	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.38	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.40	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.42	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
18.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
17.05	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.07	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.08	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.10	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.12	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.13	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.15	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.17	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.18	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.20	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.22	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.23	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.25	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.27	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.28	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.30	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.32	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.33	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.35	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.37	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.38	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.40	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.42	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.43	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.45	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.47	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.48	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.50	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.52	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.53	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.55	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.57	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.58	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.60	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.62	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.63	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.65	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.67	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.68	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.70	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.72	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.73	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.75	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.77	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.78	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.80	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.82	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.83	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.85	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.87	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.88	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.90	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.92	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.93	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.95	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.97	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
17.98	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.00	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.02	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.03	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.05	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.07	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.08	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.10	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.12	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.13	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.15	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.17	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.18	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.20	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.22	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.23	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.25	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.27	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.28	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.30	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.32	0.01	0.01	0.00	0.02	0.02	0.00	0.04	0.04	0.00
18.33	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.35	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.37	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.38	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.40	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.42	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.43	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.45	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.47	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.48	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.50	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.52	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.53	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.55	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.57	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.58	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
18.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.72	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.73	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.75	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.77	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.78	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.80	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.82	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
18.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.02	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.03	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.05	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.07	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.08	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.10	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.12	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.15	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.17	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.18	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.20	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.22	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.23	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.25	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.27	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.28	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.32	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.33	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.35	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.37	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.38	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.40	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.42	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.72	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.73	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.75	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.77	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.78	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.80	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.82	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
19.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.02	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.03	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.05	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.07	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.08	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.10	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.12	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
18.60	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.62	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.63	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.65	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.67	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.68	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.70	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.72	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.73	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.75	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.77	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.78	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.80	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.82	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.83	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.85	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.87	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.88	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.90	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.92	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.93	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.95	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.97	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
18.98	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.00	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.02	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.03	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.05	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.07	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.08	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.10	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.12	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.13	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.15	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.17	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.18	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.20	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.22	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.23	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.25	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.27	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.28	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.30	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.32	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.33	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.35	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.37	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.38	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.40	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.42	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.43	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.45	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.47	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.48	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.50	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.52	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.53	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.55	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.57	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.58	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.60	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.62	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.63	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.65	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.67	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.68	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.70	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.72	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.73	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.75	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.77	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.78	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.80	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.82	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.83	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.85	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.87	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.88	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.90	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.92	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.93	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.95	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.97	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
19.98	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.00	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.02	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.03	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.05	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.07	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.08	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.10	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.12	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.13	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
20.15	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.17	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.18	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.20	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.22	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.23	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.25	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.27	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.28	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.32	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.33	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.35	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.37	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.38	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.40	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.42	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.72	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.73	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.75	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.77	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.78	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.80	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.82	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
20.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.02	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.03	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.05	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.07	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.08	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.10	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.12	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.15	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.17	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.18	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.20	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.22	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.23	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.25	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.27	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.28	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.32	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.33	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.35	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.37	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.38	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.40	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.42	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
20.15	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.17	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.18	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.20	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.22	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.23	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.25	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.27	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.28	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.30	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.32	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.33	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.35	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.37	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.38	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.40	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.42	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.43	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.45	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.47	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.48	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.50	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.52	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.53	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.55	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.57	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.58	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.60	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.62	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.63	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.65	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.67	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.68	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.70	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.72	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.73	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.75	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.77	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.78	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.80	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.82	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.83	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.85	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.87	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.88	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.90	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.92	0.01	0.01	0.00	0.02	0.02	0.00	0.03	0.03	0.00
20.93	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
20.95	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
20.97	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
20.98	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.00	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.02	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.03	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.05	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.07	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.08	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.10	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.12	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.13	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.15	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.17	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.18	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.20	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.22	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.23	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.25	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.27	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.28	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.30	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.32	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.33	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.35	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.37	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.38	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.40	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.42	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.43	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.45	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.47	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.48	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.50	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.52	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.53	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.55	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.57	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.58	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.60	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.62	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.63	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.65	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.67	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.68	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
21.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.72	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.73	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.75	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.77	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.78	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.80	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.82	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
21.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.02	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.03	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.05	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.07	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.08	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.10	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.12	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.15	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.17	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.18	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.20	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.22	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.23	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.25	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.27	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.28	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.32	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.33	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.35	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.37	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.38	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.40	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.42	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.72	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.73	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.75	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.77	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.78	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.80	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.82	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.02	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.03	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.05	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.07	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.08	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.10	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.12	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.15	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.17	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.18	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.20	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.22	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.23	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
21.70	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.72	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.73	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.75	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.77	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.78	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.80	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.82	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.83	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.85	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.87	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.88	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.90	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.92	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.93	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.95	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.97	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
21.98	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.00	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.02	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.03	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.05	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.07	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.08	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.10	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.12	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.13	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.15	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.17	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.18	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.20	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.22	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.23	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.25	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.27	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.28	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.30	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.32	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.33	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.35	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.37	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.38	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.40	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.42	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.43	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.45	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.47	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.48	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.50	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.52	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.53	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.55	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.57	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.58	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.60	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.62	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.63	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.65	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.67	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.68	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.70	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.72	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.73	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.75	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.77	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.78	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.80	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.82	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.83	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.85	0.01	0.01	0.00	0.01	0.01	0.00	0.03	0.03	0.00
22.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
22.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.02	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.03	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.05	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.07	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.08	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.10	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.12	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.13	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.15	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.17	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.18	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.20	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.22	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.23	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("CURRENT")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
23.25	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.27	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.28	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.32	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.33	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.35	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.37	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.38	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.40	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.42	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.72	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.73	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.75	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.77	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.78	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.80	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.82	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
24.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00

WATERSHED 2
PRE- VS POST- PEAK FLOW RATE HYDROGRAPH COMPARISONS ("FUTURE")

Time (hr)	2-Year Storm Event			10-Year Storm Event			100-Year Storm Event		
	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction	Pre-Dev Peak Flow (cfs)	Post-Dev Peak Flow (cfs)	Reduction
23.25	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.27	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.28	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.30	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.32	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.33	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.35	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.37	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.38	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.40	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.42	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.43	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.45	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.47	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.48	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.50	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.52	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.53	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.55	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.57	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.58	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.60	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.62	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.63	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.65	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.67	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.68	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.70	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.72	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.73	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.75	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.77	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.78	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.80	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.82	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.83	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.85	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.87	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.88	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.90	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.92	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.93	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.95	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.97	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
23.98	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00
24.00	0.01	0.01	0.00	0.01	0.01	0.00	0.02	0.02	0.00

APPENDIX C

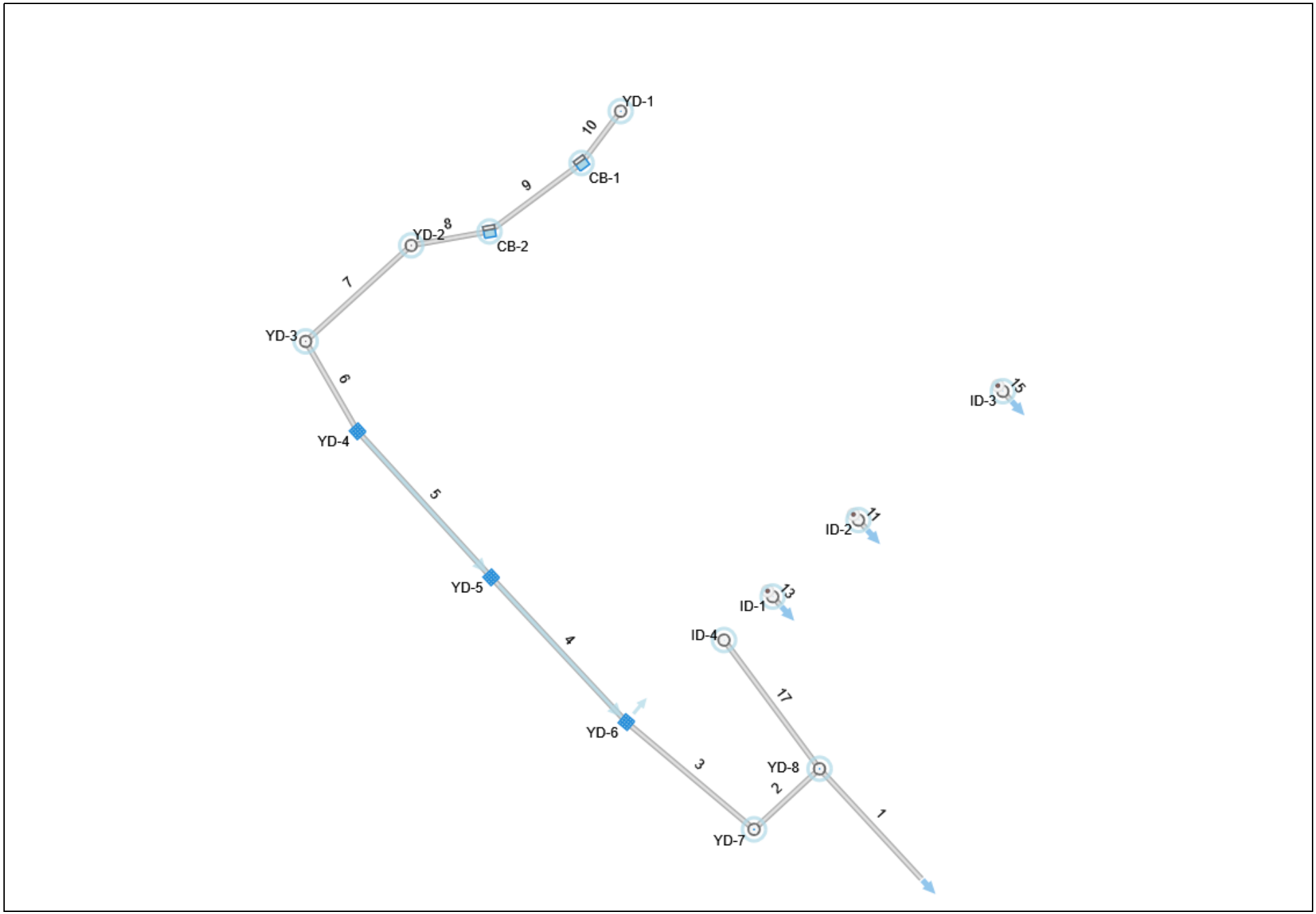
Stormwater Conveyance System Calculations

Plan View

Stormwater Studio 2026 v 3.0.0.40

Project Name: 101324801 - STORM

01-14-2026



Storm Sewer Tabulation

Project Name: 101324801 - STORM

Stormwater Studio 2026 v 3.0.0.40

01-14-2026

Line ID	Length	Drng Area		Rational	C x A		Tc		Intensity	Total Q	Capacity	Velocity	Line		Invert Elev		HGL Elev		Surface Elev		Line No
		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Up	Dn	Up	Dn	Up	Dn	
	(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
YD-8-FES-1	77.67	0.070	0.470	0.86	0.06	0.38	10.0	13.59	5.84	2.24	2.73	3.02	12	0.50	205.29	204.90	206.12	205.90	207.88	206.29	1
YD-7 - YD-8	46.57	0.060	0.390	0.90	0.05	0.31	10.0	13.28	5.89	1.84	2.73	2.51	12	0.50	205.52	205.29	206.35	206.27	207.89	207.88	2
YD-6 - YD-7	87.00	0.040	0.330	0.71	0.03	0.26	10.0	12.89	5.95	1.54	2.70	4.48	10	1.30	206.82	205.69	207.37	206.15	209.50	207.89	3
YD-5-YD-6	103.33	0.040	0.290	0.68	0.03	0.23	10.0	12.44	6.03	1.39	4.44	5.33	10	3.50	210.54	206.93	211.06	207.26	213.30	211.50	4
YD-4-YD-5	103.29	0.020	0.250	0.68	0.01	0.20	10.0	11.89	6.12	1.24	5.03	5.47	10	4.50	215.19	210.54	215.69	210.83	218.42	213.30	5
YD-3-YD-4	54.19	0.000	0.230	0.00	0.00	0.19	0.0	11.60	6.17	1.17	5.31	5.34	10	5.00	217.90	215.19	218.38	215.48	221.69	218.42	6
YD-2-YD-3	74.43	0.000	0.230	0.00	0.00	0.19	0.0	11.21	6.24	1.18	1.67	3.21	10	0.50	218.27	217.90	218.77	218.47	221.21	221.69	7
CB-2-YD-2	41.49	0.100	0.230	0.85	0.09	0.19	10.0	10.97	6.28	1.19	1.68	2.82	10	0.50	218.48	218.27	219.03	218.94	222.10	221.21	8
CB-1-CB-2	59.84	0.080	0.130	0.89	0.07	0.10	10.0	10.42	6.39	0.67	1.68	1.80	10	0.50	218.88	218.58	219.33	219.28	222.63	222.10	9
YD-1-CB-1	33.92	0.050	0.050	0.67	0.03	0.03	10.0	10.00	6.47	0.22	0.93	1.36	8	0.50	219.22	219.05	219.48	219.45	221.93	222.63	10
ID-2-ES-2	5.50	0.010	0.400	0.95	0.01	0.40	10.0	10.02	6.47	2.56	5.46	3.36	12	2.00	210.91	210.80	211.80	211.80	213.27	210.80	11
RL-2-ID-2	4.00	0.390	0.390	0.99	0.39	0.39	10.0	10.00	6.47	2.50	5.46	3.21	12	2.00	210.99	210.91	211.94	211.93	213.33	213.27	12
ID-1-ES-1	5.50	0.010	0.550	0.96	0.01	0.54	10.0	10.02	6.47	3.52	5.46	4.61	12	2.00	210.51	210.40	211.41	211.40	212.57	210.40	13
RL-1-ID-1	4.00	0.540	0.540	0.99	0.53	0.53	10.0	10.00	6.47	3.46	5.46	4.40	12	2.00	210.59	210.51	211.73	211.70	212.60	212.57	14
ID-3-ES-3	5.50	0.020	0.560	0.95	0.02	0.55	10.0	10.02	6.47	3.58	5.46	4.69	12	2.00	210.31	210.20	211.21	211.20	213.26	210.20	15
RL-3-ID-3	4.00	0.540	0.540	0.99	0.53	0.53	10.0	10.00	6.47	3.46	5.46	4.40	12	2.00	210.39	210.31	211.55	211.52	213.32	213.26	16
ID-4-YD-8	83.65	0.010	0.010	0.96	0.01	0.01	10.0	10.00	6.47	0.06	1.94	0.84	8	2.20	207.46	205.62	207.58	206.32	210.52	207.88	17

Notes: IDF File = 101324801 100-YRIDF.IDF, Return Period = 100-yrs.

Project File: 101324801-STORM.sws

Energy Grade Line Calculations

Project Name: 101324801 - STORM

Stormwater Studio 2026 v 3.0.0.40

01-14-2026

Line No	Line Size	Q	Downstream							Length	Upstream							Pipe		Junction		
			Invert Elev	Depth	Area	HGL Elev	Vel	Vel Head	EGL Elev		Invert Elev	Depth	Area	HGL Elev	Vel	Vel Head	EGL Elev	n Value	Enrgy Loss	HGLa Elev	EGLa Elev	Enrgy Loss
	(in)	(cfs)	(ft)	(ft)	(sqft)	(ft)	(ft/s)	(ft)	(ft)	(ft)	(ft)	(ft)	(sqft)	(ft)	(ft/s)	(ft)	(ft)		(ft)	(ft)	(ft)	(ft)
1	12	2.24	204.90	1.00	0.79	205.90	2.85	0.13	206.03	77.67	205.29	0.84	0.70	206.12	3.19	0.16	206.28	0.012	0.256	206.16	206.32	0.04
2	12	1.84	205.29	0.98	0.78	206.27	2.36	0.09	206.36	46.57	205.52	0.82	0.69	206.35	2.67	0.11	206.46	0.012	0.101	206.37	206.48	0.03
3	10	1.54	205.69	0.46‡	0.31	206.15	4.94	0.38	206.53	87.00	206.82	0.55²	0.38	207.37	4.02	0.25	207.62	0.012	1.097	207.37	207.62	0.00
4	10	1.39	206.93	0.33‡	0.20	207.26	6.81	0.72	207.68	103.33	210.54	0.52²	0.36	211.06	3.85	0.23	211.29	0.012	3.613	211.06	211.29	0.00
5	10	1.24	210.54	0.29‡	0.17	210.83	7.26	0.82	211.33	103.29	215.19	0.50²	0.34	215.69	3.68	0.21	215.90	0.012	4.570	215.69	215.90	0.00
6	10	1.17	215.19	0.29‡	0.17	215.48	7.09	0.78	215.93	54.19	217.90	0.48²	0.33	218.38	3.59	0.20	218.58	0.012	2.655	218.38	218.58	0.00
7	10	1.18	217.90	0.57	0.40	218.47	2.95	0.14	218.61	74.43	218.27	0.50	0.34	218.77	3.48	0.19	218.96	0.012	0.346	218.83	219.01	0.06
8	10	1.19	218.27	0.67	0.47	218.94	2.54	0.10	219.04	41.49	218.48	0.55	0.39	219.03	3.10	0.15	219.18	0.012	0.141	219.15	219.30	0.12
9	10	0.67	218.58	0.70	0.49	219.28	1.37	0.03	219.31	59.84	218.88	0.45	0.30	219.33	2.23	0.08	219.41	0.012	0.096	219.39	219.46	0.06
10	8	0.22	219.05	0.40	0.22	219.45	0.98	0.01	219.47	33.92	219.22	0.26	0.12	219.48	1.74	0.05	219.52	0.012	0.056	219.52	219.57	0.04
11	12	2.56	210.80	1.00	0.79	211.80	3.26	0.16	211.97	5.50	210.91	0.89	0.74	211.80	3.46	0.19	211.99	0.012	0.023	211.84	212.03	0.04
12	12	2.50	210.91	1.00	0.79	211.93	3.18	0.16	212.09	4.00	210.99	0.95	0.77	211.94	3.24	0.16	212.10	0.012	0.016	211.97	212.14	0.03
13	12	3.52	210.40	1.00	0.79	211.40	4.48	0.31	211.71	5.50	210.51	0.90	0.74	211.41	4.74	0.35	211.76	0.012	0.043	211.53	211.88	0.12
14	12	3.46	210.51	1.00	0.79	211.70	4.41	0.30	212.00	4.00	210.59	1.00	0.79	211.73	4.40	0.30	212.03	0.012	0.032	211.79	212.09	0.06
15	12	3.58	210.20	1.00	0.79	211.20	4.56	0.32	211.52	5.50	210.31	0.90	0.74	211.21	4.82	0.36	211.57	0.012	0.045	211.34	211.70	0.13
16	12	3.46	210.31	1.00	0.79	211.52	4.41	0.30	211.82	4.00	210.39	1.00	0.79	211.55	4.40	0.30	211.85	0.012	0.032	211.61	211.91	0.06
17	8	0.06	205.62	0.67	0.35	206.32	0.18	0.00	206.32	83.65	207.46	0.12²	0.04	207.58	1.50	0.03	207.61	0.012	1.290	207.58	207.61	0.00

Notes: Return Period = 100-yrs. ² Critical depth. ‡ Supercritical.

Project File: 101324801-STORM.sws

APPENDIX D

Stormwater Outlet Protection Calculations

Based on "Standards for Soil Erosion and Sediment Control in New Jersey," dated 2014

TABLE 12-1 ALLOWABLE VELOCITIES FOR VARIOUS SOILS

SOIL TEXTURE	ALLOWABLE VELOCITY (ft./sec.)
1. Sand	1.8
2. Sandy Loam	2.5
3. Silt loam (also high lime clay), loam	3.0
4. Sandy clay loam	3.5
5. Clay loam	4.0
6. Clay, fine gravel, gradded loam to gravel	5.0
7. Cobbles	5.5
8. Shale (non-weathered)	6.0

Soil type where outfall is located = 1 (Note: Select number designating soil texture above)
allowable velocity = 1.8 ft/sec
v (velocity) = 3.02 ft/sec
Scour Hole required? **1** (1 = yes, 0 = no)

Given:

D_o (max inside height) = 1 feet
W_o (max inside width) = 1 feet
Q (discharge) = 2.24 cfs (100-year storm)
*q (unit discharge, = Q/W_o) = 2.2 cfs / foot
** T_w (tail water) = 0.20 feet

* for the conduit design storm or the 25 year storm, whichever is greater

** for areas where T_w cannot be computed, use $T_w = 0.2\ D_o$. For discharge into detention basins, Tw shall equal the 2 year "current" storm elevation in the basin.

Preformed Scour Hole Median Stone Diameter and Riprap Lining Thickness

Preformed scour holes may be utilized, where conditions dictate the impractical use of flat aprons. The median stone diameter, D50, in feet, shall be determined from the following formulas:

$$D_{50} = \frac{0.0125}{T_w} q^{1.33}$$

where Y = ½D_o = 0.5 **D_{50} = 0.18 feet Use 6 inches**

$$D_{50} = \frac{0.0082}{T_w} q^{1.33}$$

where Y = D_o = 1 D_{50} = 0.12 feet

Y = depth of scour hole below culvert invert

The use of scour holes shall comply with county or local ordinances which would restrict the use of such devices due to possible problems with mosquito breeding.

Riprap lining shall have a thickness of at least three times the D_{50} size if a filter layer is not used and a thickness of at least two times the D_{50} size is a filter layer is used. A mimimum thickness shall be 8 inches

Liner not used = $3D_{50}$ = 1.50 feet
Liner used = $2D_{50}$ = 1.00 feet < 0.66 feet **Lining Thickness = 1.00 feet**

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ENGINEERING & ENVIRONMENTAL SERVICES
300 Kimball Drive Parsippany, NJ
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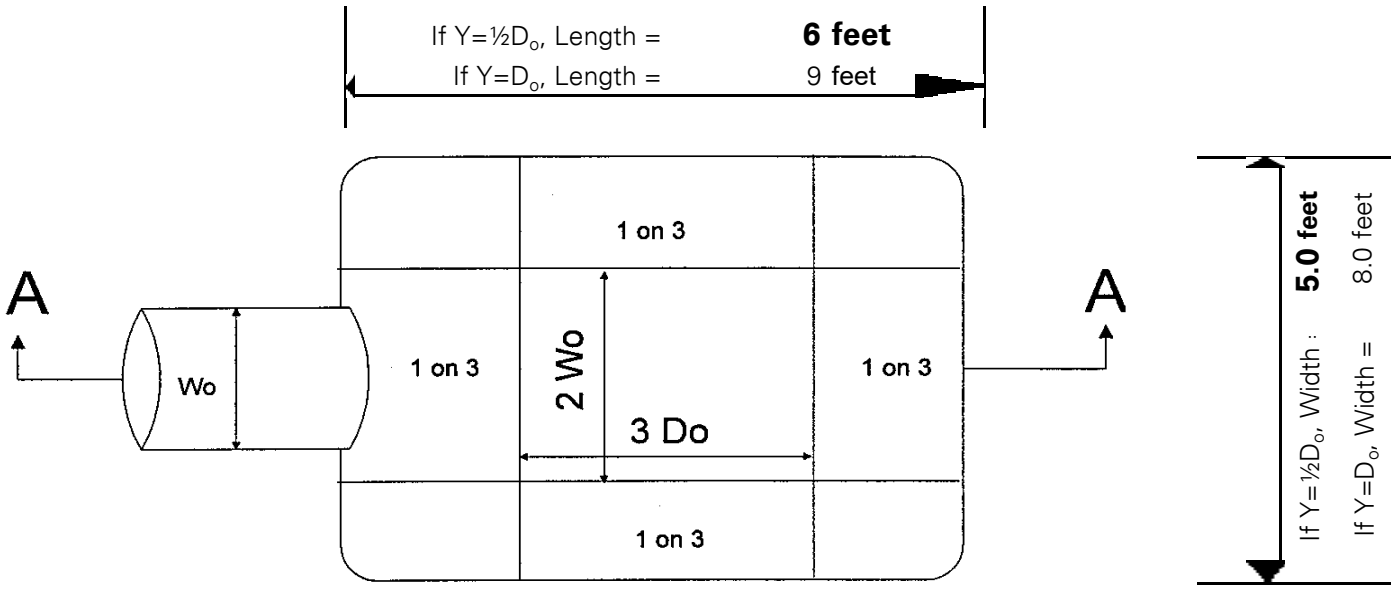
NJ Certificate of Authorization No: 24GA27996400

Project:
Scour Hole Design - FES-1
AJDM CHATHAM, LLC
Borough of Chatham, Morris County, New Jersey

Project No.	Date:	By:	Ckd:	Sheet. No.
101324801	1/14/2026	BMW	JED	1

Preformed Scour Hole Dimensions

$2W_o$ =	**2 feet**
$3D_o$ =	**3 feet**
Y (Depth) =	**0.5 feet**



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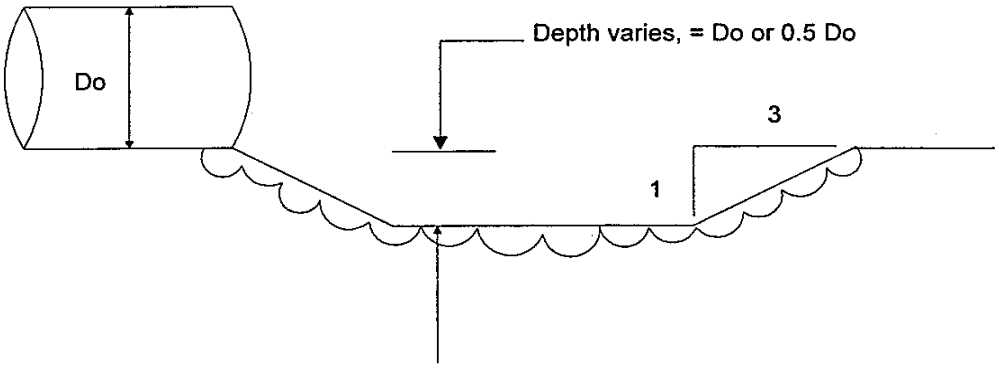

Section A - A

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AJDM CHATHAM, LLC
Borough of Chatham, Morris County, New Jersey

Project No.	Date:	By:	Ckd:	Sheet. No.
101324801	1/14/2026	BMW	JED	2

Based on "Standards for Soil Erosion and Sediment Control in New Jersey," dated 2014

TABLE 12-1 ALLOWABLE VELOCITIES FOR VARIOUS SOILS

SOIL TEXTURE	ALLOWABLE VELOCITY (ft./sec.)
1. Sand	1.8
2. Sandy Loam	2.5
3. Silt loam (also high lime clay), loam	3.0
4. Sandy clay loam	3.5
5. Clay loam	4.0
6. Clay, fine gravel, gradded loam to gravel	5.0
7. Cobbles	5.5
8. Shale (non-weathered)	6.0

Soil type where outfall is located = 1 (Note: Select number designating soil texture above)
allowable velocity = 1.8 ft/sec
v (velocity) = 4.61 ft/sec
Scour Hole required? **1** (1 = yes, 0 = no)

Given:

D_o (max inside height) = 1 feet
W_o (max inside width) = 1 feet
Q (discharge) = 3.52 cfs (100-year storm)
*q (unit discharge, = Q/W_o) = 3.5 cfs / foot
** T_w (tail water) = 0.20 feet

* for the conduit design storm or the 25 year storm, whichever is greater

** for areas where T_w cannot be computed, use $T_w = 0.2\ D_o$. For discharge into detention basins, Tw shall equal the 2 year "current" storm elevation in the basin.

Preformed Scour Hole Median Stone Diameter and Riprap Lining Thickness

Preformed scour holes may be utilized, where conditions dictate the impractical use of flat aprons. The median stone diameter, D50, in feet, shall be determined from the following formulas:

$$D_{50} = \frac{0.0125}{T_w} q^{1.33}$$ where Y = ½D_o = 0.5 **D_{50} = 0.33 feet Use 6 inches**

$$D_{50} = \frac{0.0082}{T_w} q^{1.33}$$ where Y = D_o = 1 D_{50} = 0.22 feet

Y = depth of scour hole below culvert invert

The use of scour holes shall comply with county or local ordinances which would restrict the use of such devices due to possible problems with mosquito breeding.

Riprap lining shall have a thickness of at least three times the D_{50} size if a filter layer is not used and a thickness of at least two times the D_{50} size is a filter layer is used. A mimimum thickness shall be 8 inches

Liner not used = $3D_{50}$ = 1.50 feet
Liner used = $2D_{50}$ = 1.00 feet < 0.66 feet **Lining Thickness = 1.00 feet**

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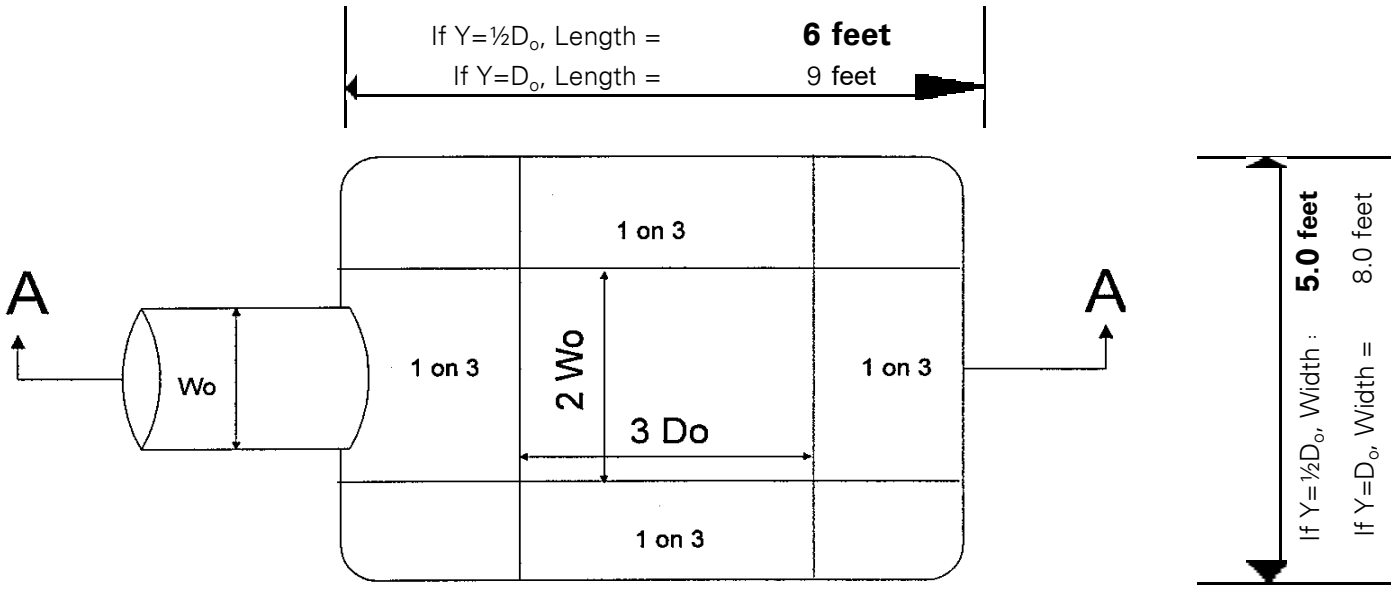
101324801	1/14/2026	BMW	JED	1

Preformed Scour Hole Dimensions

$2W_o$ =	**2 feet**
$3D_o$ =	**3 feet**
Y (Depth) =	**0.5 feet**



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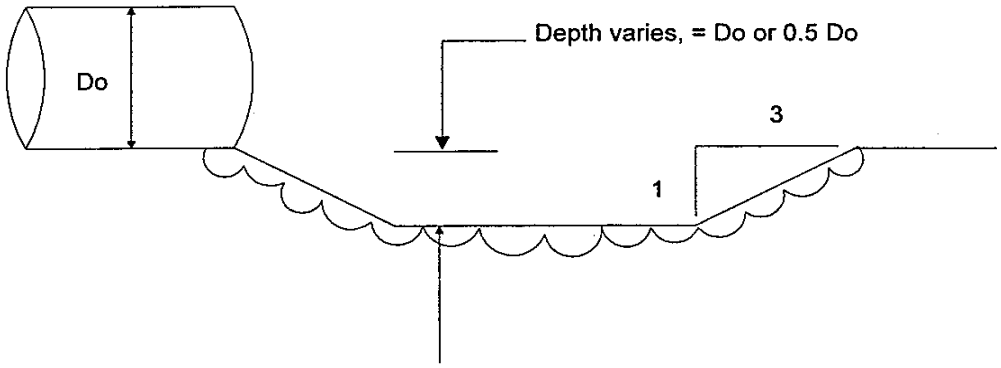

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Scour Hole Design - ES-1
AJDM CHATHAM, LLC
Borough of Chatham, Morris County, New Jersey

Project No.	Date:	By:	Ckd:	Sheet. No.
101324801	1/14/2026	BMW	JED	2

Based on "Standards for Soil Erosion and Sediment Control in New Jersey," dated 2014

TABLE 12-1 ALLOWABLE VELOCITIES FOR VARIOUS SOILS

SOIL TEXTURE	ALLOWABLE VELOCITY (ft./sec.)
1. Sand	1.8
2. Sandy Loam	2.5
3. Silt loam (also high lime clay), loam	3.0
4. Sandy clay loam	3.5
5. Clay loam	4.0
6. Clay, fine gravel, gradded loam to gravel	5.0
7. Cobbles	5.5
8. Shale (non-weathered)	6.0

Soil type where outfall is located = 1 (Note: Select number designating soil texture above)
allowable velocity = 1.8 ft/sec
v (velocity) = 3.36 ft/sec
Scour Hole required? **1** (1 = yes, 0 = no)

Given:

D_o (max inside height) = 1 feet
W_o (max inside width) = 1 feet
Q (discharge) = 2.56 cfs (100-year storm)
*q (unit discharge, = Q/W_o) = 2.6 cfs / foot
** T_w (tail water) = 0.20 feet

* for the conduit design storm or the 25 year storm, whichever is greater

** for areas where T_w cannot be computed, use $T_w = 0.2\ D_o$. For discharge into detention basins, Tw shall equal the 2 year "current" storm elevation in the basin.

Preformed Scour Hole Median Stone Diameter and Riprap Lining Thickness

Preformed scour holes may be utilized, where conditions dictate the impractical use of flat aprons. The median stone diameter, D50, in feet, shall be determined from the following formulas:

$$D_{50} = \frac{0.0125}{T_w} q^{1.33}$$ where Y = ½D_o = 0.5 **D_{50} = 0.22 feet Use 6 inches**

$$D_{50} = \frac{0.0082}{T_w} q^{1.33}$$ where Y = D_o = 1 D_{50} = 0.14 feet

Y = depth of scour hole below culvert invert

The use of scour holes shall comply with county or local ordinances which would restrict the use of such devices due to possible problems with mosquito breeding.

Riprap lining shall have a thickness of at least three times the D_{50} size if a filter layer is not used and a thickness of at least two times the D_{50} size is a filter layer is used. A mimimum thickness shall be 8 inches

Liner not used = $3D_{50}$ = 1.50 feet
Liner used = $2D_{50}$ = 1.00 feet < 0.66 feet **Lining Thickness = 1.00 feet**

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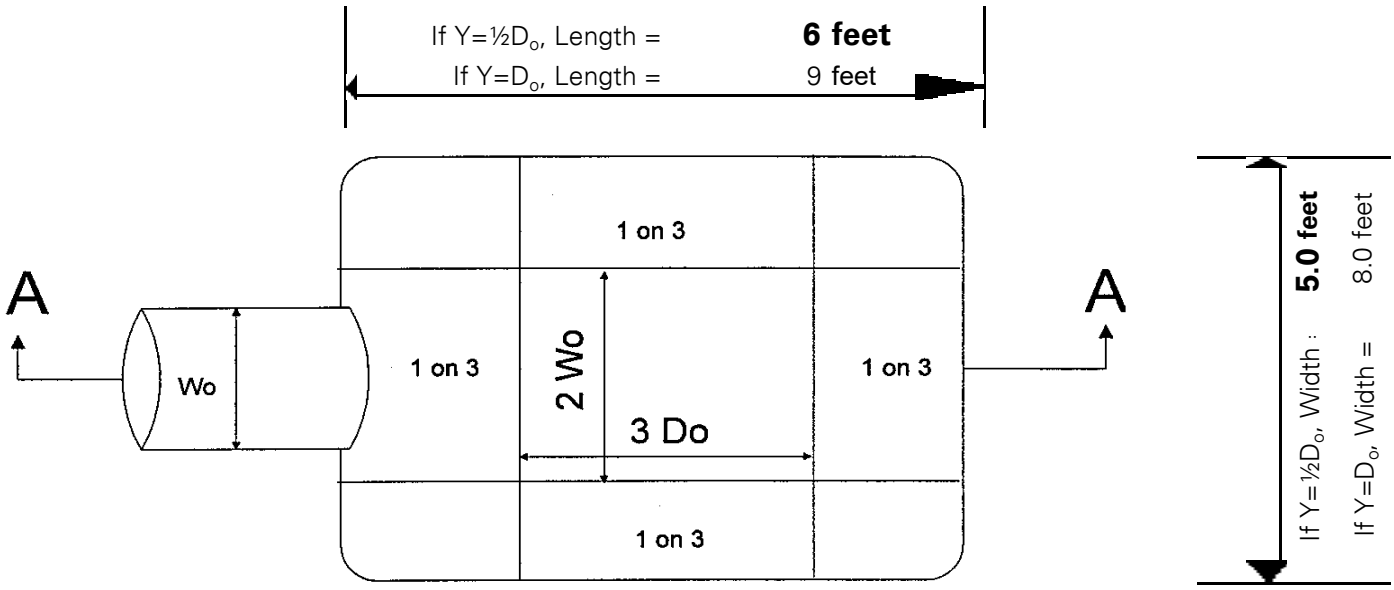
NJ Certificate of Authorization No: 24GA27996400

Project:
Scour Hole Design - ES-2
AJDM CHATHAM, LLC
Borough of Chatham, Morris County, New Jersey

Project No.	Date:	By:	Ckd:	Sheet. No.
101324801	1/14/2026	BMW	JED	1

Preformed Scour Hole Dimensions

$2W_o$ =	**2 feet**
$3D_o$ =	**3 feet**
Y (Depth) =	**0.5 feet**



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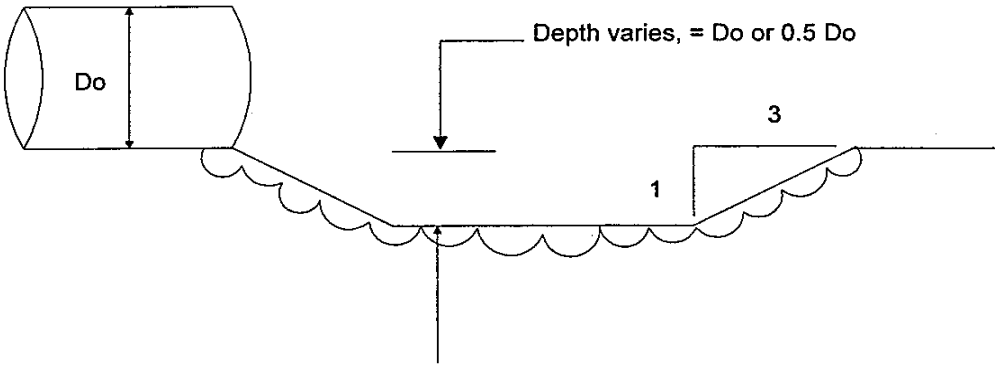

Section A - A

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ENGINEERING & ENVIRONMENTAL SERVICES
300 Kimball Drive Parsippany, NJ
P: 973.560.4900 F: 973.560.4901
NJ Certificate of Authorization No: 24GA27996400

Project:

Scour Hole Design - ES-2
AJDM CHATHAM, LLC
Borough of Chatham, Morris County, New Jersey

Project No.	Date:	By:	Ckd:	Sheet. No.
101324801	1/14/2026	BMW	JED	2

Based on "Standards for Soil Erosion and Sediment Control in New Jersey," dated 2014

TABLE 12-1 ALLOWABLE VELOCITIES FOR VARIOUS SOILS

SOIL TEXTURE	ALLOWABLE VELOCITY (ft./sec.)
1. Sand	1.8
2. Sandy Loam	2.5
3. Silt loam (also high lime clay), loam	3.0
4. Sandy clay loam	3.5
5. Clay loam	4.0
6. Clay, fine gravel, gradded loam to gravel	5.0
7. Cobbles	5.5
8. Shale (non-weathered)	6.0

Soil type where outfall is located = 1 (Note: Select number designating soil texture above)
allowable velocity = 1.8 ft/sec
v (velocity) = 4.69 ft/sec
Scour Hole required? **1** (1 = yes, 0 = no)

Given:

D_o (max inside height) = 1 feet
W_o (max inside width) = 1 feet
Q (discharge) = 3.58 cfs (100-year storm)
*q (unit discharge, = Q/W_o) = 3.6 cfs / foot
** T_w (tail water) = 0.20 feet

* for the conduit design storm or the 25 year storm, whichever is greater

** for areas where T_w cannot be computed, use $T_w = 0.2\ D_o$. For discharge into detention basins, Tw shall equal the 2 year "current" storm elevation in the basin.

Preformed Scour Hole Median Stone Diameter and Riprap Lining Thickness

Preformed scour holes may be utilized, where conditions dictate the impractical use of flat aprons. The median stone diameter, D50, in feet, shall be determined from the following formulas:

$$D_{50} = \frac{0.0125}{T_w} q^{1.33}$$ where Y = ½D_o = 0.5 **D_{50} = 0.34 feet Use 6 inches**

$$D_{50} = \frac{0.0082}{T_w} q^{1.33}$$ where Y = D_o = 1 D_{50} = 0.22 feet

Y = depth of scour hole below culvert invert

The use of scour holes shall comply with county or local ordinances which would restrict the use of such devices due to possible problems with mosquito breeding.

Riprap lining shall have a thickness of at least three times the D_{50} size if a filter layer is not used and a thickness of at least two times the D_{50} size is a filter layer is used. A mimimum thickness shall be 8 inches

Liner not used = $3D_{50}$ = 1.50 feet
Liner used = $2D_{50}$ = 1.00 feet < 0.66 feet **Lining Thickness = 1.00 feet**

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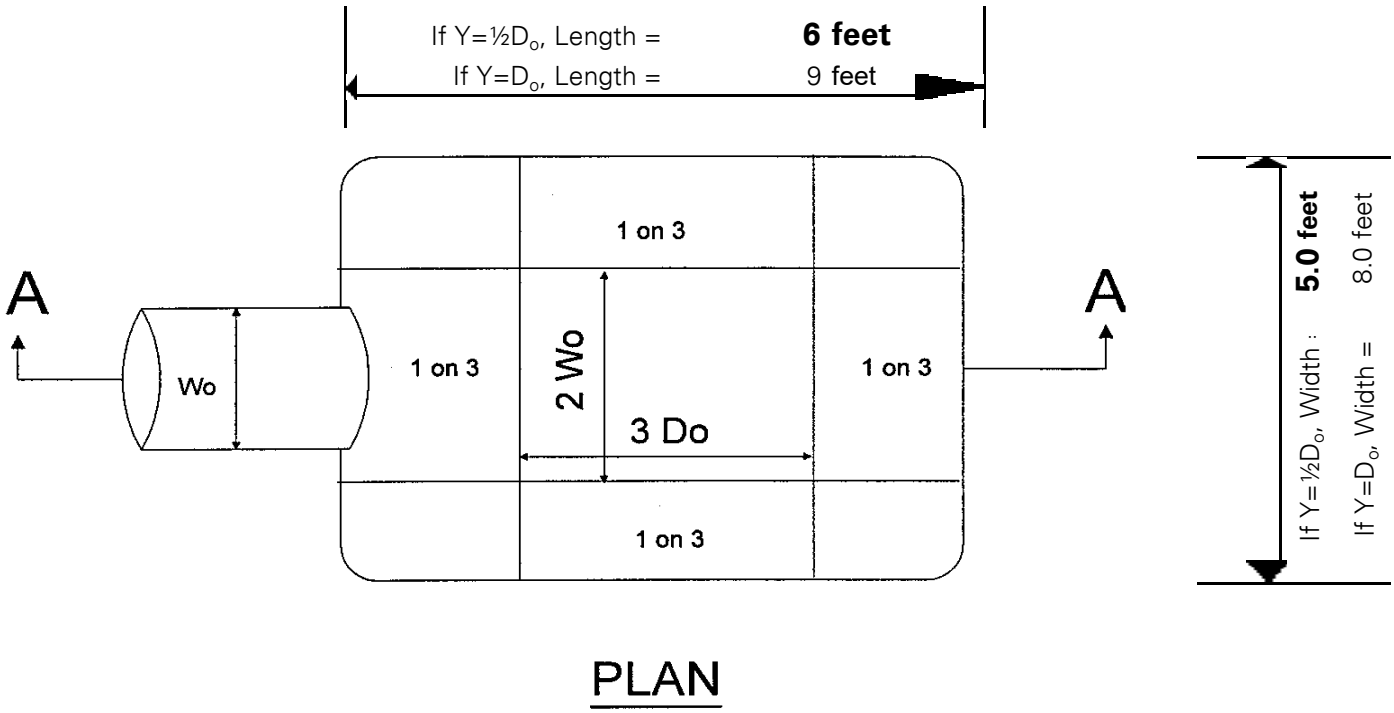
NJ Certificate of Authorization No: 24GA27996400

Project:
Scour Hole Design - ES-3
AJDM CHATHAM, LLC
Borough of Chatham, Morris County, New Jersey

Project No.	Date:	By:	Ckd:	Sheet. No.
101324801	1/14/2026	BMW	JED	1

Preformed Scour Hole Dimensions

$2W_o$ =	**2 feet**
$3D_o$ =	**3 feet**
Y (Depth) =	**0.5 feet**



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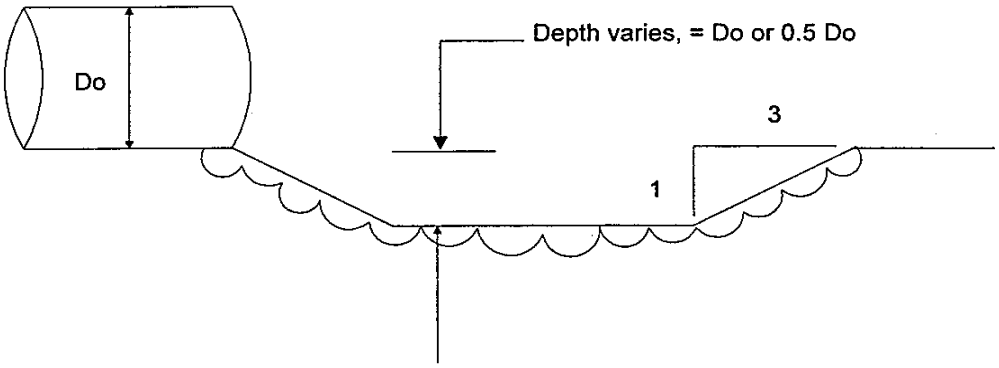

Section A - A

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ENGINEERING & ENVIRONMENTAL SERVICES
300 Kimball Drive Parsippany, NJ
P: 973.560.4900 F: 973.560.4901
NJ Certificate of Authorization No: 24GA27996400

Project:

Scour Hole Design - ES-3
AJDM CHATHAM, LLC
Borough of Chatham, Morris County, New Jersey

Project No.	Date:	By:	Ckd:	Sheet. No.
101324801	1/14/2026	BMW	JED	2

Based on "Standards for Soil Erosion and Sediment Control in New Jersey," dated January 2014

For channel slopes between 2% and 10%:

$D_{50} = [q(S)^{1.5}/4.75(10)^{-3}]^{1/1.89}$

For channel slopes between 10% and 40%:

$D_{50} = [q(S)^{0.58}/3.93(10)^{-2}]^{1/1.89}$

D_{50} = Partical (stone) size for which 50% of the sample is finer, in.
S = Bed slope, ft./ft.
q = Unit discharge, $ft^3/s/ft$ (Total discharge / Bottom width)
W_o = Bottom width, ft.

Given:

S	=	0.4	ft/ft
W_o	=	60	ft
Q (discharge)	=	2.71	ft^3/s (100-Year Storm) Q = CiA = (0.89)*(6.47 IN/HR)*(0.47 AC)
q (unit discharge, = Q/W_o)	=	0.05	$ft^3/s/ft$

Rock Chute Dimensions

I. The stone size for the rock chute, D_{50} (in inches), shall be determined from the formula:

$D_{50} = [q(S)^{1.5}/4.75(10)^{-3}]^{1/1.89}$ **D_{50} = 1.6 inches**

$D_{50} = [q(S)^{0.58}/3.93(10)^{-2}]^{1/1.89}$ **D_{50} = 0.8 inches**

*** Use D50 = 3 inches**

II. The length of the rock chute, L_o (in feet), shall be determined from the formula:

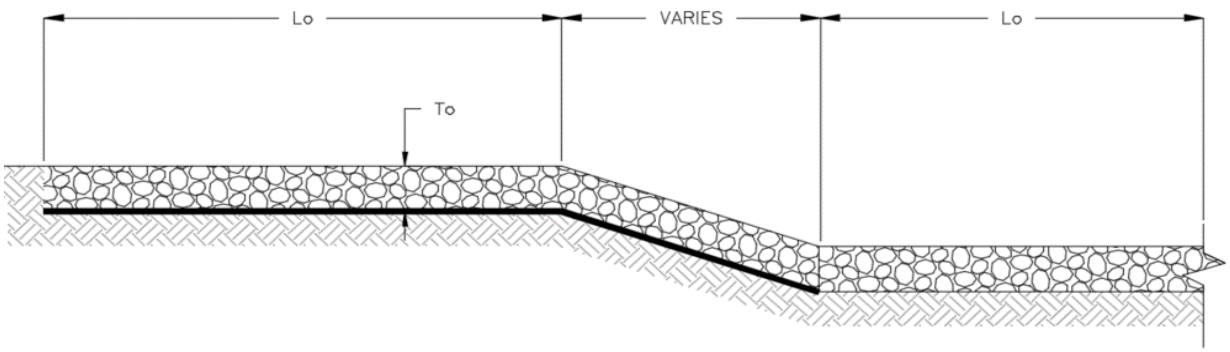
$L_o = 15D_{50}$ **L_o = 1.0 feet**

*** Use Lo = 4 feet**

III. The thickness of the rock chute, T_o (in feet), shall be determined from the formula:

$T_o = 2D_{50}$ **T_o = 0.1 feet**

***Use To = 6 inches**



LANGAN
300 Kimball Drive Parsippany, NJ
NJ Certificate of Authorization No: 24GA27996400

Project: **Rock Chute**

ROCK CHUTE DESIGN CALCULATIONS
AJDM CHATHAM, LLC
Borough of Chatham, Morris County, New Jersey

Project No.	Date:	By:	Ckd:	Sheet. No.
101324801	1/14/2026	BMW	JED	1 of 1

DOLAN&DEAN
CONSULTING ENGINEERS, LLC

181 WEST HIGH STREET
SOMERVILLE, NJ 08876

908 927 0100 p
908 927 0181 f

TRAFFIC IMPACT ASSESSMENT

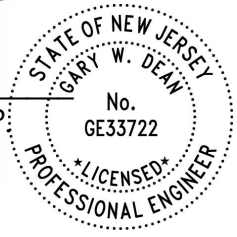
FOR

AJDM CHATHAM, LLC

PROPOSED MIXED-USE DEVELOPMENT

BLOCK 140, LOTS 7.01, 8, 9 & 10
BOROUGH OF CHATHAM
MORRIS COUNTY, NEW JERSEY

JANUARY 15, 2026



GARY W. DEAN, P.E., P.P.
NJ LICENSE NO. 33722

DOUGLAS POLYNIAK, P.E.
NJ LICENSE NO. 44905

DJP/EIC/sll
25148
Morris/Chatham/BNE-Phase II River Rd/Documents/2026-01-15 TIA.doc

INTRODUCTION

This Traffic Impact Assessment has been prepared as part of a site plan application for a new mixed-used building on Block 140, Lots 7.01, 8, 9 and 10. The proposed redevelopment consists of a new mixed-use building with 20 one-bedroom units, 57 two-bedroom units, and 23 three-bedroom units totaling 100 units. The ground floor will have 2,370 square feet of neighborhood, commercial space and a lobby and amenity space for residents.

Primary site access is envisioned via two full-movement driveways along River Road. The northerly driveway will lead directly to an at grade parking lot and will also access the basement parking garage. A southerly "ring" driveway will accommodate pick-ups, drop-offs and deliveries. It will also lead to the first-floor parking garage. The site will provide 207 basement and first floor garage parking spaces and 31 surface lot spaces for a total of 238 parking spaces.

The subject site, shown in the adjacent aerial photograph and in appended Figure 1, was formerly developed with a bus depot. It has also recently been operated with Pipe Works Services. All existing structures will be razed for the proposed mixed-use development.

While any site redevelopment could affect traffic conditions, both the volume and characteristics of the new traffic are of important consideration in evaluating the projected traffic impacts on the surrounding area. Dolan & Dean Consulting Engineers, LLC (D&D) has been commissioned by the applicant to prepare this Traffic Impact Assessment for the site plan application.

EXISTING CONDITIONS

As noted, the redevelopment site is an assemblage of four lots and is located approximately 900 feet from the River Road and Watchung Avenue intersection. The overall redevelopment site has approximately 390 feet of frontage on River Road.

Watchung Avenue (Morris County Route 646) has a general northwest/southeast orientation and is under County jurisdiction. For general orientation, the road is considered to run east/west. The roadway provides one lane in each travel direction with a posted speed limit of 35 miles per hour near the site. A dedicated left turn lane to travel south on River Road is provided at the intersection.

River Road is a local roadway with a general northeast/southwest orientation that will be considered to run north/south for this report. The roadway provides one lane of travel in each direction, with posted speed limit of 30 miles per hour. A variety of land uses exist along River Road, including light industrial, a self-storage facility and restaurants.

Traffic signal improvements were recently constructed at the Watchung Avenue/River Road intersection as part of The Ivy project that included the addition of separate left-turn and right-turn lanes on the River Road approach and improved pedestrian crossings.

EXISTING TRAFFIC CONDITIONS

To establish existing traffic conditions near the site, manual traffic counts were conducted at the River Road intersections with Watchung Avenue and The Ivy driveways on Wednesday, December 10, 2025 from 7:00 a.m. to 9:00 a.m. and from 4:00 p.m. to 7:00 p.m.

Based upon the data collected, the morning peak hour was found to generally occur from 7:45 a.m. to 8:45 a.m. and the evening peak hour occurred from 4:30 p.m. to 5:30 p.m. Appended Figure 2 shows the peak hour traffic volumes, and the traffic count data is appended to this report.

ANALYSIS OF EXISTING TRAFFIC VOLUMES

A volume/capacity, Level of Service analysis was conducted for the existing traffic volumes at the subject intersections using the Synchro computer software. This type of analysis is performed to assess intersection operations and to identify any areas of excessive delay. While traffic volumes provide a measure of activity on the area roadway system, it is also important to evaluate how well that system can accommodate those volumes – i.e., a comparison of peak hour traffic volumes with available roadway capacity.

By definition, capacity represents the maximum vehicular volume that can be accommodated on a given road segment or intersection lane as a function of roadway geometry, the general environs, traffic characteristics, regulations and controls. Intersections are usually the critical point in any road network since it is at such points that conflicts exist between through, crossing, and turning traffic. It is at these locations where congestion is most likely to occur. A description of intersection Levels of Service is noted below:

INTERSECTION LEVELS OF SERVICE AND DELAY

Level of Service	Signalized Delay per Vehicle (seconds)	Unsignalized Delay per Vehicle (seconds)
A	< 10.0	<0-10
B	>10 and <20	>10 to <15
C	>20 and < 35	>15 to <25
D	>35 and < 55	> 25 to <35
E	>55 and < 80	> 35 to <50
F	> 80	>50

Based on this analysis, and as shown in Figure 3, all movements at the study intersection currently operate at Level of Service "D" or better during both peak hours. Movements at The Ivy's driveways operate at Levels of Service "A" and "B".

Observations made during the traffic counts confirm that traffic flows generally well with slight delays noted throughout the peak hours. Local schools were in session during the time of the traffic counts and conditions are believed to be representative of typical traffic operations.

TRAFFIC CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

TRIP GENERATION

The next step in this analysis is to estimate the future traffic that would be generated by the proposed mixed-use building. The potential traffic generation from any use is directly related to the type, size, and characteristic of the use itself. Generally, data compiled by the Institute of Transportation Engineers (ITE) in the 12th Edition of the Trip Generation Manual is reviewed.

However, when possible, for a known site or end user, the ITE recommends collecting site-specific data as a preferred and more accurate means to predict future traffic characteristics for a given development over the published ITE rates collected at many different sites. Therefore, the trip generation rates as determined through the traffic counts at The Ivy will govern the calculation of trips for the proposed residential units as they will be of a similar type. Table I summarizes the peak hour trips for the existing 233 occupied units of the Ivy and the associated trip rate per unit.

TABLE I
EXISTING TRIP GENERATION & TRIP RATES
233 OCCUPIED UNITS AT THE IVY

MORNING PEAK HOUR			EVENING PEAK HOUR		
ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
33	84	117	70	49	119
0.5 Trips per unit			0.51 trips per unit		

Based on the trip rates shown in Table I, the 100 units proposed in the subject redevelopment will generate the trip generation shown in Table II.

TABLE II
PROJECTED TRIP GENERATION
100 RESIDENTIAL UNITS

MORNING PEAK HOUR			EVENING PEAK HOUR		
ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
14	36	50	30	21	51

For the limited retail space, ITE trip generation rates for "Strip Retail Plaza" were used. Table III shows the total site trip generation for the morning and evening peak hours. The ITE trip generation worksheets are appended to this report.

TABLE III
PROJECTED TRIP GENERATION
100 RESIDENTIAL UNITS & 2,370 SF OF RETAIL

LAND USE	MORNING PEAK HOUR			EVENING PEAK HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Residential	14	36	50	30	21	51
Retail	6	4	10	8	8	16
Total	20	40	60	38	29	67

It should be noted that the projected trip generation is relatively low, with a maximum of 67 trips projected during the busiest hour of the day. During all other hours, vehicular traffic volumes entering and exiting the site will be lower

Also, based on the definition of a "significant" traffic increase used by NJDOT in the State Highway Access Management Code (NJAC 16:47), a traffic increase of 100 new trips could have an effect on operating conditions on adjacent roadways and intersections. Similarly, the ITE's Manual of Transportation Engineering Studies recommends that traffic impact studies be performed for developments that will generate 100 or more peak hour trips. As the development is estimated to generate a maximum of 67 trips in one hour, the trip generation is not expected to have any material impact on nearby traffic operations.

Additionally, as previously referenced, the site formerly operated as a large school bus depot and more recently with Pipe Works Services. These uses historically generated significant

volumes of heavy vehicle traffic which will no longer exist with the uses proposed. As such, the volumes and impacts associated with the proposed redevelopment will be significantly less when considering the former uses on site.

DISTRIBUTION OF SITE GENERATED TRAFFIC

The directional distribution of new site-generated traffic was established based on a review of the existing traffic volumes and patterns as observed at The Ivy, which generally reflect home-to-work (and the reverse) commuting patterns. The projected site traffic is shown on appended Figure 4.

FUTURE TRAFFIC CONDITIONS

FUTURE TRAFFIC VOLUMES

It is recognized that traffic routinely fluctuates along various state and county roadways, as well as local streets, and varies not only day-to-day, but also on a monthly and yearly basis. Normal "background" traffic increases regularly occur as attributed to continued regional growth and changes in driver demographics. There may also be additional traffic generated by specific projects that will lead to increased demand on the roadways in the site vicinity (at least to some degree), even if no changes were to occur on the subject property.

As such, regional traffic growth patterns compiled by the New Jersey Department of Transportation (NJDOT) were examined for this analysis. Based on NJDOT data for Morris County, peak hour traffic volumes are conservatively projected to annually increase by 2.5%. In addition to the growth factor, traffic associated with the 12 unoccupied units at The Ivy have been added as well to create future "no-build" volumes as shown in Figure 5. "Build" traffic volumes were developed (shown in Figure 6) by adding site traffic to the "no-build" volumes for a total future composite.

FUTURE "BUILD" TRAFFIC ANALYSIS

An analysis of future intersection and driveway operations was completed including the traffic added by the mixed-use redevelopment. Revised Levels of Service analyses were conducted to compare the "no build" and "build" traffic volumes at the study intersections and the results are shown in Figures 7 and 8, respectively. This type of comparative analysis is used to determine the net traffic impacts of the proposed redevelopment.

As noted, the additional site traffic (shown under the "build" conditions) will not negatively affect the intersection operations. All movements will continue to operate at Levels of Service "D" or better during both peak hours. There will be no changes in Levels of Service with the new site traffic, illustrating the minimal traffic impacts of the proposed residential

development. Adequate capacity exists to accommodate the additional site-generated traffic without a need for roadway, intersection or other mitigation.

Similar to The Ivy driveways, the proposed site driveways will operate at Level of Service "B" or better demonstrating they will operate efficiently with minimal delay.

SITE ACCESS AND CIRCULATION

The following items address access and on-site design characteristics based on the Site Plan prepared by Langan Engineering and Environmental Services, LLC:

- As previously described, two full movement driveways will provide access to River Road. The driveway operational analyses indicate that the proposed access design will adequately accommodate peak traffic volume projections and confirm that any on-site queuing will be minimal. Projected delays exiting the site onto River Road will also be minimal with high service levels projected, providing further evidence of the minimal traffic impact associated with the proposed redevelopment.

- For the development, the required parking supply has been calculated based on the Residential Site Improvement Standards (RSIS) for the apartments and the Borough Ordinance for the retail component. Table IV summarizes the required parking:

TABLE IV
PARKING REQUIREMENTS

Use	Unit Count	Parking Ratio	Required Parking Spaces
One-Bedroom Apartments	20 Units	1.8 spaces/unit	36
Two-Bedroom Apartments	57 Units	2.0 spaces/unit	114
Three-Bedroom Apartments	23 Units	2.1 spaces/unit	48
Retail	2,370 SF	4.0 spaces/1,000 SF	9
Total Parking Required			207

As shown, the proposal requires 207 total on-site parking spaces, which include spaces for visitor and guest use. With 238 spaces proposed, the project complies with the required parking standards.

CONCLUSIONS

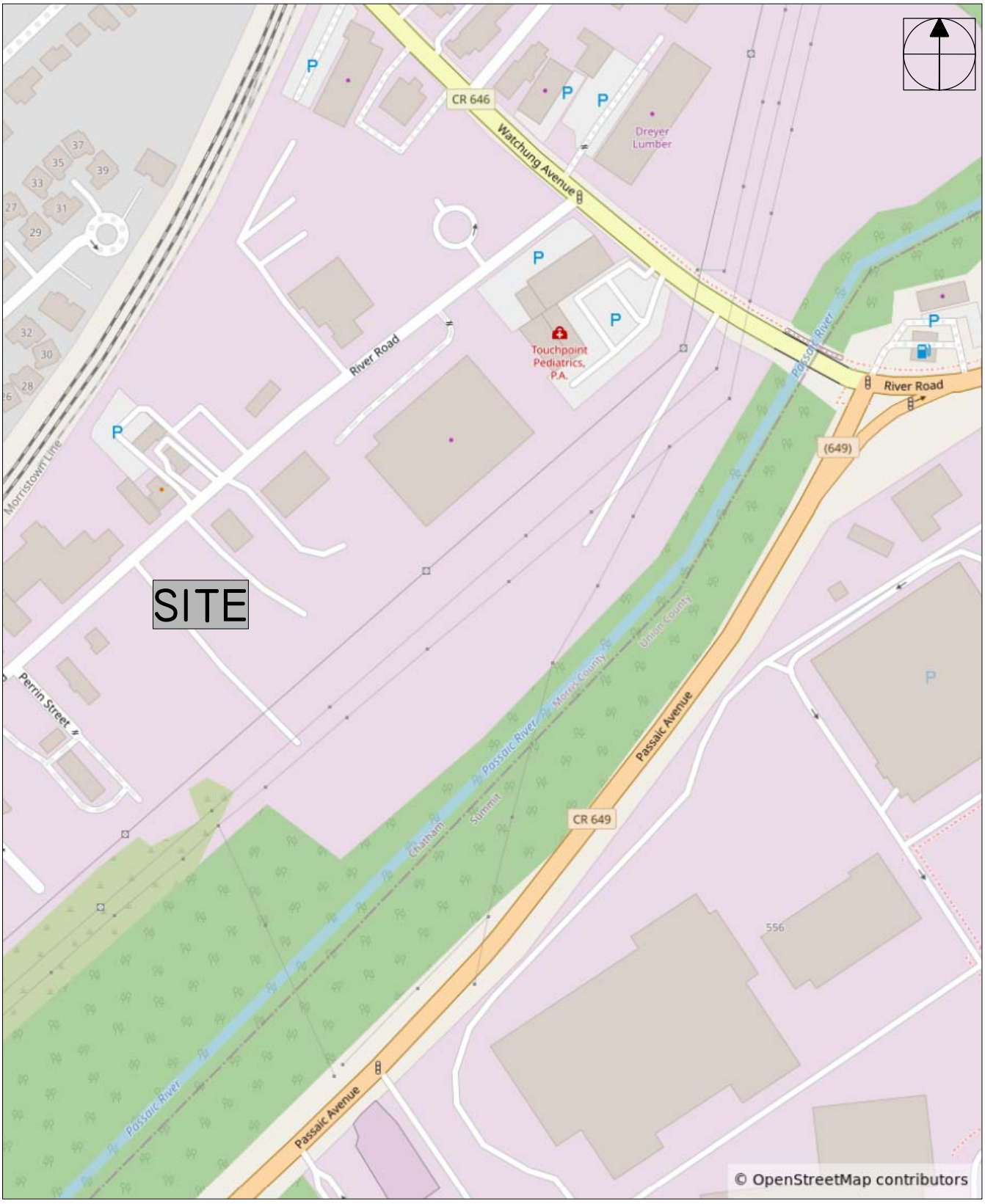
In summary, it is evident from this analysis of projected future traffic conditions that the proposed redevelopment for 100 residential apartments and 2,370 square feet of retail space would generate only modest traffic increases. This traffic study concludes that the overall traffic increases will not create a negative impact on the local roadway network and there will be no significant change in intersection operations at Watchung Avenue and River Road.

Even with the potential traffic increases associated with the application, adequate roadway capacity will continue to accommodate future site traffic. All movements to and from the site will operate safely and efficiently, assuming reasonable and prudent driver behavior.

Based on these findings, it is concluded that the site is particularly well suited for the proposed redevelopment, particularly in light of the former bus depot use and its traffic and safety impacts along River Road.

The proposed redevelopment and resultant traffic impacts will not negatively impact the traffic in the surrounding area or along the adjacent streets as adequate roadway capacity exists to accommodate the increases. The traffic characteristics of the uses will be consistently minimal and will not result in any additional off tract congestion or unfavorable conditions.

Technical Appendix

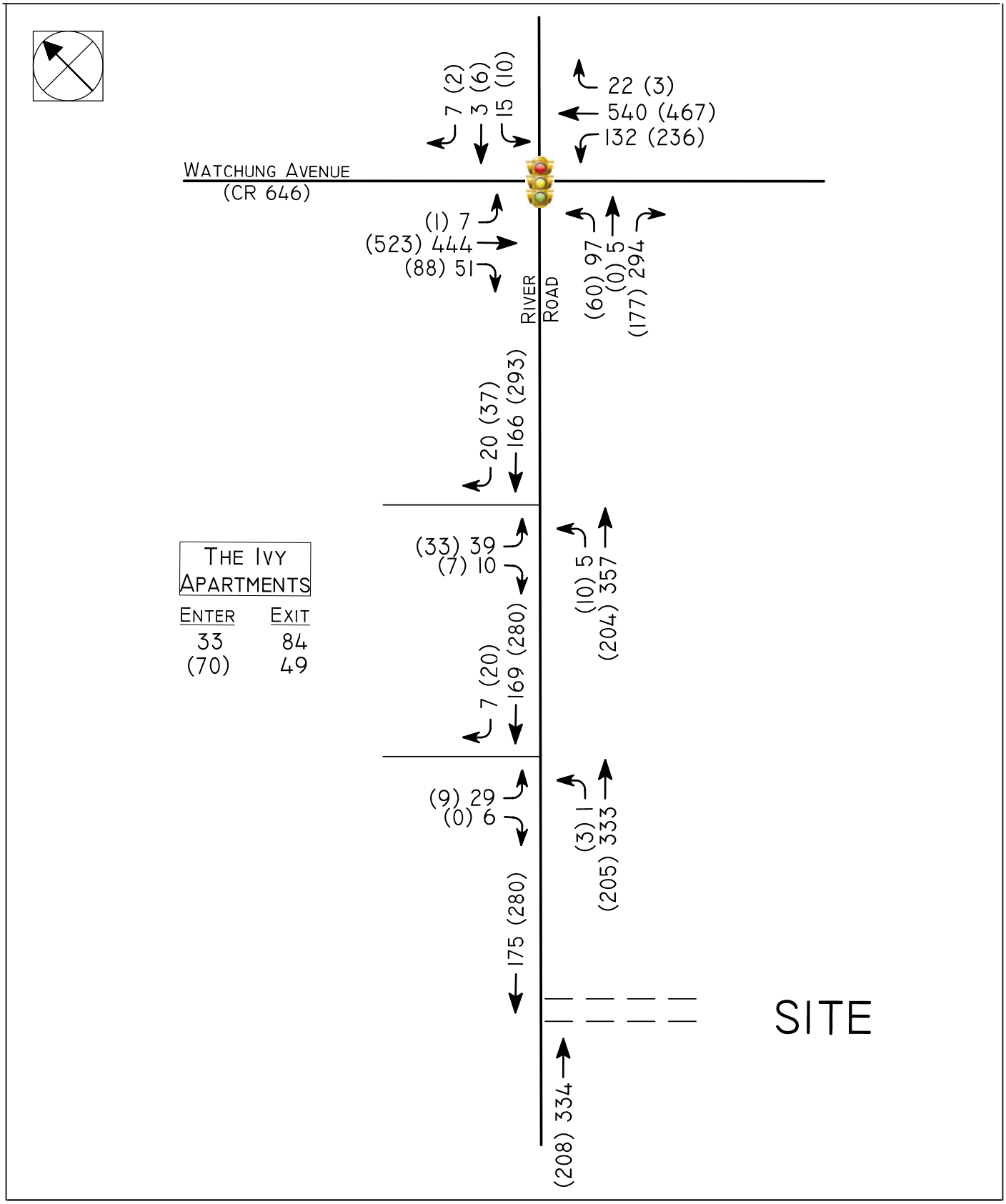


PROPOSED MIXED-USE DEVELOPMENT
BOROUGH OF CHATHAM
MORRIS COUNTY, NEW JERSEY

FIGURE 1

DOLAN&DEAN
CONSULTING ENGINEERS, LLC

SITE LOCATION MAP

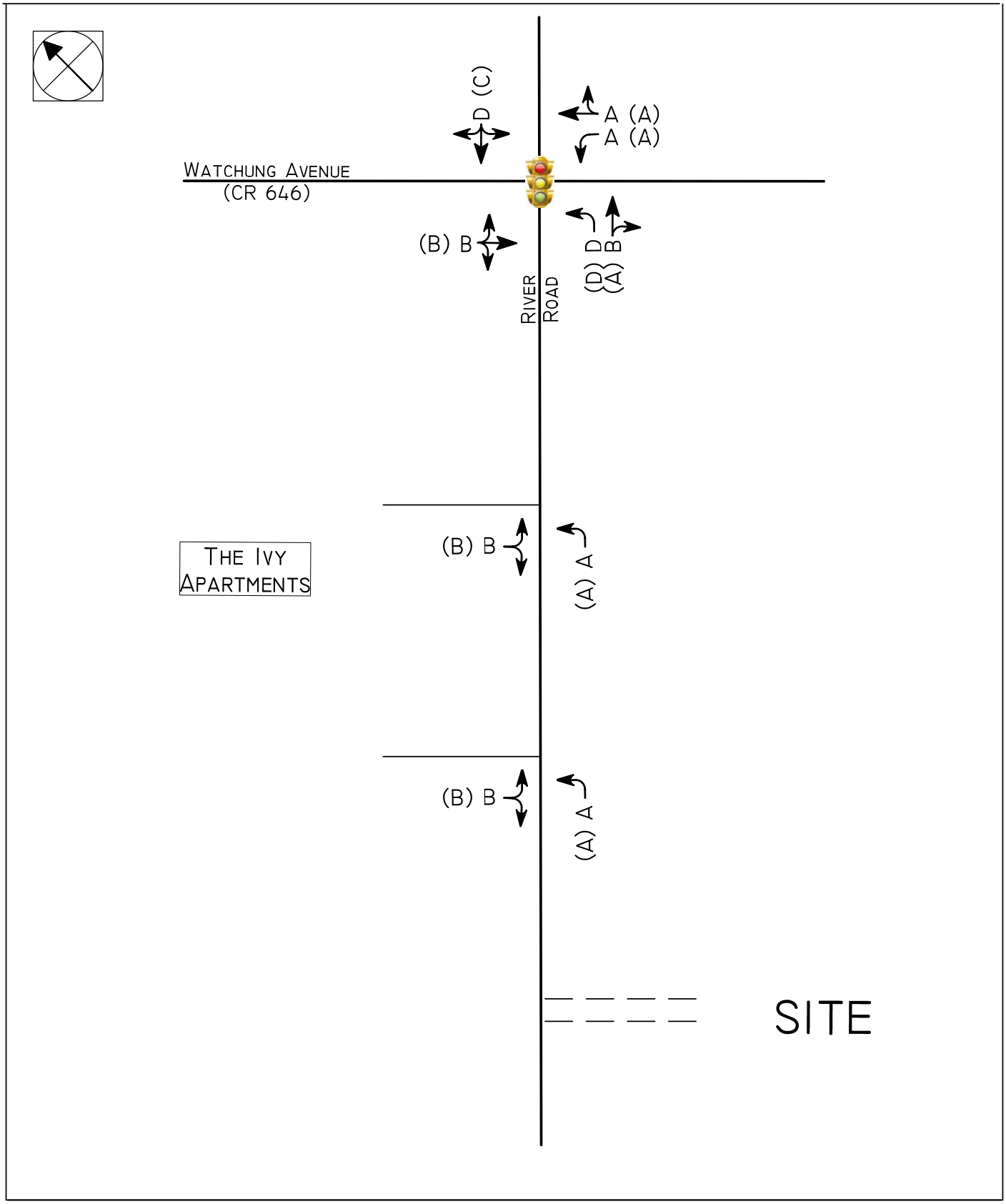


PROPOSED MIXED-USE DEVELOPMENT
BOROUGH OF CHATHAM
MORRIS COUNTY, NEW JERSEY

FIGURE 2

DOLAN&DEAN CONSULTING ENGINEERS, LLC

EXISTING TRAFFIC VOLUMES
MORNING (EVENING) PEAK HOUR

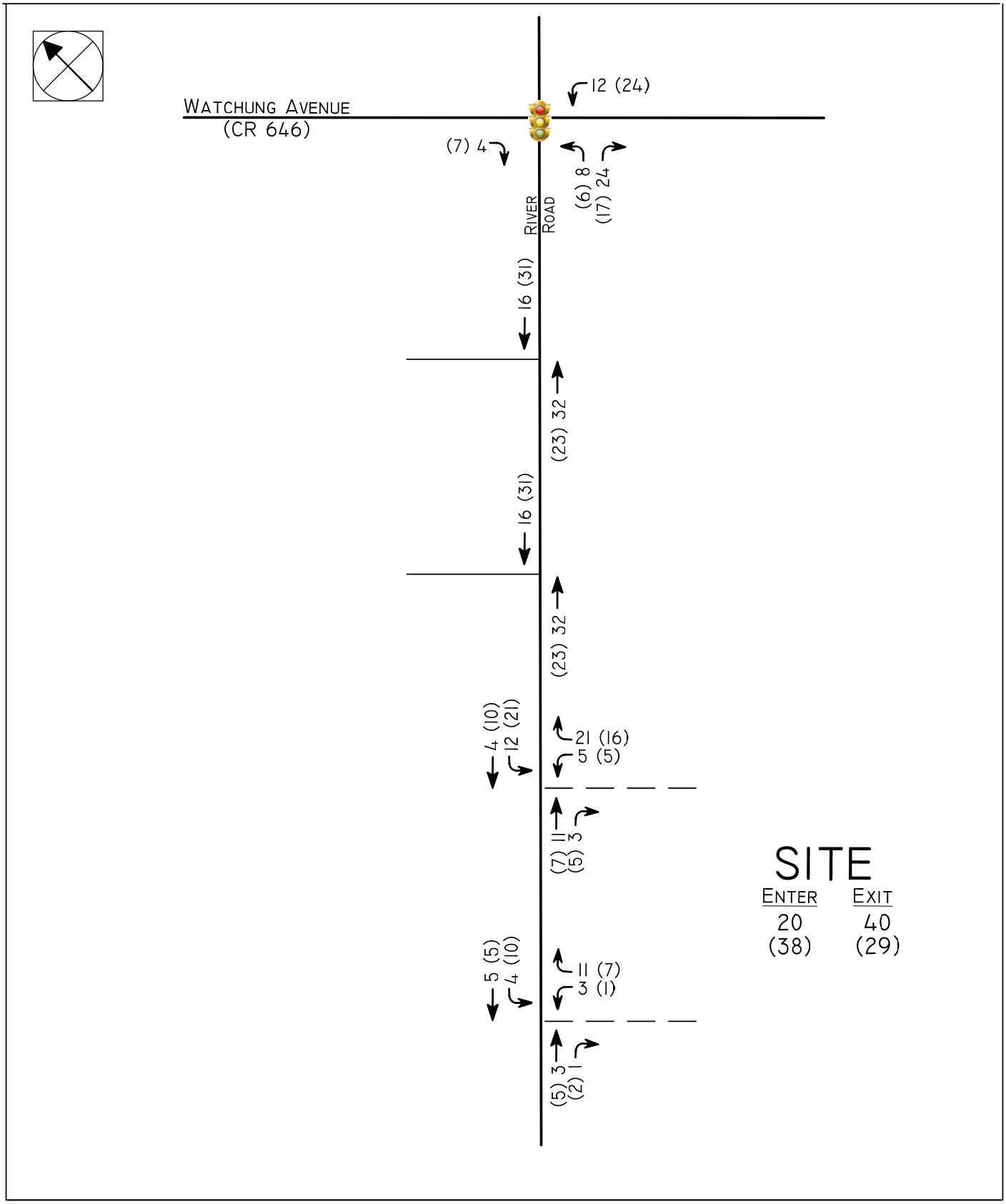


PROPOSED MIXED-USE DEVELOPMENT
BOROUGH OF CHATHAM
MORRIS COUNTY, NEW JERSEY

FIGURE 3

DOLAN&DEAN
CONSULTING ENGINEERS, LLC

EXISTING LEVELS OF SERVICE
MORNING (EVENING) PEAK HOUR

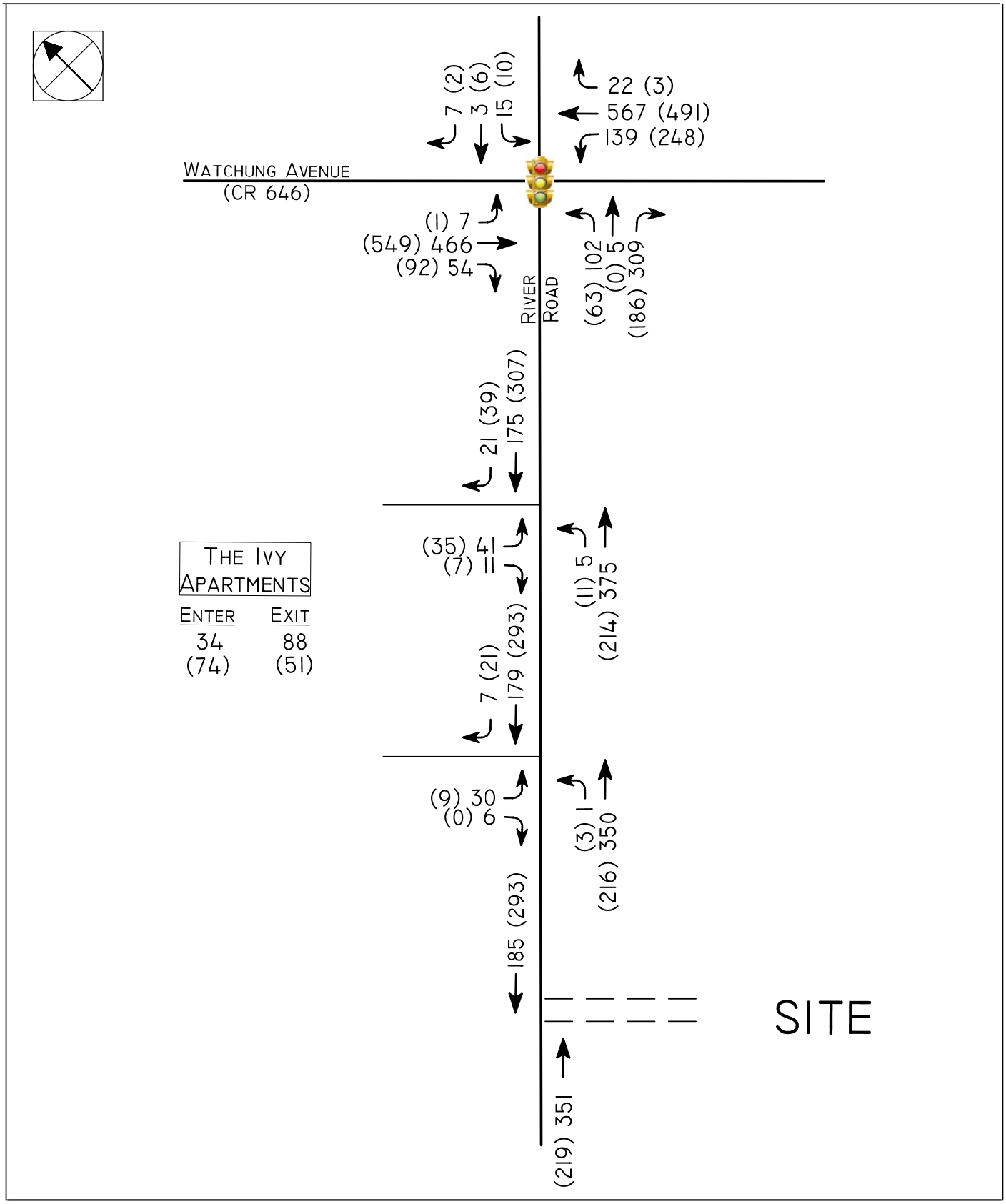


PROPOSED MIXED-USE DEVELOPMENT
BOROUGH OF CHATHAM
MORRIS COUNTY, NEW JERSEY

FIGURE 4

DOLAN&DEAN
CONSULTING ENGINEERS, LLC

SITE GENERATED TRAFFIC VOLUMES
MORNING (EVENING) PEAK HOUR

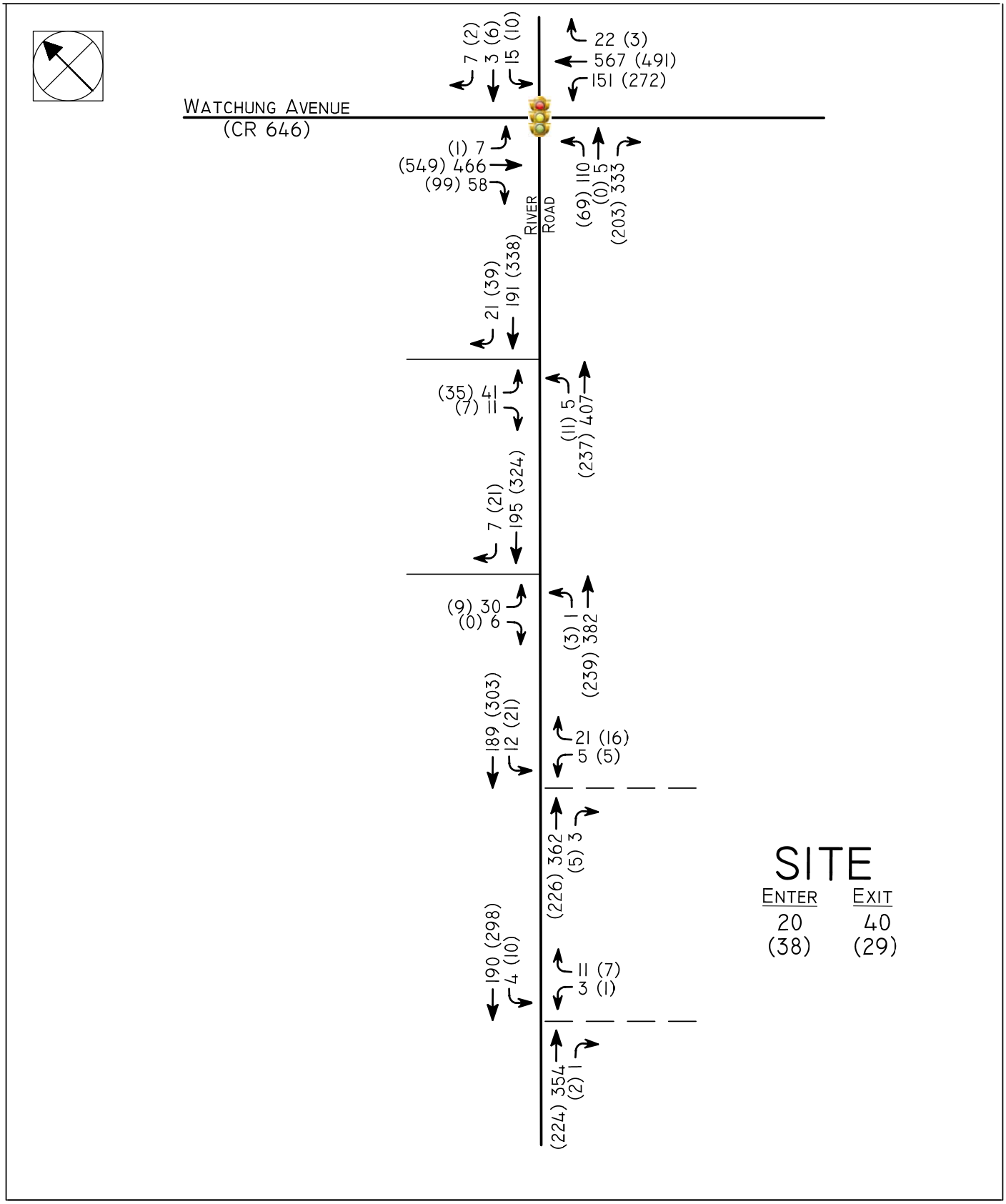


PROPOSED MIXED-USE DEVELOPMENT
BOROUGH OF CHATHAM
MORRIS COUNTY, NEW JERSEY

FIGURE 5

DOLAN&DEAN CONSULTING ENGINEERS, LLC

NO-BUILD TRAFFIC VOLUMES
MORNING (EVENING) PEAK HOUR

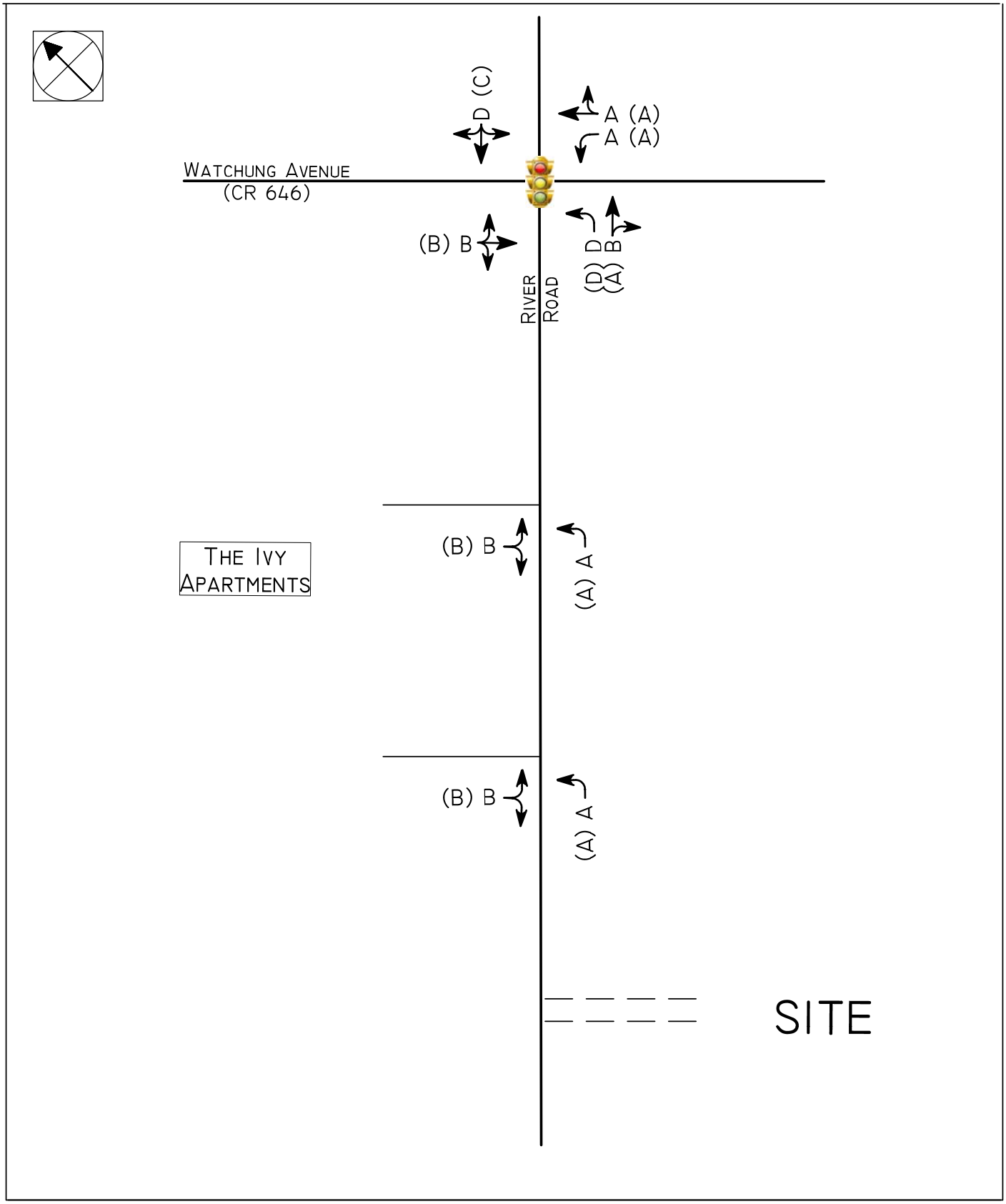


PROPOSED MIXED-USE DEVELOPMENT
BOROUGH OF CHATHAM
MORRIS COUNTY, NEW JERSEY

FIGURE 6

DOLAN&DEAN
CONSULTING ENGINEERS, LLC

BUILD TRAFFIC VOLUMES
MORNING (EVENING) PEAK HOUR

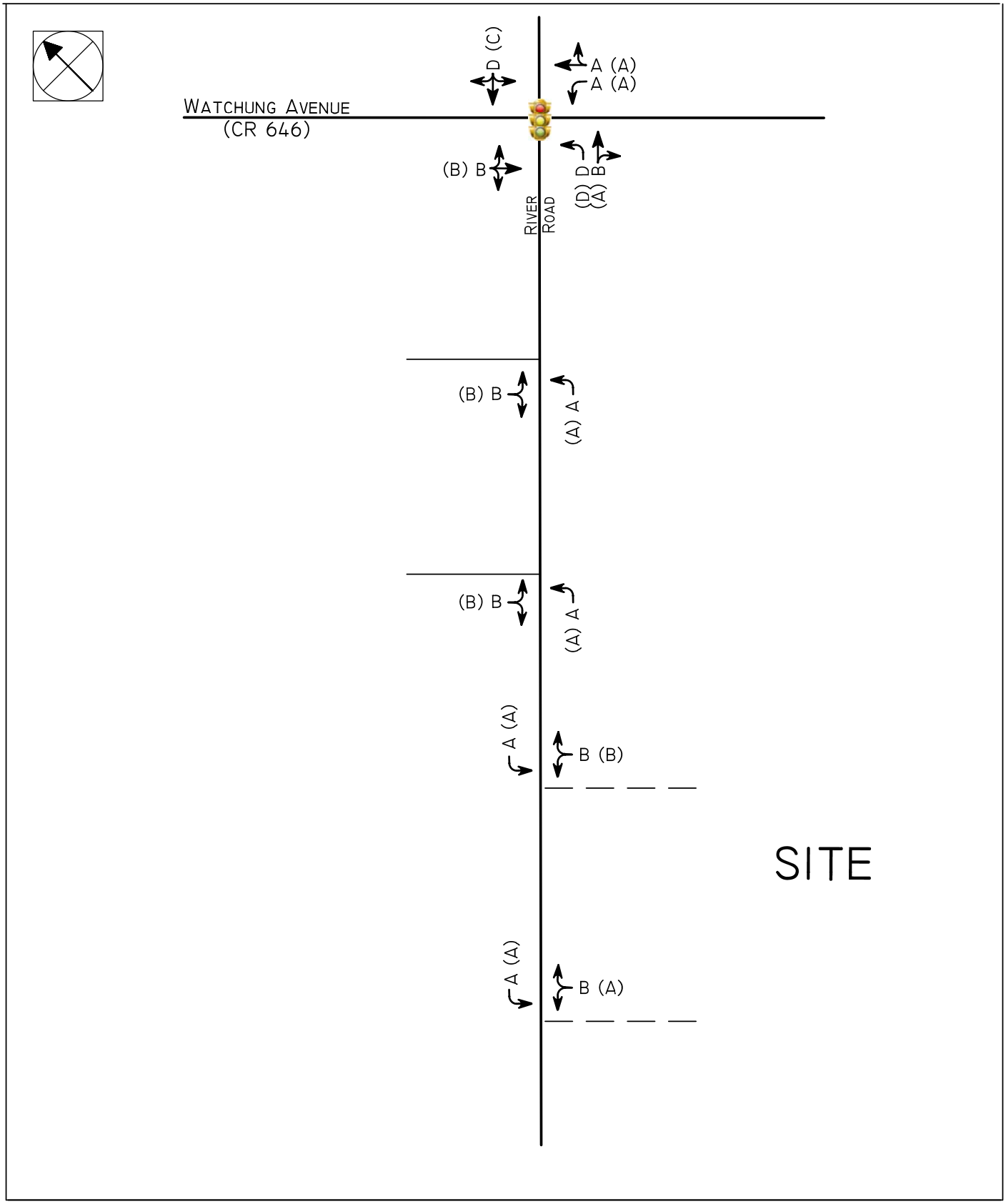


PROPOSED MIXED-USE DEVELOPMENT
BOROUGH OF CHATHAM
MORRIS COUNTY, NEW JERSEY

FIGURE 7

DOLAN&DEAN
CONSULTING ENGINEERS, LLC

NO BUILD LEVELS OF SERVICE
MORNING (EVENING) PEAK HOUR



PROPOSED MIXED-USE DEVELOPMENT
BOROUGH OF CHATHAM
MORRIS COUNTY, NEW JERSEY

FIGURE 8

DOLAN&DEAN
CONSULTING ENGINEERS, LLC

BUILD LEVELS OF SERVICE
MORNING (EVENING) PEAK HOUR

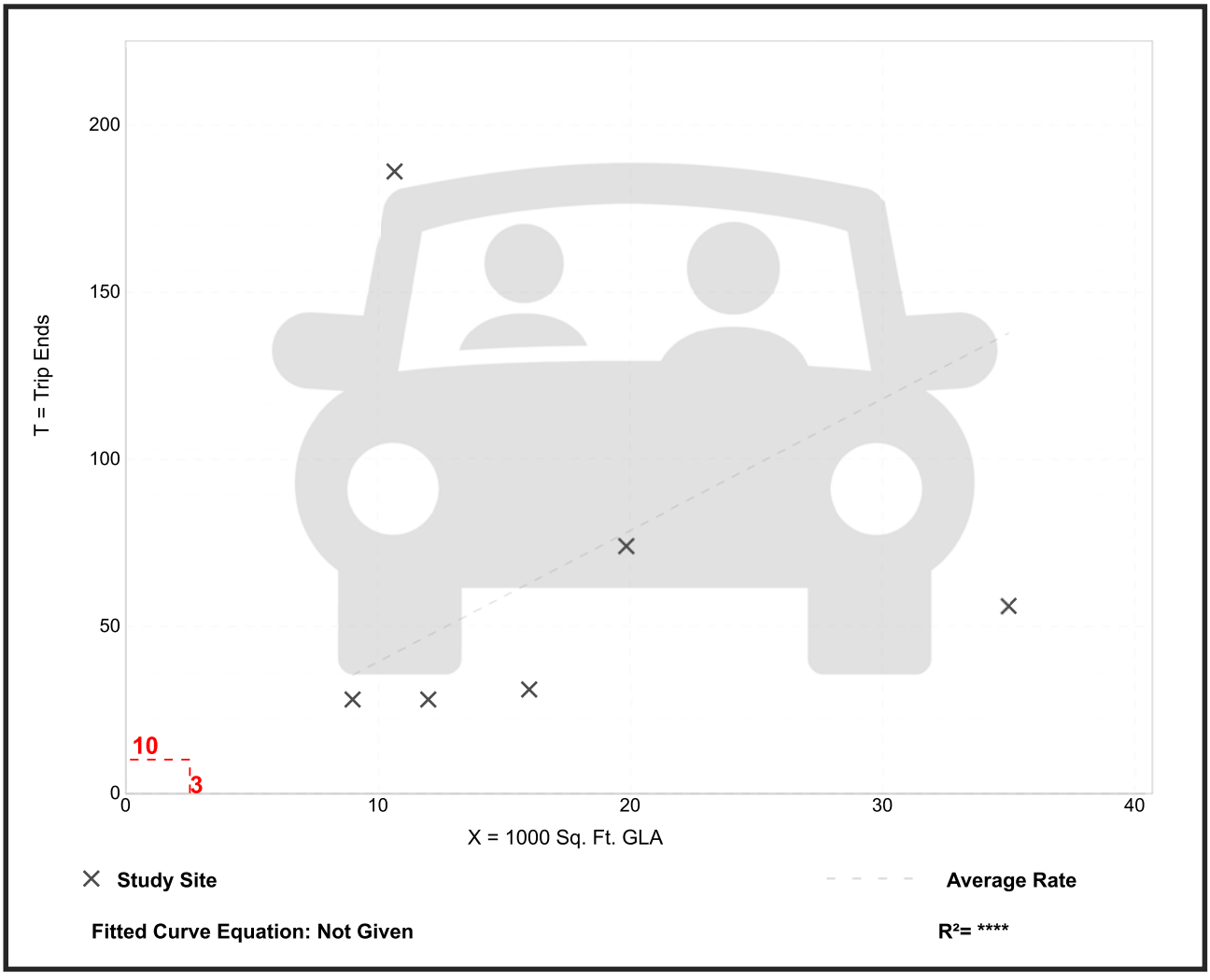
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs: **1000 Sq. Ft. GLA**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 6
Avg. 1000 Sq. Ft. GLA: 17
Directional Distribution: 55% entering, 45% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
3.93	1.60 - 17.44	5.12

Data Plot and Equation



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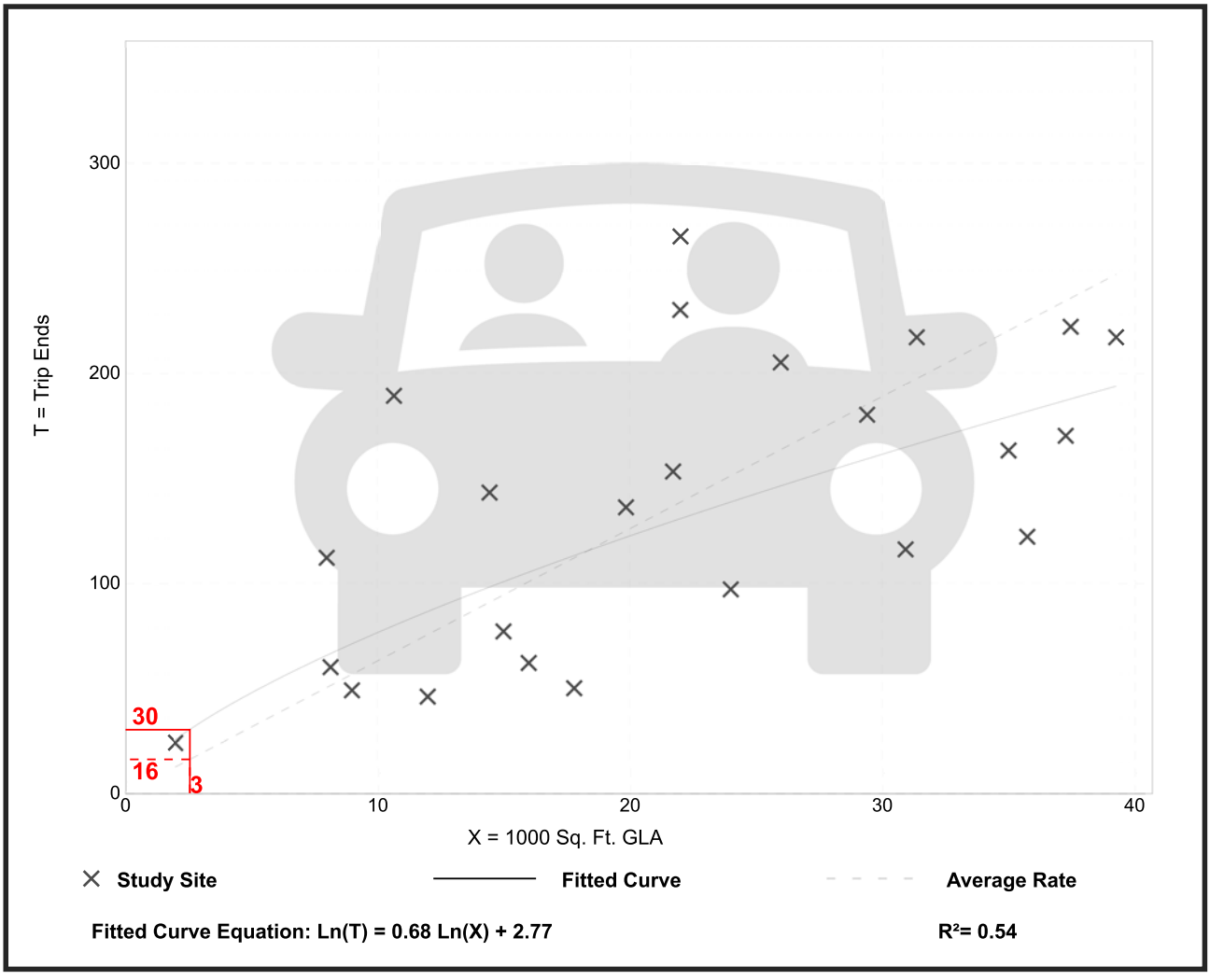
Strip Retail Plaza (<40k)
(822)

Vehicle Trip Ends vs:	**1000 Sq. Ft. GLA**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	24
Avg. 1000 Sq. Ft. GLA:	22
Directional Distribution:	50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	Standard Deviation
6.29	2.81 - 17.72	3.02

Data Plot and Equation



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Am Ex
3: River Rd & Watchung Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	444	51	132	540	22	97	5	294	15	3	7
Future Volume (vph)	7	444	51	132	540	22	97	5	294	15	3	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	12	12	16	16	16
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		0.986			0.994			0.852			0.964	
Flt Protected		0.999		0.950			0.950				0.970	
Satd. Flow (prot)	0	1736	0	1572	1727	0	1544	1483	0	0	1526	0
Flt Permitted		0.993		0.415			0.740				0.318	
Satd. Flow (perm)	0	1726	0	687	1727	0	1203	1483	0	0	500	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			4			313			7	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		469			490			241			271	
Travel Time (s)		9.1			9.5			5.5			6.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	43%	7%	10%	11%	5%	23%	13%	20%	9%	33%	33%	29%
Adj. Flow (vph)	7	472	54	140	574	23	103	5	313	16	3	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	533	0	140	597	0	103	318	0	0	26	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.00	1.04	1.00	1.00	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		5	2		4	4		8	8	

Am Ex
3: River Rd & Watchung Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	30.0	30.0		5.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	36.0	36.0		10.0	59.0		24.0	24.0		24.0	24.0	
Total Split (s)	46.0	46.0		13.0	59.0		31.0	31.0		31.0	31.0	
Total Split (%)	51.1%	51.1%		14.4%	65.6%		34.4%	34.4%		34.4%	34.4%	
Maximum Green (s)	40.0	40.0		10.0	53.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		53.5		67.5	64.5		13.5	13.5			13.5	
Actuated g/C Ratio		0.59		0.75	0.72		0.15	0.15			0.15	
v/c Ratio		0.52		0.24	0.48		0.57	0.65			0.32	
Control Delay		14.4		4.9	8.0		46.6	10.9			35.9	
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay		14.4		4.9	8.0		46.6	10.9			35.9	
LOS		B		A	A		D	B			D	
Approach Delay		14.4			7.4			19.6			35.9	
Approach LOS		B			A			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 82 (91%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.65			
Intersection Signal Delay: 13.0		Intersection LOS: B	
Intersection Capacity Utilization 93.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: River Rd & Watchung Ave

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	10	5	357	166	20
Future Vol, veh/h	39	10	5	357	166	20
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	88	88	88	88	88	88
Heavy Vehicles, %	0	11	0	11	5	11
Mvmt Flow	44	11	6	406	189	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	619	201	212	0	-	0
Stage 1	201	-	-	-	-	-
Stage 2	418	-	-	-	-	-
Critical Hdwy	6.4	6.31	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	2.2	-	-	-
Pot Cap-1 Maneuver	455	818	1370	-	-	-
Stage 1	838	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	452	818	1370	-	-	-
Mov Cap-2 Maneuver	452	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	669	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1370	-	497	-	-
HCM Lane V/C Ratio	0.004	-	0.112	-	-
HCM Control Delay (s)	7.6	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	6	1	333	169	7
Future Vol, veh/h	29	6	1	333	169	7
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	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	12	12	0
Mvmt Flow	35	7	1	396	201	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	603	205	209	0	-	0
Stage 1	205	-	-	-	-	-
Stage 2	398	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	465	841	1374	-	-	-
Stage 1	834	-	-	-	-	-
Stage 2	683	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	465	841	1374	-	-	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	833	-	-	-	-	-
Stage 2	683	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1374	-	504	-	-
HCM Lane V/C Ratio	0.001	-	0.083	-	-
HCM Control Delay (s)	7.6	0	12.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Pm Ex
3: River Rd & Watchung Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	523	88	236	467	3	60	0	177	10	6	2
Future Volume (vph)	1	523	88	236	467	3	60	0	177	10	6	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	12	12	16	16	16
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		0.981			0.999			0.850			0.985	
Flt Protected				0.950			0.950				0.973	
Satd. Flow (prot)	0	1827	0	1711	1817	0	1544	1568	0	0	2064	0
Flt Permitted				0.373			0.746				0.627	
Satd. Flow (perm)	0	1827	0	672	1817	0	1213	1568	0	0	1330	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			1			394			2	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		469			490			241			271	
Travel Time (s)		9.1			9.5			5.5			6.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	2%	1%	0%	13%	0%	3%	0%	0%	0%
Adj. Flow (vph)	1	545	92	246	486	3	63	0	184	10	6	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	638	0	246	489	0	63	184	0	0	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.00	1.04	1.00	1.00	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		5	2		4	4		8	8	

Pm Ex
3: River Rd & Watchung Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	30.0	30.0		5.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	36.0	36.0		10.0	59.0		24.0	24.0		24.0	24.0	
Total Split (s)	46.0	46.0		13.0	59.0		31.0	31.0		31.0	31.0	
Total Split (%)	51.1%	51.1%		14.4%	65.6%		34.4%	34.4%		34.4%	34.4%	
Maximum Green (s)	40.0	40.0		10.0	53.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		55.7		70.7	67.7		10.3	10.3			10.3	
Actuated g/C Ratio		0.62		0.79	0.75		0.11	0.11			0.11	
v/c Ratio		0.56		0.39	0.36		0.45	0.35			0.12	
Control Delay		13.4		4.6	5.0		46.7	1.8			32.9	
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay		13.4		4.6	5.0		46.7	1.8			32.9	
LOS		B		A	A		D	A			C	
Approach Delay		13.4			4.9			13.3			32.9	
Approach LOS		B			A			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 82 (91%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 9.8		Intersection LOS: A	
Intersection Capacity Utilization 92.2%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: River Rd & Watchung Ave

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	7	10	204	293	37
Future Vol, veh/h	33	7	10	204	293	37
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	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	37	8	11	229	329	42

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	601	350	371	0	-	0
Stage 1	350	-	-	-	-	-
Stage 2	251	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	467	698	1199	-	-	-
Stage 1	718	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	462	698	1199	-	-	-
Mov Cap-2 Maneuver	462	-	-	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	795	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.1	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1199	-	491	-	-
HCM Lane V/C Ratio	0.009	-	0.092	-	-
HCM Control Delay (s)	8	0	13.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.3

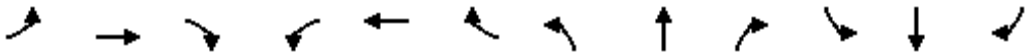
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	0	3	205	280	20
Future Vol, veh/h	9	0	3	205	280	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	10	0	3	236	322	23

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	576	334	345	0	-	0
Stage 1	334	-	-	-	-	-
Stage 2	242	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	482	712	1225	-	-	-
Stage 1	730	-	-	-	-	-
Stage 2	803	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	481	712	1225	-	-	-
Mov Cap-2 Maneuver	481	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	803	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.6	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1225	-	481	-	-
HCM Lane V/C Ratio	0.003	-	0.022	-	-
HCM Control Delay (s)	7.9	0	12.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Am Nb
3: River Rd & Watchung Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	466	54	139	567	22	102	5	309	15	3	7
Future Volume (vph)	7	466	54	139	567	22	102	5	309	15	3	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	12	12	16	16	16
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		0.986			0.994			0.852			0.964	
Flt Protected		0.999		0.950			0.950				0.970	
Satd. Flow (prot)	0	1737	0	1572	1728	0	1544	1483	0	0	1526	0
Flt Permitted		0.993		0.398			0.740				0.309	
Satd. Flow (perm)	0	1726	0	659	1728	0	1203	1483	0	0	486	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			4			329			7	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		469			490			241			271	
Travel Time (s)		9.1			9.5			5.5			6.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	43%	7%	10%	11%	5%	23%	13%	20%	9%	33%	33%	29%
Adj. Flow (vph)	7	496	57	148	603	23	109	5	329	16	3	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	560	0	148	626	0	109	334	0	0	26	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.00	1.04	1.00	1.00	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		5	2		4	4		8	8	

Am Nb
3: River Rd & Watchung Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	30.0	30.0		5.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	36.0	36.0		10.0	59.0		24.0	24.0		24.0	24.0	
Total Split (s)	46.0	46.0		13.0	59.0		31.0	31.0		31.0	31.0	
Total Split (%)	51.1%	51.1%		14.4%	65.6%		34.4%	34.4%		34.4%	34.4%	
Maximum Green (s)	40.0	40.0		10.0	53.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		52.9		67.0	64.0		14.0	14.0			14.0	
Actuated g/C Ratio		0.59		0.74	0.71		0.16	0.16			0.16	
v/c Ratio		0.55		0.26	0.51		0.59	0.66			0.32	
Control Delay		15.5		5.2	8.6		46.7	10.7			35.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay		15.5		5.2	8.6		46.7	10.7			35.5	
LOS		B		A	A		D	B			D	
Approach Delay		15.5			8.0			19.5			35.5	
Approach LOS		B			A			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 82 (91%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 13.5		Intersection LOS: B	
Intersection Capacity Utilization 95.9%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: River Rd & Watchung Ave

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	11	5	375	175	21
Future Vol, veh/h	41	11	5	375	175	21
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	88	88	88	88	88	88
Heavy Vehicles, %	0	11	0	11	5	11
Mvmt Flow	47	13	6	426	199	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	649	211	223	0	-	0
Stage 1	211	-	-	-	-	-
Stage 2	438	-	-	-	-	-
Critical Hdwy	6.4	6.31	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	2.2	-	-	-
Pot Cap-1 Maneuver	438	807	1358	-	-	-
Stage 1	829	-	-	-	-	-
Stage 2	655	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	435	807	1358	-	-	-
Mov Cap-2 Maneuver	435	-	-	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	655	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1358	-	482	-	-
HCM Lane V/C Ratio	0.004	-	0.123	-	-
HCM Control Delay (s)	7.7	0	13.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	6	1	350	179	7
Future Vol, veh/h	30	6	1	350	179	7
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	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	12	12	0
Mvmt Flow	36	7	1	417	213	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	636	217	221	0	-	0
Stage 1	217	-	-	-	-	-
Stage 2	419	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	445	828	1360	-	-	-
Stage 1	824	-	-	-	-	-
Stage 2	668	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	445	828	1360	-	-	-
Mov Cap-2 Maneuver	445	-	-	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1360	-	482	-	-
HCM Lane V/C Ratio	0.001	-	0.089	-	-
HCM Control Delay (s)	7.6	0	13.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Pm Nb
3: River Rd & Watchung Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	549	92	248	491	3	63	0	186	10	6	2
Future Volume (vph)	1	549	92	248	491	3	63	0	186	10	6	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	12	12	16	16	16
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		0.981			0.999			0.850			0.985	
Flt Protected				0.950			0.950				0.973	
Satd. Flow (prot)	0	1827	0	1711	1817	0	1544	1568	0	0	2064	0
Flt Permitted				0.357			0.746				0.610	
Satd. Flow (perm)	0	1827	0	643	1817	0	1213	1568	0	0	1294	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			1			380			2	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		469			490			241			271	
Travel Time (s)		9.1			9.5			5.5			6.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	2%	1%	0%	13%	0%	3%	0%	0%	0%
Adj. Flow (vph)	1	572	96	258	511	3	66	0	194	10	6	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	669	0	258	514	0	66	194	0	0	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.00	1.04	1.00	1.00	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		5	2		4	4		8	8	

Pm Nb
3: River Rd & Watchung Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	30.0	30.0		5.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	36.0	36.0		10.0	59.0		24.0	24.0		24.0	24.0	
Total Split (s)	46.0	46.0		13.0	59.0		31.0	31.0		31.0	31.0	
Total Split (%)	51.1%	51.1%		14.4%	65.6%		34.4%	34.4%		34.4%	34.4%	
Maximum Green (s)	40.0	40.0		10.0	53.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		55.2		70.4	67.4		10.6	10.6			10.6	
Actuated g/C Ratio		0.61		0.78	0.75		0.12	0.12			0.12	
v/c Ratio		0.59		0.42	0.38		0.46	0.37			0.12	
Control Delay		14.4		5.0	5.3		46.8	2.1			32.7	
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay		14.4		5.0	5.3		46.8	2.1			32.7	
LOS		B		A	A		D	A			C	
Approach Delay		14.4			5.2			13.4			32.7	
Approach LOS		B			A			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 82 (91%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 10.3		Intersection LOS: B	
Intersection Capacity Utilization 94.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: River Rd & Watchung Ave

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	7	11	214	307	39
Future Vol, veh/h	35	7	11	214	307	39
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	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	39	8	12	240	345	44

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	631	367	389	0	-	0
Stage 1	367	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	448	683	1181	-	-	-
Stage 1	705	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	443	683	1181	-	-	-
Mov Cap-2 Maneuver	443	-	-	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	785	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1181	-	471	-	-
HCM Lane V/C Ratio	0.01	-	0.1	-	-
HCM Control Delay (s)	8.1	0	13.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.3

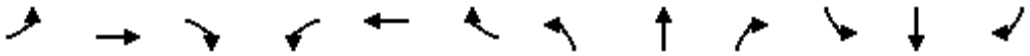
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	0	3	216	293	21
Future Vol, veh/h	9	0	3	216	293	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	10	0	3	248	337	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	603	349	361	0	-	0
Stage 1	349	-	-	-	-	-
Stage 2	254	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	465	699	1209	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	793	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	464	699	1209	-	-	-
Mov Cap-2 Maneuver	464	-	-	-	-	-
Stage 1	717	-	-	-	-	-
Stage 2	793	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1209	-	464	-	-
HCM Lane V/C Ratio	0.003	-	0.022	-	-
HCM Control Delay (s)	8	0	12.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Am B
3: River Rd & Watchung Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	466	58	151	567	22	110	5	333	15	3	7
Future Volume (vph)	7	466	58	151	567	22	110	5	333	15	3	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	12	12	16	16	16
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		0.985			0.994			0.852			0.964	
Flt Protected		0.999		0.950			0.950				0.970	
Satd. Flow (prot)	0	1735	0	1572	1728	0	1544	1483	0	0	1526	0
Flt Permitted		0.993		0.391			0.740				0.290	
Satd. Flow (perm)	0	1724	0	647	1728	0	1203	1483	0	0	456	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			4			354			7	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		469			490			241			271	
Travel Time (s)		9.1			9.5			5.5			6.2	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	43%	7%	10%	11%	5%	23%	13%	20%	9%	33%	33%	29%
Adj. Flow (vph)	7	496	62	161	603	23	117	5	354	16	3	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	565	0	161	626	0	117	359	0	0	26	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.00	1.04	1.00	1.00	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		5	2		4	4		8	8	

Am B
3: River Rd & Watchung Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	30.0	30.0		5.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	36.0	36.0		10.0	59.0		24.0	24.0		24.0	24.0	
Total Split (s)	46.0	46.0		13.0	59.0		31.0	31.0		31.0	31.0	
Total Split (%)	51.1%	51.1%		14.4%	65.6%		34.4%	34.4%		34.4%	34.4%	
Maximum Green (s)	40.0	40.0		10.0	53.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		51.8		66.3	63.3		14.7	14.7			14.7	
Actuated g/C Ratio		0.58		0.74	0.70		0.16	0.16			0.16	
v/c Ratio		0.57		0.29	0.52		0.60	0.67			0.33	
Control Delay		16.6		5.7	9.1		46.1	10.3			35.4	
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay		16.6		5.7	9.1		46.1	10.3			35.4	
LOS		B		A	A		D	B			D	
Approach Delay		16.6			8.4			19.1			35.4	
Approach LOS		B			A			B			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 82 (91%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 14.0		Intersection LOS: B	
Intersection Capacity Utilization 97.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: River Rd & Watchung Ave

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	11	5	407	191	21
Future Vol, veh/h	41	11	5	407	191	21
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	88	88	88	88	88	88
Heavy Vehicles, %	0	11	0	11	5	11
Mvmt Flow	47	13	6	463	217	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	704	229	241	0	-	0
Stage 1	229	-	-	-	-	-
Stage 2	475	-	-	-	-	-
Critical Hdwy	6.4	6.31	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	2.2	-	-	-
Pot Cap-1 Maneuver	406	788	1337	-	-	-
Stage 1	814	-	-	-	-	-
Stage 2	630	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	404	788	1337	-	-	-
Mov Cap-2 Maneuver	404	-	-	-	-	-
Stage 1	809	-	-	-	-	-
Stage 2	630	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.2	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1337	-	450	-	-
HCM Lane V/C Ratio	0.004	-	0.131	-	-
HCM Control Delay (s)	7.7	0	14.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	6	1	382	195	7
Future Vol, veh/h	30	6	1	382	195	7
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	84	84	84	84	84	84
Heavy Vehicles, %	0	0	0	12	12	0
Mvmt Flow	36	7	1	455	232	8

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	693	236	240	0	-	0
Stage 1	236	-	-	-	-	-
Stage 2	457	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	412	808	1339	-	-	-
Stage 1	808	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	412	808	1339	-	-	-
Mov Cap-2 Maneuver	412	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	642	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1339	-	449	-	-
HCM Lane V/C Ratio	0.001	-	0.095	-	-
HCM Control Delay (s)	7.7	0	13.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	5	21	362	3	12	189
Future Vol, veh/h	5	21	362	3	12	189
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	12	0	0	12
Mvmt Flow	5	23	393	3	13	205

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	626	395	0	0	396	0
Stage 1	395	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	451	659	-	-	1174	-
Stage 1	685	-	-	-	-	-
Stage 2	812	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	446	659	-	-	1174	-
Mov Cap-2 Maneuver	446	-	-	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	802	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.3	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	604	1174	-
HCM Lane V/C Ratio	-	-	0.047	0.011	-
HCM Control Delay (s)	-	-	11.3	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.3

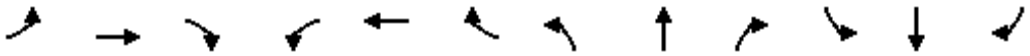
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	11	354	1	4	190
Future Vol, veh/h	3	11	354	1	4	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	12	0	0	12
Mvmt Flow	3	12	385	1	4	207

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	601	386	0	0	386	0
Stage 1	386	-	-	-	-	-
Stage 2	215	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	467	666	-	-	1184	-
Stage 1	691	-	-	-	-	-
Stage 2	826	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	465	666	-	-	1184	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	691	-	-	-	-	-
Stage 2	823	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	610	1184	-
HCM Lane V/C Ratio	-	-	0.025	0.004	-
HCM Control Delay (s)	-	-	11.1	8.1	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Pm B
3: River Rd & Watchung Ave



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	549	98	267	491	3	67	0	199	10	6	2
Future Volume (vph)	1	549	98	267	491	3	67	0	199	10	6	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	11	11	12	11	12	12	16	16	16
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		0.980			0.999			0.850			0.985	
Flt Protected				0.950			0.950				0.973	
Satd. Flow (prot)	0	1826	0	1711	1817	0	1544	1568	0	0	2064	0
Flt Permitted				0.352			0.746				0.574	
Satd. Flow (perm)	0	1826	0	634	1817	0	1213	1568	0	0	1217	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			1			380			2	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		469			490			241			271	
Travel Time (s)		9.1			9.5			5.5			6.2	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	2%	2%	2%	1%	0%	13%	0%	3%	0%	0%	0%
Adj. Flow (vph)	1	572	102	278	511	3	70	0	207	10	6	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	675	0	278	514	0	70	207	0	0	18	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			11			11			11	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.04	1.04	1.00	1.04	1.00	1.00	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6			2			4			8		
Detector Phase	6	6		5	2		4	4		8	8	

Pm B
3: River Rd & Watchung Ave

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	30.0	30.0		5.0	40.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	36.0	36.0		10.0	59.0		24.0	24.0		24.0	24.0	
Total Split (s)	46.0	46.0		13.0	59.0		31.0	31.0		31.0	31.0	
Total Split (%)	51.1%	51.1%		14.4%	65.6%		34.4%	34.4%		34.4%	34.4%	
Maximum Green (s)	40.0	40.0		10.0	53.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		3.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		0.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)		6.0		3.0	6.0		6.0	6.0			6.0	
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	C-Max	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	
Act Effct Green (s)		54.6		70.2	67.2		10.8	10.8			10.8	
Actuated g/C Ratio		0.61		0.78	0.75		0.12	0.12			0.12	
v/c Ratio		0.61		0.46	0.38		0.48	0.40			0.12	
Control Delay		15.1		5.5	5.4		47.1	2.2			32.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay		15.1		5.5	5.4		47.1	2.2			32.5	
LOS		B		A	A		D	A			C	
Approach Delay		15.1			5.4			13.6			32.5	
Approach LOS		B			A			B			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 90			
Actuated Cycle Length: 90			
Offset: 82 (91%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow			
Natural Cycle: 85			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 10.7		Intersection LOS: B	
Intersection Capacity Utilization 95.6%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 3: River Rd & Watchung Ave

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	7	11	231	332	39
Future Vol, veh/h	35	7	11	231	332	39
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	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	1	2	0
Mvmt Flow	39	8	12	260	373	44

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	679	395	417	0	-	0
Stage 1	395	-	-	-	-	-
Stage 2	284	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	420	659	1153	-	-	-
Stage 1	685	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	415	659	1153	-	-	-
Mov Cap-2 Maneuver	415	-	-	-	-	-
Stage 1	677	-	-	-	-	-
Stage 2	769	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.1	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1153	-	442	-	-
HCM Lane V/C Ratio	0.011	-	0.107	-	-
HCM Control Delay (s)	8.2	0	14.1	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	0	3	233	318	21
Future Vol, veh/h	9	0	3	233	318	21
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, %	0	0	0	1	2	0
Mvmt Flow	10	0	3	268	366	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	652	378	390	0	-	0
Stage 1	378	-	-	-	-	-
Stage 2	274	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	436	673	1180	-	-	-
Stage 1	697	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	435	673	1180	-	-	-
Mov Cap-2 Maneuver	435	-	-	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	777	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.5	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1180	-	435	-	-
HCM Lane V/C Ratio	0.003	-	0.024	-	-
HCM Control Delay (s)	8.1	0	13.5	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	10	226	3	15	303
Future Vol, veh/h	3	10	226	3	15	303
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	3	11	246	3	16	329

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	248	0	0	249	0
Stage 1	248	-	-	-	-	-
Stage 2	361	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	462	796	-	-	1328	-
Stage 1	798	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	455	796	-	-	1328	-
Mov Cap-2 Maneuver	455	-	-	-	-	-
Stage 1	798	-	-	-	-	-
Stage 2	699	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.4	0	0.4
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	679	1328	-
HCM Lane V/C Ratio	-	-	0.021	0.012	-
HCM Control Delay (s)	-	-	10.4	7.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	7	222	2	10	296
Future Vol, veh/h	1	7	222	2	10	296
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	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	0	0	2
Mvmt Flow	1	8	241	2	11	322

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	586	242	0	0	243	0
Stage 1	242	-	-	-	-	-
Stage 2	344	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.1	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	476	802	-	-	1335	-
Stage 1	803	-	-	-	-	-
Stage 2	722	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	471	802	-	-	1335	-
Mov Cap-2 Maneuver	471	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	715	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	737	1335	-
HCM Lane V/C Ratio	-	-	0.012	0.008	-
HCM Control Delay (s)	-	-	9.9	7.7	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

National Data & Surveying Services

Intersection Turning Movement Count

Location: River Rd/Dreyer's Lumber & Hardware Dwy & CR 646/Watchung Ave
City: Chatham
Control: Signalized

Project ID: 25-340205-001
Date: 12/10/2025

Data - Total

NS/EW Streets:	River Rd/Dreyer's Lumber & Hardware Dwy				River Rd/Dreyer's Lumber & Hardware Dwy				CR 646/Watchung Ave				CR 646/Watchung Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	1	0	0	0	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	8	0	58	0	1	0	0	0	1	43	7	0	25	73	1	0	217
7:15 AM	16	2	64	0	1	0	0	0	0	85	5	0	32	64	4	0	273
7:30 AM	23	2	72	0	1	1	1	0	3	104	12	0	46	95	2	0	362
7:45 AM	21	3	71	0	5	1	1	0	3	121	20	0	34	145	6	0	431
8:00 AM	21	0	71	0	4	0	3	0	2	117	14	0	36	119	4	0	391
8:15 AM	24	1	58	0	2	1	3	0	0	95	11	0	27	139	5	0	366
8:30 AM	31	1	94	0	4	1	0	0	2	111	6	0	35	137	7	0	429
8:45 AM	27	3	52	0	8	0	5	0	2	127	15	0	31	113	4	0	387
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	171	12	540	0	26	4	13	0	13	803	90	0	266	885	33	0	2856
APPROACH %'s :	23.65%	1.66%	74.69%	0.00%	60.47%	9.30%	30.23%	0.00%	1.43%	88.63%	9.93%	0.00%	22.47%	74.75%	2.79%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	97	5	294	0	15	3	7	0	7	444	51	0	132	540	22	0	1617
PEAK HR FACTOR :	0.782	0.417	0.782	0.000	0.750	0.750	0.583	0.000	0.583	0.917	0.638	0.000	0.917	0.931	0.786	0.000	0.938
	0.786				0.893				0.872				0.938				

NS/EW Streets:	River Rd/Dreyer's Lumber & Hardware Dwy				River Rd/Dreyer's Lumber & Hardware Dwy				CR 646/Watchung Ave				CR 646/Watchung Ave				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	0	1	0	0	1	0	0	0	1	0	0	1	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	9	1	55	0	0	0	2	0	0	133	16	0	50	106	0	0	372
4:15 PM	13	1	48	0	1	2	1	0	1	110	17	0	48	122	0	0	364
4:30 PM	12	0	41	0	10	6	2	0	1	141	17	0	60	108	3	0	401
4:45 PM	12	0	36	0	0	0	0	0	0	105	19	0	64	136	0	0	372
5:00 PM	14	0	50	0	0	0	0	0	0	144	24	0	47	110	0	0	389
5:15 PM	22	0	50	0	0	0	0	0	0	133	28	0	65	113	0	0	411
5:30 PM	14	0	44	0	0	0	0	0	0	136	25	0	63	89	0	0	371
5:45 PM	19	0	29	0	0	0	0	0	0	153	17	0	60	109	0	0	387
6:00 PM	20	0	48	0	0	0	0	0	0	103	27	0	43	110	0	0	351
6:15 PM	13	0	36	0	0	0	0	0	0	107	10	0	48	106	0	0	320
6:30 PM	8	0	35	0	0	0	0	0	0	84	13	0	54	74	0	0	268
6:45 PM	7	0	36	0	0	0	0	0	0	64	5	0	53	70	1	0	236
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	163	2	508	0	11	8	5	0	2	1413	218	0	655	1253	4	0	4242
APPROACH %'s :	24.22%	0.30%	75.48%	0.00%	45.83%	33.33%	20.83%	0.00%	0.12%	86.53%	13.35%	0.00%	34.26%	65.53%	0.21%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	60	0	177	0	10	6	2	0	1	523	88	0	236	467	3	0	1573
PEAK HR FACTOR :	0.682	0.000	0.885	0.000	0.250	0.250	0.250	0.000	0.250	0.908	0.786	0.000	0.908	0.858	0.250	0.000	0.957
	0.823				0.250				0.911				0.883				

Prepared by National Data & Surveying Services

River Rd/Dreyer's Lumber & Hardware Dwy & CR 646/Watchung Ave

Peak Hour Turning Movement Count

ID: 25-340205-001
City: Chatham

Day: Wednesday
Date: 12/10/2025

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NONE	NONE
04:30 PM - 05:30 PM	4:00 PM - 07:00 PM

CONTROL: Signalized

	AM	NOON	PM
TEV	1617	0	1573
PHF	0.94		0.96

SOUTHBOUND (River Rd/Dreyer's Lumber & Hardware Dwy)

	Left	Thru	Right	U-Turn	Approach
AM	7	3	15	0	34
NOON	0	0	0	0	0
PM	2	6	10	0	4

EASTBOUND (CR 646/Watchung Ave)

	Left	Thru	Right	U-Turn	Approach
AM	644	0	529	0	1173
NOON	0	0	0	1	1
PM	7	0	1	0	8

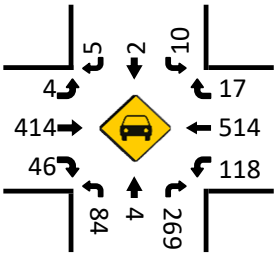
WESTBOUND (CR 646/Watchung Ave)

	Left	Thru	Right	U-Turn	Approach
AM	22	0	132	0	154
NOON	540	0	0	1	541
PM	3	0	236	0	239

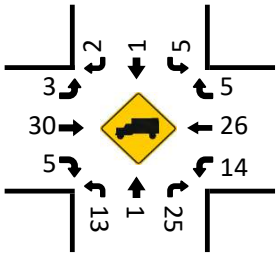
NORTHBOUND (River Rd/Dreyer's Lumber & Hardware Dwy)

	Left	Thru	Right	U-Turn	Approach
AM	186	0	97	5	294
NOON	0	0	0	0	0
PM	330	0	60	0	177

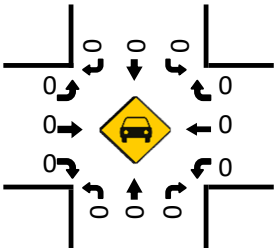
Cars (AM)



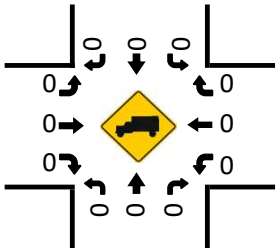
HT (AM)



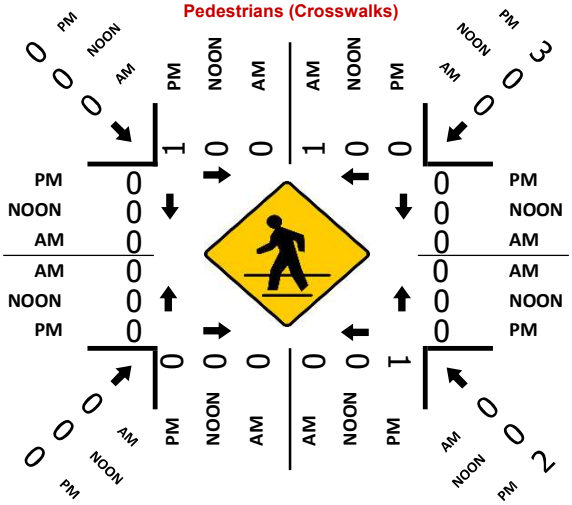
Cars (NOON)



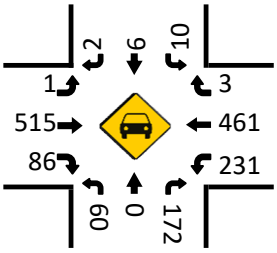
HT (NOON)



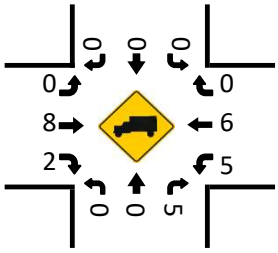
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: River Rd & The Ivy S Dwy
City: Chatham
Control: No Control

Project ID: 25-340205-003
Date: 12/10/2025

Data - Total

NS/EW Streets:	River Rd				River Rd				The Ivy S Dwy				The Ivy S Dwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	58	0	0	0	29	2	0	4	0	1	0	0	0	0	0	94
7:15 AM	0	74	0	0	0	30	2	0	6	0	1	0	0	0	0	0	113
7:30 AM	0	79	0	0	0	51	1	0	7	0	1	0	0	0	0	0	139
7:45 AM	1	84	0	0	0	52	2	0	8	0	2	0	0	0	0	0	149
8:00 AM	0	70	0	0	0	44	2	0	8	0	2	0	0	0	0	0	126
8:15 AM	0	70	0	0	0	29	2	0	4	0	0	0	0	0	0	0	105
8:30 AM	1	115	0	0	0	35	4	0	6	0	0	0	0	0	0	0	161
8:45 AM	0	64	0	0	0	38	0	0	4	0	1	0	0	0	0	0	107
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	614	0	0	0	308	15	0	47	0	8	0	0	0	0	0	994
APPROACH %'s :	0.32%	99.68%	0.00%	0.00%	0.00%	95.36%	4.64%	0.00%	85.45%	0.00%	14.55%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	2	339	0	0	0	160	10	0	26	0	4	0	0	0	0	0	541
PEAK HR FACTOR :	0.500	0.737	0.000	0.000	0.000	0.769	0.625	0.000	0.813	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.840
	0.735				0.787				0.750								

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	59	0	0	0	56	4	0	1	0	1	0	0	0	0	0	121
4:15 PM	3	58	0	0	0	56	1	0	1	0	1	0	0	0	0	0	120
4:30 PM	0	42	0	0	0	77	1	0	2	0	0	0	0	0	0	0	122
4:45 PM	1	44	0	0	0	60	5	0	3	0	0	0	0	0	0	0	113
5:00 PM	0	59	0	0	0	60	1	0	1	0	0	0	0	0	0	0	121
5:15 PM	1	63	0	0	0	76	5	0	1	0	0	0	0	0	0	0	146
5:30 PM	1	42	0	0	0	72	6	0	4	0	0	0	0	0	0	0	125
5:45 PM	1	43	0	0	0	62	6	1	1	0	0	0	0	0	0	0	114
6:00 PM	0	59	0	0	0	59	3	0	3	0	0	0	0	0	0	0	124
6:15 PM	2	39	0	0	0	45	4	0	0	0	0	0	0	0	0	0	90
6:30 PM	2	36	0	0	0	56	2	0	0	0	2	0	0	0	0	0	98
6:45 PM	1	35	0	0	0	50	2	0	0	0	1	0	0	0	0	0	89
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	12	579	0	0	0	729	40	1	17	0	5	0	0	0	0	0	1383
APPROACH %'s :	2.03%	97.97%	0.00%	0.00%	0.00%	94.68%	5.19%	0.13%	77.27%	0.00%	22.73%	0.00%					
PEAK HR :	05:15 PM - 06:15 PM																TOTAL
PEAK HR VOL :	3	207	0	0	0	269	20	1	9	0	0	0	0	0	0	0	509
PEAK HR FACTOR :	0.750	0.821	0.000	0.000	0.000	0.885	0.833	0.250	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.872
	0.820				0.895				0.563								

Prepared by National Data & Surveying Services

River Rd & The Ivy S Dwy

Peak Hour Turning Movement Count

ID: 25-340205-003
City: Chatham

Day: Wednesday
Date: 12/10/2025

PEAK HOURS	COUNT PERIODS
07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NONE	NONE
05:15 PM - 06:15 PM	4:00 PM - 07:00 PM

SOUTHBOUND (River Rd)

AM	10	160	0	0	365	AM
NOON	0	0	0	0	0	NOON
PM	20	269	0	1	217	PM

EASTBOUND (The Ivy S Dwy)

AM	NOON	PM	
12	0	23	⇦
0	0	0	↶ 0
26	0	9	↰ 0
0	0	0	→ 1
4	0	0	↷ 0
AM	NOON	PM	

WESTBOUND (The Ivy S Dwy)

PM	NOON	AM	
0	0	0	↶ 0
0	0	0	← 0
0	0	0	↰ 0
0	0	0	⇨
PM	NOON	AM	

NORTHBOUND (River Rd)

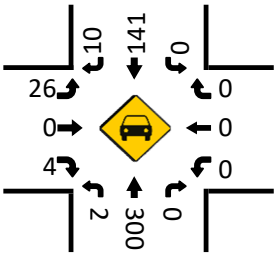
PM	269	0	3	207	0	PM
NOON	0	0	0	0	0	NOON
AM	164	0	2	339	0	AM

CONTROL

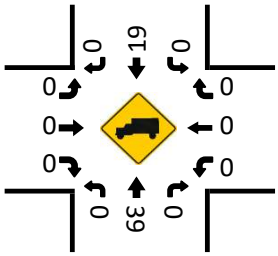
No Control

TEV	541 AM	0 NOON	509 PM
PHF	0.84		0.87

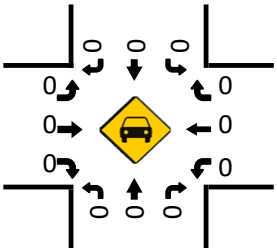
Cars (AM)



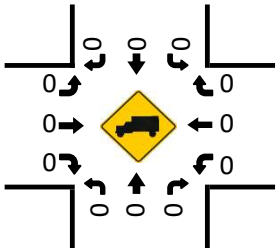
HT (AM)



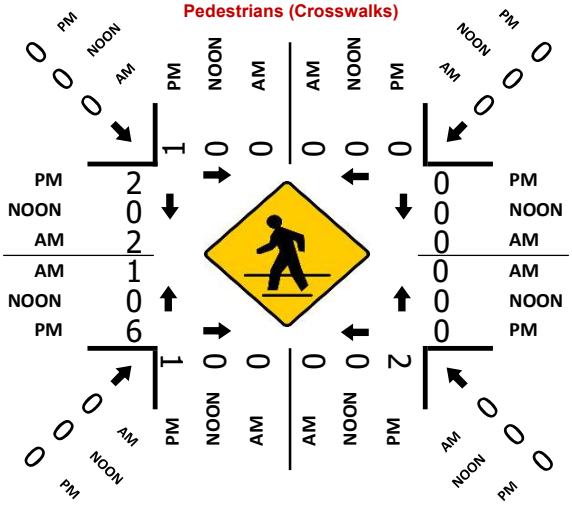
Cars (NOON)



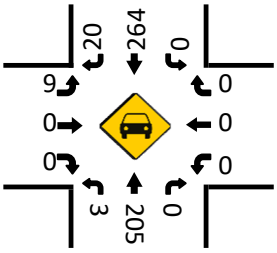
HT (NOON)



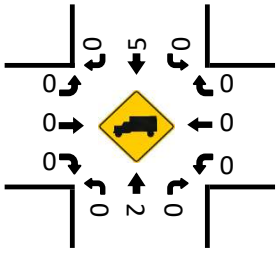
Pedestrians (Crosswalks)



Cars (PM)



HT (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: River Rd & The Ivy N Dwy/Touchpoint Pediatrics Dwy
City: Chatham
Control: 1-Way Stop(EB)

Project ID: 25-340205-004
Date: 12/10/2025

Data - Total

NS/EW Streets:	River Rd				River Rd				The Ivy N Dwy/Touchpoint Pediatrics Dwy				The Ivy N Dwy/Touchpoint Pediatrics Dwy				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	60	0	0	0	29	3	0	7	0	1	0	0	0	0	0	100
7:15 AM	2	73	1	0	0	31	5	0	10	0	3	0	0	0	1	0	126
7:30 AM	2	88	0	0	1	54	4	0	10	0	1	0	0	0	0	0	160
7:45 AM	1	88	0	0	0	49	6	0	9	0	4	0	0	0	0	0	157
8:00 AM	0	76	1	0	1	45	5	0	10	0	2	0	0	0	1	0	141
8:15 AM	0	76	0	0	0	34	6	0	11	0	2	0	0	0	0	0	129
8:30 AM	0	122	0	0	1	38	3	0	4	0	1	0	0	0	0	0	169
8:45 AM	0	67	1	0	0	39	6	0	11	0	0	0	0	0	1	0	125
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	5	650	3	0	3	319	38	0	72	0	14	0	0	0	3	0	1107
APPROACH %'s :	0.76%	98.78%	0.46%	0.00%	0.83%	88.61%	10.56%	0.00%	83.72%	0.00%	16.28%	0.00%	0.00%	0.00%	100.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	1	362	1	0	2	166	20	0	34	0	9	0	0	0	1	0	596
PEAK HR FACTOR :	0.250	0.742	0.250	0.000	0.500	0.847	0.833	0.000	0.773	0.000	0.563	0.000	0.000	0.000	0.250	0.000	0.882
	0.746				0.855				0.827				0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	2	58	1	0	1	60	5	1	7	0	1	0	1	0	2	0	139
4:15 PM	2	56	0	0	1	57	8	0	5	0	1	0	1	0	0	0	131
4:30 PM	0	47	0	0	1	75	5	0	3	0	0	0	0	0	1	0	132
4:45 PM	1	44	0	0	1	67	12	0	4	0	0	0	0	0	0	0	129
5:00 PM	1	65	0	0	2	61	8	0	4	1	3	0	0	0	1	0	146
5:15 PM	2	62	0	0	1	80	11	0	7	0	2	0	0	0	0	0	165
5:30 PM	3	44	1	0	2	76	10	0	10	0	2	0	0	1	1	0	150
5:45 PM	3	39	0	0	1	65	10	0	6	0	2	0	0	0	0	0	126
6:00 PM	2	60	0	0	4	60	6	0	10	0	1	0	0	0	1	0	144
6:15 PM	1	39	1	0	3	48	7	0	7	0	1	0	1	0	0	0	108
6:30 PM	0	36	0	0	0	58	8	0	4	0	1	0	0	0	1	0	108
6:45 PM	0	35	0	0	1	52	6	0	5	0	1	0	0	0	1	0	101
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	17	585	3	0	18	759	96	1	72	1	15	0	3	1	8	0	1579
APPROACH %'s :	2.81%	96.69%	0.50%	0.00%	2.06%	86.84%	10.98%	0.11%	81.82%	1.14%	17.05%	0.00%	25.00%	8.33%	66.67%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	7	215	1	0	6	284	41	0	25	1	7	0	0	1	2	0	590
PEAK HR FACTOR :	0.583	0.827	0.250	0.000	0.750	0.888	0.854	0.000	0.625	0.250	0.583	0.000	0.000	0.250	0.500	0.000	0.894
	0.845				0.899				0.688				0.375				

Prepared by National Data & Surveying Services

River Rd & The Ivy N Dwy/Touchpoint Pediatrics Dwy

Peak Hour Turning Movement Count

ID: 25-340205-004
City: Chatham

Day: Wednesday
Date: 12/10/2025

PEAK HOURS		COUNT PERIODS
AM	07:45 AM - 08:45 AM	7:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	4:00 PM - 07:00 PM

River Rd — SOUTHBOUND

	Right	Thru	Left	U-Turn	Departing
AM	20	166	2	0	397
NOON	0	0	0	0	0
PM	41	284	6	0	242
Lanes	0	1	0	0	

The Ivy N Dwy/Touchpoint Pediatrics Dwy — EASTBOUND

	AM	NOON	PM	Lanes
Departing	21	0	49	
U-Turn	0	0	0	0
Left	34	0	25	0
Thru	0	0	1	1
Right	9	0	7	0

The Ivy N Dwy/Touchpoint Pediatrics Dwy — WESTBOUND

	Lanes	PM	NOON	AM
Right	0	2	0	1
Thru	1	1	0	0
Left	0	0	0	0
U-Turn	0	0	0	0
Departing		8	0	3

River Rd — NORTHBOUND

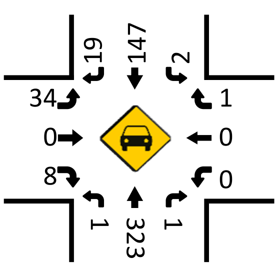
	Departing	U-Turn	Left	Thru	Right
Lanes		0	0	1	0
PM	291	0	7	215	1
NOON	0	0	0	0	0
AM	175	0	1	362	1

CONTROL

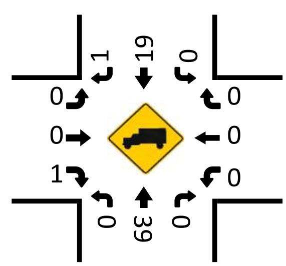
1-Way Stop(EB)

	AM	NOON	PM
TEV	596	0	590
PHF	0.88		0.89

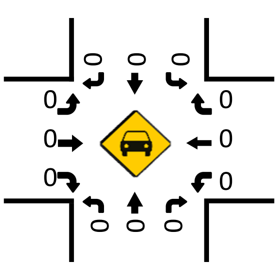
Cars (AM)



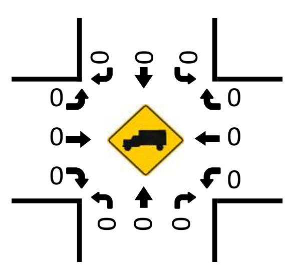
HT (AM)



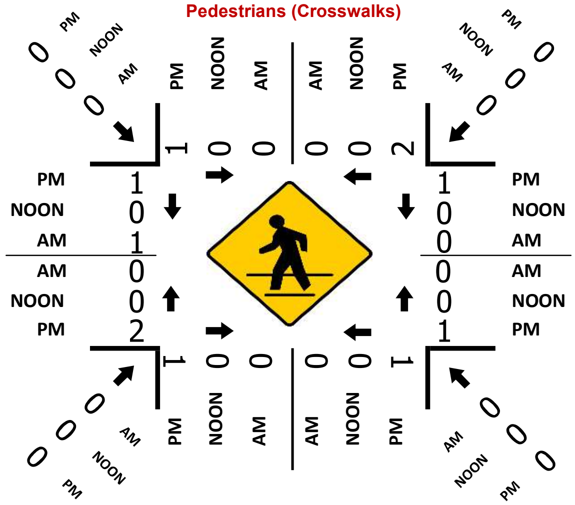
Cars (NOON)



HT (NOON)



Pedestrians (Crosswalks)



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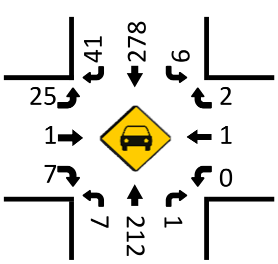
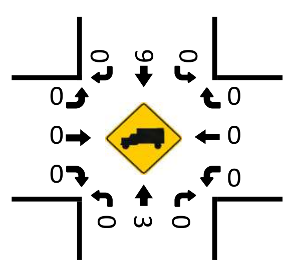


HT (PM)



PRELIMINARY AND FINAL SITE PLAN SUBMISSION

CHATHAM RIVER ROAD PHASE II

PROPOSED MIXED USE DEVELOPMENT
BLOCK 140, LOT 7.01, 8, 9 AND 10
BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY

ILLUSTRATIVE PERSPECTIVE

PROJECT UNIT MIX:

TOTAL PROJECT

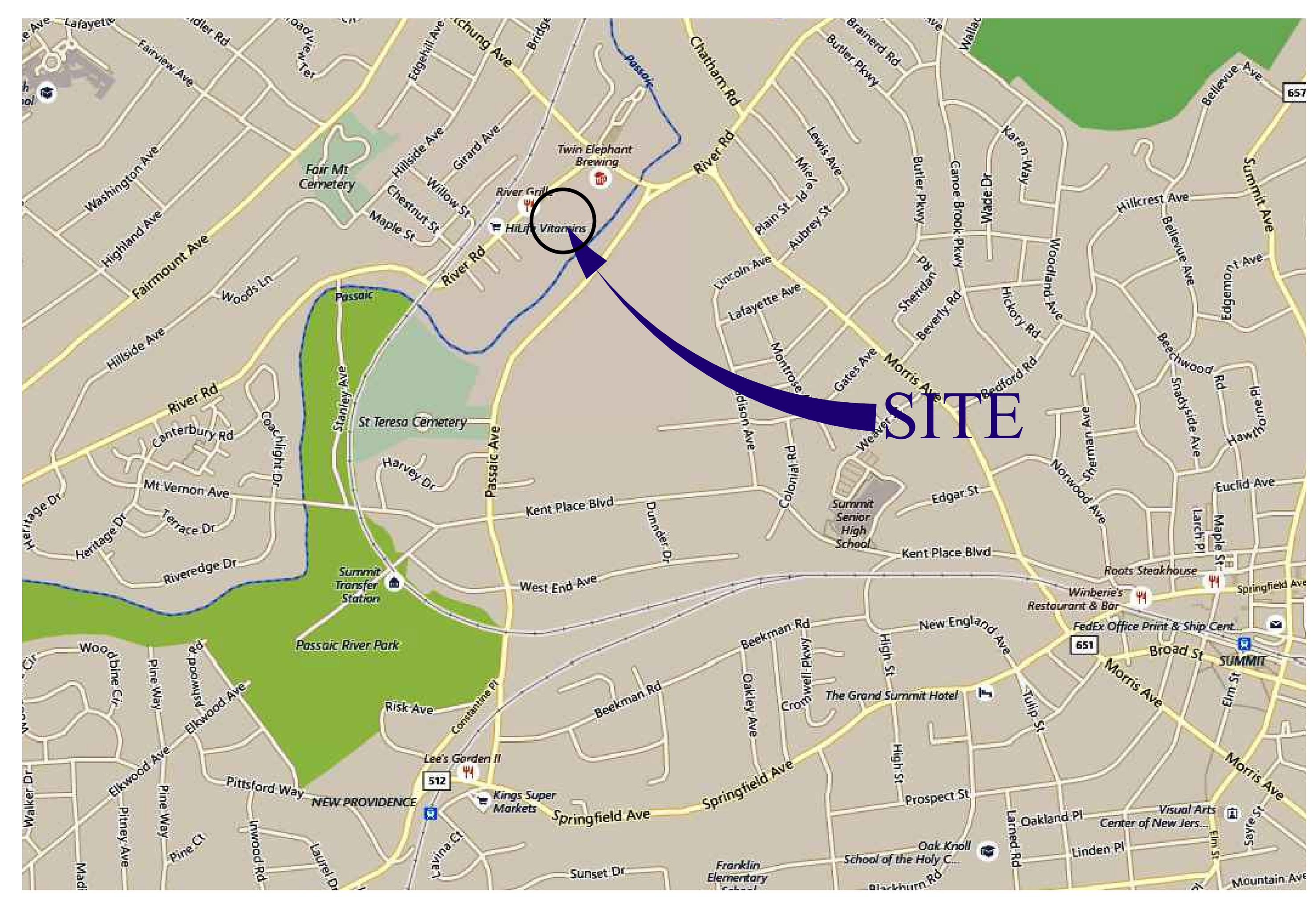
1 BEDROOM:	10	05%
1 BEDROOM W/ DEN:	07	07%
1 BEDROOM A:	03	03%
2 BEDROOM:	35	35%
2 BEDROOM W/ DEN:	13	13%
2 BEDROOM A:	09	09%
3 BEDROOM:	20	20%
3 BEDROOM A:	03	03%
TOTAL:	**100**	

TOTAL MARKET RATE

1 BEDROOM:	10	12%
1 BEDROOM W/DEN:	07	08%
2 BEDROOM:	35	41%
2 BEDROOM W/ DEN	13	15%
3 BEDROOM:	20	24%
TOTAL:	**85**	

TOTAL AFFORDABLE

1 BEDROOM:	03	20%
2 BEDROOM:	09	06%
3 BEDROOM:	03	20%
TOTAL:	**15**	



LOCATION MAP
NTS

PROJECT DATA

BLOCK / LOT:	BLOCK 140, LOT 7.01, 8, 9, 10
ZONING DISTRICT: HOUSING OVERLAY 1 (GAHO-1)	GATEWAY AFFORDABLE
LOT AREA:	136,809 SF (3.141 ACRES)
BUILDING HEIGHT:	4 STORIES (50'-10")
BUILDING FOOTPRINT:	59,455 SF
RESI GROSS FLOOR AREA:	151,855 SF
RETAIL AREA:	2,370 SF
DWELLING UNITS:	100 DU
GARAGE PARKING:	207 SPACES

SHEET INDEX

PLANNING BD. APPROVAL

PRELIMINARY AND FINAL SITE PLAN APPROVAL IS HEREBY GRANTED TO THIS SITE PLAN BY THE PLANNING BOARD OF THE BOROUGH OF CHA-THAM, NEW JERSEY, THIS _ _ DAY OF _ _ _ _ _ _ 2026.

Board Chairman

Board Secretary

Board Engineer

PREPARED BY:

MINNO WASKO
ARCHITECTS AND PLANNERS
204 N. UNION STREET, LAMBERTVILLE, NEW JERSEY 08530
GATEWAY TWO, SUITE 1700, NEWARK, NEW JERSEY 07102
MINNOWASKO.COM

CHATHAM RIVER ROAD - PHASE II
BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY
BLOCK 140, LOT 7.01,8,9 AND 10

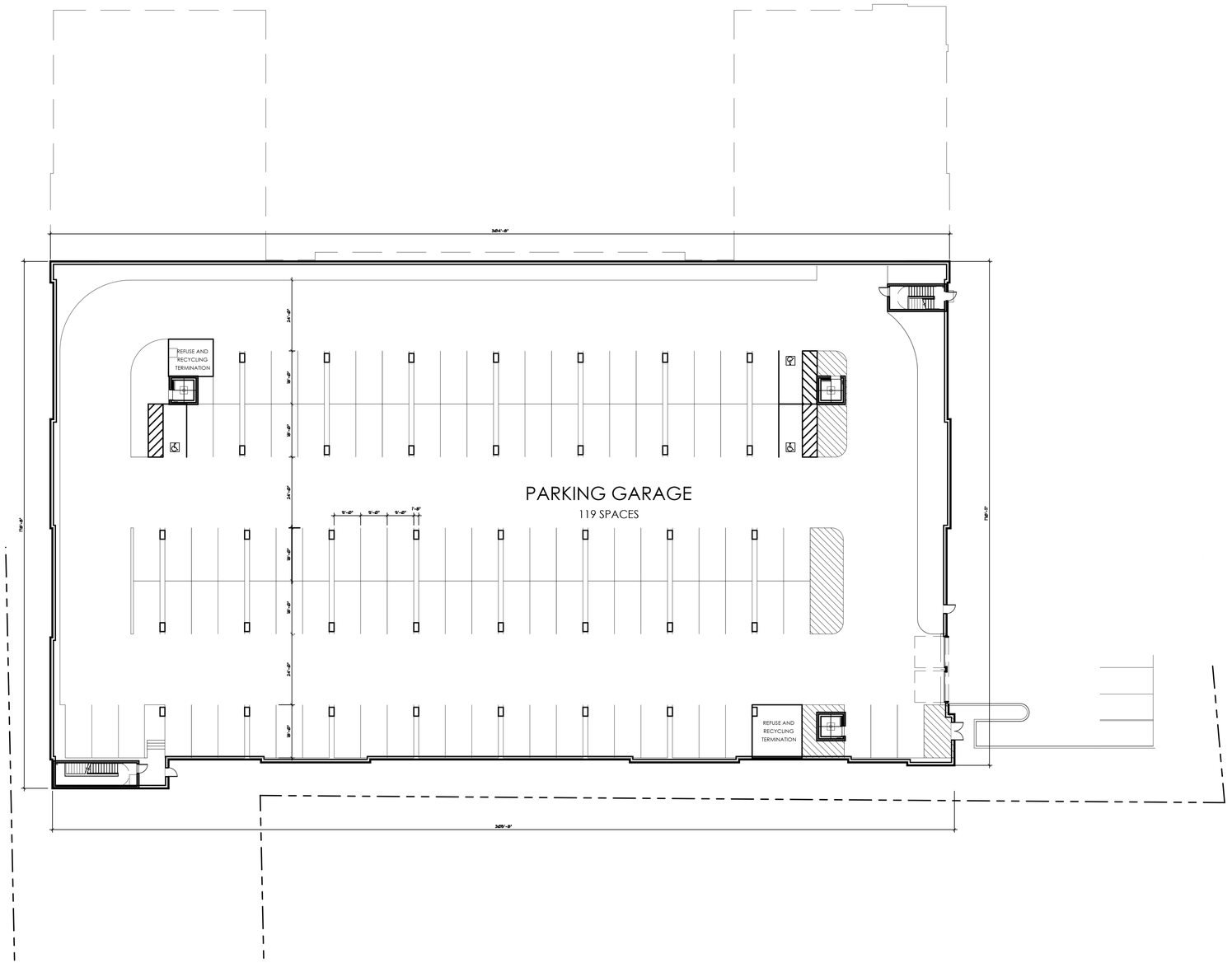
PREPARED FOR:
BNE REAL ESTATE GROUP

ISSUE: DATE:	FOR:
01-16-2026	PRELIM & FINAL SITE PLAN

C-01

COVER SHEET

00-0217-111



01 BASEMENT FLOOR PLAN

SCALE: 1/20" = 1'-0"

0 20' 40'

PARKING CALCULATIONS:

TOTAL PROPOSED GARAGE PARKING:	**207 SPACES**
EV SPACES	10 SPACES
EVR SPACES	20 SPACES

REFER TO CIVIL DRAWINGS/ TRAFFIC ANALYSIS FOR TOTAL PROPOSED PARKING/ SHARED PARKING ANALYSIS

SITE NOTES:

1. REFER TO CIVIL DRAWINGS FOR ALL UNDERGROUND UTILITY LOCATIONS, SIZES AND DETAILING.

2. REFER TO CIVIL DRAWINGS FOR ALL STORM WATER RUNOFF AND RETENTION INFORMATION.

3. REFER TO LANDSCAPE ARCHITECTS DRAWINGS FOR SITE DETAILS, CONDITIONS, AND LANDSCAPING DETAILS.

REFUSE/RECYCLING:

COMPACTOR IS HYDRAULICALLY OPERATED EXTRUDER-TYPE UNIT. SOLID WASTE WILL BE DELIVERED TO UNIT VIA MULTI-STORY TRASH CHUTE WITH OPENINGS ON EACH RESIDENTIAL FLOOR. COMPACTED REFUSE WILL BE EXTRUDED INTO CONTINUOUS PLASTIC TUBING OR INDIVIDUAL PLASTIC BAGS, WHICH WILL BE STORED IN TRASH COMPACTOR ROOM UNTIL PRIVATE HAULER PICKUP. AT PICKUP TIMES, BUILDING MANAGEMENT WILL WHEEL CONTAINERS TO LOADING AREA FOR PICKUP BY PRIVATE HAULER. YARD STORAGE CONTAINERS WILL BE PROVIDED.

RECYCLING BINS WILL BE LOCATED ON EACH FLOOR AND WILL BE COLLECTED BY BUILDING MANAGEMENT AND STORED IN REFUSE/RECYCLING TERMINATION ROOM UNTIL PRIVATE HAULER PICKUP. AT PICKUP TIMES, BUILDING MANAGEMENT WILL WHEEL CONTAINERS TO LOADING AREA FOR PICKUP BY PRIVATE HAULER. YARD STORAGE CONTAINERS WILL BE PROVIDED.

PREPARED BY:
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ARCHITECTS AND PLANNERS
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CHATHAM RIVER ROAD - PHASE II
BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY
BLOCK 140, LOT 7.01,8,9 AND 10

PREPARED FOR:
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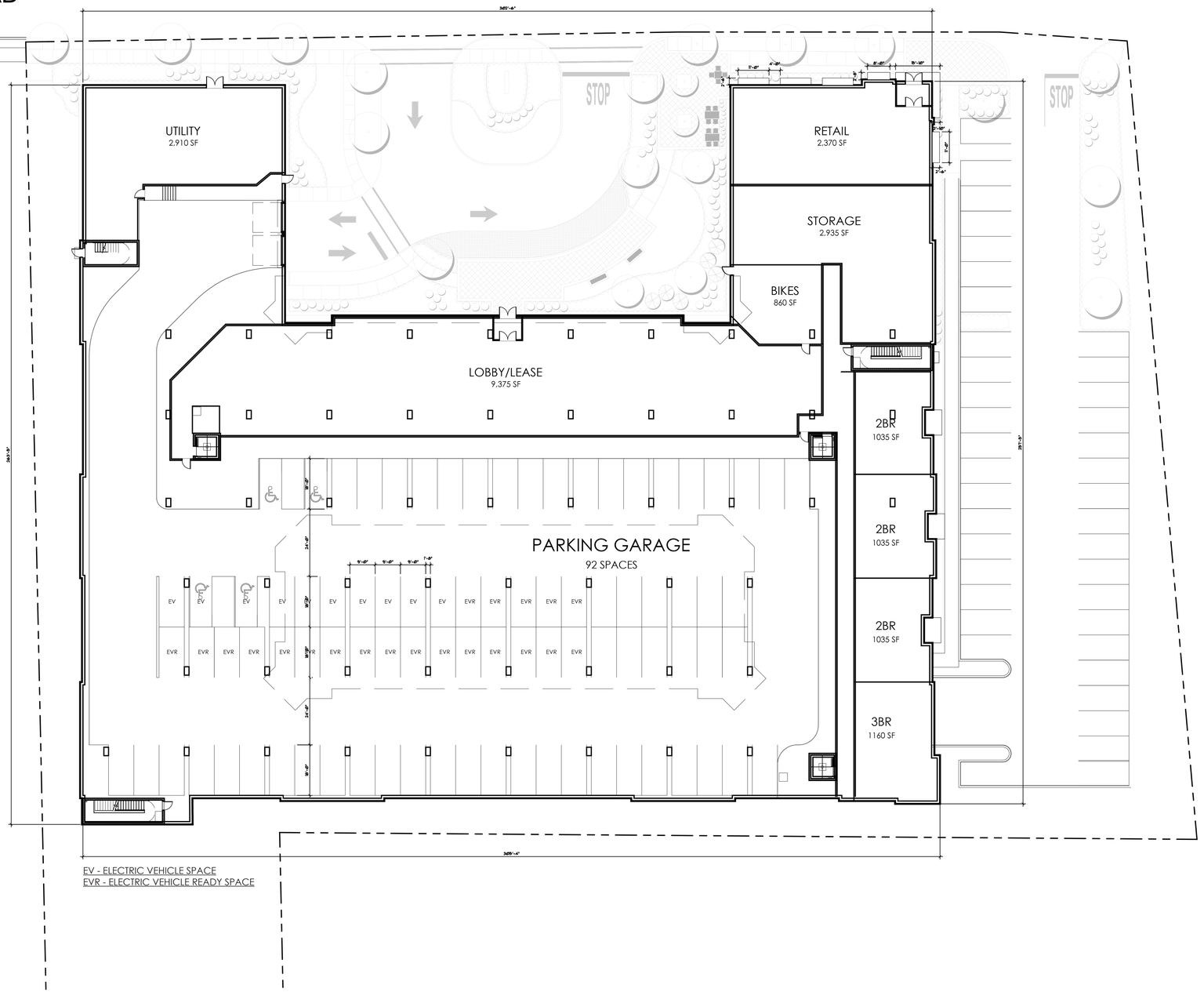
ISSUE:	
DATE:	**FOR:**
01-16-2026	PRELIM & FINAL SITE PLAN

A-01

BUILDING PLAN

00-0217-111

RIVER ROAD



EV - ELECTRIC VEHICLE SPACE
EVR - ELECTRIC VEHICLE READY SPACE

01 GROUND FLOOR PLAN
SCALE: 1/20" = 1'-0"
0 20' 40'

PREPARED BY:
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CHATHAM RIVER ROAD - PHASE II
BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY
BLOCK 140, LOT 7.01,8,9 AND 10

PREPARED FOR:
BNE REAL ESTATE GROUP

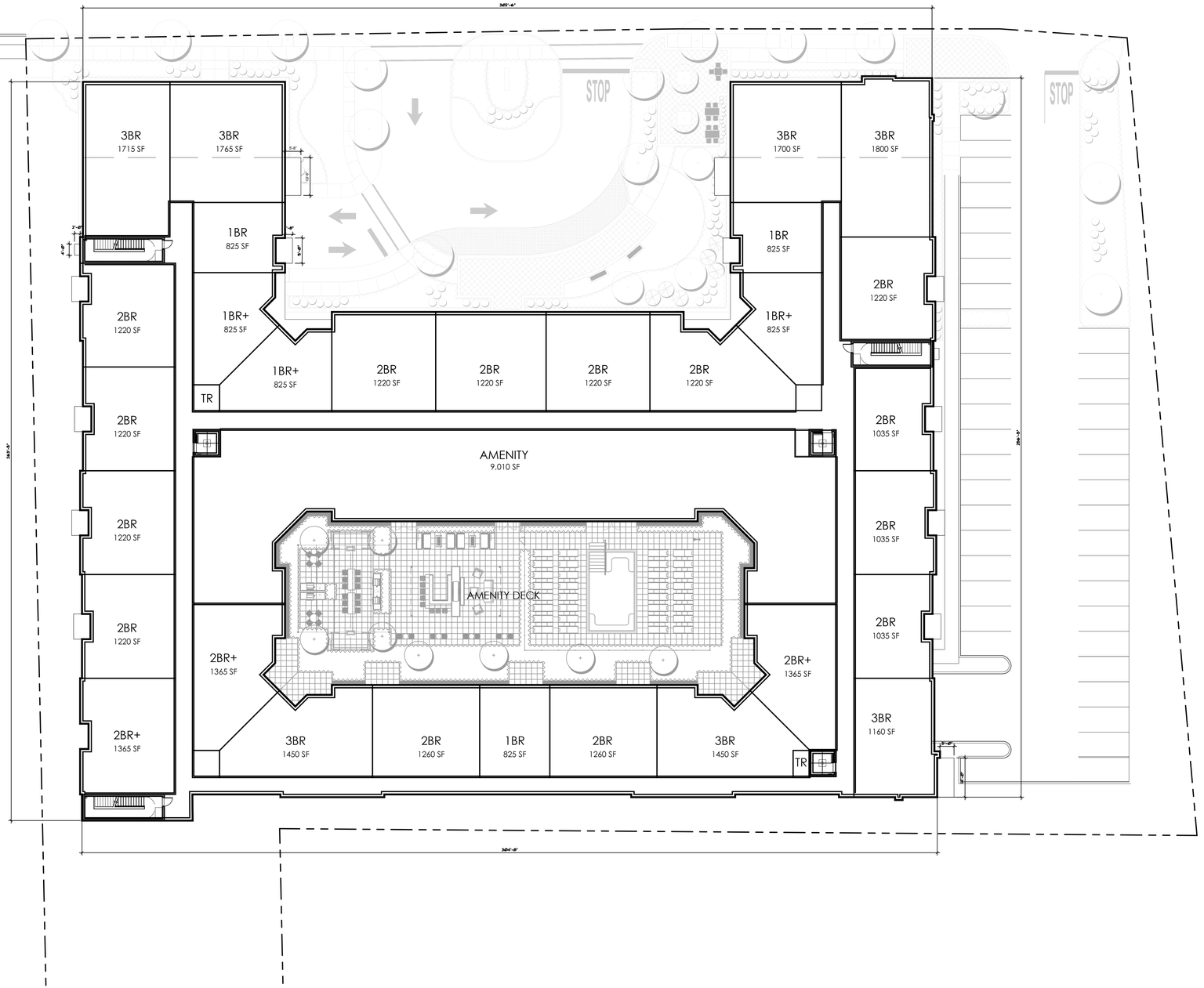
ISSUE:	
DATE:	FOR:
01-16-2026	PRELIM & FINAL SITE PLAN

A-02

BUILDING PLAN

00-0217-111

RIVER ROAD



01 SECOND FLOOR PLAN

SCALE: 1/20" = 1'-0"

0 20' 40'

PREPARED BY:

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CHATHAM RIVER ROAD - PHASE II

BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY

BLOCK 140, LOT 7.01,8,9 AND 10

PREPARED FOR:

BNE REAL ESTATE GROUP

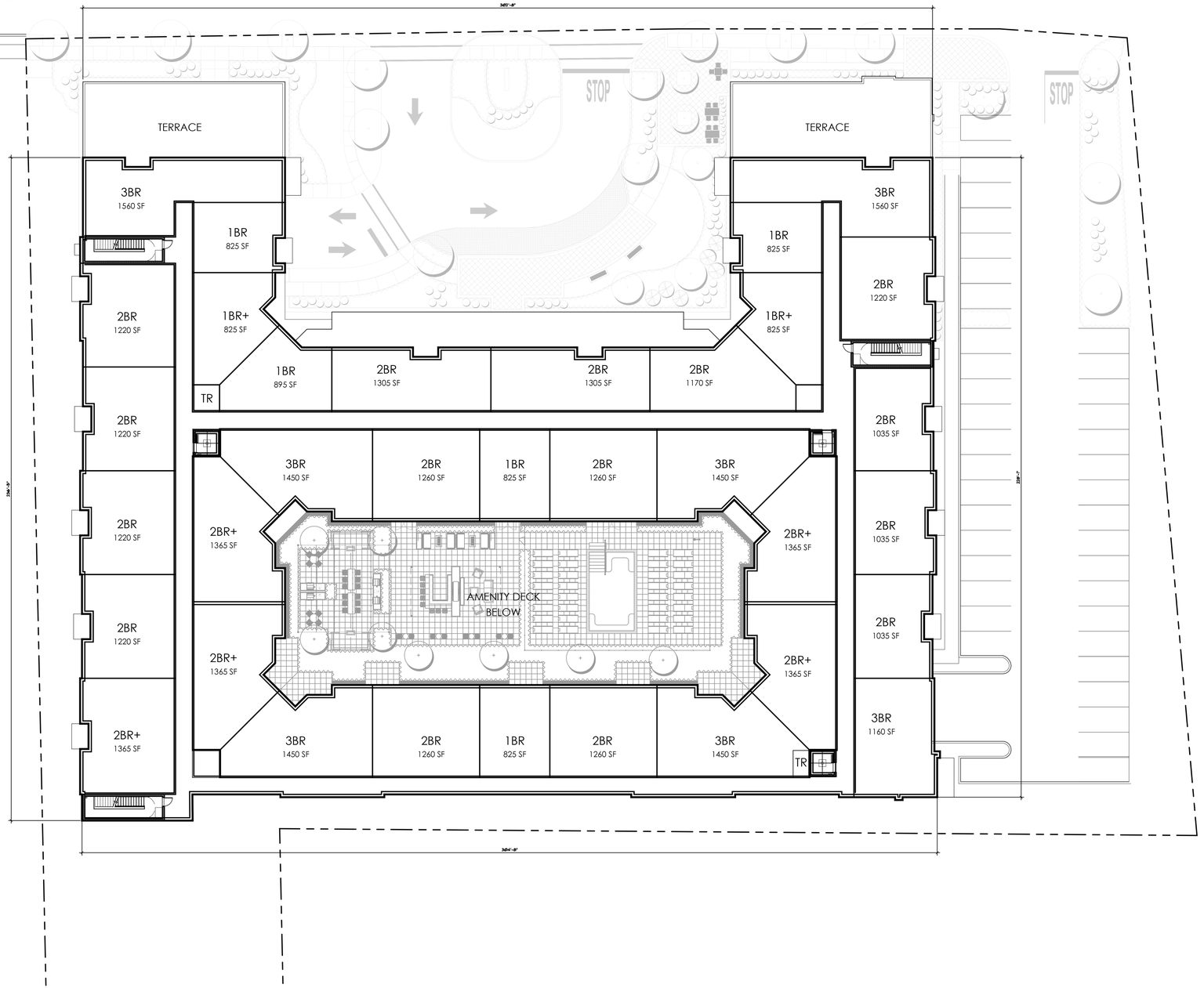
ISSUE:	
DATE:	FOR:
01-16-2026	PRELIM & FINAL SITE PLAN

A-03

BUILDING PLAN

00-0217-111

RIVER ROAD



01 THIRD FLOOR PLAN

SCALE: 1/20" = 1'-0"

0 20' 40'

PREPARED BY:

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CHATHAM RIVER ROAD - PHASE II
BOROUGH OF CHATHAM, MORRIS COUNTY,
NEW JERSEY
BLOCK 140, LOT 7.01,8,9 AND 10

PREPARED FOR:
BNE REAL ESTATE GROUP

ISSUE:	
DATE:	FOR:
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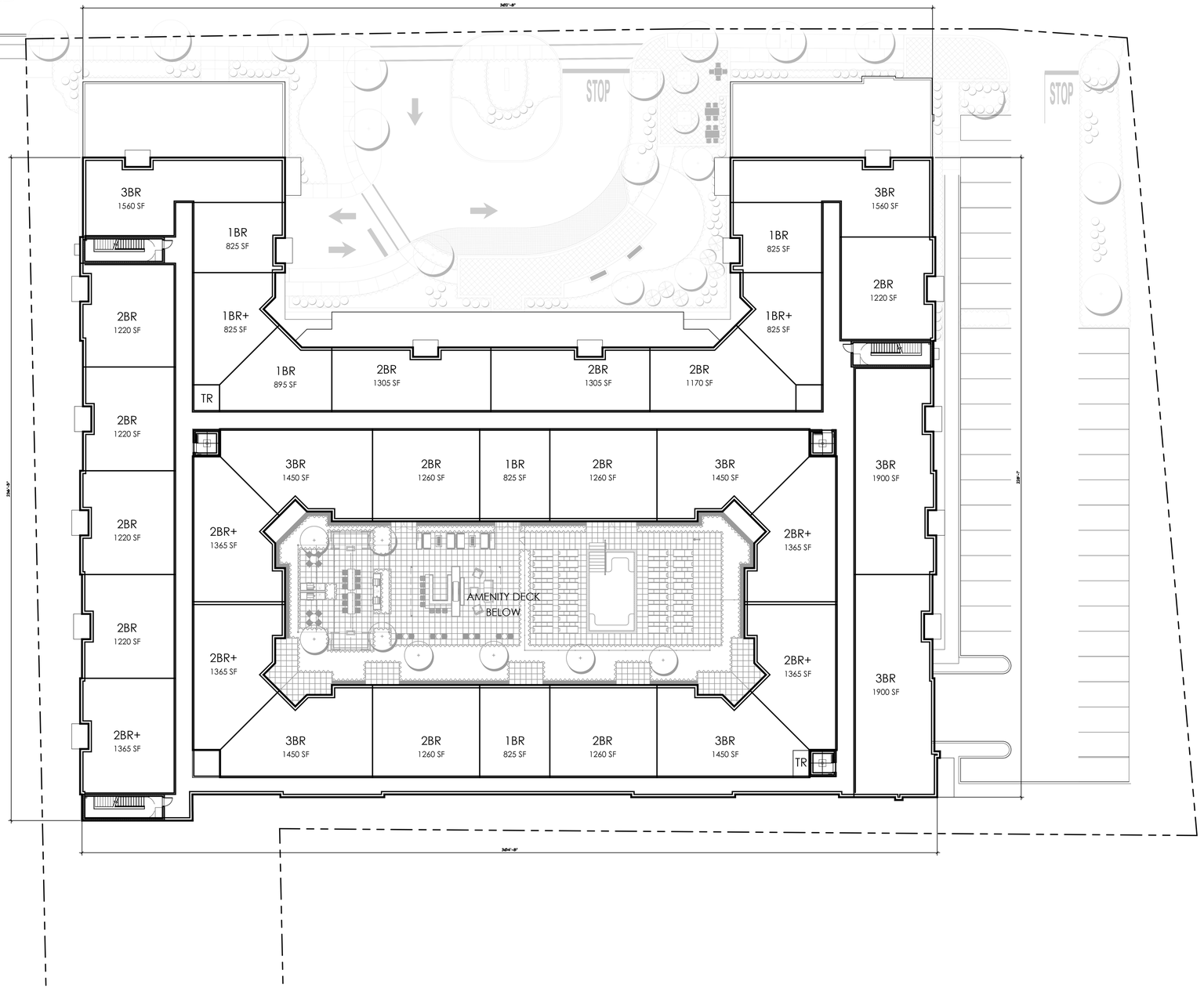
A-04

BUILDING PLAN

RIVER ROAD



01 FOURTH FLOOR PLAN

SCALE: 1/20" = 1'-0"

0 20' 40'

PREPARED BY:
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CHATHAM RIVER ROAD - PHASE II

BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY

BLOCK 140, LOT 7.01,8,9 AND 10

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BNE REAL ESTATE GROUP

ISSUE:	
DATE:	FOR:
01-16-2026	PRELIM & FINAL SITE PLAN

A-05

BUILDING PLAN

00-0217-111

02 RIVER ROAD BUILDING ELEVATION

SCALE: 1/16" = 1'-0"

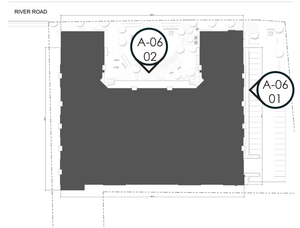
0 8' 16' 32'

01 NORTH BUILDING ELEVATION

SCALE: 1/16" = 1'-0"

0 8' 16' 32'

KEY PLAN:



MATERIALS KEY:

01 MASONRY BRICK VENEER 01
02 COMPOSITE METAL PANEL 01
03 STANDING SEAM METAL PANEL
04 VINYL WINDOW
05 ARCHITECTURAL METAL RAILING
06 ARCHITECTURAL METAL CANOPY
07 ARCHITECTURAL METAL LOUVER
08 ARCHITECTURAL METAL GRILL
09 STOREFRONT DOOR & WINDOW SYSTEM
10 ARCHITECTURAL OVERHEAD GARAGE DOOR

NOTES:

PRODUCTS AND MANUFACTURERS LISTED ARE SUBJECT TO CHANGE AND/OR SUBSTITUTED WITH EQUIVALENT AND COMPATIBLE OPTIONS.

LANDSCAPE BY OTHERS AND SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.

SIGNAGE SHOWN FOR ZONING COMPLIANCE AND APPROVAL ONLY. TEXT MAY CHANGE BASED ON FINAL BRANDING OF THE BUILDING.

PREPARED BY:
MINNO WASKO
ARCHITECTS AND PLANNERS
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CHATHAM RIVER ROAD - PHASE II
BOROUGH OF CHATHAM, MORRIS COUNTY,
NEW JERSEY
BLOCK 140, LOT 7.01,8,9 AND 10

PREPARED FOR:
BNE REAL ESTATE GROUP

ISSUE:	
DATE:	FOR:
01-16-2026	PRELIM & FINAL SITE PLAN

A-06

BUILDING ELEVATIONS

00-0217-111

02 EAST BUILDING ELEVATION

SCALE: 1/16" = 1'-0"

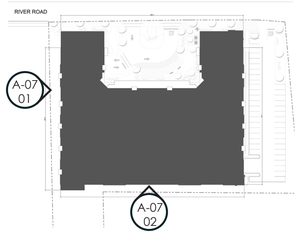
0 8' 16' 32'

01 SOUTH BUILDING ELEVATION

SCALE: 1/16" = 1'-0"

0 8' 16' 32'

KEY PLAN:



MATERIALS KEY:

01	MASONRY BRICK VENEER 01
02	COMPOSITE METAL PANEL 01
03	STANDING SEAM METAL PANEL
04	VINYL WINDOW
05	ARCHITECTURAL METAL RAILING
06	ARCHITECTURAL METAL CANOPY
07	ARCHITECTURAL METAL LOUVER
08	ARCHITECTURAL METAL GRILL
09	STOREFRONT DOOR & WINDOW SYSTEM
10	ARCHITECTURAL OVERHEAD GARAGE DOOR

NOTES:

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CHATHAM RIVER ROAD - PHASE II
BOROUGH OF CHATHAM, MORRIS COUNTY,
NEW JERSEY
BLOCK 140, LOT 7.01,8,9 AND 10

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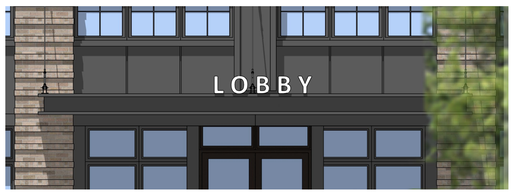
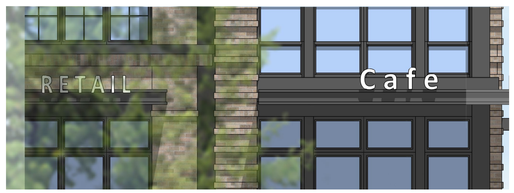
01-16-2026	PRELIM & FINAL SITE PLAN

A-07

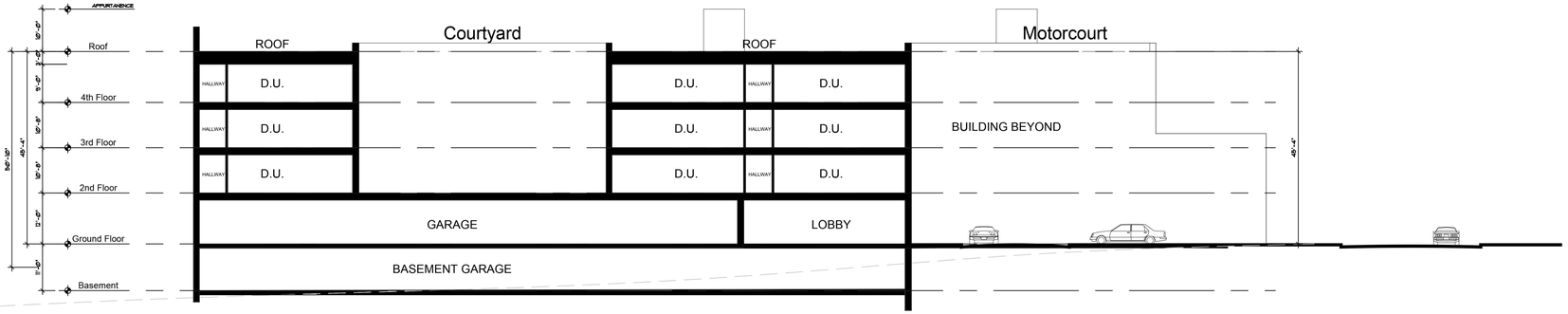
BUILDING ELEVATIONS

00-0217-111



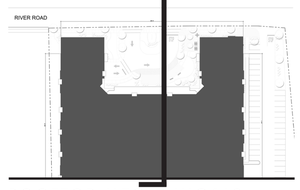


02 SIGNAGE
SCALE: 1/4" = 1'-0"
0 2' 4' 8'



01 SECTION
SCALE: 1/16" = 1'-0"
0 8' 16' 32'

KEY PLAN:



ROOFTOP MECHANICALS:

BUILDING SIGNAGE:
(X) RESIDENTIAL SIGNS
-

(X) RESIDENTIAL BLADE SIGN
-

(X) GARAGE SIGNAGE
-

(X) RETAIL SIGNS
-

PREPARED BY:
MINNO WASKO
ARCHITECTS AND PLANNERS
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CHATHAM RIVER ROAD - PHASE II
BOROUGH OF CHATHAM, MORRIS COUNTY,
NEW JERSEY
BLOCK 140, LOT 7.01,8,9 AND 10

PREPARED FOR:
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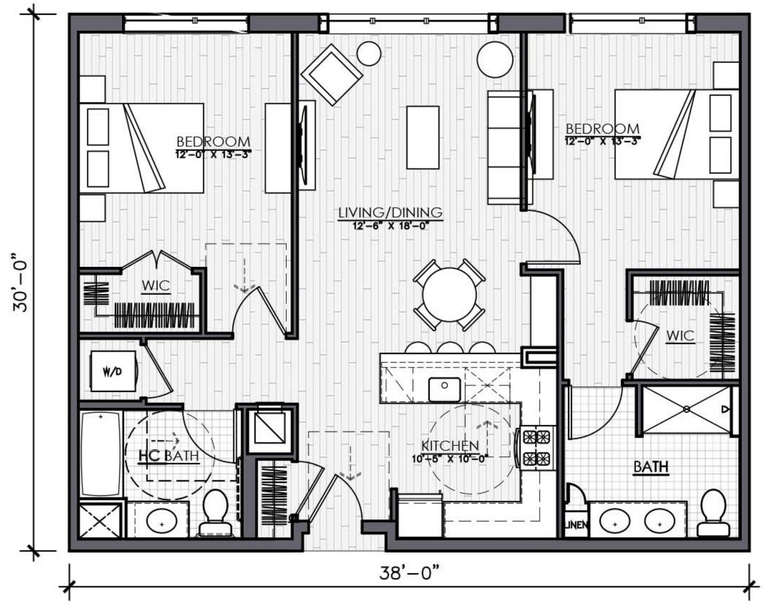
01-16-2026	PRELIM & FINAL SITE PLAN

A-08

BUILDING SECTION/ SIGNAGE

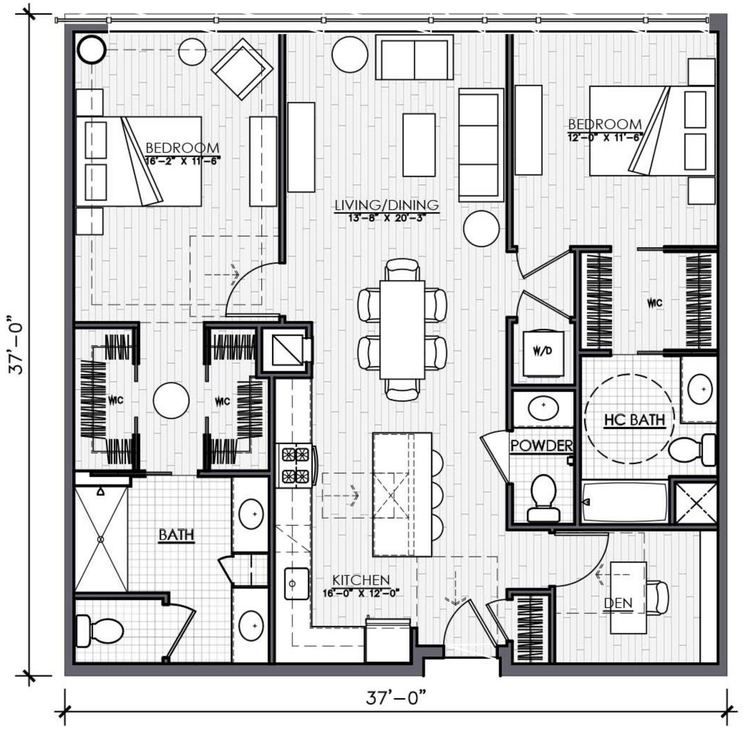
00-0217-111



03 TWO BEDROOM (1140 SF)

SCALE: 1/4" = 1'-0"

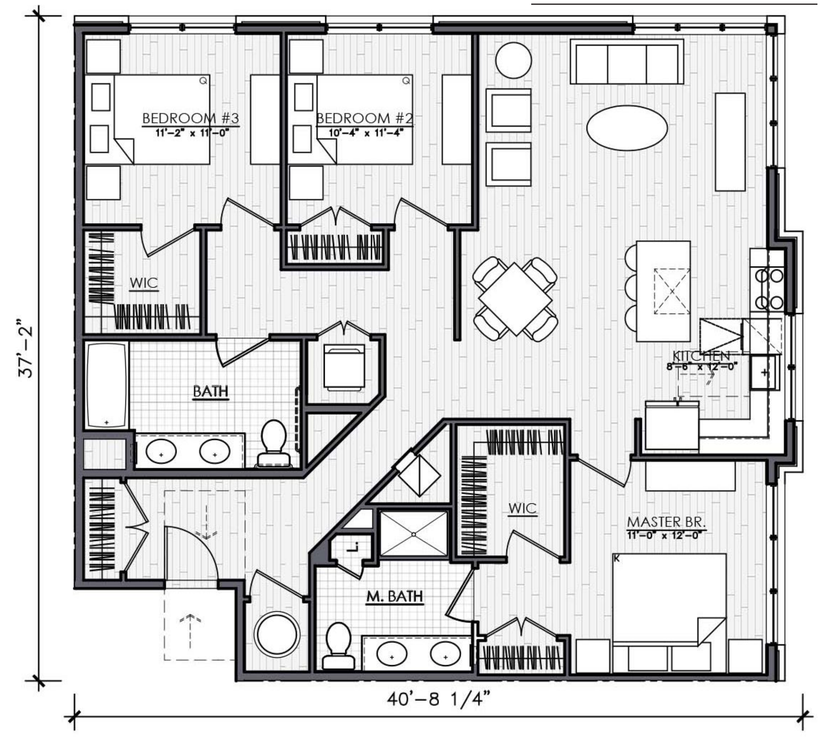
0 2' 4' 8'



04 TWO BEDROOM + DEN (1364 SF)

SCALE: 1/4" = 1'-0"

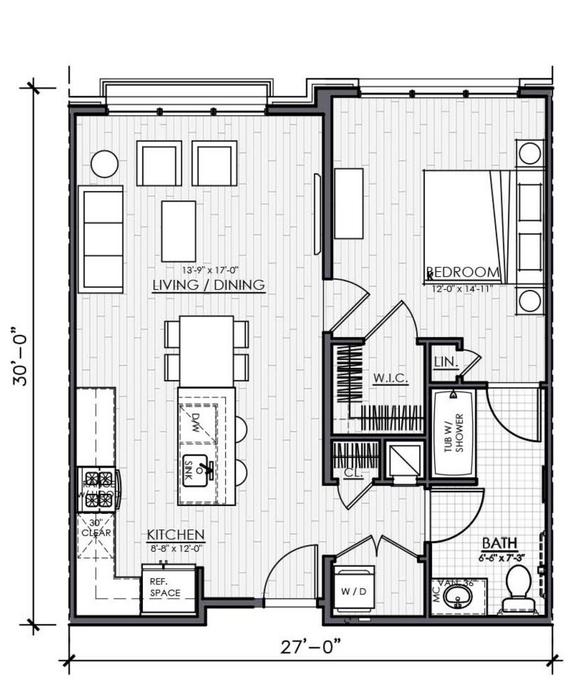
0 2' 4' 8'



05 THREE BEDROOM (1403 SF)

SCALE: 1/4" = 1'-0"

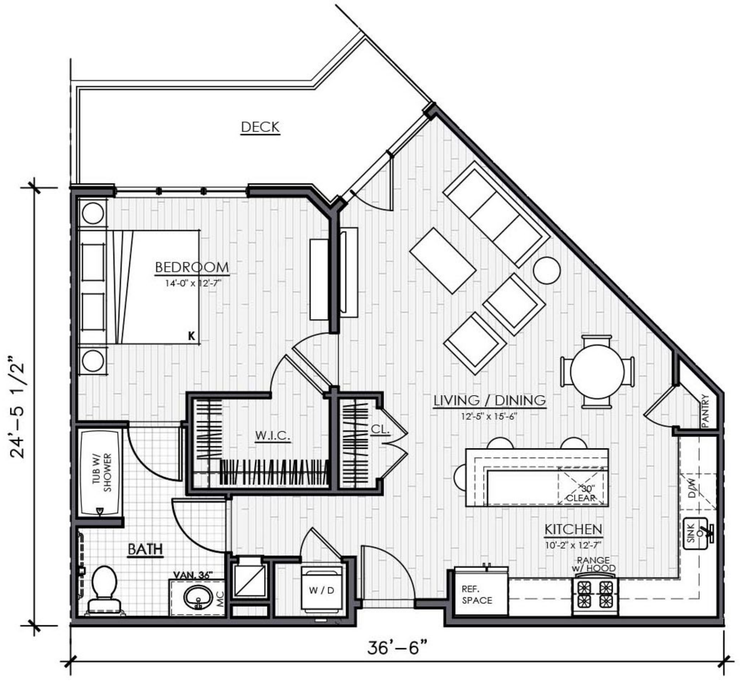
0 2' 4' 8'



01 ONE BEDROOM (789 SF)

SCALE: 1/4" = 1'-0"

0 2' 4' 8'



02 ONE BEDROOM + DEN (843 SF)

SCALE: 1/4" = 1'-0"

0 2' 4' 8'

PREPARED BY:
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CHATHAM RIVER ROAD - PHASE II

BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY

BLOCK 140, LOT 7.01,8,9 AND 10

PREPARED FOR:

BNE REAL ESTATE GROUP

ISSUE:	
DATE:	FOR:
01-16-2026	PRELIM & FINAL SITE PLAN

A-09

TYPICAL UNIT PLANS

00-0217-111

ENVIRONMENTAL IMPACT STATEMENT

for

AJDM Chatham, LLC
29, 33, 37, and 39 River Road
Block 140, Lots 7.01, 8, 9, & 10
Borough of Chatham
Morris County, New Jersey

Prepared For:

AJDM Chatham, LLC
16 Microlab Road, Suite A
Livingston, New Jersey 07039

Prepared By:

Langan Engineering and Environmental Services, LLC
300 Kimball Drive, 4th Floor
Parsippany, New Jersey 07054
NJ Certificate of Authorization No: 24GA27996400

16 January 2026
101324801

LANGAN

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

DRAWINGS (BOUND SEPARATELY)

1.0 INTRODUCTION

On behalf of AJDM Chatham, LLC ("applicant"), Langan has prepared this Environmental Impact Statement (EIS) as part of the preliminary/final site plan application for a mixed-use inclusionary multifamily and retail development ("project") on River Road in Chatham Borough, Morris County, New Jersey (Figure 1 – USGS Site Location Map). The project application requires an EIS per the application checklist under § 165-161A(1)(c) of the Borough of Chatham Land Development Regulations (LDR).

The EIS purpose is to permit the planning board to assess the environmental impact of the project. Furthermore, the EIS outlines how the project can proceed without detriment to the public health, safety, and welfare of the borough, and to the statutory purposes set forth in the Municipal Land Use Law (MLUL). Based on the foregoing, the project would not have an adverse environmental impact on the project site or the surrounding area.

1.1 Project Location

The project site addresses are 29, 33, 37 and 39 River Road, southwest of the intersection of River Road and Watchung Avenue in the borough (Figure 2 - Vicinity Map). Municipal tax records identify the 2.92-acre project site as Block 140, Lots 7.01, 8, 9, and 10 (Figure 3 – Tax Map). The project site lots currently include one-story commercial/light industrial buildings and vehicle and equipment storage. Multiple driveways provide ingress and egress onto River Road (Figure 4 – Site Aerial Photograph).

The following land uses surround the project site:

- North: Westy Self-Storage, The Ivy Condominiums (multifamily residential development).
- East: Jersey Central Power and Light (JCP&L) utility easement, Passaic River.
- South: Light industrial storage and commercial uses, residential uses along St. James Street.
- West: Commercial and light industrial uses, including River Grille, Engine Exchange, Prendville Disposal and Hanover Supply.

1.2 Proposed Project

The project would demolish the existing improvements. The project includes the following improvements:

- 4-story mixed-use residential building with basement.
- 64,243 square foot at-grade building footprint.
- 100 residential units, inclusive of market rate and affordable units.
- 2,370 square feet of retail space.

- 207 parking spaces in basement and on first level.
- 31 at-grade parking spaces.

Other improvements include landscaping, lighting, utility, and stormwater management improvements. Exterior active and passive recreational amenities include a turf area, paver area, and pickleball courts. Table 1 outlines the project unit bedroom distribution.

Table 1: Unit Bedroom Distribution

Unit Type	Market Rate Units	Affordable Units	TOTAL
One-Bedroom	5	3	8
One-Bedroom w Den	12	0	12
Two-Bedroom	35	9	44
Two-Bedroom w Den	13	0	13
Three-Bedroom	20	3	23
	85	15	100

Source: Architectural Drawings, Drawing No. C-01, Cover Sheet, prepared by Minno-Wasko Architects and Planners, most recently revised January 7, 2026 (bound separately).

The project will provide a total of 238 parking spaces, 207 of which will be located in structured parking in the basement and first level. The remaining 31 spaces will be in an at-grade parking lot at the northern side of the building. At least 30 parking spaces will be make-ready for electric vehicles, and 11 will be installed for EV charging. The project will also provide ADA-accessible spaces, in compliance with local code. The project will also include 21 internal bike parking spaces.

Other project improvements include signage, lighting, landscaping, and stormwater improvements. A stop-controlled ingress-egress driveway will provide access from River Road to both parking areas. In addition, a one-way stop-controlled horseshoe drive in front of the building for pickup and drop-off will access the structured parking area and provide connection to River Road.

2.0 NATURAL RESOURCES INVENTORY

2.1 Soils

The project site and surrounding area consist of the following soil types (Figure 5 – NRCS Soils Map):

- Parsippany silt loam, sand loam substratum, 0-3 percent slopes, frequently flooded, 90% hydric (PbphAt): Derived from glaciolacustrine deposits from basalt, shale and granitic gneiss material, profiles range from silt loam to clay loam, silty clay loam and fine sandy loam.

- Urban land – Haledon complex, 3-8 percent slopes, 5 percent hydric (USHALB): Composed of Haledon and urban land. Urban land is described as a surface covered by pavement, concrete, buildings, and other structures underlain by disturbed and natural soil material. Haledon complex is a coarse loamy basal till derived from basalt, with profiles ranging from silt loam to very fine sandy loam. Together the soils they form have a variable profile.

Most of the project site, except for the rear section of Lot 7.01, consists of Urban land soils.

2.2 Topography

The project site has an existing high point of EL (elevation) 224 located along the River Road frontage, and a low point of EL 206 located along the southwestern property line. The existing grade generally slopes downward from the River Road frontage to the rear of the site.

2.3 Geology

The project site's surficial geology consists of Late Wisconsinan Terminal Moraine Deposits, Rahway Till (Figure 6 – NJDEP Surficial Geology Map). This unit ranges from dark reddish brown to reddish brown to yellowish brown. It is typically a sandy to clayey till, with about five to 20 percent pebbles, cobbles and boulders of gneiss, sandstone, basalt, and quartzite.

The project site is underlain by the Towaco Formation (Figure 7 – NJDEP Bedrock Geology Map). The Towaco Formation consists of fine to medium-grained sandstone, siltstone, and silty mudstone in addition to limited calcareous mudstone and siltstone.

2.4 Vegetation and Wildlife

The project site is primarily impervious coverage, with limited landscaping. The NJDEP Landscape Habitat Project Version 3.4 does not identify any threatened or endangered species onsite, nor is the Natural Heritage Program (NHP) grid onsite. The closest mapped species is the Rank Five federally and state endangered Indiana Bat, to the southwest of the site. (Figure 8 – NJDEP Threatened and Endangered Species Map).

On January 8, 2026, the applicant requested an NHP letter from NJDEP, which is pending as of this date. On January 8, 2026, the U.S. Fish and Wildlife Service (USFWS) issued an Information, Planning, and Consulting (IPaC) letter with (Appendix A – Threatened and Endangered Species Correspondence). While the project site does not include any critical habitats in the project area, the IPaC recommends the project consider the following species during site development:

- Indiana Bat (*Myotis sodalis*), federally endangered.
- Northern Long-eared Bat (*Myotis septentrionalis*), federally endangered.
- Tricolored Bat (*Perimyotis subflavus*) proposed federally endangered.
- Monarch Butterfly (*Danaus Plexippus*) proposed federally threatened.

The IPaC also indicates that migratory birds may pass through the site on a seasonal basis. No vernal pools or habitats are on or adjacent to the project site (Figure 9 – NJDEP Vernal Pool Habitat Map).

2.5 Surface Water

No wetlands are on or adjacent to the project site (Figure 10 - NJDEP Wetlands Map). The closest mapped wetlands are along the Passaic River over 200 feet to the southwest. The project site does not include any surface waters (Figure 11 – NJDEP Surface Waters Map). The closest waterbody is an unnamed Passaic River tributary, classified as FW2/NT non-trout producing freshwater tributary, south of the project site.

The project site is in the Upper Passaic, Whippany, and Rockaway Passaic River Upper (40d 45m to Snyder Ave) HUC-14 watershed (Figure 12 — NJDEP HUC-14 Watershed Map). The project site is not part of a floodplain or flood hazard area (Figure 13 – FEMA Effective FIRM Map).

2.6 Subsurface Water

The project site is part of the Upper Passaic, Whippany and Rockaway Groundwater Recharge Area, and the Buried Valley Sole-Source Aquifer (Figure 14 – NJDEP Subsurface Waters Mapping).

2.7 Unique Scenic and/or Historic Features

No historic properties or districts are on or adjacent to the project site (Figure 15 – NJDEP Historic Resources Map). The NJDEP Archaeological Site Grid does not overlap with the project site, which includes several commercial and light industrial buildings without unique scenic features.

2.8 Air Quality

No operations at the project site are subject to state or federal air permits.

2.9 Noise

The site currently contains active commercial uses and storage, and generates the noise associated with those active uses. The site also receives traffic noise from River Road and the surrounding road network, and rail noise from the NJ Transit line.

3.0 ENVIRONMENTAL IMPACTS

3.1 Soils

The project design and construction will comply with a Soil Erosion and Sediment Control Plan (Soil Erosion and Sediment Control Plan, Drawing No. CE101, bound separately). Plan measures include silt fences, inlet filters, temporary seeding of any areas exposed for more than 60 days, and moisture control on exposed ground surfaces. After development, the ground surfaces will be permanently stabilized through construction and landscaping, minimizing erosion. Based on the foregoing, the project would not have an adverse impact on soils.

3.2 Topography and Geology

The project site grading plan minimizes site cuts and fills, and to consider existing topographic features (Grading Plan, Drawing No. CG101, bound separately). The deepest cut is 22 feet below ground surface, and the most significant fill is 14 feet. Based on the foregoing, the project would not have an adverse impact on topography or geology.

3.3 Vegetation and Wildlife

The project site is mostly impervious with limited vegetation present on site. The project will reduce onsite impervious coverage. Additional proposed landscaping includes street trees, shrubs, and a landscaped area around the drop-off lane at the building frontage.

The project site does not include any sensitive areas, such as wetlands, waterways, or threatened and endangered species habitats. Concern about the Indiana Bat is not necessary since the project site has no trees. The IPaC confirms the project site does not include any critical habitat. Based on the foregoing, the project would not have an adverse impact on vegetation or wildlife

3.4 Surface Water

The project site does not include any surface waters. The project will result in a net 1.79 acre decrease of onsite regulated vehicle surface, a positive change for surface water. Project stormwater improvements will include a new system of catch basins, manholes, yard drains, and pipes. Due to the reduction of regulated motor vehicle surface, the project does not require stormwater quality improvements.

The project addresses stormwater quantity requirements through the decrease in impervious area. Post-construction runoff hydrographs for the current and projected 2-, 10-, and 100-year storm events do not exceed the preconstruction runoff hydrographs for the same storm events. The site is exempt from groundwater recharge requirements due to its location within an Urban Redevelopment Area. Based on the foregoing, the project would not have an adverse impact regarding surface water.

3.5 Subsurface Water

While the project site is part of a groundwater recharge area and a sole-source aquifer, it qualifies as an Urban Redevelopment Area per N.J.A.C. 7:8-1.2. As an Urban Redevelopment Area, the project is exempt from groundwater recharge requirements. Based on the foregoing, the project would not have an adverse impact regarding subsurface water.

3.6 Unique Scenic and/or Historic Features

The project site does not include any historic features or unique scenic features. As a result, the project would not have an impact on unique scenic or historic features.

3.7 Air Quality

The project does not anticipate requiring an air permit since the project consists of inclusionary residential development. During the construction phase, mechanical equipment will conform to the applicable standards for exhaust emission levels and safety standards. Construction vehicles and machinery may contribute to minor temporary impacts to air quality. During construction, heavy construction equipment will clear and grade the project site.

To mitigate any adverse impacts on air quality, a soil erosion and sediment control plan will control dust levels. Plan measures include temporary seeding of any areas exposed for more than 60 days, and moisture control on exposed ground surfaces (Soil Erosion and Sediment Control Plan, Drawing No. CE101, bound separately). Based on the foregoing, the project would not have an adverse impact regarding air quality.

3.8 Noise

Overall noise standard regulation is subject to the New Jersey Noise Control Act (N.J.A.C. 7:29). All municipal noise ordinances must be identical to the State Model Noise Control Ordinance provided by the NJDEP, which oversees noise control rules and regulations. The noise level will increase temporarily during demolition and construction activities.

Residential use and retail operations may contribute intermittent noise from use activity. The project will comply with and not exceed the maximum sound level standards as outlined in the State regulations. Based on the foregoing, the project would not have an adverse impact regarding noise.

4.0 ENVIRONMENTAL PERFORMANCE CONTROLS

4.1 Drainage

The stormwater management design will include a new system of catch basins, manholes, yard drains, and pipes (Appendix B – Stormwater Management Report, bound separately). The project will not require stormwater quality improvements due to a reduction in regulated motor vehicle surface. The project addresses stormwater quantity requirements through the decrease in impervious area.

Post-construction runoff hydrographs for the current and projected 2-, 10-, and 100-year storm events do not exceed the preconstruction runoff hydrographs for the same storm events. The project site is considered part of an Urban Redevelopment Area and is exempt from groundwater recharge requirements. The project drainage will comply with N.J.A.C. 7:8, the New Jersey state stormwater management rules. Based on the foregoing, the project would not have an adverse impact on drainage.

4.2 Sewage Disposal

The project site is in a mapped NJDEP sewer service area, with sewer service provided by the Madison-Chatham Joint Meeting wastewater treatment plant (Figure 16 – NJDEP Sewer Service Area). The project will connect to the eight-inch sewer main located in River Road. Based on the residential unit count and retail floor area, the project anticipates approximately 23,692 gallons per day (GPD) of sanitary sewer demand. Based on the foregoing, the project would not have an adverse impact on sewage disposal.

4.3 Site Design

The site design provides effective parking and circulation while reducing impervious surface and providing a mixed-use inclusionary housing development.

4.4 Water Supply and Conservation

The project will comply with NJDEP Appliance and Equipment Efficiency Standards to conserve water with efficient fixtures such as toilets, showerheads, and faucets. Based on the residential unit count and retail floor area, the project anticipates approximately 15,121 GPD of water demand. Chatham Borough will provide water service via an eight-inch water main located in River Road.

4.5 Energy Conservation

The project will comply with NJDEP Appliance and Equipment Efficiency Standards to conserve energy with efficient fixtures such as fans and lighting.

4.6 Noise Reduction Techniques

During the construction phase, mechanical equipment will conform to the applicable standards for noise, exhaust emission levels, and safety standards. Contractors will take necessary steps to minimize, or eliminate where possible, avoidable noise emanating from construction operations. Although construction conditions are temporary in nature, the applicant will minimize, to the extent practical, the acoustical impact of this activity.

The municipality prohibits heavy construction equipment from exceeding noise code limits outside the hours specified in their noise ordinance. The project construction will conform to these requirements. No sensitive receptors are directly adjacent to the project site.

Construction equipment, such as bulldozers, front end loaders, and dump trucks, can typically produce maximum sound levels of 80 dB(A) at 50 feet. To minimize receptor exposure to construction noise, the project will implement the following construction noise control strategies to the extent feasible:

- Limit all heavy equipment operation to non-noise-sensitive daytime hours and follow allowable construction hours.
- If possible, limit the number of equipment operating near one receptor at a given time. Avoid exposing any one receptor to high sound levels for an extended period.
- Place stationary equipment, such as generators, compressors, and office trailers, away from noise-sensitive receptors.
- Avoid having construction parking or laydown areas near noise-sensitive receptor.

After construction, residential use and retail operations may contribute intermittent noise from use activity. The project will comply with and not exceed the maximum sound level standards as outlined in the state regulations.

5.0 ALTERNATIVES

The project site is located within the Gateway Affordable Housing Overlay District 1 (GAHO-1). Chatham Borough zoning ordinance indicates that the purpose of this district is as follows:

1. *To find ways for a developed community to balance "legitimate zoning and planning objectives" with the need and constitutional obligation to provide affordable housing.*

2. *To attempt to channel affordable housing in the areas of the Borough that are best suited to accommodate affordable housing.*

3. *To address its affordable housing unmet need obligation, the Borough shall implement a Gateway Overlay Ordinance that creates an opportunity for housing in the Borough that is affordable to very-low-, low- and moderate-income households. This section establishes the Gateway Affordable Housing Overlay 1 District (GAHO-1) Zone, and permits the creation of multifamily housing within the GAHO-1 provided that such housing complies with a required inclusionary set-aside requirement and with the requirements of this section*

As indicated in this description, the main purpose of this zone is inclusionary multifamily housing. The permitted uses in this zone are either inclusionary multifamily development, or mixed-use development that meets the minimum affordable housing set aside, with the following uses to mix:

- Art galleries.
- Artisan workshop.
- Brewery.
- Brewpub.
- Business services.
- Child-care centers.
- Community center.
- Convenience store.
- Financial institutions, including banks.
- Indoor commercial recreation/fitness club.
- Live/work lofts.
- Museum.
- Office.
- Personal services.
- Public open space.
- Public purpose use.
- Recreational instruction.
- Restaurants.
- Retail services.
- Retail trade.
- Theater.

Alternatives could include inclusionary development without a mixed use, or inclusionary development with a different mixed use from the list. Overall, the alternatives are extremely similar to the proposed project due to the purposes of the zone.

6.0 LICENSES, PERMITS, AND OTHER APPROVALS REQUIRED

Table 2 provides information about the permits and approvals associated with the project:

Table 2: Project Permits and Approvals Required

Board / Agency	Required Approvals
Borough of Chatham Planning Board	Preliminary/Final major site plan
Morris County Soil Conservation District	Soil Erosion and Sediment Control Plan
New Jersey Department of Environmental Protection	• Treatment Works Approval (TWA) • Water Main Extension Certification

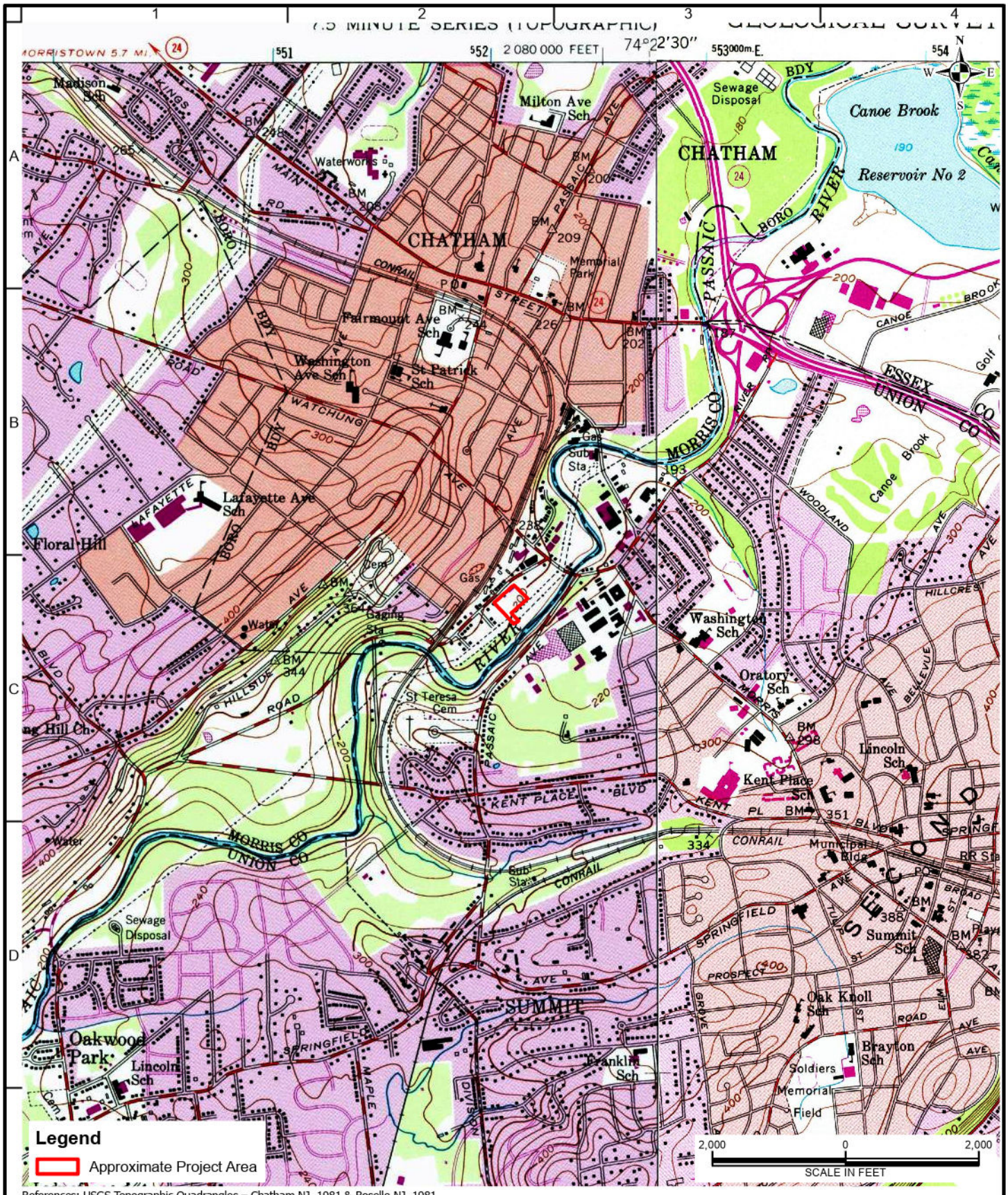
7.0 REFERENCE LIST

New Jersey Geological Survey Open File Map, Surficial Geology of the Chatham Quadrangle, 2007.

New Jersey Geological Survey Open File Map, Bedrock Geological Map of Northern New Jersey, 2003.

Borough of Chatham, Morris County, New Jersey, Chapter 165, Land Development Regulations, adopted 1-29-1979 and amended through 06-23-2025.

FIGURES



References: USGS Topographic Quadrangles – Chatham NJ, 1981 & Roselle NJ, 1981

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Project	AJDM CHATHAM, LLC BLOCK 140; LOTS 7.01, 8, 9, 10 CHATHAM BOROUGH MORRIS COUNTY NEW JERSEY
Figure Title	USGS SITE LOCATION MAP
Project No.	101324801
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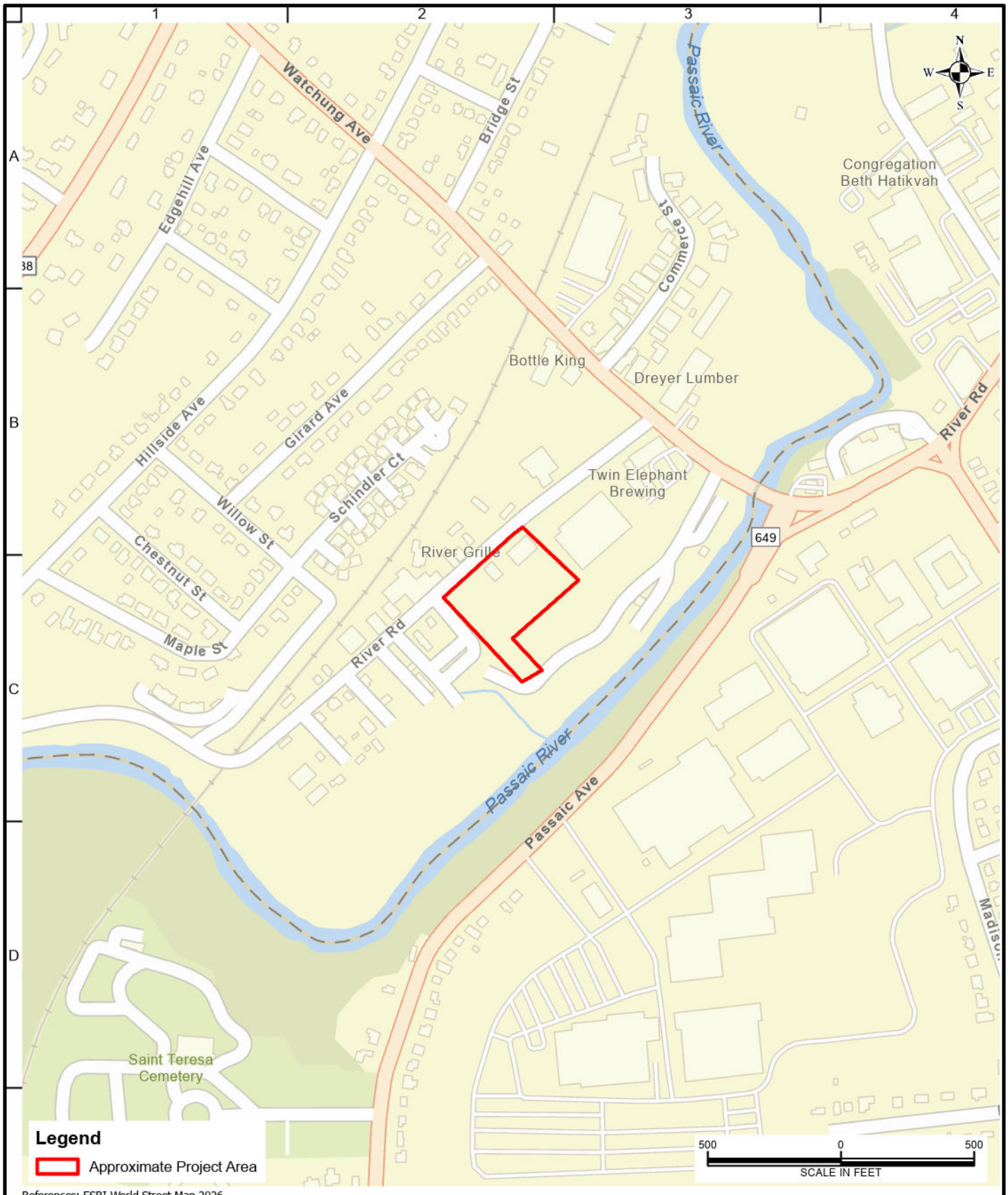

References: ESRI World Street Map 2026

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Project	AJDM CHATHAM, LLC BLOCK 140; LOTS 7.01, 8, 9, 10 CHATHAM BOROUGH MORRIS COUNTY NEW JERSEY
Figure Title	VICINITY MAP
Project No.	101324801
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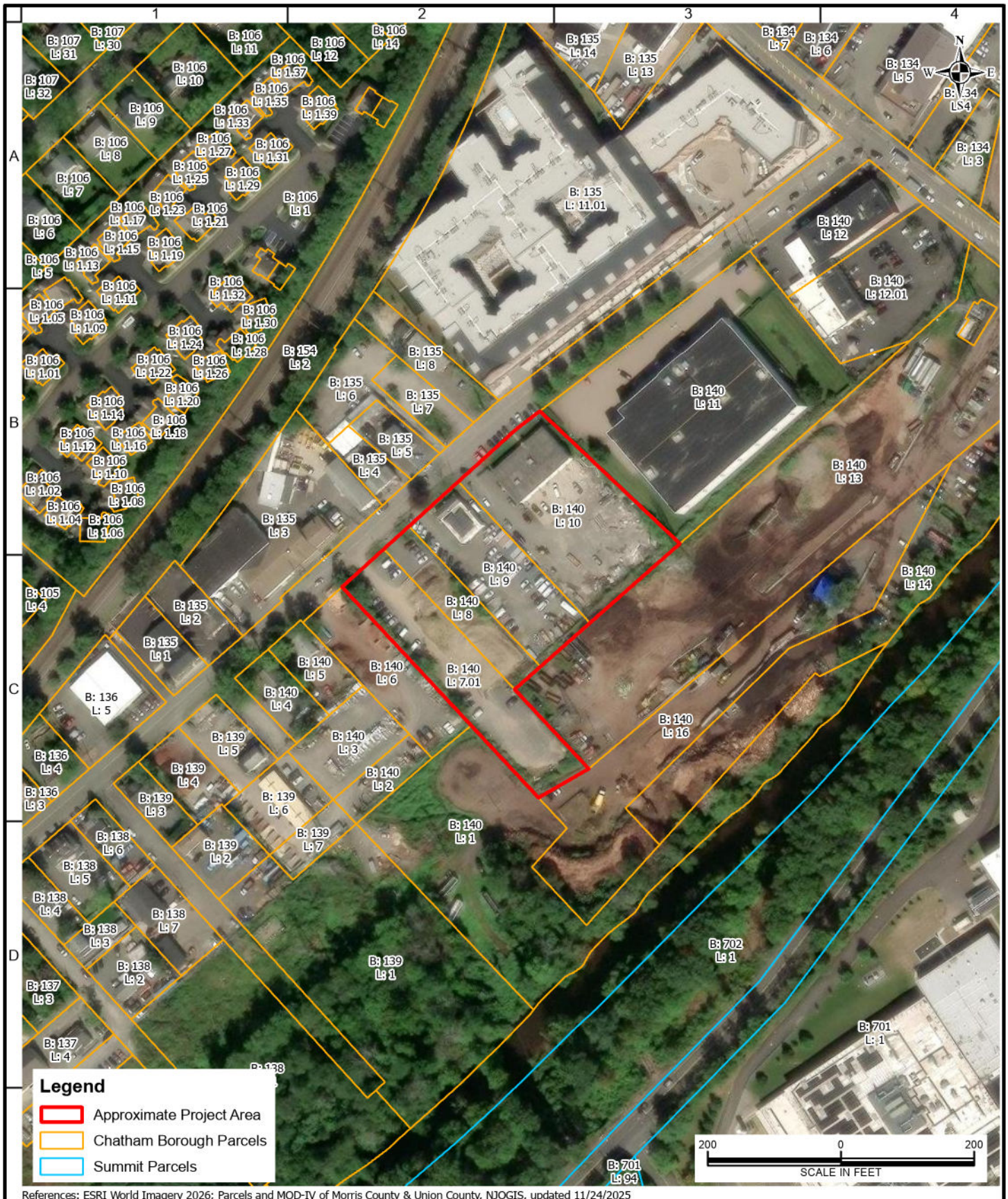

References: ESRI World Imagery 2026; Parcels and MOD-IV of Morris County & Union County, NJOGIS, updated 11/24/2025

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Project	Figure Title	Project No.	Figure No.
AJDM CHATHAM, LLC BLOCK 140; LOTS 7.01, 8, 9, 10 CHATHAM BOROUGH MORRIS COUNTY NEW JERSEY	TAX MAP	101324801 Date 1/14/2026 Scale 1" = 200' Drawn By GEG	3

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References: ESRI World Imagery 2026

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Project	AJDM CHATHAM, LLC BLOCK 140; LOTS 7.01, 8, 9, 10 CHATHAM BOROUGH MORRIS COUNTY NEW JERSEY
Figure Title	AERIAL PHOTOGRAPH MAP
Project No.	101324801
Date	1/14/2026
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Drawn By	GEG
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References: ESRI World Imagery 2026; NRCS Web Soil Survey SSURGO GIS Data 08/28/2025

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Project	Figure Title	Project No.	Figure No.
AJDM CHATHAM, LLC BLOCK 140; LOTS 7.01, 8, 9, 10 CHATHAM BOROUGH MORRIS COUNTY NEW JERSEY	NRCS SOILS MAP	101324801 Date 1/14/2026 Scale 1" = 100' Drawn By GEG	5

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References: ESRI World Imagery 2026; NJDEP Surficial Geology of New Jersey, updated 05/18/2007

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Project	Figure Title	Project No.	Figure No.
AJDM CHATHAM, LLC BLOCK 140; LOTS 7.01, 8, 9, 10 CHATHAM BOROUGH MORRIS COUNTY NEW JERSEY	NJDEP SURFICIAL GEOLOGY MAP	101324801 Date 1/14/2026 Scale 1" = 200' Drawn By GEG	6

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References: ESRI World Imagery 2026; NJDEP Bedrock Geology of New Jersey, updated 02/28/2023

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Project	AJDM CHATHAM, LLC BLOCK 140; LOTS 7.01, 8, 9, 10 CHATHAM BOROUGH MORRIS COUNTY NEW JERSEY
Figure Title	NJDEP BEDROCK GEOLOGY MAP
Project No.	101324801
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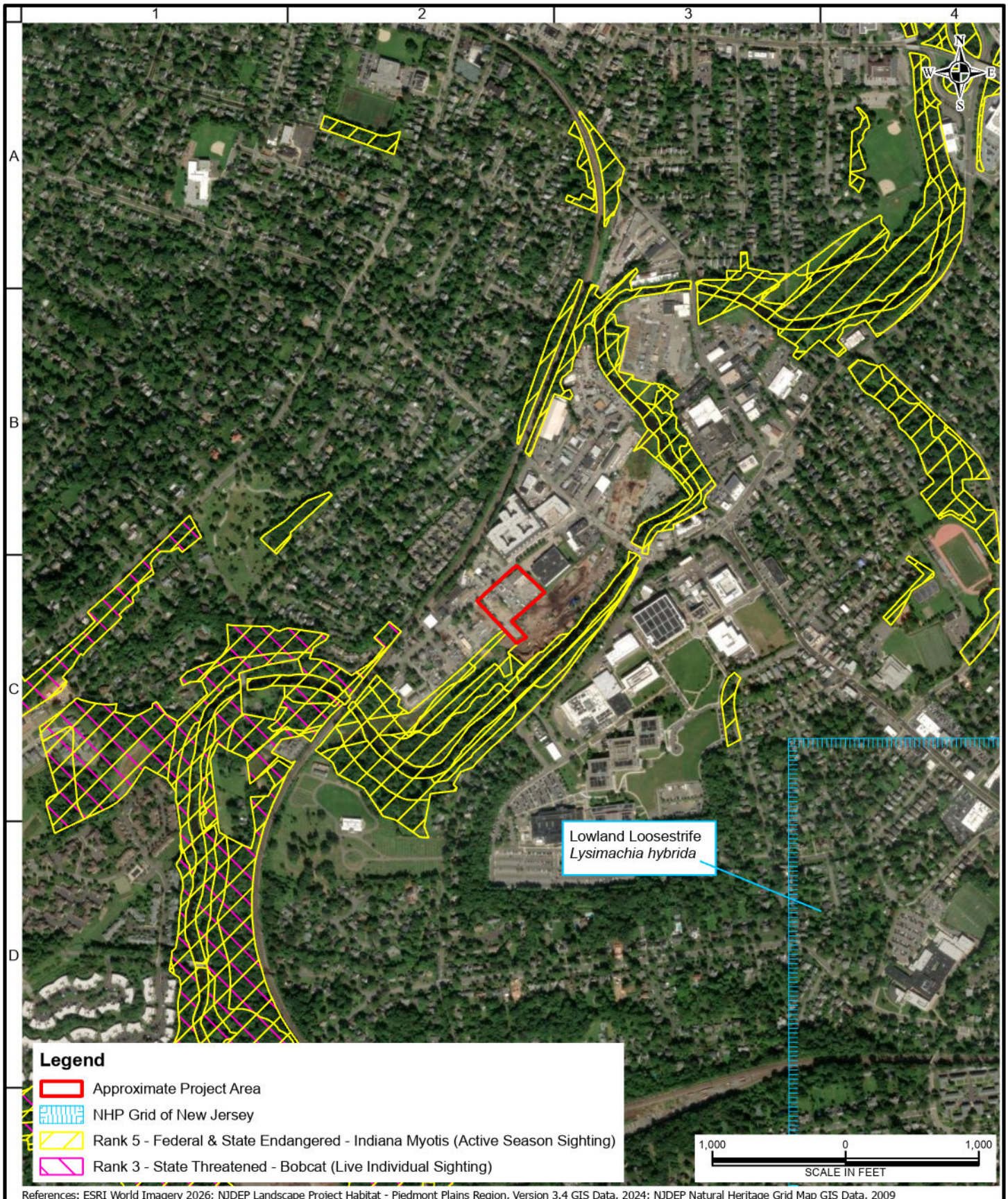

References: ESRI World Imagery 2026; NJDEP Landscape Project Habitat - Piedmont Plains Region, Version 3.4 GIS Data, 2024; NJDEP Natural Heritage Grid Map GIS Data, 2009

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Project
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MORRIS COUNTY NEW JERSEY

Figure Title
NJDEP THREATENED & ENDANGERED SPECIES MAP

Project No.	101324801
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Drawn By	GEG

Figure No. 8

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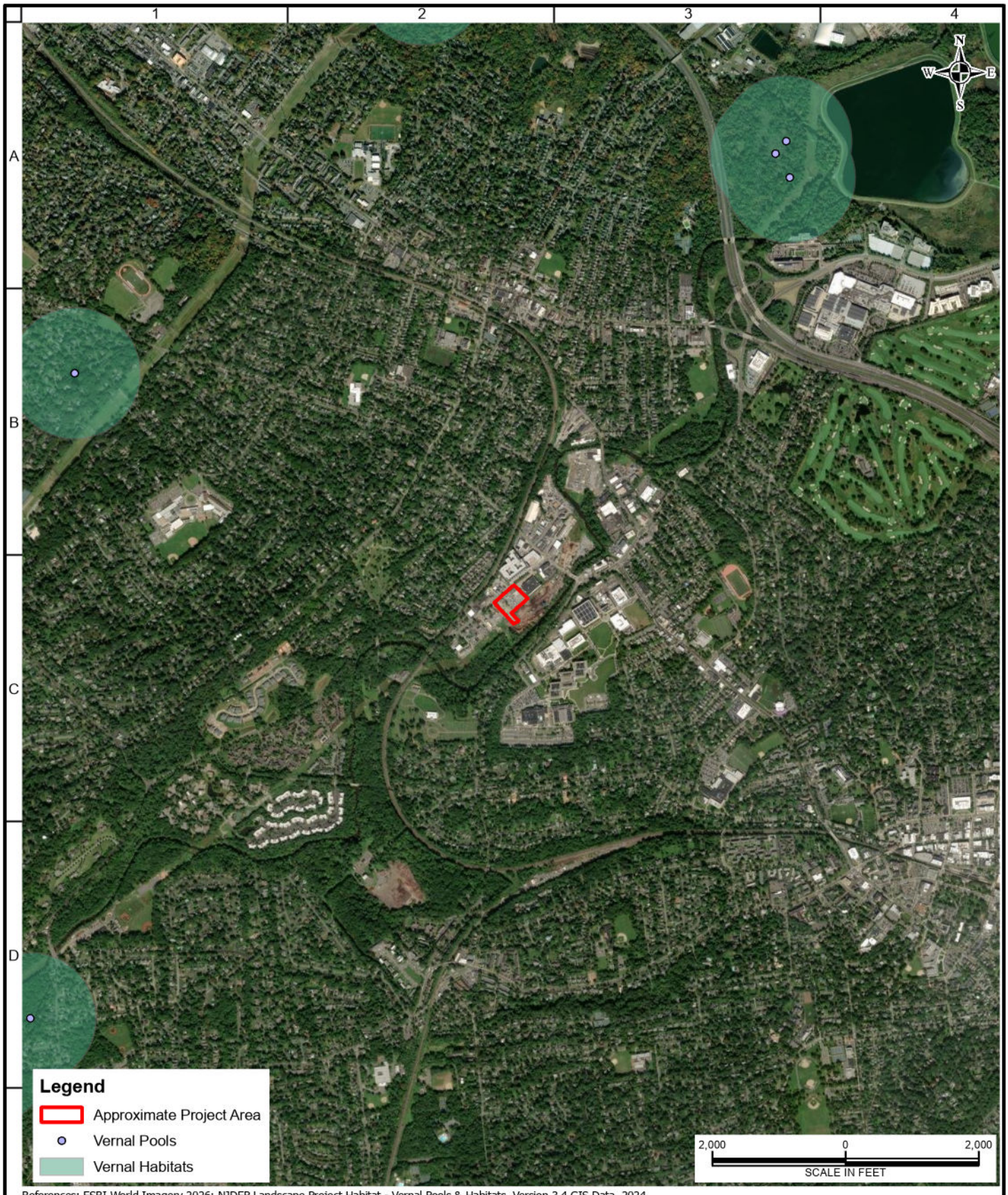

References: ESRI World Imagery 2026; NJDEP Landscape Project Habitat - Vernal Pools & Habitats, Version 3.4 GIS Data, 2024

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Project
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Figure Title
NJDEP VERNAL POOL HABITAT MAP

Project No.	Figure No.
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References: ESRI World Imagery 2026; NJDEP Land Use/Land Cover Wetlands 2020, updated 11/01/2025

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Project	AJDM CHATHAM, LLC BLOCK 140; LOTS 7.01, 8, 9, 10 CHATHAM BOROUGH MORRIS COUNTY NEW JERSEY
Figure Title	NJDEP WETLANDS MAP
Project No.	101324801
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References: ESRI World Imagery 2026; NJDEP Surface Water Quality Standards, 12/27/2023

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Project
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Figure Title
NJDEP SURFACE WATERS MAP

Project No.	Figure No.
101324801	11
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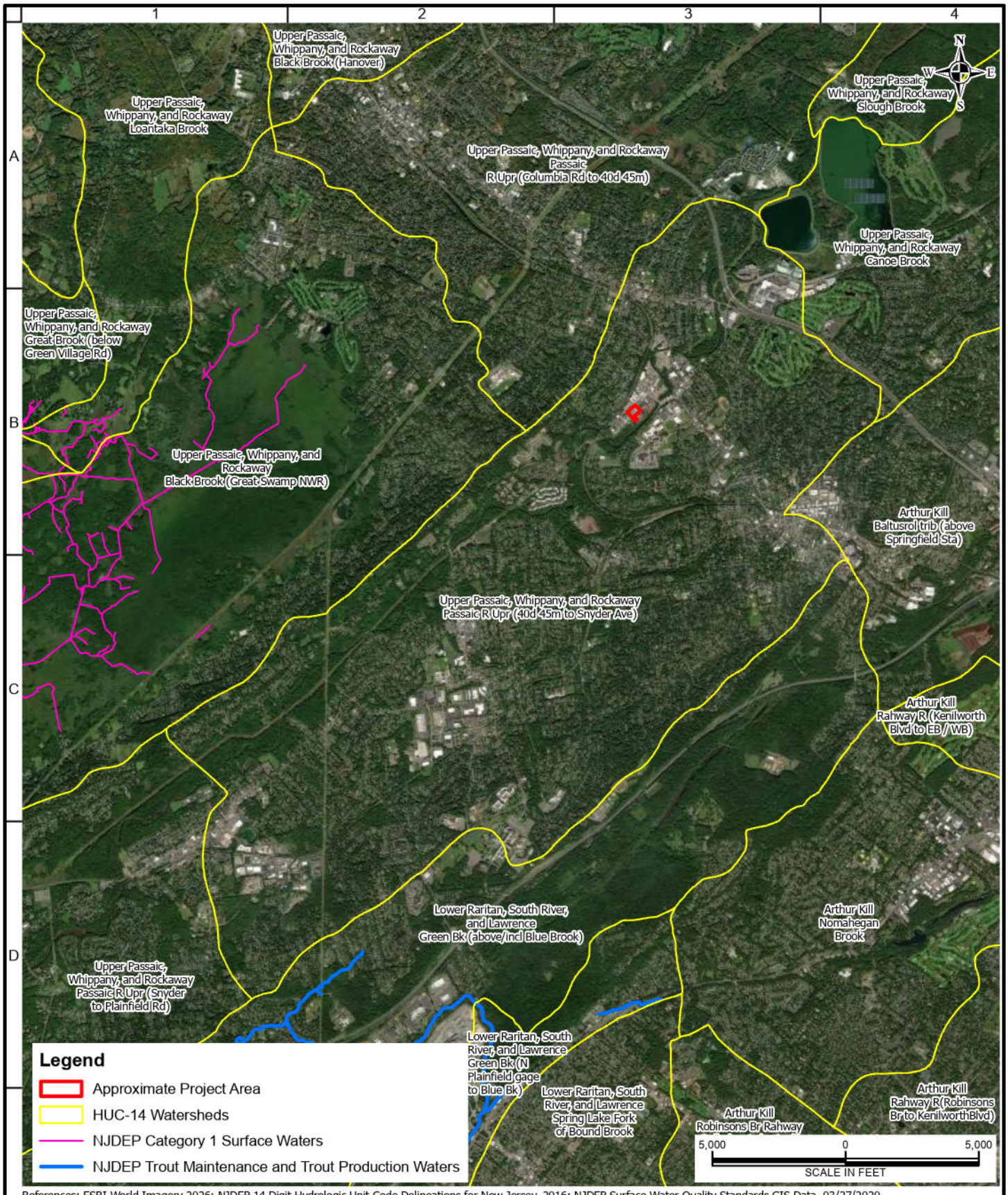

References: ESRI World Imagery 2026; NJDEP 14 Digit Hydrologic Unit Code Delineations for New Jersey, 2016; NJDEP Surface Water Quality Standards GIS Data, 03/27/2020

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Project	AJDM CHATHAM, LLC BLOCK 140; LOTS 7.01, 8, 9, 10 CHATHAM BOROUGH MORRIS COUNTY NEW JERSEY
Figure Title	NJDEP HUC-14 WATERSHED MAP
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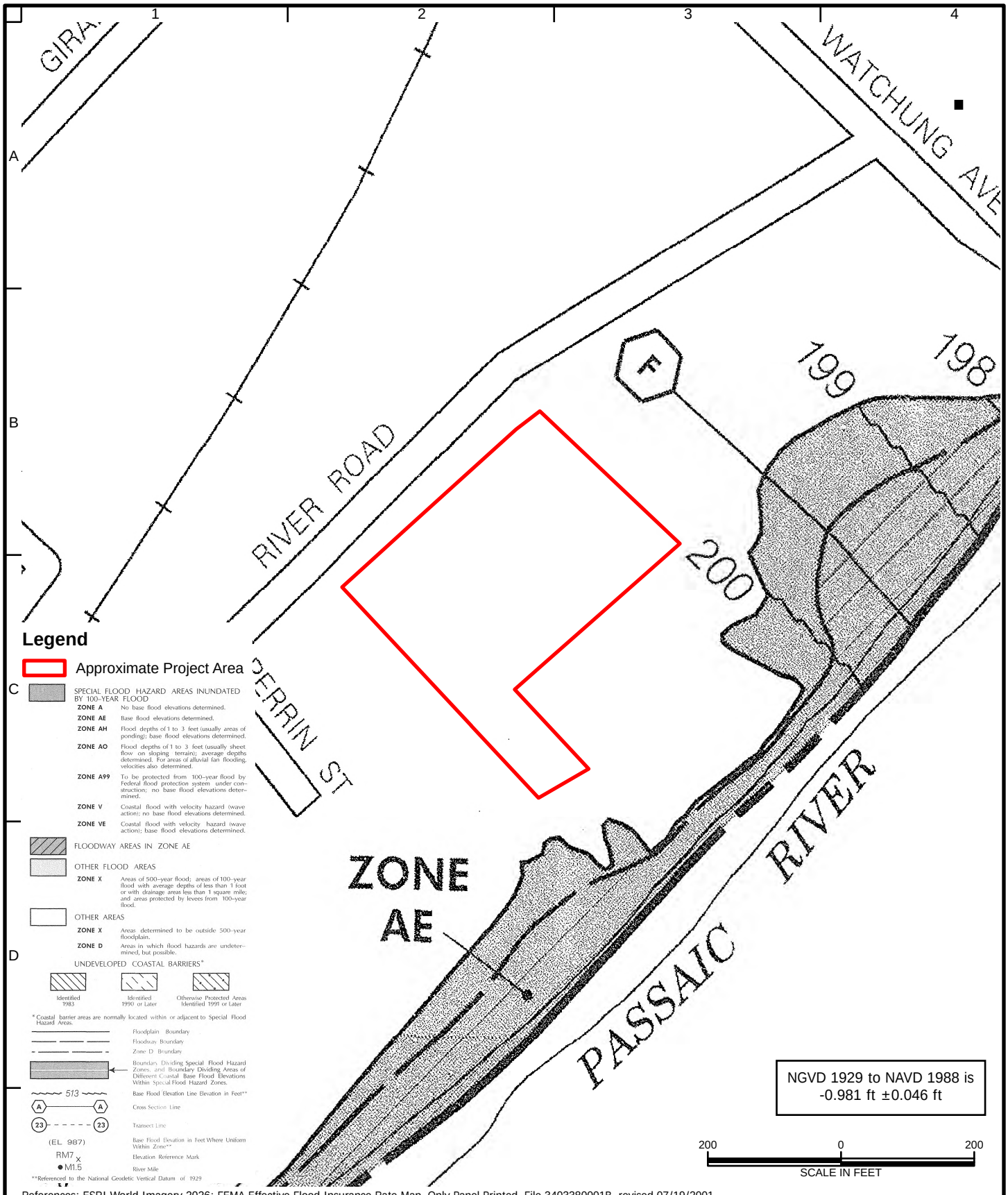

References: ESRI World Imagery 2026; FEMA Effective Flood Insurance Rate Map, Only Panel Printed, File 3403380001B, revised 07/19/2001

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Project	AJDM CHATHAM, LLC BLOCK 140; LOTS 7.01, 8, 9, 10 CHATHAM BOROUGH MORRIS COUNTY NEW JERSEY
Figure Title	FEMA EFFECTIVE FIRM MAP
Project No.	101324801
Date	1/7/2026
Scale	1" = 200'
Drawn By	GEG
Figure No.	13

Path: \\langan.com\data\PAR\data8\101324801\Project Data\ArcGIS\APRX\101324801\101324801.aprx Date: 1/7/2026 User: ggower Time: 3:01 P

References: NJDEP Sole Source Aquifers 2024, NJ GeoWeb Groundwater Recharge Areas accessed 1/9/2026, ESRI World Imagery 2026

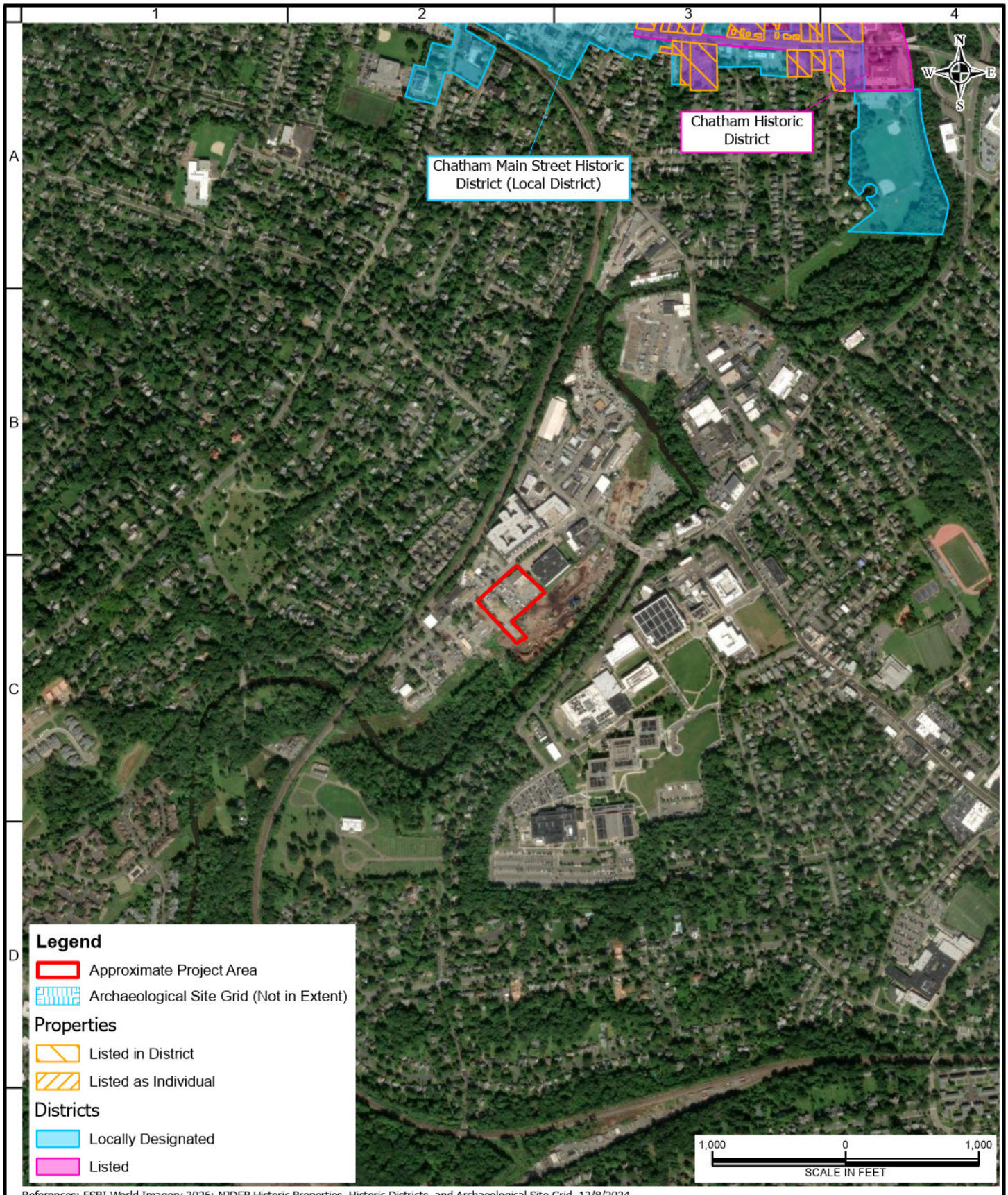
LANGAN
Langan Engineering and Environmental Services, LLC
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certification of Authorization No. 24GA27996400

Project
AJDM CHATHAM, LLC
BLOCK 140; LOTS 7.01, 8, 9, 10
CHATHAM BOROUGH
MORRIS COUNTY NEW JERSEY

Figure Title
NJDEP SUBSURFACE WATERS MAP

Project No.	Figure No.
101324801	14
Date: 1/14/2026	
Scale: 1" = 250'	
Drawn By: RAF	

Path: \\langan.com\data\PAR\data8\101324801\Project Data\ArcGIS\APRX\101324801\101324801.aprx Date: 1/14/2026 User: rfifield Time: 10:10 A



References: ESRI World Imagery 2026; NJDEP Historic Properties, Historic Districts, and Archaeological Site Grid, 12/8/2024

LANGAN
Langan Engineering and Environmental Services, LLC
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certification of Authorization No. 24GA27996400

Project
AJDM CHATHAM, LLC
BLOCK 140; LOTS 7.01, 8, 9, 10
CHATHAM BOROUGH
MORRIS COUNTY NEW JERSEY

Figure Title
NJDEP HISTORIC RESOURCES MAP

Project No. 101324801
Date 1/14/2026
Scale 1" = 1,000'
Drawn By GEG

Figure No. 15

Path: \\langan.com\data\PAR\data8\101324801\Project Data\ArcGIS\APRX\101324801\101324801.aprx Date: 1/14/2026 User: rfifield Time: 10:23 A

References: ESRI World Imagery 2026; NJDEP Statewide Sewer Service Area for New Jersey, updated 12/23/2025

LANGAN
Langan Engineering and Environmental Services, LLC
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certification of Authorization No. 24GA27996400

Project
AJDM CHATHAM, LLC
BLOCK 140; LOTS 7.01, 8, 9, 10
CHATHAM BOROUGH
MORRIS COUNTY NEW JERSEY

Figure Title
NJDEP SEWER SERVICE AREA MAP

Project No.	Figure No.
101324801	16
Date: 1/14/2026	
Scale: 1" = 200'	
Drawn By: GEG	

Path: \\langan.com\data\PAR\data8\101324801\Project Data\ArcGIS\APRX\101324801\101324801.aprx Date: 1/14/2026 User: rfifield Time: 10:22 A

APPENDIX A

THREATENED AND ENDANGERED SPECIES CORRESPONDENCE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Jersey Ecological Services Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 8205
Phone: (609) 646-9310

In Reply Refer To: 01/08/2026 16:41:53 UTC
Project Code: 2026-0034005
Project Name: BNE Chatham 2

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

If the enclosed list indicates that any listed species may be present in your action area, please visit the New Jersey Field Office Project Review Guide web page as the next step in evaluating potential project impacts: http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html

On the New Jersey Field Office consultation web page you will find:

- habitat descriptions, survey protocols, and recommended best management practices for listed species;
- recommended procedures for submitting information to this office; and
- links to other Federal and State agencies, the Section 7 Consultation Handbook, the Service's wind energy guidelines, communication tower recommendations, the National Bald Eagle Management Guidelines, and other resources and recommendations for protecting wildlife resources.

The enclosed list may change as new information about listed species becomes available. As per Federal regulations at 50 CFR 402.12(e), the enclosed list is only valid for 90 days. Please return to the IPaC website at regular intervals during project planning and implementation to obtain an updated species list. When using IPaC, be careful about drawing the boundary of your Project Location. Remember that your action area under the ESA is not limited to just the footprint of the project. The action area also includes all areas that may be indirectly affected through impacts

such as noise, visual disturbance, erosion, sedimentation, hydrologic change, chemical exposure, reduced availability or access to food resources, barriers to movement, increased human intrusions or access, and all areas affected by reasonably foreseeable future that would not occur without ("but for") the project that is currently being proposed.

We appreciate your concern for threatened and endangered species. The Service encourages Federal and non-Federal project proponents to consider listed, proposed, and candidate species early in the planning process. Feel free to contact this office if you would like more information or assistance evaluating potential project impacts to federally listed species or other wildlife resources. Please include the project code in the header of this letter with any correspondence about your project.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New Jersey Ecological Services Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 8205
(609) 646-9310

PROJECT SUMMARY

Project Code: 2026-0034005
Project Name: BNE Chatham 2
Project Type: Residential Construction
Project Description: For the purpose of an Environmental Impact Statement (EIS)
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.727767549999996,-74.38265185557213,14z

Counties: Morris County, New Jersey

ENDANGERED SPECIES ACT SPECIES

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Indiana Bat *Myotis sodalis* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949 General project design guidelines: https://ipac.ecosphere.fws.gov/project/KYTHRUJAJZCEVC3DSZY74FRQUM/documents/generated/10545.pdf	Endangered
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 General project design guidelines: https://ipac.ecosphere.fws.gov/project/KYTHRUJAJZCEVC3DSZY74FRQUM/documents/generated/10545.pdf	Endangered
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515 General project design guidelines: https://ipac.ecosphere.fws.gov/project/KYTHRUJAJZCEVC3DSZY74FRQUM/documents/generated/10545.pdf	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743 General project design guidelines: https://ipac.ecosphere.fws.gov/project/KYTHRUJAJZCEVC3DSZY74FRQUM/documents/generated/10545.pdf	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

BALD & GOLDEN EAGLES

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/ activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

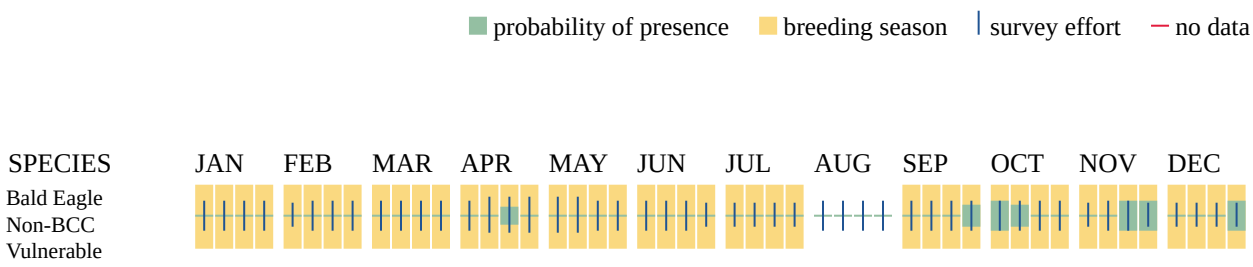
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.



Golden Eagle
Non-BCC
Vulnerable

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

MIGRATORY BIRDS

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10

NAME	BREEDING SEASON
Cerulean Warbler *Setophaga cerulea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 28 to Jul 20
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere
Grasshopper Sparrow *Ammodramus savannarum perpallidus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8329	Breeds Jun 1 to Aug 20
Kentucky Warbler *Geothlypis formosa* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9443	Breeds Apr 20 to Aug 20
Prairie Warbler *Setophaga discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	Breeds May 10 to Aug 31

PROBABILITY OF PRESENCE SUMMARY

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

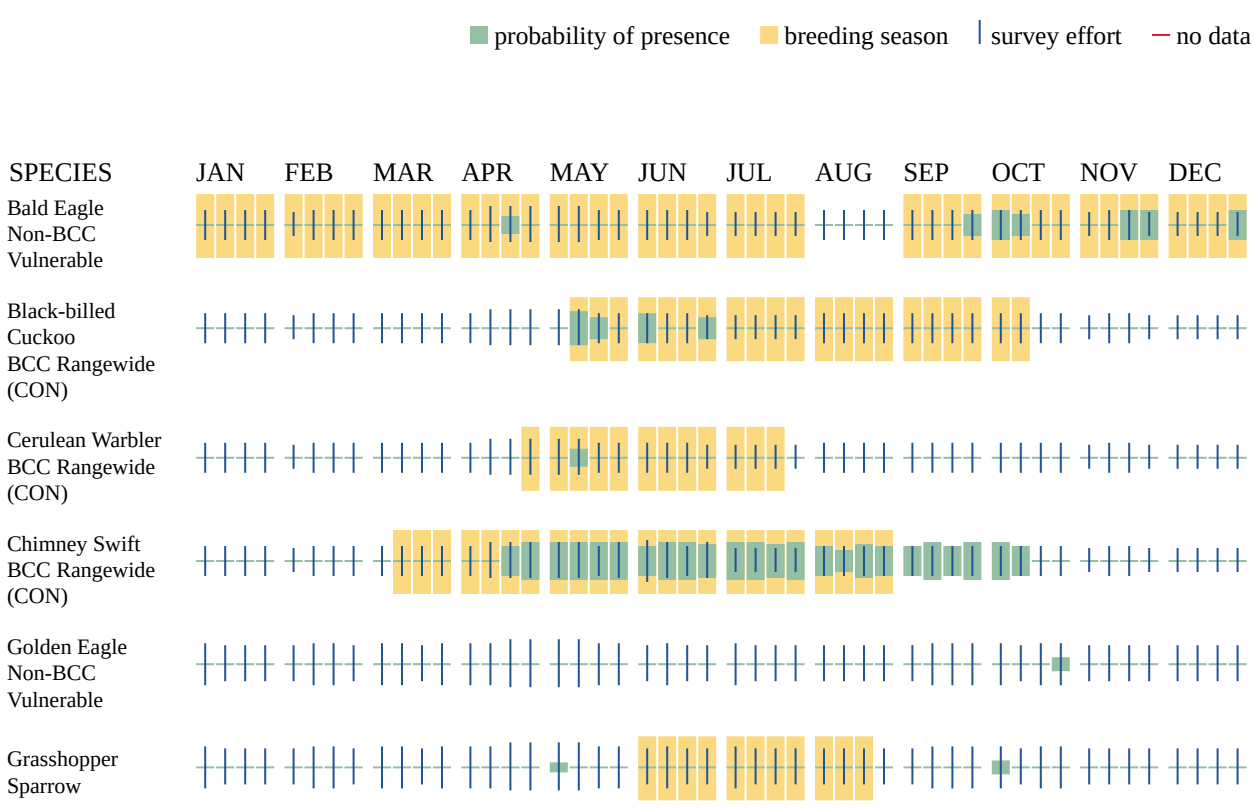
Probability of Presence (■)

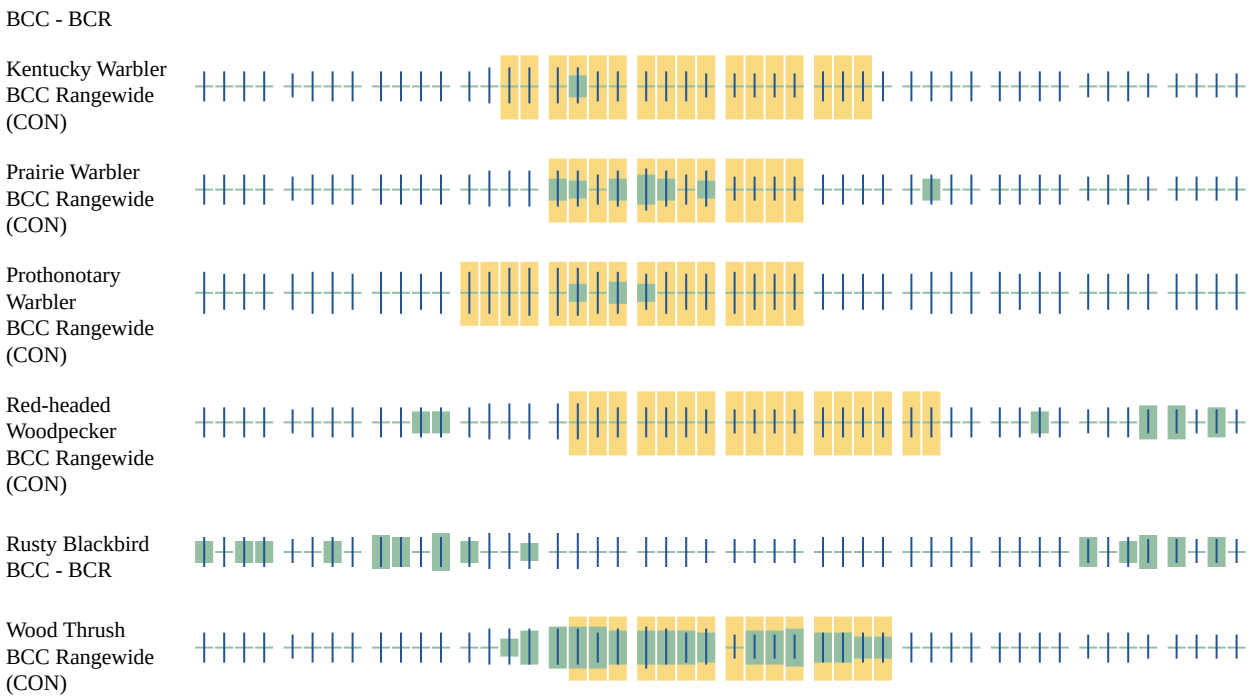
Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data (–)
A week is marked as having no data if there were no survey events for that week.





Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

WETLANDS

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

THERE ARE NO WETLANDS WITHIN YOUR PROJECT AREA.

IPAC USER CONTACT INFORMATION

Agency: Langan Engineering & Environmental Services, LLC
Name: Grace Gower
Address: 300 Kimball Drive, 4th Floor
City: Parsippany
State: NJ
Zip: 07054
Email ggower@langan.com
Phone: 9735604900

LEAD AGENCY CONTACT INFORMATION

Lead Agency: Environmental Protection Agency

APPENDIX B

STORMWATER MANAGEMENT REPORT
(BOUND SEPARATELY)

APPENDIX C

QUALIFICATION OF PREPARERS

SEAN F. MORONSKI, PP, AICP

SENIOR PROJECT MANAGER

PLANNING, ENVIRONMENTAL ASSESSMENTS AND IMPACT STATEMENTS

Mr. Moronski has over 25 years of experience on behalf of private and public clients in project management of planning consulting services. Specific consulting services completed include the preparation of master plans, environmental impact statements, redevelopment investigation and plans, housing plans, fiscal and socio-economic impact reports, wireless telecommunications site services, and public testimony presentations for variance and site plan development applications. He has been qualified as a professional planning expert before planning and zoning boards in over 100 municipalities throughout New Jersey, New York, Pennsylvania and Delaware. Previously, Mr. Moronski has served as the consultant for several New Jersey municipalities.

SELECTED PROJECTS

- Greater Bergen Community Action, Inc., Garfield, NJ, Health Resources and Services Administration (HRSA) NEPA EA
- Touro University California, Vallejo, CA, HRSA NEPA EA
- Hackensack Meridian Health; Hackensack, Nutley, and North Bergen, NJ; New Jersey Executive Order 215 EAs.
- Primary Care Health Services, Pittsburgh, PA, HRSA NEPA EA
- Agricultural Research Service, Chatsworth, NJ USDA NEPA EA
- New Jersey Community Development Corporation, Paterson, NJ, HUD NEPA EA
- MAR Acquisition Group, Newark, NJ, HUD Environmental Review Record (ERR)
- Alameda Housing Authority, Alameda, CA, North Housing CDBG NEPA EA
- National Institutes of Health, Bethesda, MD, Temporary Research Facility HHS NEPA EA
- Signature Flight Support Corporation, Teterboro, NJ, Teterboro Airport EA & USDOT Section 4(f) Evaluation
- Hillman Consulting LLC, Bronx, NY, Twin Parks Terrace Affordable Housing Development NEPA HUD EA
- Hillman Consulting, LLC, Brooklyn, NY, NYCHA Bushwick and Hope Gardens Housing Developments NEPA HUD CATEX
- Kingsland Development Urban Renewal, LLC, Lyndhurst, NJ, NJSEA Project Impact Analysis, Planning Report, and Site Suitability Report.

EDUCATION

Masters of Urban Planning
New York University

B.S., Management
Tulane University

PROFESSIONAL REGISTRATION

Professional Planner (PP) in NJ

American Institute of Certified Planners (AICP)

40 Hour HAZWOPER

8 Hour HAZWOPPER

AFFILIATIONS

American Planning Association – NJ Chapter

New Jersey Planning Officials

RACHEL FIFIELD, PP

ENVIRONMENTAL PLANNER

NATURAL RESOURCES

Ms. Fifield has over 3 years of experience in environmental planning in the public and private sector across multiple states. Her skills include in assisting in planning testimonies and environmental assessment reports.

SELECTED PROJECTS

- 1 Malcolm Avenue, Teterboro, NJ
- 10 Patton Drive, West Caldwell, NJ
- 24 River Road, Bogota, NJ
- 37 Forest Lane, Carneys Point, Penns Grove, NJ
- 71-73 Isabella Avenue, Newark, NJ
- 105 Mill Street, Paterson, NJ
- 220 West Crescent Avenue, Allendale, NJ
- 333 Route 46, Mountain Lakes, NJ
- 600 Jefferson Avenue, Secaucus, NJ
- 615 Division Street, Elizabeth, NJ
- 667-683 Ferry Street, Newark, NJ
- 710 Marne Highway Warehouse Development, Hainesport, NJ
- 980 Frelinghuysen Avenue, Newark, NJ
- 989 Coopertown Road, Delanco, NJ
- 1500 Clinton Street, Hoboken, NJ
- 1900 River Road, Burlington, NJ
- 3501 Route 66, Neptune, NJ
- Absolute Auto, Middlesex, NJ
- Admiral Wilson Boulevard Plaza, Merchantville, NJ
- American Legion Redevelopment, Hoboken, NJ
- ARBOK, Kelly Farm, Carneys Point, NJ
- Arena Diner Redevelopment, Hackensack, NJ
- Bayonne Logistics Center, Bayonne, NJ
- Bluewater DY04, Lakewood, NJ
- Bluewater, Hopewell Junction, NY
- Bogota Golf Center, Bogota, NJ
- Bridge Point 8 Industrial Park, Princeton Junction, NJ
- Burlington Mall, Burlington, NJ
- Colts Neck Residential, Colts Neck, NJ
- Community Medical Center, Toms River, NJ
- Connell Corporate Park, Berkeley Heights, NJ
- Corporate Boulevard, Robbinsville, NJ
- Democratic Road, East Greenwich, NJ
- Denville Square, Denville, NJ
- District at 15Fifteen, Parsippany, NJ
- Equinix N11, Carteret, NJ
- Equinix NY4-6, Secaucus, NJ
- Essex Green Shopping Center, Clifton, NJ
- Fernwood Road, Florham Park, NJ
- First Energy FE Belford-Keyport 34.5 kV, Belford, NJ

EDUCATION

Master of City and Regional Planning (MCRP)
Rutgers University

B.S., Environmental Science
Willamette University

PROFESSIONAL REGISTRATION

American Institute of Certified Planners (AICP)

Licensed Professional Planner (PP), New Jersey

AFFILIATIONS

American Planning Association – NJ Chapter

- Fisher Scientific, Fair Lawn, NJ
- Friendship Road, Cranbury, NJ
- Fulfillment Center (DEW5), Lawrence Township, NJ
- Hercules Roxbury Development, Kenvil, NJ
- Highland Cross, Rutherford, NJ
- Hudson Mall Self-Storage, Jersey City, NJ
- Jumping Brook Road, Tinton Falls, NJ
- Kingsland Development, Rutherford, NJ
- Lanidex Plaza, Parsippany, NJ
- Lincoln Gateway, North Bergen, NJ
- Meadowlands Park, Carlstadt, NJ
- Mercer Corporate Park, Trenton, NJ
- Millburn Redevelopment, Millburn, NJ
- Montclair Golf Club, West Orange, NJ
- Morristown Airport Lynx FBO Hangar, Morristown, NJ
- New Brunswick K-8 School, New Brunswick, NJ
- New Center for Downtown Newark, Newark, NJ
- NIH Temporary Research Facility, Bethesda, MD
- NJCDC, 105 Mill Street, Multi Family Residence, Paterson, NJ
- NJPAC Media Production Campus, Newark, NJ
- North Housing Project, Alameda, CA
- Old York Road, Bordentown, NJ
- PANYNJ Newark Airport Air Train Replacement, Newark, NJ
- Pew Farm Design, Mt. Holly, NJ
- Pier 6 Redevelopment, Jersey City, NJ
- Plainfield Country Club, Plainfield, NJ
- PRC Development, Sayreville, NJ
- RWJBarnabas, Fort Monmouth, NJ
- Schoolhouse Road, Somerset, NJ
- Shop-Rite, West Caldwell, NJ
- Signature Flight Support 8 Acre Expansion, Teterboro, NJ
- Silver Line Drive, North Brunswick, NJ
- State Theatre, New Brunswick, NJ
- StorQuest, Tenafly, NJ
- Styertowne Center, Clifton, NJ
- Summit Medical Group, Clifton, NJ
- SW Park, Hoboken, NJ
- The District at 15Fifteen, Parsippany, NJ
- The Solebury School, New Hope, PA
- Theory Wellness Dispensary, Trenton, NJ
- Touro University, Vallejo, CA
- UPS Facility, Saddle Brook, NJ
- USDA NEPA, Chatsworth, NJ
- Private Ski Resort, Confidential Location, UT
- Woolwich Industrial, Swedesboro, NJ

DRAWINGS
(BOUND SEPARATELY)

29, 33, 37 and 39 RIVER ROAD PHOTO LAYOUT
PHOTOS TAKEN JANUARY 9, 2026

PHOTO 1 FACING ALONG LOT 7.01

PHOTO 2 FACING ALONG LOT 10 (29 River Rd)

PHOTO 3 FACING THE BACK OF 29 RIVER ROAD

PHOTO 4 FACING THE REAR PARKING AREA OF 29 RIVER ROAD

PHOTO 5 FACING THE REAR OF LOT 9 (33 RIVER ROAD)

PHOTO 6 FACING THE REAR OF LOT 8

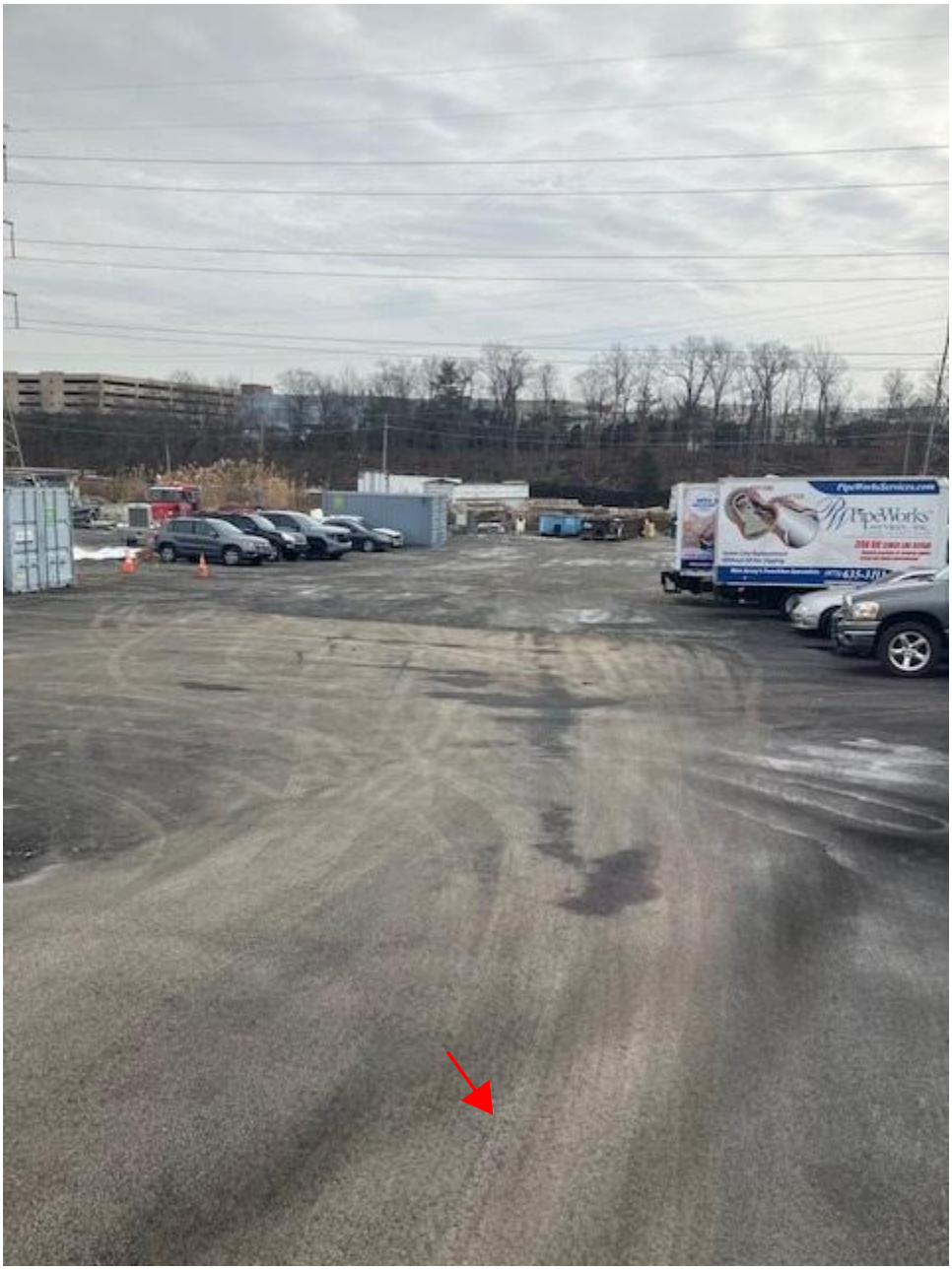


PHOTO 7 FACING 33 RIVER ROAD

PHOTO 8 FACING ACROSS LOT 7.01 FRONTAGE

Morris County Land Development Review Application

Morris County Office of Planning & Preservation

Submitted On:
Jan 21, 2026, 03:37PM EST

SUBMISSION REQUIREMENTS

Subdivision

- All subdivisions must be submitted to the County Planning Board for review.
- Major Subdivisions – will be reviewed for County approval
- Minor Subdivisions – will be reviewed to determine:
    - If the project fronts along a County road; and/or
    - If the project will affect any County drainage facilities.

For those minor subdivisions which meet either one or both of the above criteria, the project will be reviewed for approval. If a minor subdivision does not meet either criteria, an exemption letter will be sent.

Site Plans

Site Plans will be reviewed to determine:

- If the project fronts along a County road; and/or
- If the project contains an amount of impervious surface equal to or greater than one acre (43,560 sq. ft.)

For those site plans which meet either one or both of the above criteria, the project will be reviewed for approval.

If the site plan does not meet either criteria, an exemption letter is sent.

PROCEDURES:

New applications must be submitted to the County Planning Board by the municipal approving authority or by the applicant and accompanied by the transmittal letter stating that the application has also been made to the municipal approving authority.

Development applications revised in response to County Planning Board requirements may be submitted directly to the County Planning Board by the applicant.

Digital copy of final plat and fully signed paper copy of final plat are required prior to filing of final plat at the Morris County Clerk's Office.

REVISIONS:

Subdivision plats and site plans which are revised to comply with the County Planning Board requirements, or would alter a previous County Planning Board approval, must be resubmitted to the County Planning Board for review and approval.

REPORTS:

The County Planning Board has a statutory review period of thirty (30) days from the date of a complete submission. **A complete submission includes payment, a digital copy AND two (2) hard copies of the entire application.**

Upon completion of the County Planning Board review, a report will be mailed to the municipal approving authority with copies mailed to the applicant and his/her engineer. For those site plans and minor subdivisions found to be exempt, a notice of exemption will be mailed to the municipal approving authority.

PAYMENT:

After you submit your application online, we will review it, and then send you an electronic invoice.

You can pay via ACH, Credit Card (AMEX is not accepted), or Check.

If paying via ACH or Credit Card, our processing fees are:

- **Credit Card:** 2.75%
- **ACH:**
  - $1.75 up to $50,000
  - $3.00 up to $75,000
  - $6.00 up to $100,000
  - $10.00 up to $150,000
  - $15.00 up to $250,000

No fee is required for resubmissions.

MAILED SUBMISSION PACKAGE:

Hard copies of this application and supplementary materials are required.

Follow these instructions for mailing:

1. Two (2) completed copies of the County application form. **When you submit this form electronically, you will receive a PDF copy in your email. Print two copies and send along with the rest of your application.**
2. Two (2) copies of the subdivision or site plan drawings.
3. Two (2) copies of the drainage study (if required by the County Land Development Standards or municipal ordinance).
4. Two (2) copies of the traffic impact study (if required by the County Land Development Standards or municipal ordinance).
5. Two (2) copies of any other supporting materials (if required by the Morris County Land Development Standards or Municipal Ordinance).

Application package should be submitted via mail to:

Morris County Planning Board
P.O. Box 900
Morristown, NJ 07963-0900

Or via personal delivery or overnight (i.e., Fedex, USP, etc.) to:

Morris County Planning Board
30 Schuyler Place, 4th Floor
Morristown, New Jersey 07960

Questions, please call: (973) 829-8120 or email: mcdevreview@co.morris.nj.us

For more information, visit morriscountynj.gov/LandDevReview.

I. Submission Requirements

Is this a new or revised submission?	New
Which municipal board are you submitting this application to?	Planning Board

II. Project Information

Project Name	AJDM Chatham, LLC
Municipality	Chatham Borough
Block(s) and Lot(s)	Block 140 Lot 7.01 Block 140 Lot 8 Block 140 Lot 9 Block 140 Lot 10
Does this project include a second municipality?	No
Road Frontage Name	River Road
Applicant's Name	AJDM Chatham, LLC
Applicant Phone Number	973-992-2443
Applicant Fax Number	973-992-1822
Applicant Street Address	16 Microlab Rd, Suite A
Applicant Municipality	Livingston
Applicant State	NJ
Applicant Zip Code	07039
Applicant Email Address	cthomas@bnerealestate.com
Engineer's Name	John DiGiacinto
Engineer's Firm	Langan
Engineer Street Address for Correspondence	300 Kimball Drive, 4th Floor

Engineer Municipality for Correspondence	Parsippany
Engineer State for Correspondence	NJ
Engineer Zip Code for Correspondence	07054
Engineer Phone Number	973-560-4554
Engineer Email Address	jdigiacinto@langan.com
Attorney's Name	Derek Orth
Attorney's Firm	Inglesino - Taylot
Attorney Street Address for Correspondence	600 Parsippany Road
Attorney Municipality for Correspondence	Parsippany
Attorney State for Correspondence	NJ
Attorney Zip Code for Correspondence	07054
Attorney Phone Number	973-947-7111
Attorney Email Address	dorth@itfirm.law

III. Site Data

What is being proposed?	Demolition of 2 existing buildings and construction of proposed 4-story mixed use residential building with 100 units, 2370 sf of retail, 207 parking spaces in garage and 31 at grade spaces
Zone District(s) in which property is located:	AH-1 GAHO-1
Present Use(s) - if mixed-use, complete both Residential and Non-Residential	Non-Residential
Non-Residential (for multiple uses, choose MIXED USE and add info to comment field)	Office: Corporate
Proposed Use(s) - if mixed-use, complete both Residential and Non-Residential	Residental Non-Residential
Proposed Residential: Type of Property	Multi-family
Proposed Residential Types (pick all that apply)	Rental Low/Moderate Income

Proposed Non-Residential (for multiple uses, choose MIXED USE and add info to comment field)	Commercial: Retail
Proposed Water Source	Public
Sewage Disposal	Public
Is this application for a subdivision or site plan? (Select all that apply)	Site Plan

Site Plan

How many acres are in the project area?	2.92
Is this a residential, non-residential, or mixed-use property?	Mixed-use
Number of Dwelling Units	100
NEW Floor Area (square feet)	2370
TOTAL Floor Area (square feet)	151855
NEW Parking Spaces	238
TOTAL Parking Spaces	238
NEW Impervious Surface (square feet)	14918
TOTAL Impervious Surface (square feet)	14918

Upload Attachments

Subdivision/Site Plan Drawings	101324801 - AJDM Chatham LLC - Langan Drawing Set - 2026-01-15.pdf
Drainage Study	101324801 - Stormwater Report - 2026-01-15.pdf
Traffic Impact Study	2025-01-15 TIA FINAL.pdf
Aerial Site Map with Site outlined	PHOTO LAYOUT.pdf

IV. Review Fees and Submit Application

Subdivision: Sketch	
Subdivision: Minor	
Subdivision: Preliminary	
Subdivision: Final	

Site Plan	Site Plan - $500.00 Base Fee
Non-Residential: Number of new parking spaces ($5.00 / new parking space)	31
Residential: Number of dwelling units ($25.00 / dwelling unit)	100
TOTAL	$3,155.00
What payment method will you use to pay your application fee?	Check
Application completed by:	Applicant
Signature	First Name: Charles Last Name: Thomas Email Address: cthomas@bnerealestate.com  Signed at: January 21, 2026 3:37PM America/New_York
Receipt	LDR2026-0000008

AJDM CHATHAM, LLC

16 Microlab Road, Suite A
Livingston, NJ 07039
Tel (973) 992-2443

STATEMENT OF REASONS

As set forth in greater detail on the plans, the Applicant proposes to construct a 100-unit inclusionary housing community, with ground floor retail, on certain property designated as Block 140, Lots 7.01, 8-10, on Chatham Borough's official Tax Map (the "Property"). The Property is located in the Borough's GAHO-1 (Gateway Overlay) zone district and is comprised of approximately 2.92 acres.

The proposed community consists of a total 100 units contained within a 4-story building, accompanied by approximately 2,370 SF of ground floor retail space, 207 covered parking stalls, and 31 at-grade parking stalls. The proposed community fully conforms with the bulk and use requirements set forth in the GAHO-1 zone district, including but not limited to all setback requirements, maximum building height, maximum impervious coverage (approximately 10% less than what is permitted), maximum building coverage (approximately 25% less than what is permitted), and all parking requirements.

The Property is currently developed with aging and mostly vacant commercial uses and structures. As set forth in Ordinance No. 21-22 (which implemented the GAHO-1 Overlay Zone District), the Borough specifically identified the Property as an appropriate location to permit and encourage multifamily, inclusionary development, with a balanced mix of ground floor retail. This application furthers those objectives and also assists the Borough's satisfaction of its constitutional Mt. Laurel obligation, while reinvigorating an economically stagnant area of the Borough with a vibrant mixed-use community. The application is also consistent with, and furthers the goals and objectives in the Borough's Master Plan, including but not limited to the Housing Element and Fair Share Plan.

As delineated on the plans, the proposed community will have adequate site access through a 24'-wide boulevard ingress/egress drive on River Road, garage parking, with site plantings and architectural elements that have been specifically designed to create an aesthetically pleasing community. The Applicant looks forward to presenting this proposed community to the Planning Board.

AJDM CHATHAM, LLC

16 Microlab Road, Suite A
Livingston, NJ 07039
Tel (973) 251-8681

LIST OF EXPERTS

Block 140, Lots 7.01, 8, 9, 10
29, 33, 37, 39 River Road

Owner Representative Jonathan Schwartz AJDM Chatham, LLC 16 Microlab Road Suite A Livingston, NJ 07039 (973) 251-8665	**Planner / EIS** **Community Impact Assessment** Sean Moronski, PP Langan 300 Kimball Drive, 4th Flr Parsippany, NJ 07054 973-560-4557
Attorney Derek Orth, Esq. Inglesino, Taylor, LLC 600 Parsippany Road, Suite 204 Parsippany, NJ 07054 (877) 828-3381	
Civil Engineer – Site Plans John DiGiacinto, PE Langan 300 Kimball Drive, 4th Flr Parsippany, NJ 07054 973-560-4554	
Architect – Architectural Plans Jack Raker, AIA Minno & Wasko 204 North Union Street , Suite 1 Lambertville, NJ 08530 (609) 397-9009 x115	
Traffic Engineer – Traffic Impact Gary W. Dean, PE, PP Dolan and Dean 181 West High Street Somerville, NJ 08876 (908) 927 0100	

AJDM CHATHAM, LLC

16 Microlab Road, Suite A
Livingston, NJ 07039
Tel (973) 992-2443

LOADING AREA OPERATION
RIVER ROAD

January 16, 2026

The project consists of two (2) loading and pick-up areas. These are located:

1. Off River Road main entrance courtyard circle
2. Off River Road at the back westerly end of the project.

These areas each function similarly but with specific restrictions.

I. River Road main entrance courtyard circle

Will be used for:

- Pick up and drop off of guests
- Small package deliveries UPS/Fed Ex etc.

No move ins or outs will be permitted at this location.

II. River Road Westerly loading zone

This loading zone will be used for:

- Move-ins / Outs. All move-ins and move outs are controlled by the owner. Moves only occur late morning and early afternoon. After lease up, during normal operations an average of seven (7) move ins and outs per month will occur.
- Refuse pick-up ONLY occurs at the westerly loading area. No permanent outdoor storage of refuse will occur. Waste is collected in the building and rolled out on collection day to this area twice a week.
- Large Deliveries. Larger items such as appliances will be delivered to the westerly loading area.

River Road Apartments Estimates Plan-Trash Generation Estimates and Recycling Plan 01-16-2026

Prepared by BNE Real Estate

EPA 2014 MUNICIPAL SOLID WASTE GENERATION (MSW) RATE = 2.3 LBS/PERSON/DAY

EPA 2014 MUNICIPAL SOLID WASTE GENERATION (MSW) RATE = 1.1 LBS/PERSON/DAY

EPA 2016 Volume to Weight Conversions
Solid Waste = 550 # / CY (Compacted)
Commingled Recyclables = 51#/ CY

Number of Chatham Apartment Residents Per NJ RSIS

Bedroom#	Apartments	Residents Per Unit	Residents		
1 BR	20	1.57	31.4		
2 BR	67	2.33	156.11		
3 BR	13	3.56	46.28		
	100		234	0	0

TOTAL UNITS	100	TOTAL RESIDENTS=	234

Trash is compacted, recycling is not

UNIT/ REFUSE TYPE	RESIDENT COUNT	GENERATION LBS/PERSON/DAY	DENSITY LBS/CY	WEIGHT / 7 DAYS (LBS)	VOLUME / 7 DAYS (CY)	# of 3 CY CONTAINERS PROVIDED	REQUIRED VOLUME WITH TWICE / WEEK PICKUP (CY)		
APT-EPA NONRECYCLABLE	234	2.3	95	3767	19.8	3	9.9	OK	Compacted
APT- EPA--RECYCLABLE	234	1.1	51	1802	17.7	3	8.8	OK	

STORMWATER MAINTENANCE PLAN

AJDM Chatham LLC
29, 33, 37, and 39 River Road
Block 140, Lot 7.01, 8, 9, and 10
Borough of Chatham, Morris County, New Jersey

Prepared For:

Applicant
AJDM Chatham, LLC
16 Microlab Road
Suite A
Livingston, NJ 07039

Prepared By:

Langan Engineering & Environmental Services, LLC
300 Kimball Drive
Parsippany, New Jersey 07054

Leonard D. Savino, PE
New Jersey P.E. License Number GE-39238

15 January 2026
101324801
NJ Certificate of Authorization No. 24GA27996400

TABLE OF CONTENTS

LIST OF ATTACHMENTS

LIST OF DRAWINGS

INTRODUCTION

The New Jersey Administrative Code NJAC 7:8-5.8 entitled "Maintenance requirements" sets forth rules and refers to the New Jersey Stormwater Best Practices Manual (BMP Manual) prepared by the New Jersey Department of Environmental Protection (NJDEP). Chapter 8 of the BMP Manual entitled "Maintenance and Retrofit of Stormwater Management Measures" specifically addresses the requirements for maintenance for a major development. A major development is defined in the aforementioned administrative code as an individual "development," as well as multiple developments that individually or collectively result in:

1. The disturbance of one or more acres of land since February 2, 2004;
2. The creation of one-quarter acre or more of "regulated impervious surface" since February 2, 2004;
3. The creation of one-quarter acre or more of "regulated motor vehicle surface" since March 2, 2021; or,
4. A combination of 2 and 3 above that totals an area of one-quarter acre or more. The same surface shall not be counted twice when determining if the combined area equals one-quarter acre or more.

This plan is prepared to address the maintenance component of the proposed stormwater improvements to ensure the effective, efficient, and enduring service of a particular stormwater measure. The plan contains preventive and corrective maintenance tasks and procedures. The party responsible for preventative and corrective maintenance of the stormwater measures described herein is:

AJDM Chatham, LLC
16 Microlab Road
Suite A
Livingston, NJ 07039
Contact: Chuck Thomas – Cthomas@bnerealestate.com
Contact Tel: (973) 846-1138

Per NJAC 7:8-5.8(d), this maintenance plan and any future revisions shall be recorded upon the deed of record for the property on which the maintenance is described.

1.0 PROJECT DESCRIPTION

Existing Site Description

The BNE Chatham 2 project site is located at 29, 33, 37, and 39 River Road in the Borough of Chatham, Morris County, New Jersey. The ±2.92-acre property is identified as Block 140, Lots 7.01, 8, 9, and 10 (see Figure 1 – Site Location Map). Site features consist of two masonry buildings, gravel and asphalt parking areas, and minimal lawn and landscape areas. The property is bound by River Road on the north, a self-storage property on the east and landscape supply properties on the south and west.

Proposed Development

The proposed development at the site will consist of the following improvements:

- Demolition of two existing masonry buildings;
- A new 4-story mixed-use residential building with an at-grade building footprint of approximately 64,000 square feet including 2,370 square feet of retail space, and 100 residential units;
- A new at-grade parking lot, sidewalks, and amenity area with landscaping and lighting improvements; and,
- New stormwater conveyance system and utility infrastructure to support the development.

2.0 STORMWATER MAINTENANCE OBJECTIVE

The stormwater systems proposed for this development are intended to convey stormwater from the development. This maintenance plan is prepared to verify that the proposed systems in place are operating efficiently and reliably. The responsible party shall ensure the long-term/perpetual operation, maintenance, repair, and safety of the stormwater management facilities. In the event that the stormwater management or conveyance system becomes a danger to public safety or public health, or if it is in need of maintenance, the municipality shall so notify the responsible person in writing. If for reasons of safety there is need for immediate action, the responsible person shall act forthwith to remove the danger.

Maintenance procedures are required to maintain the intended operation and safe condition of the stormwater management facility by reducing the occurrence of problems and malfunctions. To be effective, maintenance shall be performed on a regular basis and include such routine procedures as training of staff, periodic inspections, silt and debris removal and disposal, control of mosquitoes and other insects, and review of maintenance and inspection work to identify where the maintenance program could be more effective. The required inspections are to be conducted only by properly trained individuals, including confined space entry training and certification. As per N.J.A.C. 7:8-5.8(f), the person responsible for maintenance shall maintain a detailed log of all preventative and corrective maintenance for the structural stormwater management measures incorporated into the design of the development, including a record of all inspections and copies of all maintenance-related work orders. The person with maintenance responsibility must retain and, upon request, make available the maintenance plan and associated logs and other records for review by a public entity with administrative, health, environmental, or safety authority over the site.

Repair procedures are required to correct a problem or malfunction at a stormwater management facility and to restore the facility's intended operation and safe condition. Based upon the severity of the problem, repairs shall be performed on an as-needed or emergency basis and may include such procedures as structural repairs, mosquito control, removal of debris, sediment and trash which threaten discharge capacity, erosion repair, snow and ice removal and restoration of vegetation.

In the event that the stormwater management or conveyance system becomes a danger to public safety or public health, or if it is in need of maintenance, the municipality may notify the responsible person in writing. Upon receipt of that notice, the responsible person shall have fourteen (14) days to initiate maintenance and repair of the system in a manner that is approved by the municipal engineer or his designee. If the responsible person fails or refuses to perform such maintenance and repair, the municipality may immediately proceed to do so and shall bill the cost thereof to the responsible person.

3.0 MAINTENANCE OF CONVEYANCE SYSTEMS

The proposed conveyance systems have adequate access for inspection and/or maintenance. The use of the proposed conveyance systems is necessary to manage runoff and is consistent with the community's surroundings for this area.

All conveyance systems including inlets/catch basins, manholes and pipes are expected to receive and/or accumulate debris and sediment. These systems must be inspected for clogging and excessive debris and sediment accumulation at least annually as well as after every storm exceeding 2 inches of rainfall. Sediment removal should take place when all runoff has drained from the conveyance network and the systems are reasonably dry. Disposal of debris, trash, sediment, and other waste material should be done at suitable disposal/recycling sites and in compliance with all applicable local, state, and federal waste regulations.

All structural components must be inspected quarterly for cracking, subsidence, breaching, wearing, and deterioration. The condition of surrounding and above lying materials shall be inspected for evidence of potential failures or deterioration. Damage to the structural components shall be repaired promptly. The analysis of structural damage and the design and performance of structural repairs should only be undertaken by qualified personnel.

Maintenance of the conveyance systems would require a minimum of two people. The routine equipment expected to be utilized for the maintenance tasks may include a jet vacuum vehicle, shovels, lighting equipment and a wheel barrel or truck for the hauling off debris. Water, mosquito control chemicals, and concrete repair materials may also be required depending on the condition of the structure. The cost to perform routine maintenance tasks including removal of debris, sediment and trash is estimated to be $4,000/year for the proposed on-site conveyance systems.

Related inspection and maintenance forms for this work are located at the end of this plan.

4.0 ANNUAL EVALUATION OF THE EFFECTIVENESS OF THE PLAN

As per N.J.A.C. 7:8-5.8(g), the person responsible for maintenance shall evaluate the effectiveness of the maintenance plan at least once per year and adjust the plan as needed. The annual assessment shall be documented. Records must be retained and be available upon request for review by a public entity with administrative, health, environmental, or safety authority over the site.

The responsible party should evaluate the effectiveness of the maintenance plan by comparing the

maintenance plan with the actual performance of the maintenance. The items to evaluate may include, but not be limited to:

- Whether the inspections have been performed as scheduled;
- Whether the preventive maintenance has been performed as scheduled;
- Whether the frequency of preventative maintenance needs to increase or decrease;
- Whether the planned resources were enough to perform the maintenance;
- Whether the repairs were completed on time; and
- Whether the inspection, maintenance, and repair records have been kept.

If actual performance of those items has been deviated from the maintenance plan, the responsible party should find the causes and implement solutions in a revised maintenance plan.

Related annual evaluation form is in the appendix at the end of this plan.

ATTACHMENTS

MAINTENANCE INSPECTION FOR CONVEYANCE SYSTEMS

AJDM CHATHAM, LLC
CHATHAM BOROUGH, MORRIS COUNTY, NEW JERSEY

NOTE: INSPECTIONS TO BE EVALUATED DURING A PERIOD OF DRY AND WARM WEATHER AT THE PROJECT SITE

Yes	No	Maintenance Evaluation	Action(s) Required if Answer "Yes"
❑	❑	Is there a buildup of sediment (in excess of 2 inches), trash, debris or any other stormwater pollution?	Remove sediment and evaluate on-site upstream systems. Dispose debris in accordance with local, state and federal requirements.
❑	❑	Is there standing water?	Evaluate downstream systems for clogging or trash sediment buildup.
❑	❑	Is there any structural failure?	Consult engineer to determine safety and/or stability of the system.
❑	❑	Are there visible signs of cracking, subsidence, erosion or deterioration of any of the storm conveyance systems?	Consult engineer to determine safety and/or stability of the system.
❑	❑	Are there any root intrusions or any other vegetation within catch basins, outlet control structures or storm manholes?	Remove roots and dispose vegetation in accordance with local, state and federal requirements.
❑	❑	Are ladder rungs in manholes or outlet structures damaged, missing or misaligned?	Repair or replace.
❑	❑	Are and covers or grates missing, damaged or only partially in place at any catch basin, outlet control structure or manhole?	Repair or replace.

MAINTENANCE LOG
FOR CONVEYANCE SYSTEMS

AJDM CHATHAM, LLC
CHATHAM BOROUGH, MORRIS COUNTY,
NEW JERSEY

INSTRUCTIONS:
THIS LOG SHALL BE UPDATED TO INCLUDE ALL MAINTENANCE PERFORMED AT A SPECIFIC STORMWATER MEASURE.

DATE	PERSON CONDUCTING MAINTENANCE	AREA OF MAINTENANCE	PROBLEM(S) FOUND	ACTION(S) TAKEN

RECORD OF ANNUAL EVALUATION OF THE EFFECTIVENESS OF THE PLAN

AJDM CHATHAM, LLC
CHATHAM BOROUGH, MORRIS COUNTY,
NEW JERSEY

NOTE: EVALUATION TO BE CONDUCTED DURING A PERIOD OF DRY AND WARM WEATHER AND LOW TIDE CONDITIONS AT THE PROJECT SITE

Evaluator(s)	Date of Evaluation	Decision
		__Maintain current version OR __Revise current version Revision date _____ (also update the last revision date on the cover page)
		__Maintain current version OR __Revise current version Revision date _____ (also update the last revision date on the cover page)
		__Maintain current version OR __Revise current version Revision date _____ (also update the last revision date on the cover page)

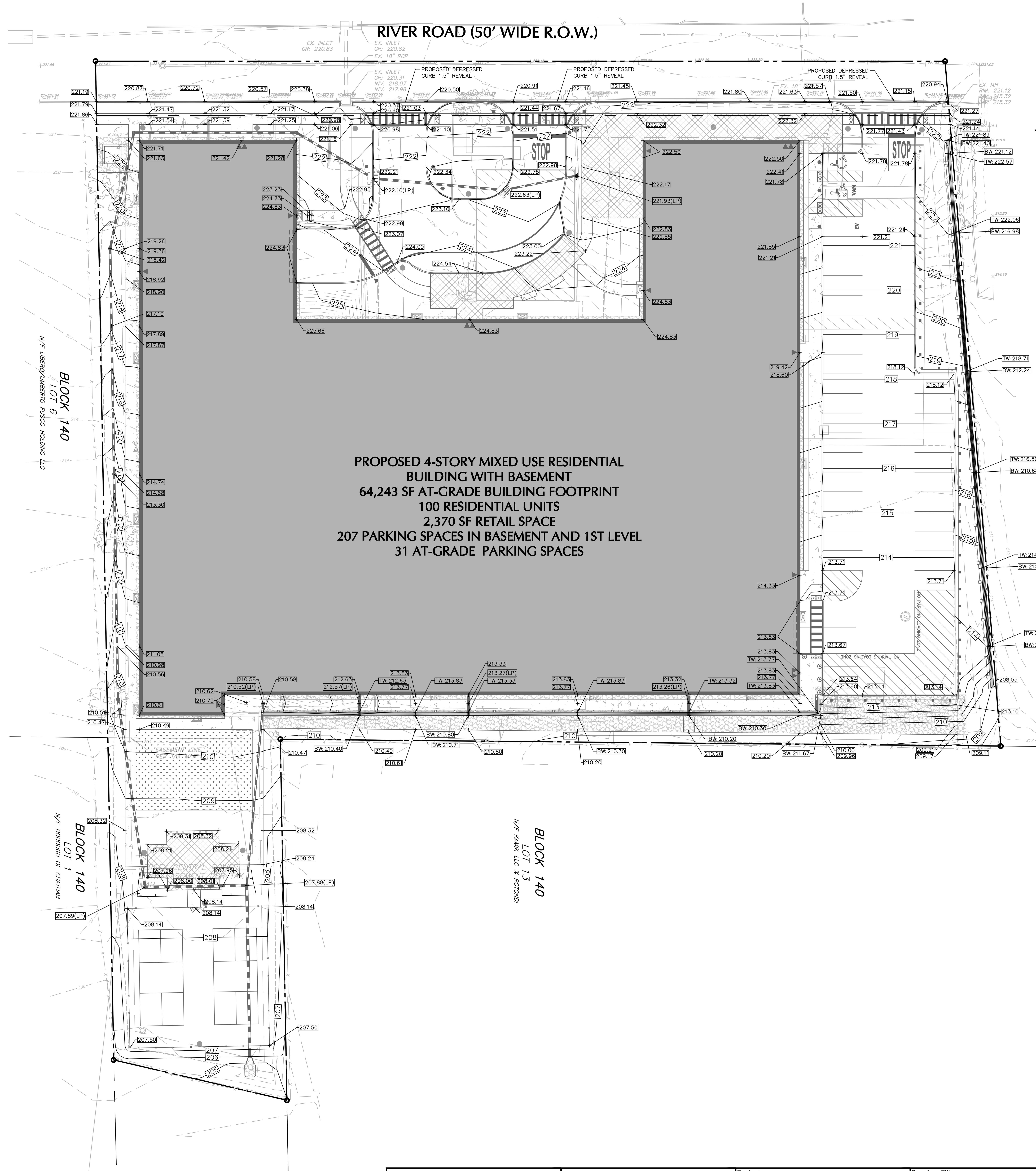
DRAWINGS

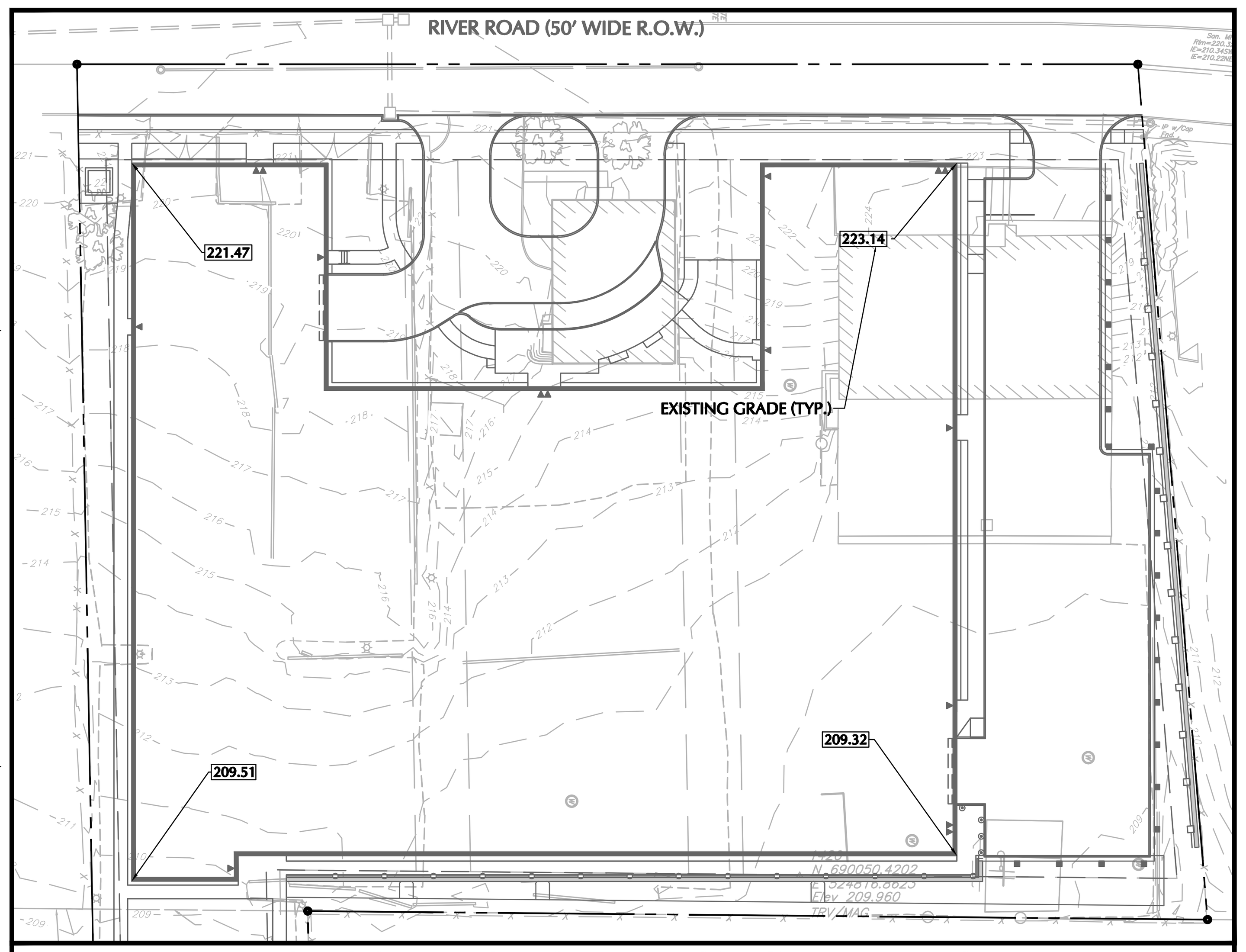
GRADING AND DRAINAGE NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE SHEET CE101 FOR EROSION CONTROL MEASURES.
2. SET PIPES AND STRUCTURES TO ELEVATIONS AND GRADES SHOWN ON THE DRAWINGS.
3. MINIMUM DEPTH OF COVER FOR ALL STORM SEWER PIPES IS 2 FEET OR AS SPECIFIED BY THE MANUFACTURER.
4. ALL CONCRETE DRAINAGE STRUCTURES SHALL BE PRECAST IN ACCORDANCE WITH NJDOT SPECIFICATIONS, UNLESS OTHERWISE NOTED.
5. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
6. ALL CONCRETE DRAINAGE STRUCTURES SHALL HAVE NO SUMP AND SHALL BE PLACED ON 6 INCHES OF COURSE AGGREGATE.
7. CATCH BASIN AND MANHOLE STRUCTURES ARE NOT SHOWN TO SCALE.
8. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS AND SIZES OF ALL ROOF LEADERS AND COORDINATE WITH PROPOSED STORMWATER SYSTEM PRIOR TO INSTALLATION.
9. ALL ROOF DRAINS TO BUILDING SHALL BE BROUGHT TO FIVE FEET OUTSIDE THE BUILDING LIMITS BY THE SITE CONTRACTOR AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT THE END. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF PIPING WITHIN FIVE FEET OF BUILDING AND CONNECTION OF BUILDING LATERALS TO SITE DRAINAGE SYSTEM.
12. CLEANOUTS SHALL BE PROVIDED FLUSH AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
13. CONTRACTOR SHALL PROVIDE 24"x24"x8" THICK CONCRETE APRON AT ALL CLEANOUTS OUTSIDE OF BUILDING UNLESS MUNICIPAL REQUIREMENTS DICTATE OTHERWISE.
14. THE CONTRACTOR SHALL FLUSH AND CLEAN ALL EXISTING ON-SITE STORM PIPING AND STRUCTURES THAT ARE TO REMAIN WITHIN THE LIMITS OF WORK OR AS INDICATED ON THE PLANS.
15. COMPACTION CRITERIA FOR FILL PLACED IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA IS GIVEN ELSEWHERE (INCLUDING GEOTECHNICAL REPORT):

FILL AREA	% OF MAXIMUM MODIFIED PROCTOR DRY DENSITY
BUILDING FOOTINGS	95%
BUILDING FOOTPRINT, PAVEMENT, SIDEWALKS, AND ROADWAYS	95%
LANDSCAPED AREAS	92%
TRENCH BACKFILL	95%

16. PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
17. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO BE UNSATISFACTORY BY OWNER'S ENGINEER AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THAN BEST SUBGRADE MATERIAL ON SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS-SECTION AND SHALL NOT RUT OR WEAVE WHEN LOADED WITH A FULL DUMP TRUCK.
18. STORMWATER PIPES CONFLICTING WITH THE PROPOSED SITE IMPROVEMENTS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
19. ALL PROPOSED STORM DRAINAGE PIPING SHALL BE TEMPORARILY PROTECTED WITH REQUIRED MINIMUM COVER FOR CONSTRUCTION.
20. ALL PROPOSED STORM DRAINAGE TO BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
21. PIPE LENGTHS SHOWN REPRESENT PLANAR LENGTHS MEASURED FROM CENTER-OF-STRUCTURE TO CENTER-OF-STRUCTURE.
22. PLAN AND PROFILE STRUCTURES ARE SYMBOLS THAT ARE PROVIDED FOR REFERENCE, AND ARE NOT TO BE USED AS THE BASIS FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL DRAINAGE, SANITARY, AND UTILITY STRUCTURES TO ENGINEER.
23. HDPE PIPING SHALL CONFORM TO AASHTO M 294 AND IS TYPE S (SMOOTH INTERIOR WITH ANNULAR CORRUGATIONS) WITH GASKETED WATER-TIGHT JOINTS.
24. RCP PIPING SHALL CONFORM TO A.S.T.M SPECIFICATIONS C76-81 CLASS III.
25. ABBREVIATIONS:
    - BC = BOTTOM OF CURB
    - BW = LAWN/SIDEWALK ELEVATION AT BOTTOM OF WALL
    - CB = CATCH BASIN
    - FES = FLARED END SECTION
    - GR = GRATE ELEVATION
    - HP = HIGH POINT
    - HDPE = HIGH DENSITY POLYETHYLENE
    - ID = INLINE DRAIN
    - INV = INVERT
    - LF = LINEAR FEET
    - MH = MANHOLE
    - PVC = POLYVINYL CHLORIDE
    - RCP = REINFORCED CONCRETE PIPE
    - RIM = RIM ELEVATION
    - RL = ROOF LEADER
    - TC = TOP OF CURB
    - TW = LAWN ELEVATION AT TOP OF WALL
    - YD = YARD DRAIN





EXISTING GRADE INSET FOR BUILDING HEIGHT CALCULATION   SCALE: 1" = 50'

NOTES:

1. EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A PLAN TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 140 LOTS 7.01, 8, 9, AND 10, BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD, DATED 15 MARCH 2017, LAST REVISED 5 NOVEMBER 2025.
2. PROPOSED BUILDING FOOTPRINT OBTAINED FROM A CAD FILE TITLED "2026-BNE_Chatham-Submission_Package" PROVIDED BY MINNO WASKO ON 12 JANUARY 2026.
3. THE MERIDIAN OF THE SURVEY IS REFERENCED TO THE NEW JERSEY STATE PLANE COORDINATE SYSTEM NAD 83 (2011).
4. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

LEGEND

(line symbol)	PROPERTY LINE
600	EXISTING MAJOR CONTOUR
599	EXISTING MINOR CONTOUR
600	PROPOSED MAJOR CONTOUR
601	PROPOSED MINOR CONTOUR
135.50	PROPOSED SPOT ELEVATION
TW 278.20 BW 269.00	LAWN ELEVATION AT PROPOSED TOP/BOTTOM OF WALL
258.31 (LP)	PROPOSED LOW POINT
272.23 (HP)	PROPOSED HIGH POINT
FFE: 272.23	FIRST FLOOR ELEVATION

NOTE:
ELEVATIONS ALONG THE CURB REFERENCE THE BOTTOM OF CURB / EDGE OF PAVEMENT. ADD 6 INCHES FOR TOP OF CURB EXCEPT FOR THE FOLLOWING:

1. ADD 1.5 INCHES AT DEPRESSED CURB DRIVEWAY ENTRANCES.
2. TOP OF CURB TO BE FLUSH WITH PAVEMENT AT ADA RAMPS.
3. TOP OF WALL ELEVATION TO BE A MINIMUM OF 4 INCHES ABOVE ADJACENT LAWN ELEVATION.

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

Date	Description	No.
Revisions		

LANGAN
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NJ Certificate of Authorization No. 24GA27996400

Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: GRADING PLAN

Project No.: 101324801
Date: 1/15/2026
Drawn By: GC
Checked By: JD
Drawing No.: CG101

Project No. 101324801

GRADING AND DRAINAGE NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
2. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED. SEE SHEET CE101 FOR EROSION CONTROL MEASURES.
2. SET PIPES AND STRUCTURES TO ELEVATIONS AND GRADES SHOWN ON THE DRAWINGS.
3. MINIMUM DEPTH OF COVER FOR ALL STORM SEWER PIPES IS 2 FEET OR AS SPECIFIED BY THE MANUFACTURER.
4. ALL CONCRETE DRAINAGE STRUCTURES SHALL BE PRECAST IN ACCORDANCE WITH NJDOT SPECIFICATIONS, UNLESS OTHERWISE NOTED.
5. ALL DRAINAGE STRUCTURES AND STORM SEWER PIPES SHALL MEET HEAVY DUTY TRAFFIC (H20) LOADING AND BE INSTALLED ACCORDINGLY.
6. ALL CONCRETE DRAINAGE STRUCTURES SHALL HAVE NO SUMP AND SHALL BE PLACED ON 6 INCHES OF COURSE AGGREGATE.
7. CATCH BASIN AND MANHOLE STRUCTURES ARE NOT SHOWN TO SCALE.
8. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS AND SIZES OF ALL ROOF LEADERS AND COORDINATE WITH PROPOSED STORMWATER SYSTEM PRIOR TO INSTALLATION.
9. ALL ROOF DRAINS TO BUILDING SHALL BE BROUGHT TO FIVE FEET OUTSIDE THE BUILDING LIMITS BY THE SITE CONTRACTOR AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT THE END. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF PIPING WITHIN FIVE FEET OF BUILDING AND CONNECTION OF BUILDING LATERALS TO SITE DRAINAGE SYSTEM.
12. CLEANOUTS SHALL BE PROVIDED FLUSH AT ALL LOCATIONS OF ROOF DRAIN INTERSECTIONS, BENDS AND UPSTREAM ENDS.
13. CONTRACTOR SHALL PROVIDE 24"x24"x8" THICK CONCRETE APRON AT ALL CLEANOUTS OUTSIDE OF BUILDING UNLESS MUNICIPAL REQUIREMENTS DICTATE OTHERWISE.
14. THE CONTRACTOR SHALL FLUSH AND CLEAN ALL EXISTING ON-SITE STORM PIPING AND STRUCTURES THAT ARE TO REMAIN WITHIN THE LIMITS OF WORK OR AS INDICATED ON THE PLANS.
15. COMPACTION CRITERIA FOR FILL PLACED IN THE FOLLOWING AREAS SHALL MEET OR EXCEED THE FOLLOWING MINIMUM PERCENTAGE OF MAXIMUM MODIFIED PROCTOR DRY DENSITY AS DETERMINED BY ASTM D-1557 USED ON REPRESENTATIVE SOIL SAMPLES, UNLESS MORE STRINGENT CRITERIA IS GIVEN ELSEWHERE (INCLUDING GEOTECHNICAL REPORT):

FILL AREA	% OF MAXIMUM MODIFIED PROCTOR DRY DENSITY
BUILDING FOOTINGS	95%
BUILDING FOOTPRINT, PAVEMENT, SIDEWALKS, AND ROADWAYS	95%
LANDSCAPED AREAS	92%
TRENCH BACKFILL	95%

16. PROTECT SUBGRADE FROM EXCESSIVE WHEEL LOADING DURING CONSTRUCTION, INCLUDING CONCRETE TRUCKS AND DUMP TRUCKS.
17. REMOVE AREAS OF FINISHED SUBGRADE FOUND TO BE UNSATISFACTORY BY OWNER'S ENGINEER AND REPLACE IN A MANNER THAT WILL COMPLY WITH COMPACTION REQUIREMENTS BY USE OF MATERIAL EQUAL TO OR BETTER THAN BEST SUBGRADE MATERIAL ON SITE. SURFACE OF SUBGRADE AFTER COMPACTION SHALL BE HARD, UNIFORM, SMOOTH, STABLE, AND TRUE TO GRADE AND CROSS-SECTION AND SHALL NOT RUT OR WEAVE WHEN LOADED WITH A FULL DUMP TRUCK.
18. STORMWATER PIPES CONFLICTING WITH THE PROPOSED SITE IMPROVEMENTS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR.
19. ALL PROPOSED STORM DRAINAGE PIPING SHALL BE TEMPORARILY PROTECTED WITH REQUIRED MINIMUM COVER FOR CONSTRUCTION.
20. ALL PROPOSED STORM DRAINAGE TO BE INSTALLED UNDERGROUND UNLESS OTHERWISE NOTED.
21. PIPE LENGTHS SHOWN REPRESENT PLANAR LENGTHS MEASURED FROM CENTER-OF-STRUCTURE TO CENTER-OF-STRUCTURE.
22. PLAN AND PROFILE STRUCTURES ARE SYMBOLS THAT ARE PROVIDED FOR REFERENCE, AND ARE NOT TO BE USED AS THE BASIS FOR CONSTRUCTION. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL DRAINAGE, SANITARY, AND UTILITY STRUCTURES TO ENGINEER.
23. HDPE PIPING SHALL CONFORM TO AASHTO M 294 AND IS TYPE S (SMOOTH INTERIOR WITH ANNULAR CORRUGATIONS) WITH GASKETED WATER-TIGHT JOINTS.
24. RCP PIPING SHALL CONFORM TO A.S.T.M SPECIFICATIONS C76-81 CLASS III.
25. ABBREVIATIONS:
BC = BOTTOM OF CURB
BW = LAWN/SIDEWALK ELEVATION AT BOTTOM OF WALL
CB = CATCH BASIN
FES = FLARED END SECTION
GR = GRATE ELEVATION
HP = HIGH POINT
HDPE = HIGH DENSITY POLYETHYLENE
ID = INLINE DRAIN
INV = INVERT
LF = LINEAR FEET
MH = MANHOLE
PVC = POLYVINYL CHLORIDE
RCP = REINFORCED CONCRETE PIPE
RIM = RIM ELEVATION
RL = ROOF LEADER
TC = TOP OF CURB
TW = LAWN ELEVATION AT TOP OF WALL
YD = YARD DRAIN

DRAINAGE STRUCTURE SCHEDULE

BNE Chatham 2	
Structure ID	**Structure Type**
CB-1	NJDOT TYPE B CATCH BASIN
CB-2	NJDOT TYPE B CATCH BASIN
ES-1	12" HDPE END SECTION THRU RETAINING WALL
ES-2	12" HDPE END SECTION THRU RETAINING WALL
ES-3	12" HDPE END SECTION THRU RETAINING WALL
YD-1	8" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-2	12" NYLOPLAST DRAIN WITH SOLID COVER
YD-3	12" NYLOPLAST DRAIN WITH SOLID COVER
YD-4	12" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-5	12" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-6	12" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-7	15" NYLOPLAST DRAIN WITH STANDARD GRATE
YD-8	15" NYLOPLAST DRAIN WITH STANDARD GRATE
ID-1	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
ID-2	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
ID-3	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
ID-4	8" NYLOPLAST INLINE DRAIN WITH PEDESTRIAN GRATE
FES-1	12" HDPE FLARED END SECTION

Note:
CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION.

NOTES:

1. EXISTING BOUNDARY, UTILITY AND TOPOGRAPHIC INFORMATION OBTAINED FROM A PLAN TITLED "BOUNDARY AND TOPOGRAPHIC SURVEY, BLOCK 140 LOTS 7.01, 8, 9, AND 10, BOROUGH OF CHATHAM, MORRIS COUNTY, NEW JERSEY", PREPARED BY MATRIX NEW WORLD, DATED 15 MARCH 2017, LAST REVISED 5 NOVEMBER 2025.
2. PROPOSED BUILDING FOOTPRINT OBTAINED FROM A CAD FILE TITLED "2026-BNE_Chatham-Submission_Package" PROVIDED BY MINNO WASKO ON 12 JANUARY 2026.
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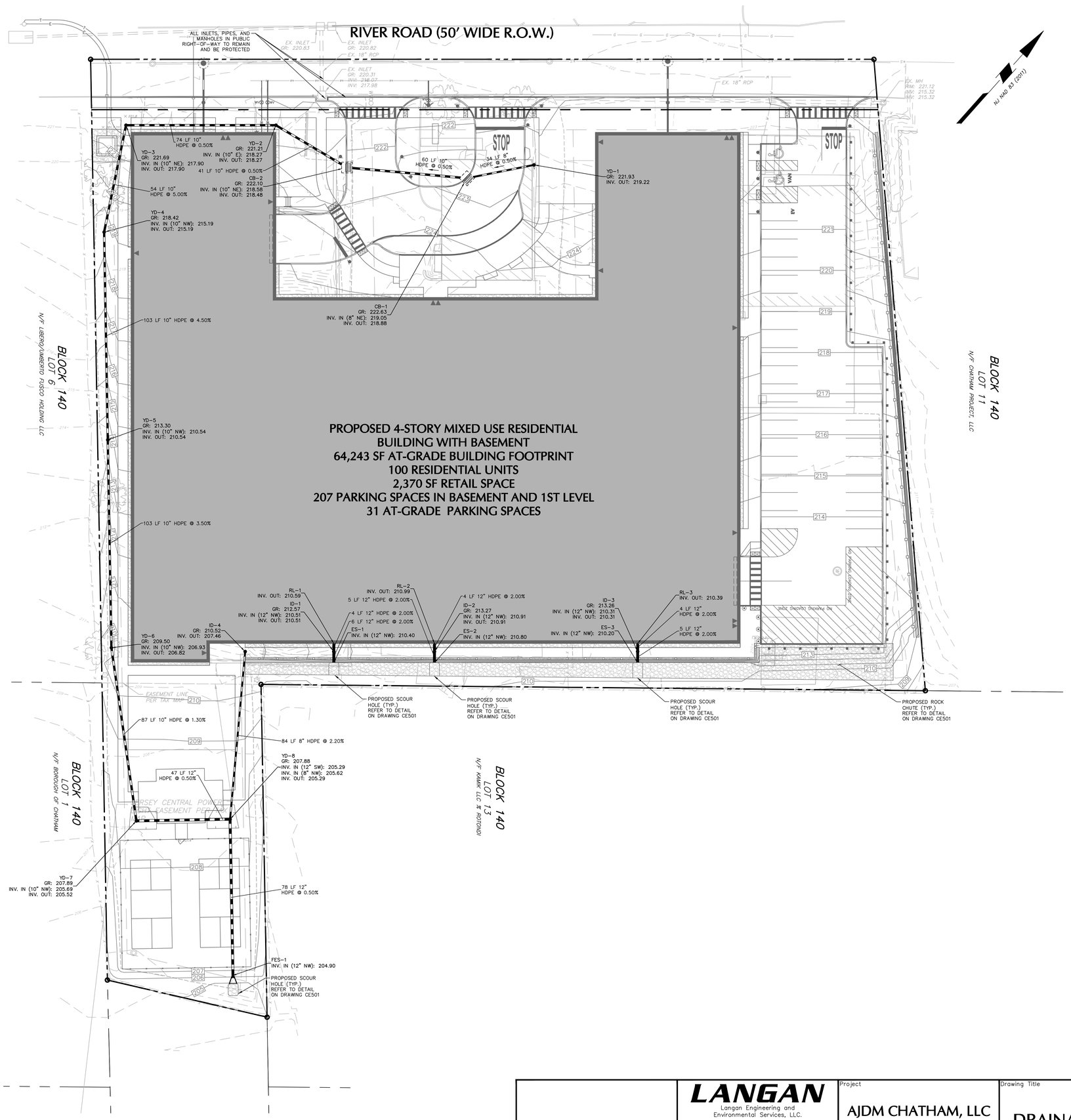
4. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).



LEGEND

- PROPERTY LINE
- 600 EXISTING MAJOR CONTOUR
- 599 EXISTING MINOR CONTOUR
- 600 PROPOSED MAJOR CONTOUR
- 601 PROPOSED MINOR CONTOUR
- PROPOSED DRAINAGE PIPE
- PROPOSED CATCH BASIN
- PROPOSED DRAINAGE MANHOLE
- PROPOSED FLARED END SECTION

20 0 5 10 20
SCALE: 1 INCH = 20 FEET

Date	Description	No.
Revisions		

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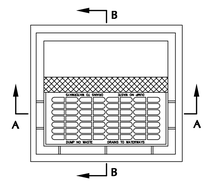
NJ Certificate of Authorization No. 24GA27996400

Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: DRAINAGE PLAN

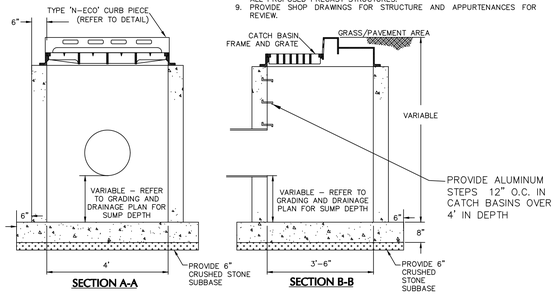
Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By JD

Drawing No. CG102



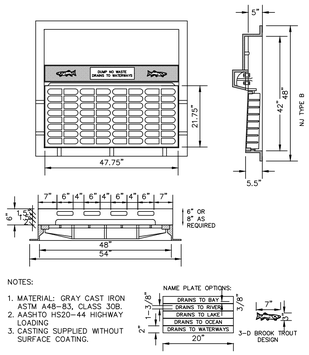
GENERAL NOTES

1. THE PRECAST MANUFACTURER IS RESPONSIBLE FOR STRUCTURAL DESIGN OF ALL PROPOSED PRECAST STRUCTURES. CONTRACTOR MUST PROVIDE SHOP DRAWINGS FOR REVIEW.
2. FOOTER AND INVERT TO BE NJDOT CLASS "C" CONCRETE.
3. IF WALL CONSTRUCTION OTHER THAN CONCRETE THE WALLS SHALL BE PLASTERED BOTH INSIDE AND OUTSIDE WITH 1/2" THICK CEMENT PLASTER.
4. CASTING TO BE CAMPBELL FOUNDRY NO. 2618 OR EQUIVALENT WITH TYPE N – ECO CURB PIECE.
5. PROVIDE ALUMINUM ALCO STEPS 6061T6 12" O.C. IN CATCH BASIN OVER 4' IN DEPTH. MAX. DIST. BETWEEN BOTTOM STEP AND BOTTOM OF INLET SHALL BE 18".
6. WHEN ADDITIONAL DEPTH IS SCHEDULED WALLS BELOW THE DEPTH OF 8'–0" MEASURED FROM THE INLET GUTTER TO INVERT, SHALL BE 12" THICK. IF CONCRETE OR DOUBLE BLOCK IF BLOCK. THE FOUNDATION DIMENSION SHALL BE INCREASED 12" IN WIDTH AND TO 12" IN DEPTH.
7. SHALL MEET NJDOT STANDARDS AND H20 LOADING.
8. PRECAST MANUFACTURER IS RESPONSIBLE FOR STRUCTURAL DESIGN OF ALL PROPOSED PRECAST STRUCTURES.
9. PROVIDE SHOP DRAWINGS FOR STRUCTURE AND APPURTENANCES FOR REVIEW.



1 TYPE 'B' CATCH BASIN WITH CURB PIECE

NTS

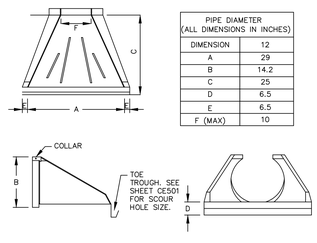


NOTES:

1. MATERIAL: GRAY CAST IRON ASTM A48–83, CLASS 30B.
2. AASHTO HS20–44 HIGHWAY LOADING
3. CASTING SUPPLIED WITHOUT SURFACE COATING.

2 CURB INLET WITH BICYCLE SAFE GRATE AND TYPE 'N-ECO' CURB PIECE

NTS



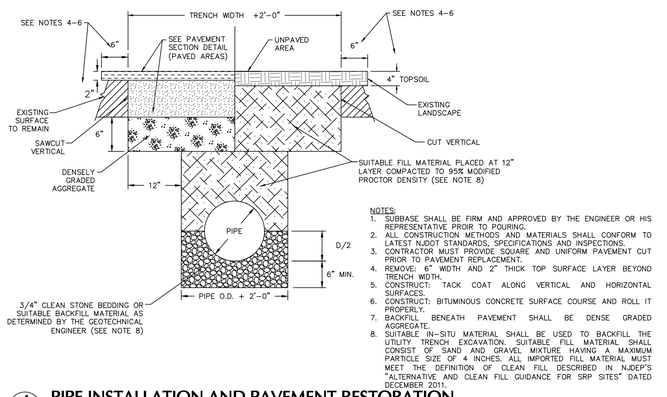
PIPE DIAMETER (ALL DIMENSIONS IN INCHES)	
DIMENSION	12
A	29
B	14.2
C	25
D	6.5
E	6.5
F (MAX)	10

NOTES:

1. PROVIDE SHOP DRAWINGS REVIEW AND APPROVAL.
2. THE HDPE FLARED END SECTIONS SHALL BE IN ACCORDANCE WITH ADS'S HDPE FLARED END SECTION SPECIFICATIONS AND INSTALLATION INSTRUCTIONS.

3 HDPE FLARED END SECTION

NTS

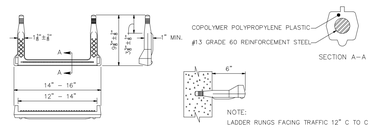


NOTES:

1. SUBBASE SHALL BE FIRM AND APPROVED BY THE ENGINEER OR HIS REPRESENTATIVE PRIOR TO POURING.
2. ALL CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO LATEST NJDOT STANDARDS, SPECIFICATIONS AND INSPECTIONS.
3. CONTRACTOR MUST PROVIDE SQUARE AND UNIFORM PAVEMENT CUT PRIOR TO PAVEMENT REPLACEMENT.
4. REMOVE: 6" WIDTH AND 2" THICK TOP SURFACE LAYER BEYOND TRENCH WIDTH.
5. CONSTRUCT: TACK COAT ALONG VERTICAL AND HORIZONTAL SURFACES.
6. CONSTRUCT: BITUMINOUS CONCRETE SURFACE COURSE AND ROLL IT PROPERLY.
7. BACKFILL BENEATH PAVEMENT SHALL BE DENSE GRADED AGGREGATE.
8. SUITABLE IN–SITU MATERIAL SHALL BE USED TO BACKFILL THE UTILITY TRENCH EXCAVATION. SUITABLE FILL MATERIAL SHALL CONSIST OF SAND AND GRAVEL MIXTURE HAVING A MAXIMUM PARTICLE SIZE OF 4 INCHES. ALL IMPORTED FILL MATERIAL MUST MEET THE DEFINITION OF CLEAN FILL DESCRIBED IN NJDEP'S "ALTERNATIVE AND CLEAN FILL GUIDANCE FOR SRP SITES" DATED DECEMBER 2011.

4 PIPE INSTALLATION AND PAVEMENT RESTORATION

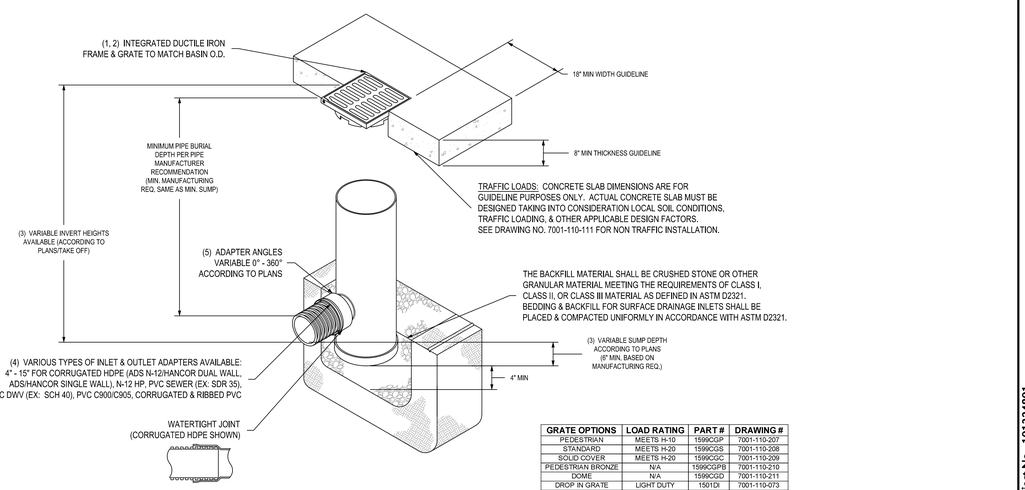
NTS



REF: NEW JERSEY DEPARTMENT OF TRANSPORTATION DETAIL (CD–602–1.5)

5 COPOLYMER PLASTIC LADDER RUNG

NTS



GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
PEDESTRIAN	MEETS H-10	1599CGP	7001-110-207
STANDARD	MEETS H-20	1599CGS	7001-110-208
SOLID COVER	MEETS H-20	1599CGC	7001-110-209
PEDESTRIAN BRONZE	N/A	1599CGPB	7001-110-210
DOME	N/A	1599CGD	7001-110-211
DROP IN GRATE	LIGHT DUTY	1501DI	7001-110-073

1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05, WITH THE EXCEPTION OF THE BRONZE GRATE.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

NOTES:

1. DETAIL OBTAINED FROM ADS WEBSITE.
2. PROVIDE SHOP DRAWINGS REVIEW AND APPROVAL.
3. REFER TO DRAINAGE STRUCTURE SCHEDULE ON CG102 FOR GRATE OPTIONS FOR EACH YARD DRAIN.

6 NYLOPLAST DRAIN BASIN

NTS

Date	Description	No.

Revisions

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NJ Certificate of Authorization No. 24GA27996400

Project: AJDM CHATHAM, LLC
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title: CONSTRUCTION DETAILS III

Project No. 101324801
Date 1/15/2026
Drawn By GC
Checked By BMW

Drawing No. CS503

Date: 1/14/2026 Time: 18:04 User: gchieff Style Table: Langan.stb Layout: CS503 Document Code: 101324801-0101-CS501-0101

LANGAN397
Project No. 101324801

15 January 2026

Borough of Chatham Planning Board
54 Fairmount Avenue
Chatham, NJ 07928

Re: Flood Damage Prevention Compliance Letter
AJDM Chatham, LLC
29, 33, 37, and 39 River Road
Block No. 140, Lots 7.01, 8, 9, and 10
Borough of Chatham, Morris County, New Jersey
Langan Project No.: 101324801

Dear Board Members:

This letter demonstrates compliance with the Flood Damage Prevention (Article XI) requirements of the Borough of Chatham Code for the proposed project. AJDM Chatham LLC (The Applicant) is submitting a Preliminary and Final Major Site Plan Application for the project located at 29, 33, 37, and 39 River Road in the Borough of Chatham. The 2.92-acre property is identified as Block 140, Lots 7.01, 8, 9, and 10 on the borough tax map (see Figure 1 – Site Location Map). The property is bound by River Road on the north, a self-storage property on the east and landscape supply properties on the south and west.

The proposed development at the site will consist of the following improvements:

- Demolition of two existing masonry buildings and associated site features;
- A new 4-story mixed-use residential building with an at-grade building footprint of approximately 64,000 square feet, 2,370 square feet of retail space, and 100 residential units;
- A new at-grade parking lot, sidewalks, and amenity area with landscaping and lighting improvements; and,
- New utility infrastructure to support the development.

Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map for Morris County, Map Number 34027C0432F, Community Panel Number 3403380432F, Preliminary Date 17 November 2025, the subject property and all associated site improvements are not within the flood hazard area (refer to Figure 2). The FEMA flood hazard area elevation of the Passaic River as it parallels the project site is approximately Elevation 200 (NAVD88) and the lowest elevation on the site is approximately Elevation 205. Therefore, the project is not subject to Flood Hazard Area Control Act Rules (NJAC 7:13) nor the Borough of Chatham Flood Damage Prevention Regulations.

The project has been designed in accordance with the New Jersey Stormwater Management Rules (NJAC 7:8) and the Borough of Chatham Stormwater Management and Control Ordinance (Article XIV).

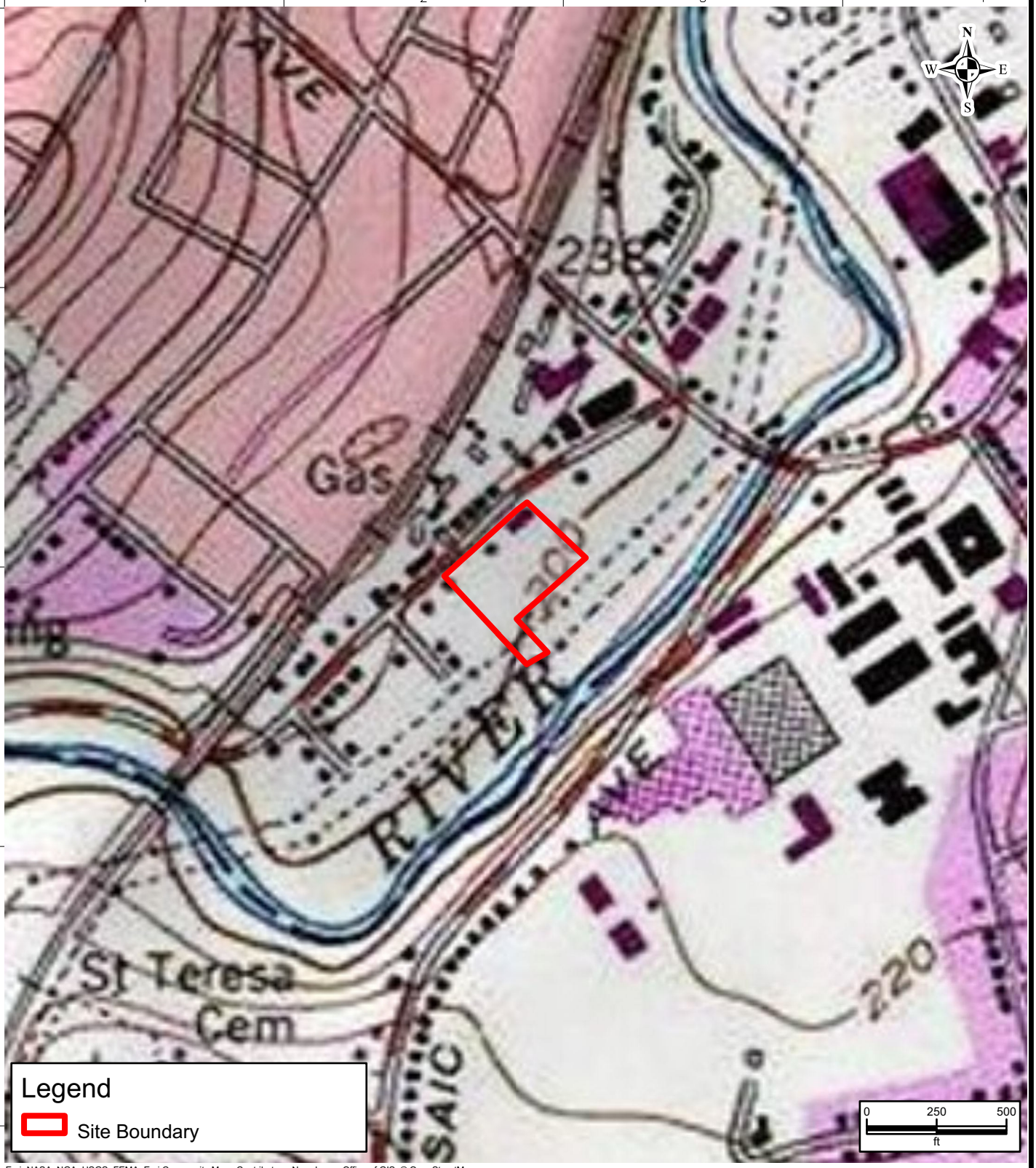
Sincerely,
Langan Engineering and Environmental Services, LLC

John E. DiGiacinto, P.E.
Senior Project Manager

Leonard D. Savino, P.E.
Principal

Enclosure(s): Figure 1 – Site Location Map
Figure 2 – FEMA Flood Insurance Rate Map

cc: Tom Witherel and Chuck Thomas – AJDM Chatham, LLC
Derek Orth – Inglesino Taylor



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NJ Certificate of Authorization No. 24GA27996400

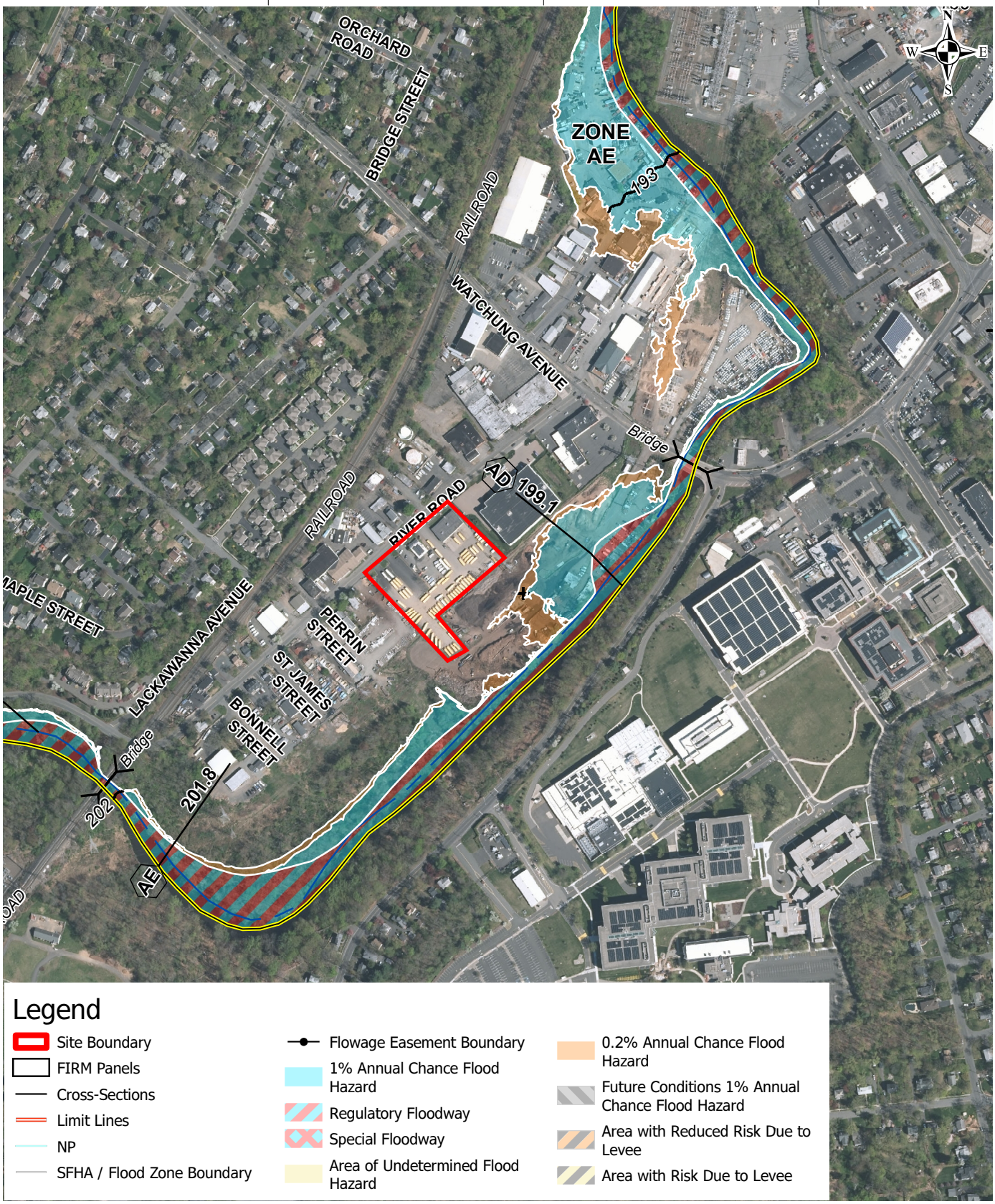
Project
AJDM CHATHAM, LLC
29, 33, 37, AND 39 RIVER ROAD
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
SITE LOCATION MAP

Project No.	101324801
Date	1/8/2026
Drawn By	GC
Checked By	JD

Drawing No.
FIG 1

Project No. 101324801



Legend

- Site Boundary
- FIRM Panels
- Cross-Sections
- Limit Lines
- NP
- SFHA / Flood Zone Boundary
- Flowage Easement Boundary
- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee

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Project
AJDM CHATHAM, LLC
29, 33, 37, AND 39 RIVER ROAD
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
FEMA FLOOD INSURANCE RATE MAP

Project No.	101324801
Date	1/13/26
Drawn By	GC
Checked By	JD

Drawing No.
FIG 2

LANGAN

Project No. 101324801

15 January 2026

Borough of Chatham Planning Board
54 Fairmount Avenue
Chatham, NJ 07928

Re: Well Head Protection Area Compliance Letter
AJDM Chatham, LLC
29, 33, 37, and 39 River Road
Block No. 140, Lots 7.01, 8, 9, and 10
Borough of Chatham, Morris County, New Jersey
Langan Project No.: 101324801

Dear Board Members:

This letter confirms compliance with the Well Head Protection Area Regulations (Article IX) of the Borough of Chatham Code for the proposed project. AJDM Chatham LLC (The Applicant) is submitting a Preliminary and Final Major Site Plan Application for the project located at 29, 33, 37, and 39 River Road in the Borough of Chatham. The 2.92-acre property is identified as Block 140, Lots 7.01, 8, 9, and 10 on the borough tax map (see Figure 1 – Site Location Map). The property is bound by River Road on the north, a self-storage property on the east and landscape supply properties on the south and west.

The proposed development at the site will consist of the following improvements:

- Demolition of two existing masonry buildings and associated site features;
- A new 4-story mixed-use residential building with an at-grade building footprint of approximately 64,000 square feet, 2,370 square feet of retail space, and 100 residential units;
- A new at-grade parking lot, sidewalks, and amenity area with landscaping and lighting improvements; and,
- New utility infrastructure to support the development.

The property is situated in the Tier 1 and Tier 2 Wellhead Protection Area (see Figure 2 – NJDEP Well Head Protection Map). The proposed improvements will not generate any Potential Pollutant Sources as defined in § 165-52 of the Borough of Chatham Code. Therefore, the proposed development complies with the Borough of Chatham Wellhead Protection Area Regulations.

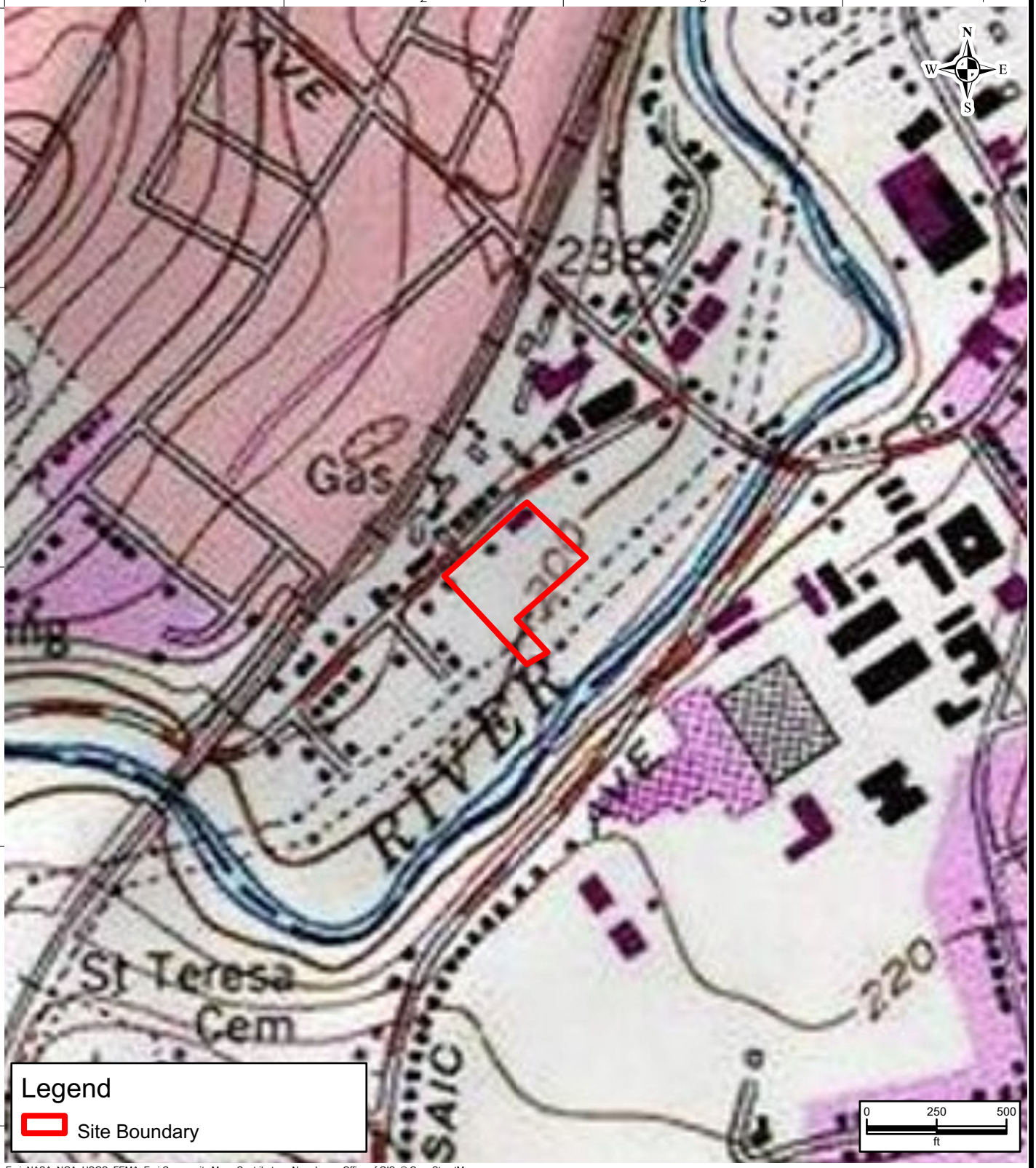
Sincerely,
Langan Engineering and Environmental Services, LLC

John E. DiGiacinto, P.E.
Senior Project Manager

Leonard D. Savino, P.E.
Principal

Enclosure(s): Figure 1 – Site Location Map
Figure 2 – NJDEP Well Head Protection Map

cc: Tom Witherel and Chuck Thomas – AJDM Chatham, LLC
Derek Orth – Inglesino Taylor



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LANGAN

Project No. 101324801

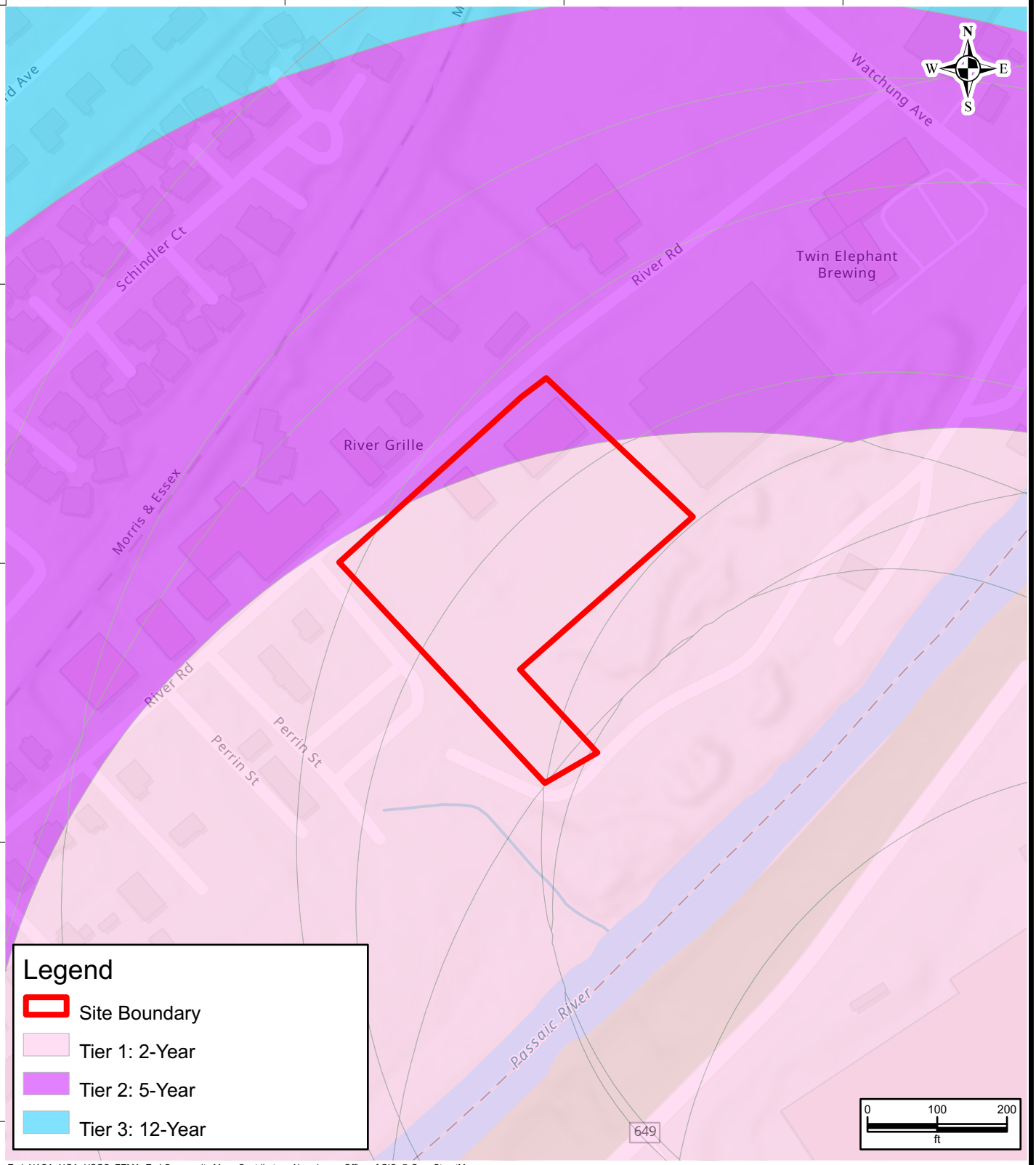
LANGAN
Langan Engineering and Environmental Services, LLC.
300 Kimball Drive
Parsippany, NJ 07054
T: 973.560.4900 F: 973.560.4901 www.langan.com
NJ Certificate of Authorization No. 24GA27996400

Project
AJDM CHATHAM, LLC
29, 33, 37, AND 39 RIVER ROAD
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
SITE LOCATION MAP

Project No.	101324801
Date	1/8/2026
Drawn By	GC
Checked By	JD

Drawing No.
FIG 1



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Project
AJDM CHATHAM, LLC
29, 33, 37, AND 39 RIVER ROAD
BLOCK No. 140, LOT Nos. 7.01, 8, 9, AND 10
BOROUGH OF CHATHAM
MORRIS COUNTY NEW JERSEY

Drawing Title
NJDEP WELL HEAD PROTECTION MAP

Project No. 101324801
Date 1/8/2026
Drawn By GC
Checked By JD

Drawing No.
FIG 2

LANGAN

Project No. 101324801

Date: 1/8/2026 Time: 11:57 User: bwild Style Table: Langan.stb Layout: Layout1 Document Code: 101324801-0502-CS101-0101

BNE CHATHAM

CHATHAM, NEW JERSEY

LANDSCAPE SUBMISSION PLANS

APPLICANT

AJDM CHATHAM, LLC
16 MICROLAB ROAD, SUITE A
LIVINGSTON, NJ 07039

LANDSCAPE ARCHITECT

MELILLO | BAUER | CARMAN
LANDSCAPE ARCHITECTURE
200 UNION AVENUE
BRIELLE, NEW JERSEY 08730
PHONE: (732)-528-0664

ARCHITECT

MINNO & WASKO
ARCHITECTS AND PLANNERS
80 LAMBERT LANE, SUITE 105
LAMBERTVILLE, NEW JERSEY 08530
PHONE (609) 397-9009

CIVIL ENGINEER

LANGAN
300 KIMBALL DRIVE
4TH FLOOR
PARSIPPANY, NJ 07054-2172

01/15/2026 (PRELIMINARY SITE PLAN SUBMISSION)

BNE CHATHAM

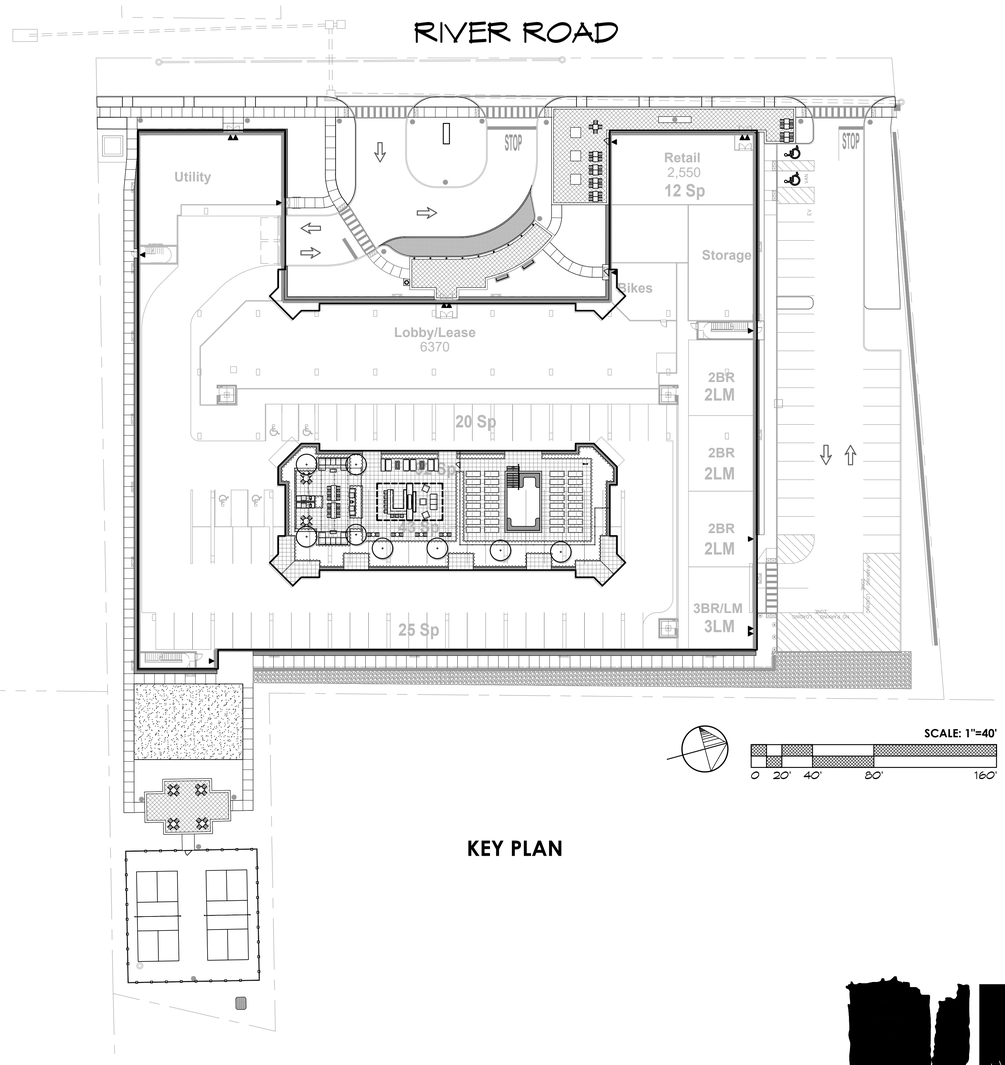
PROJECT NO.: 25-156

DRAWINGS LIST

SHEET NO.	DESCRIPTION		DATE	ISSUANCE
L-1	STREETSCAPE	LANDSCAPE PLAN	1/15/2026	PRELIMINARY SITE PLAN SUBMISSION
L-2	STREETSCAPE - PLANTING PLAN	LANDSCAPE PLAN	1/15/2026	PRELIMINARY SITE PLAN SUBMISSION
L-3	ENLARGEMENT PLANS	LANDSCAPE PLAN	1/15/2026	PRELIMINARY SITE PLAN SUBMISSION
L-4	SECOND FLOOR COURTYARD	LANDSCAPE PLAN	1/15/2026	PRELIMINARY SITE PLAN SUBMISSION
L-5	STREETSCAPE	SITE DETAILS	1/15/2026	PRELIMINARY SITE PLAN SUBMISSION
L-6	STREETSCAPE	SITE DETAILS	1/15/2026	PRELIMINARY SITE PLAN SUBMISSION
L-7	SECOND FLOOR COURTYARD	SITE DETAILS	1/15/2026	PRELIMINARY SITE PLAN SUBMISSION
L-8	PLANTING NOTES	PLANTING DETAILS	1/15/2026	PRELIMINARY SITE PLAN SUBMISSION
L-9	PLANTING NOTES	PLANTING DETAILS	1/15/2026	PRELIMINARY SITE PLAN SUBMISSION

GENERAL NOTES:

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY BEARING ON THE PERFORMANCE OF THE WORK.
2. ALL BASE INFORMATION AND UTILITY LAYOUT WAS PROVIDED BY: LANGAN ENGINEERING.
3. ALL GRADING SHALL BE VERIFIED IN THE FIELD BEFORE CONSTRUCTION AND SHALL BE COORDINATED WITH THE LANDSCAPE ARCHITECT AND CIVIL ENGINEER.
4. ALL PAVING SURFACES SHALL BE FLUSH AND MEET SMOOTHLY AND EVENLY. NO WALKS SHALL EXCEED 5% OR A 2% CROSS-PITCH. ALL WALKS TO BE LAID OUT IN THE FIELD UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT.
5. ALL SITE DETAILS SHALL BE REVIEWED AND SUPPLEMENTED BY A PROFESSIONAL NEW JERSEY LICENSED STRUCTURAL ENGINEER WHO SHALL SPECIFY ALL STRUCTURAL DATA, FOOTINGS, REINFORCEMENT, HARDWARE, ETC. REQUIRED FOR STRUCTURAL INTEGRITY, SAFETY AND COMPLIANCE WITH LOCAL CODES AND CONDITIONS PRIOR TO CONSTRUCTION.
6. ALL ARCHITECTURAL INFORMATION WAS PROVIDED BY: *MINNO & WASKO.*
7. ALL PLANTED AREAS SHALL BE DRIP IRRIGATED. ALL LAWN AREAS SHALL BE SPRAY IRRIGATED. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS.
8. ALL PLANT MATERIAL/LANDSCAPE MATERIAL SUBSTITUTIONS SHALL BE APPROVED BY THE L.A./OWNERS REPRESENTATIVE.



KEY PLAN

MELILLO ▪ BAUER ▪ CARMAN
LANDSCAPE ARCHITECTURE

RIVER ROAD

CONCRETE SIDEWALK (TYP.)

DETECTABLE WARNING PAVERS
SEE ENG. PLANS FOR DETAILS

STRIPPED CROSSWALK
SEE ENG. PLANS FOR DETAILS

5 L-5 COMMUNITY IDENTIFICATION SIGNAGE

DINING TABLES AND CHAIRS (TYP.)

6 L-5 STREET TREE W/ PLANTING (TYP.)

1 L-5 DECORATIVE PAVERS AT RETAIL ENTRIES (TYP.)

2 L-6

STOP

TREE PIT W/ PLANTING (TYP.)

4 L-6

1 L-6

STOP

Utility

3 L-5 VEHICULAR PAVEMENT (TYP.)

GARAGE ENTRANCE

RETAIL SPACE

12 Sp

STORAGE SPACE

TRASH RECEPTACLE 9 L-5

BIKE STORAGE

LOBBY

DECORATIVE PAVEMENT (TYP.) 1 L-5

BENCH (TYP.) II L-5

DROP OFF ENLARGEMENT 1 I-5

20 Sp

92 Sp

43 Sp

2BR 2LM

2BR 2LM

3BR/LM 3LM

25 Sp

VAN

EV

NO PARKING LOADING ZONE

NO PARKING LOADING ZONE

MATCHLINE INSET

SYNTHETIC TURF

PICKLEBALL COURTS

AMENITY SPACE / PICKLEBALL COURTS ENLARGEMENT 2 L-5

MATCHLINE INSET

SYNTHETIC TURF

PROPERTY LINE

0 8' 16' 32' 64'

Streetscape
Landscape Plan

BNE Chatham
Chatham, New Jersey

MBC
MELILLO • BAUER • CARMAN
LANDSCAPE ARCHITECTURE

200 Union Avenue
Brielle, NJ
08730

295 Newark Avenue
Jersey City, NJ
07302

732-528-0664
www.mbcla.design
NJCA No. 21MH00001700

NO.	DATE	REVISION

SCALE: 1/16"-1'-0"

DATE: 01/15/2026 JOB NO.: 25-156

DRAWING NO.
L-1

PLANT LIST- PARKING

KEY	BOTANICAL NAME	COMMON NAME	CAL	HT.	SPRD.	ROOT	COMMENTS
	SHRUBS - TYP. SPACING 2'-3' O.C.						
CAR	Clethra alnifolia 'Rosea'	Pink Summersweet		2'-2.5'		#5 Can	Full Plants, 3' O.C.
EK	Euonymus kiautschovicus 'Manhattan'	Manhattan Euonymus		2.5'-3'		#5 Can	Full Plants, 2' O.C., Hedge
GB	Gaylussacia baccata	Black Huckleberry		2'-2.5'		#5 Can	Full Plants, 3' O.C.
HV	Hamemelis virginiana	Common Witchhazel		3'-4'		#7 Can	Full Plants, 3' O.C.
HQP	Hydrangea quercifolia 'Pee Wee'	Pee Wee Oakleaf Hydrangea		2'-2.5'		#3 Can	Full Plants, 2.5' O.C.
HCB	Hypericum calycinum 'Briggadoon'	Gold St. Johnswort		2'-2.5'		#3 Can	Full Plants, 2' O.C.
IGC	Ilex glabra 'Compacta'	Compact Inkberry		2.5'-3'		#5 Can	Full Plants, 2' O.C.
IGS	Ilex glabra 'Shamrock'	Shamrock Inkberry		2'-2.5'		#3 Can	Full Plants, 2' O.C.
IVR	Ilex verticillata 'Red Sprite' (I.v. 'nana') pollinator Jim Dandy	Red Sprite Female Winterberry		2.5'-3'		#5 Can	Full Plants, 2' O.C. plant one Jim Dandy for every 5 Red Sprite
IT	Itea virginica 'Sprich'	Little Henry Sweetspire		2'-2.5'		#3 Can	Full Plants, 2.5' O.C.
KL	Kalmia latifolia	Mountian Laurel		2.5'-3'		#5 Can	Full Plants, 3' O.C.
MP	Morella (Myrica) pensylvanica	Northern Bayberry		2.5'-3'		#5 Can	Full Plants, 2.5' O.C.
JVO	Juniperus virginiana 'Grey Owl'	Grey Owl Juniper		18"-24"		#2 Can	Full Plants, 2' O.C.
PLO	Prunus laurocerasus 'Otto Luyken'	Otto Luyken Cherry Laurel		2.5'-3'		#7 Can	Full Plants, 3' O.C.
RAG	Rhus aromatica Glo-Low	Gro-Low Fragrant Sumac		18"-24"		#5 Can	Full Plants, 2' O.C.
RXR	Rosa x 'Radrazz'	Knockout Shrub Rose (Red)		2.5'-3'		#5 Can	Full Plants, 2.5' O.C.
VON	Viburnum opulus 'Nanum'	Dwarf Cranberrybush		2.5'-3'		#5 Can	Full Plants, 3' O.C.
	PERENNIALS, GROUNDCOVER & ORNAMENTAL GRASSES - TYP. SPACING 18"24" O.C.						
AF	Achillea filipendulina	Coronation Gold 'Yarrow				1 Gal.	Full Plants, 18" O.C.
ANB	Aster novi-belgii 'Alice Haslam'	Alice Haslam New York Aster				1 Gal.	Full Plants, 18" O.C.
BGB	Bouteloua gracilis 'Blonde Ambition'	Blue grama grass				2 Gal.	Full Plants, 18" O.C.
CC	Carex cherokeensis	Cherokee Sedge				1 Gal.	Full Plants, 18" O.C.
CLW	Coreopsis lanceolata 'Walter'	Walter lance-leaf Coreopsis				2 Gal.	Full Plants, 18" O.C.
EPR	Echinacea purpurea 'Raspberry Tart'	Raspberry Tart Coneflower				2 Gal.	Full Plants, 18" O.C.
ES	Eragrostis spectabilis	Purple Lovegrass				1 Gal.	Full Plants, 18" O.C.
GR	Geranium 'Rozanne'	Cranesbill				2 Gal.	Full Plants, 18" O.C.
HSD	Hemerocallis 'Stella D'Oro'	Stella D'Oro Daylilly				2 Gal.	Full Plants, 18" O.C.
LMB	Liriope muscari 'Big Blue'	Big Blue Lilyturf				1 Gal.	Full Plants, 12" O.C.
MS	Matteuccia struthiopteris	Ostrich fern				2 Gal.	Full Plants, 18" O.C.
NFW	Nepeta x faassenii 'Walkers low'	Catmint				3 Gal.	Full Plants, 2' O.C.
OC	Osmunda cinnamonea	Cinnamon Fern				2 Gal.	Full Plants, 3' O.C.
PVS	Panicum virgatum 'Shenandoah'	Shenandoah Switchgrass				2 Gal.	Full Plants, 2' O.C.
RFG	Rudbeckia fulgida 'Goldstrum'	Black-Eyed Susan				2 Gal.	Full Plants, 2' O.C.
SSS	Schizachyrium scoparium 'Standing Ovation'	Standing Ovation Little Bluestem				3 Gal.	Full Plants, 18" O.C.
SH	Sporobolus heterolepis	Prairie Dropseed				2 Gal.	Full Plants, 18" O.C.
TCR	Tiarella cordifolia Running Tapestry	Running Tapestry Foamflower				2 Gal.	Full Plants, 18" O.C.

PLANT LIST- FOUNDATION

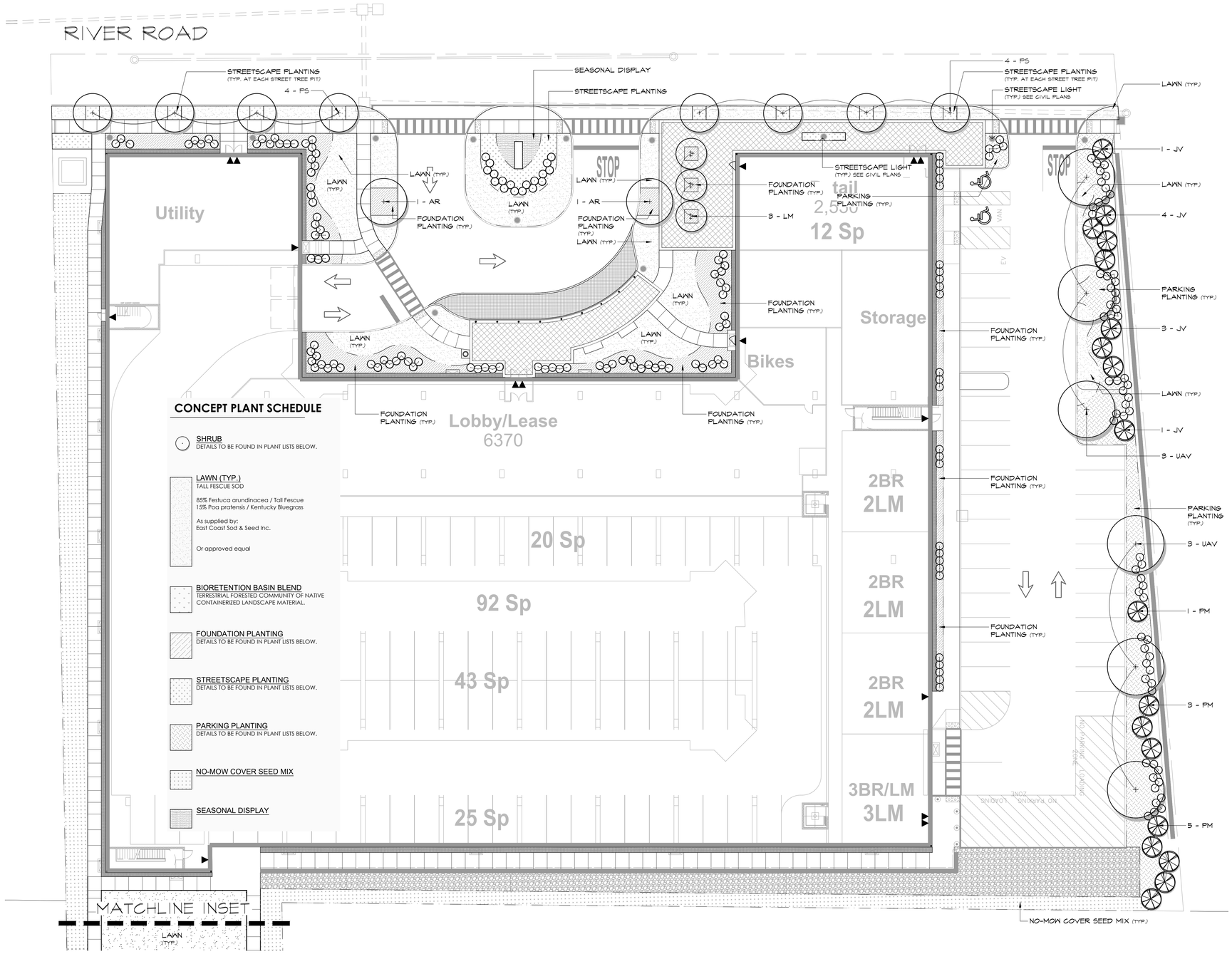
KEY	BOTANICAL NAME	COMMON NAME	CAL	HT.	SPRD.	ROOT	COMMENTS
	SHRUBS - TYP. SPACING 2'-3' O.C.						
AMV	Aronia melonacarpa 'Viking'	Black Chokeberry		2.5'-3'		#5 Can	Full Plants, 2.5' O.C.
CAR	Clethra alnifolia 'Rosea'	Pink Summersweet		2'-2.5'		#5 Can	Full Plants, 3' O.C.
EK	Euonymus kiautschovicus 'Manhattan'	Manhattan Euonymus		2.5'-3'		#5 Can	Full Plants, 2' O.C., Hedge
GB	Gaylussacia baccata	Black Huckleberry		2'-2.5'		#5 Can	Full Plants, 3' O.C.
HV	Hamemelis virginiana	Common Witchhazel		3'-4'		#7 Can	Full Plants, 3' O.C.
HMP	Hydrangea macrophylla 'Mini Penny'	Mini Penny Hydrangea		2'-2.5'		#3 Can	Full Plants, 2.5' O.C.
HYM	Hydrangea macrophylla 'Balmacrofive'	Summer Crushy Hydrangea		2'-2.5'		#3 Can	Full Plants, 2.5' O.C.
HQP	Hydrangea quercifolia 'Pee Wee'	Pee Wee Oakleaf Hydrangea		2'-2.5'		#3 Can	Full Plants, 2.5' O.C.
HCB	Hypericum calycinum 'Briggadoon'	Gold St. Johnswort		2'-2.5'		#3 Can	Full Plants, 2' O.C.
IGC	Ilex glabra 'Compacta'	Compact Inkberry		2.5'-3'		#5 Can	Full Plants, 2' O.C.
IGS	Ilex glabra 'Shamrock'	Shamrock Inkberry		2'-2.5'		#3 Can	Full Plants, 2' O.C.
IVR	Ilex verticillata 'Red Sprite' (I.v. 'nana') pollinator Jim Dandy	Red Sprite Female Winterberry		2.5'-3'		#5 Can	Full Plants, 2' O.C. plant one Jim Dandy for every 5 Red Sprite
KL	Kalmia latifolia	Mountian Laurel		2.5'-3'		#5 Can	Full Plants, 3' O.C.
IT	Itea virginica 'Sprich'	Little Henry Sweetspire		2'-2.5'		#3 Can	Full Plants, 2.5' O.C.
JVO	Juniperus virginiana 'Grey Owl'	Grey Owl Juniper		18"-24"		#2 Can	Full Plants, 2' O.C.
MP	Morella (Myrica) pensylvanica	Northern Bayberry		2.5'-3'		#5 Can	Full Plants, 2.5' O.C.
PLO	Prunus laurocerasus 'Otto Luyken'	Otto Luyken Cherry Laurel		2.5'-3'		#7 Can	Full Plants, 3' O.C.
RAG	Rhus aromatica Glo-Low	Gro-Low Fragrant Sumac		18"-24"		#5 Can	Full Plants, 2' O.C.
RXR	Rosa x 'Radrazz'	Knockout Shrub Rose (Red)		2.5'-3'		#5 Can	Full Plants, 2.5' O.C.
RID	Rosa 'Meigalpio' (Red Drift)	Red Drift Rose		18"-24"		#3 Can	Full Plants, 2' O.C.
VON	Viburnum opulus 'Nanum'	Dwarf Cranberrybush		2.5'-3'		#5 Can	Full Plants, 3' O.C.
	PERENNIALS, GROUNDCOVER & ORNAMENTAL GRASSES - TYP. SPACING 18"24" O.C.						
BGB	Bouteloua gracilis 'Blonde Ambition'	Blue grama grass				2 Gal.	Full Plants, 18" O.C.
CC	Carex cherokeensis	Cherokee Sedge				1 Gal.	Full Plants, 18" O.C.
CAK	Calamagrostis arund. 'Karl Foerster'	K. F. Feather Reed Grass				3 Gal.	Full Plants, 2' O.C.
CLW	Coreopsis lanceolata 'Walter'	Walter lance-leaf Coreopsis				2 Gal.	Full Plants, 18" O.C.
DC	Deschampsia cespitosa	Tuffted Hair Grass				1 Gal.	Full Plants, 1' O.C.
EPR	Echinacea purpurea 'Raspberry Tart'	Raspberry Tart Coneflower				2 Gal.	Full Plants, 18" O.C.
ES	Eragrostis spectabilis	Purple Lovegrass				1 Gal.	Full Plants, 18" O.C.
GR	Geranium 'Rozanne'	Cranesbill				2 Gal.	Full Plants, 18" O.C.
HSD	Hemerocallis 'Stella D'Oro'	Stella D'Oro Daylilly				2 Gal.	Full Plants, 18" O.C.
HSE	Hosta sieboldiana 'Elegans'	Siebold Plantain Lily				2 Gal.	Full Plants, 18" O.C.
IV	Iris versicolor	Blue Flag				1 Gal.	Full Plants, 18" O.C.
LMB	Liriope muscari 'Big Blue'	Big Blue Lilyturf				1 Gal.	Full Plants, 12" O.C.
NT	Nessella tenuissima	Finestem Needlegrass				2 Gal.	Full Plants, 18" O.C.
OC	Osmunda cinnamonea	Cinnamon Fern				2 Gal.	Full Plants, 3' O.C.
PVS	Panicum virgatum 'Shenandoah'	Shenandoah Switchgrass				2 Gal.	Full Plants, 2' O.C.
RFG	Rudbeckia fulgida 'Goldstrum'	Black-Eyed Susan				2 Gal.	Full Plants, 2' O.C.
SSS	Schizachyrium scoparium 'Standing Ovation'	Standing Ovation Little Bluestem				3 Gal.	Full Plants, 18" O.C.
SH	Sporobolus heterolepis	Prairie Dropseed				2 Gal.	Full Plants, 18" O.C.
TCR	Tiarella cordifolia Running Tapestry	Running Tapestry Foamflower				2 Gal.	Full Plants, 18" O.C.

PLANT LIST- STREETSCAPE

KEY	BOTANICAL NAME	COMMON NAME	CAL	HT.	SPRD.	ROOT	COMMENTS
	SHRUBS - TYP. SPACING 2'-3' O.C.						
CAR	Clethra alnifolia 'Rosea'	Pink Summersweet		2'-2.5'		#5 Can	Full Plants, 3' O.C.
GB	Gaylussacia baccata	Black Huckleberry		2'-2.5'		#5 Can	Full Plants, 3' O.C.
HV	Hamemelis virginiana	Common Witchhazel		3'-4'		#7 Can	Full Plants, 3' O.C.
HCB	Hypericum calycinum 'Briggadoon'	Gold St. Johnswort		2'-2.5'		#3 Can	Full Plants, 2' O.C.
JVO	Juniperus virginiana 'Grey Owl'	Grey Owl Juniper		18"-24"		#2 Can	Full Plants, 2' O.C.
RAG	Rhus aromatica Glo-Low	Gro-Low Fragrant Sumac		18"-24"		#5 Can	Full Plants, 2' O.C.
RXR	Rosa x 'Radrazz'	Knockout Shrub Rose (Red)		2.5'-3'		#5 Can	Full Plants, 2.5' O.C.
RID	Rosa 'Meigalpio' (Red Drift)	Red Drift Rose		18"-24"		#3 Can	Full Plants, 2' O.C.
	PERENNIALS, GROUNDCOVER & ORNAMENTAL GRASSES - TYP. SPACING 18"24" O.C.						
BGB	Bouteloua gracilis 'Blonde Ambition'	Blue grama grass				2 Gal.	Full Plants, 18" O.C.
CC	Carex cherokeensis	Cherokee Sedge				1 Gal.	Full Plants, 18" O.C.
CAK	Calamagrostis arund. 'Karl Foerster'	K. F. Feather Reed Grass				3 Gal.	Full Plants, 2' O.C.
EPR	Echinacea purpurea 'Raspberry Tart'	Raspberry Tart Coneflower				2 Gal.	Full Plants, 18" O.C.
ES	Eragrostis spectabilis	Purple Lovegrass				1 Gal.	Full Plants, 18" O.C.
GR	Geranium 'Rozanne'	Cranesbill				2 Gal.	Full Plants, 18" O.C.
HSD	Hemerocallis 'Stella D'Oro'	Stella D'Oro Daylilly				2 Gal.	Full Plants, 18" O.C.
LMB	Liriope muscari 'Big Blue'	Big Blue Lilyturf				1 Gal.	Full Plants, 12" O.C.
NT	Nessella tenuissima	Finestem Needlegrass				2 Gal.	Full Plants, 18" O.C.
NFW	Nepeta x faassenii 'Walkers low'	Catmint				2 Gal.	Full Plants, 2' O.C.
RFG	Rudbeckia fulgida 'Goldstrum'	Black-Eyed Susan				2 Gal.	Full Plants, 2' O.C.
SSS	Schizachyrium scoparium 'Standing Ovation'	Standing Ovation Little Bluestem				3 Gal.	Full Plants, 18" O.C.
SH	Sporobolus heterolepis	Prairie Dropseed				2 Gal.	Full Plants, 18" O.C.

PLANT SCHEDULE

CODE	QTY	BOTANICAL / COMMON NAME	CAL	HT.	CONT	COMMENTS
SHADE TREES						
AR	2	Acer rubrum 'Red Sunset' / Red Sunset Maple	3"-3.5" cal.	14'-16'	B&B	Full Specimens, headed to 7'
GTS	4	Gleditsia triacanthos inermis 'Shademaster' / Shademaster Honey Locust	2.5-3" cal.	12'-14'	B&B	Full Specimens, headed to 7'
UAV	6	Ulmus americana 'Valley Forge' / Valley Forge American Elm	2.5-3" cal.	12'-14'	B&B	Full Specimens, headed to 7'
EVERGREEN TREES						
JV	14	Juniperus virginiana 'Emerald Sentinel' / Eastern Red Cedar 'Emerald Sentinel'	-	8'-10'	B&B	Full, uniform specimens, branched to the ground
JV2	6	Juniperus virginiana 'Brodie' / Eastern Red Cedar 'Brodie'	-	10'-12'	B&B	Full, uniform specimens, branched to the ground
PM	9	Pseudotsuga menziesii / Douglas Fir	-	8'-10'	B&B	Full, uniform specimens, branched to the ground
ORNAMENTAL TREES						
LM	3	Lagerstroemia indica x fauriei 'Muskogee' / Muskogee Crape Myrtle	(1) @ 2" cal.	10'-12'	B&B	Heavy, Multi-stemmed specimens, 3-5 canes
PS	8	Prunus sargentii / Sargent Cherry	3"-3.5" cal.	8'-10'	B&B	Full Furnished Specimens, 6' Branch Height



0 8' 16' 32' 64'

Streetscape - Planting Plan
Landscape Plan

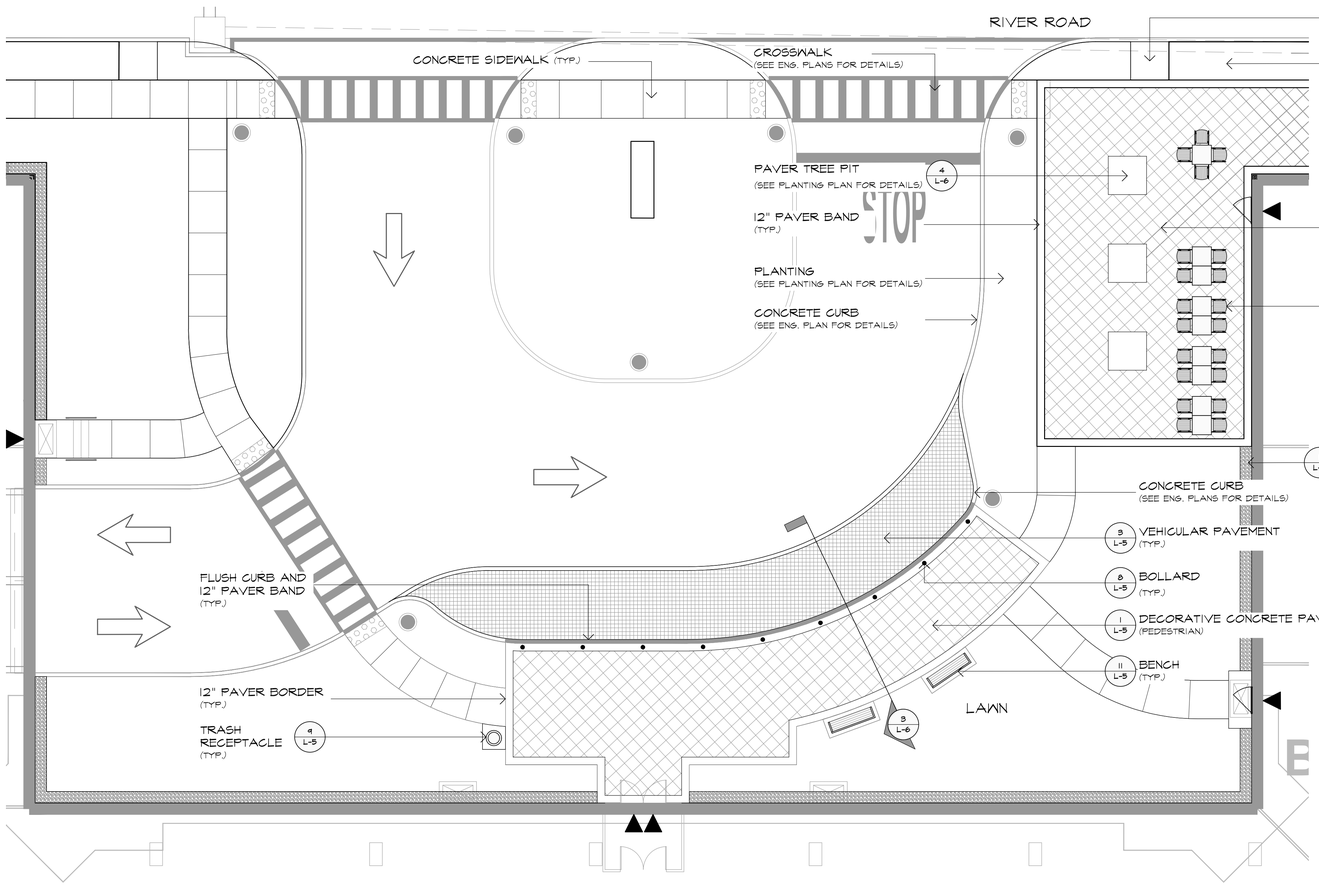
BNE Chatham
Chatham, New Jersey

MBC
MELILLO • BAUER • CARMAN
LANDSCAPE ARCHITECTURE
200 Union Avenue, Brielle, NJ 08730
295 Newark Avenue, Jersey City, NJ 07302
732-528-0664
www.mbcla.design
NJCA No. 21MH00001700

NO.	DATE	REVISION

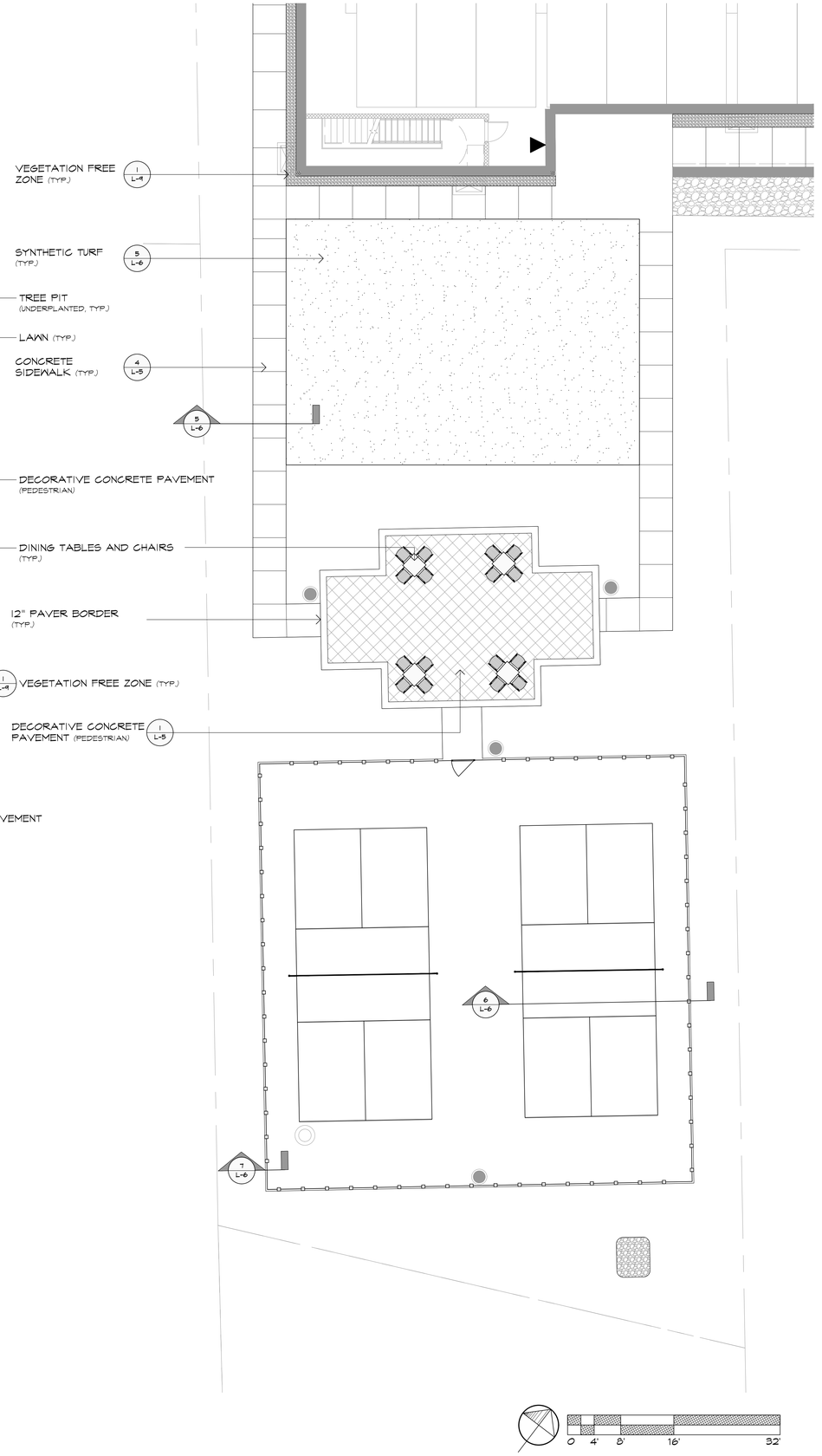
SCALE: 1/16"-1'-0"
DATE: 01/15/2026 | JOB NO.: 25-156

DRAWING NO.
L-2



1 L-3 ENLARGEMENT: DROP-OFF

1/8" = 1'-0"



2 L-3 ENLARGEMENT: AMENITY SPACE / PICKLEBALL COURTS

1/8" = 1'-0"

Streetscape - Enlargements
Landscape Plan

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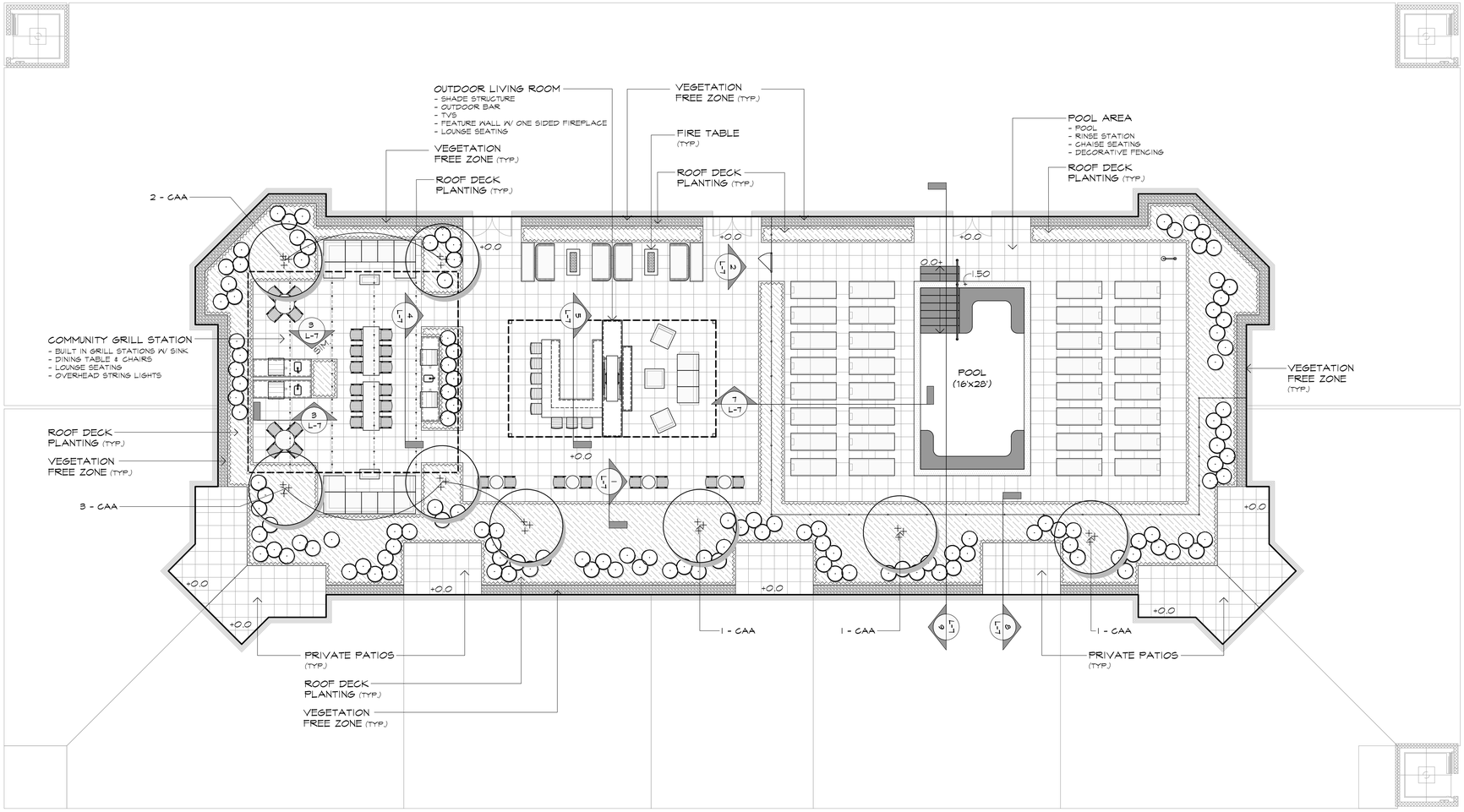
DRAWING NO.
L-3



PLANT SCHEDULE

CODE	QTY	BOTANICAL / COMMON NAME	CAL	HT.	CONT	COMMENTS
ORNAMENTAL TREES						
CAA	8	Cercis canadensis 'Ace of Hearts' / Ace of Hearts Eastern Redbud	(1) @ 2" cal.	8'-10'	B&B	Heavy, Multi-stemmed specimens, 3-5 canes

CONCEPT PLANT SCHEDULE

SHRUB
DETAILS TO BE FOUND IN PLANT LISTS BELOW.

ROOF DECK PLANTING

PLANT LIST- AMENITY ROOF DECK

KEY	BOTANICAL NAME	COMMON NAME	CAL	HT.	SPRD.	ROOT	COMMENTS
	SHRUBS - TYP. SPACING 2'-3' O.C.						
CAR	Clethra alnifolia 'Rosea'	Pink Summersweet		2'-2.5'		#5 Can	Full Plants, 3' O.C.
HMP	Hydrangea macrophylla 'Mini Penny'	Mini Penny Hydrangea		2'-2.5'		#3 Can	Full Plants, 2.5' O.C.
HQP	Hydrangea quercifolia 'Pee Wee'	Pee Wee Oakleaf Hydrangea		2'-2.5'		#3 Can	Full Plants, 2.5' O.C.
HCB	Hypericum calycinum 'Briggadoon'	Gold St. Johnswort		2'-2.5'		#3 Can	Full Plants, 2' O.C.
IGS	Ilex glabra 'Shamrock' pollinator Jim Dandy	Shamrock Inkberry		2'-2.5'		#3 Can	Full Plants, 2' O.C., plant one Jim Dandy for every 5 Red Sprite
IT	Itea virginica 'Sprich'	Little Henry Sweetspire		2'-2.5'		#3 Can	Full Plants, 2.5' O.C.
PLO	Prunus laurocerasus 'Otto Luyken'	Otto Luyken Cherry Laurel		2.5'-3'		#7 Can	Full Plants, 3' O.C.
RAG	Rhus aromatica Glo-Low	Gro-Low Fragrant Sumac		18"-24"		#5 Can	Full Plants, 2' O.C.
RXR	Rosa x 'Radrazz'	Knockout Shrub Rose (Red)		2.5'-3'		#5 Can	Full Plants, 2.5' O.C.
RID	Rosa 'Meigalpio' (Red Drift)	Red Drift Rose		18"-24"		#3 Can	Full Plants, 2' O.C.
	PERENNIALS, GROUNDCOVER & ORNAMENTAL GRASSES - TYP. SPACING 18"24" O.C.						
BGB	Bouteloua gracilis 'Blonde Ambition'	Blue grama grass				2 Gal.	Full Plants, 18" O.C.
CC	Carex cherokeensis	Cherokee Sedge				1 Gal.	Full Plants, 18" O.C.
CAK	Calamagrostis arund. 'Karl Foerster'	K. F. Feather Reed Grass				3 Gal.	Full Plants, 2' O.C.
CLW	Coreopsis lanceolata 'Walter'	Walter lance-leaf Coreopsis				2 Gal.	Full Plants, 18" O.C.
EPR	Echinacea purpurea 'Raspberry Tart'	Raspberry Tart Coneflower				2 Gal.	Full Plants, 18" O.C.
HSD	Hemerocallis 'Stella D'Oro'	Stella D'Oro Daylilly				2 Gal.	Full Plants, 18" O.C.
HSE	Hosta sieboldiana 'Elegans'	Siebold Plantain Lily				2 Gal.	Full Plants, 18" O.C.
IV	Iris versicolor	Blue Flag				1 Gal.	Full Plants, 18" O.C.
LMB	Liriope muscari 'Big Blue'	Big Blue Lilyturf				1 Gal.	Full Plants, 12" O.C.
OC	Osmunda cinnamonea	Cinnamon Fern				2 Gal.	Full Plants, 3' O.C.
PVS	Panicum virgatum 'Shenandoah'	Shenandoah Switchgrass				2 Gal.	Full Plants, 2' O.C.
RFG	Rudbeckia fulgida 'Goldstrum'	Black-Eyed Susan				2 Gal.	Full Plants, 2' O.C.
SSS	Schizachyrium scoparium 'Standing Ovation'	Standing Ovation Little Bluestem				3 Gal.	Full Plants, 18" O.C.

0 4' 8' 16' 32'

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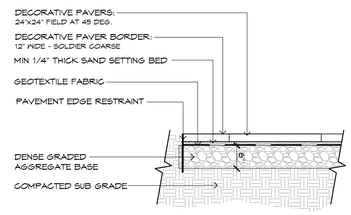
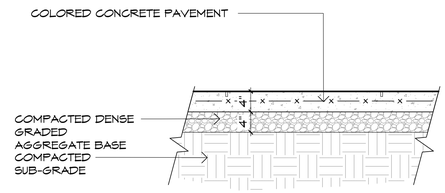
DRAWING NO.
L-4



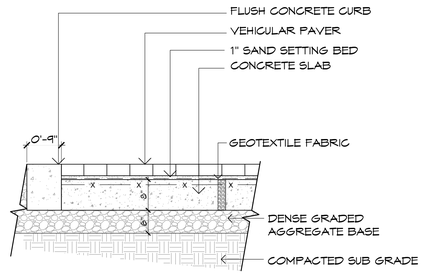
1 L-5 DECORATIVE PAVERS: PEDESTRIAN

3/4" = 1'-0"



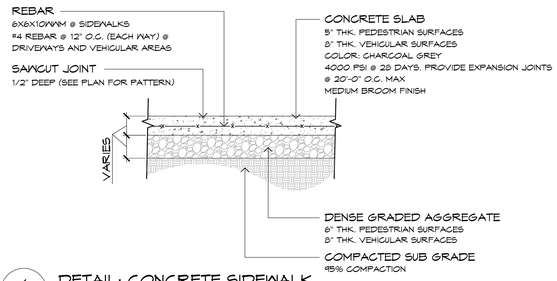
2 L-5 DECORATIVE CONCRETE PAVEMENT

1" = 1'-0"



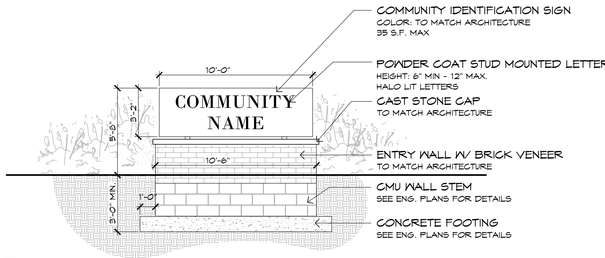
3 L-5 SECTION: VEHICULAR PAVER

3/4" = 1'-0"



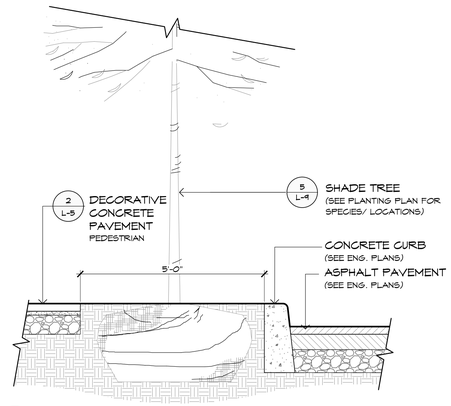
4 L-5 DETAIL: CONCRETE SIDEWALK

3/4" = 1'-0"



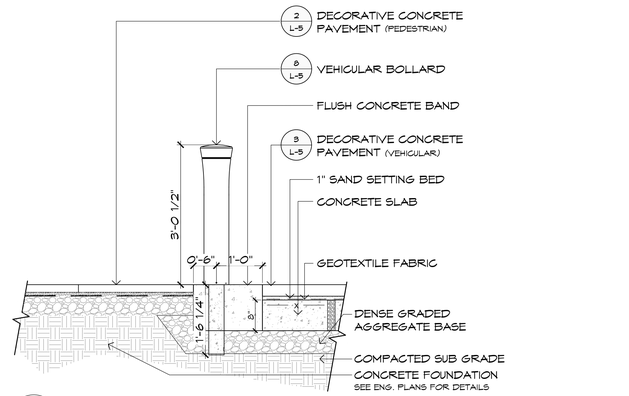
5 L-5 DETAIL: COMMUNITY IDENTIFICATION SIGNAGE

1/4" = 1'-0"



6 L-5 DETAIL: TREE PIT

3/4" = 1'-0"



7 L-5 SECTION: FLUSH CURB AT DROP-OFF

3/4" = 1'-0"

VEHICULAR BOLLARD
BOLLARD MODEL: NORTHPORT
COLOR/FINISH: FOG / POWDERCOATED

AS MFG. BY: LANDSCAPE FORMS
WWW.LANDSCAPEFORMS.COM
INSTALL PER MFG. RECOMMENDATIONS.

SEE CIVIL PLANS FOR ATTACHMENT AND
CORE DETAIL

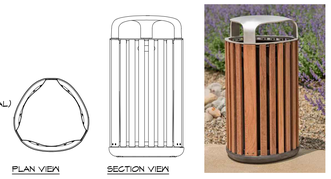
8 L-5 DETAIL: VEHICULAR BOLLARD

3/4" = 1'-0"

LITTER RECEPTACLE
MODEL: FGP LITTER
COLOR/FINISH: TO BE SELECTED BY L.A.

AS MFG. BY: LANDSCAPE FORMS
WWW.LANDSCAPEFORMS.COM
INSTALL PER MFG. RECOMMENDATIONS

(OR LANDSCAPE ARCHITECT APPROVED EQUAL)



9 L-5 DETAIL: LITTER RECEPTACLE

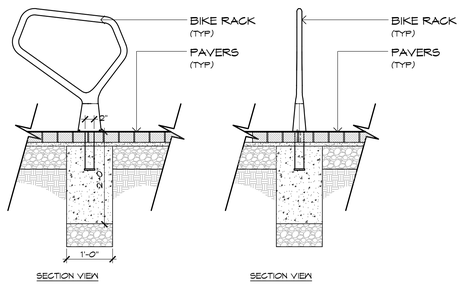
3/4" = 1'-0"

BIKE RACK (EMBEDDED)
MODEL: FGP BIKE RACK
COLOR/FINISH: TO BE DETERMINED BY L.A.
QUANTITY: 4

AS MFG. BY: LANDSCAPE FORMS
WWW.LANDSCAPEFORMS.COM
INSTALL PER MFG. RECOMMENDATIONS.

(OR LANDSCAPE ARCHITECT APPROVED EQUAL)

PLAN VIEW



10 L-5 DETAIL: BIKE RACK

3/4" = 1'-0"

BENCH
MODEL: PLAINWELL BENCH
COLOR/FINISH: TO BE SELECTED BY L.A.

AS MFG. BY: LANDSCAPE FORMS
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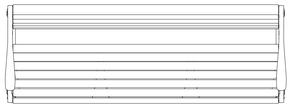
INSTALL PER MFG. RECOMMENDATIONS.

(OR LANDSCAPE ARCHITECT APPROVED EQUAL)



PLAN VIEW

SECTION VIEW

11 L-5 DETAIL: BENCH

3/4" = 1'-0"

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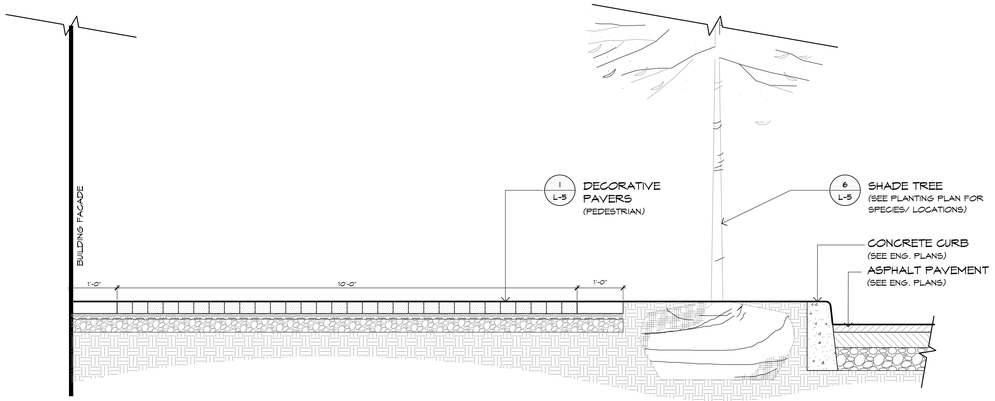
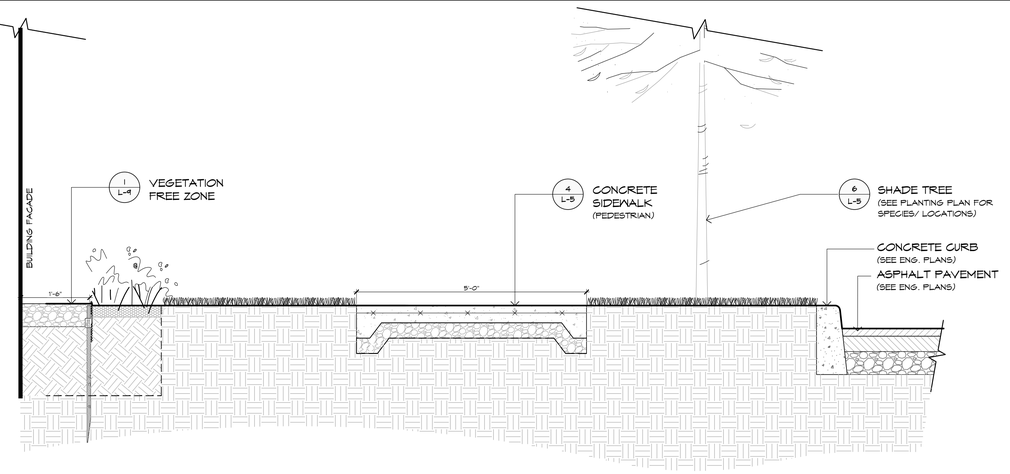
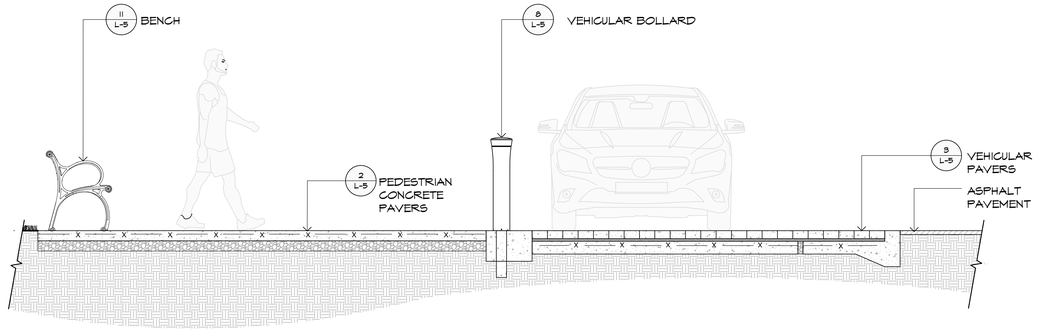
DRAWING NO.
L-5



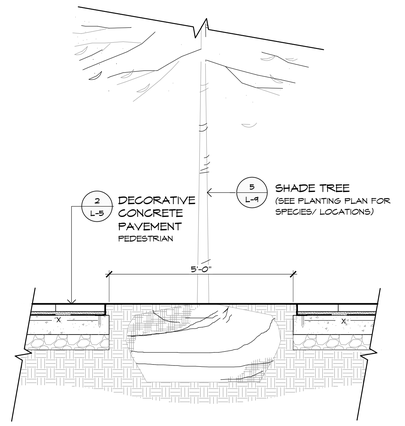
1 L-6 SECTION: PEDESTRIAN WALKWAY AND TREE PIT
3/4" = 1'-0"



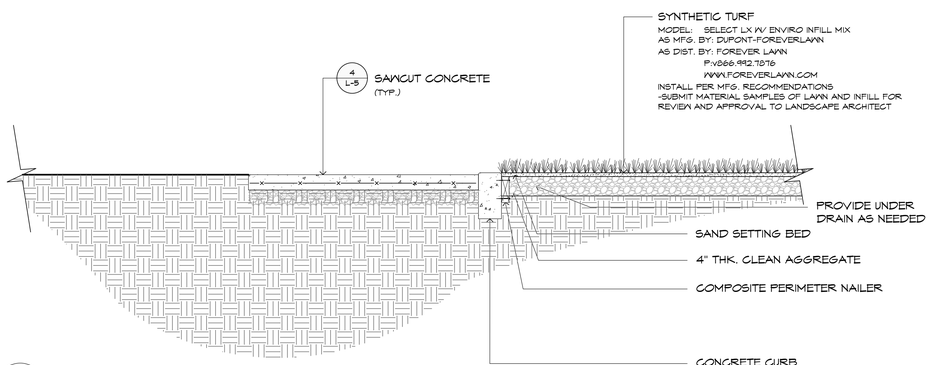
2 L-6 SECTION: SIDEWALK
3/4" = 1'-0"



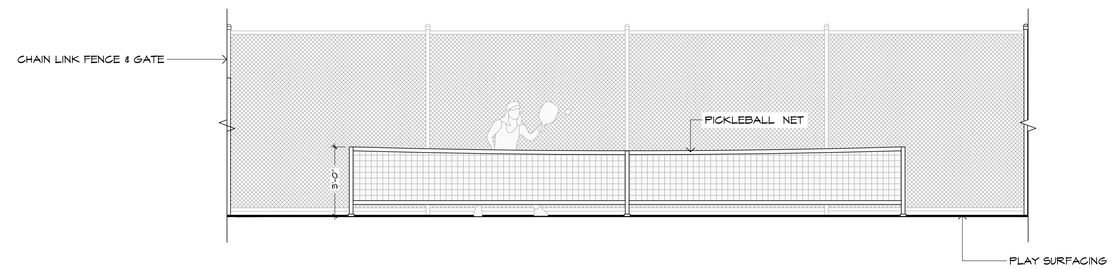
3 L-6 SECTION: LOBBY ENTRY
1/2" = 1'-0"



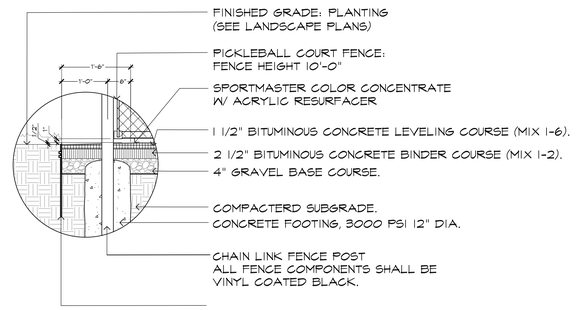
4 L-6 SECTION: PAVER TREE PIT
3/4" = 1'-0"



5 L-6 SECTION: ON-GRADE SAWCUT CONCRETE & SYNTHETIC TURF
3/4" = 1'-0"



6 L-6 SECTION: PICKLEBALL COURT
3/8" = 1'-0"



7 L-6 DETAIL: PICKLEBALL FENCE AND COURT
3/4" = 1'-0"

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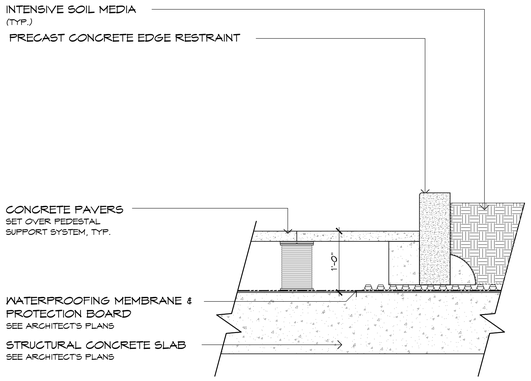
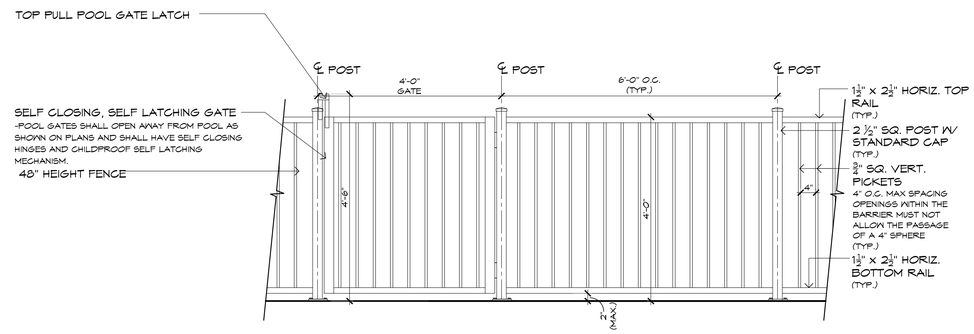


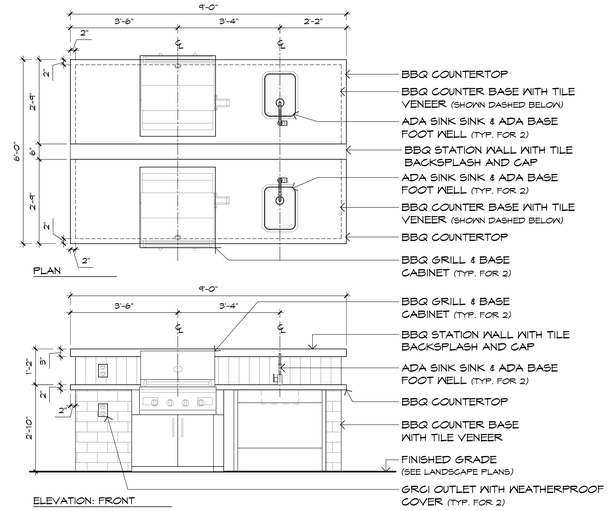
1 L-7 SECTION: INTENSIVE PLANTING PEDESTAL PAVER TRANSITION

1" = 1'-0"



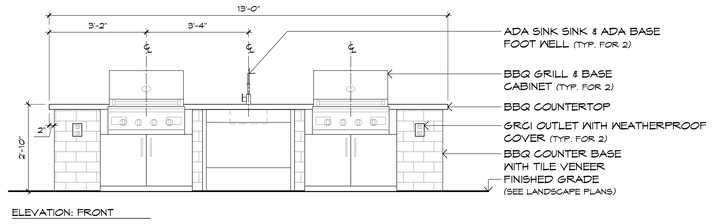
2 L-7 ELEVATION: POOL ENCLOSURE FENCE

3/4" = 1'-0"



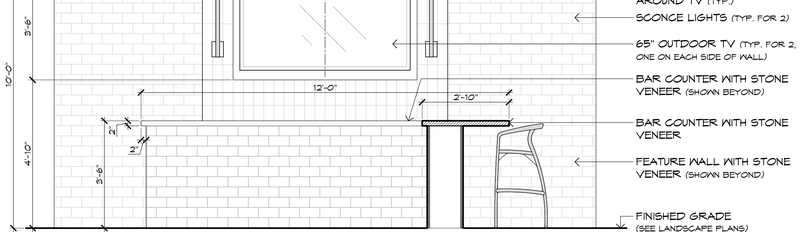
3 L-7 ELEVATION: BBQ GRILL STATION - SINGLE

1/2" = 1'-0"



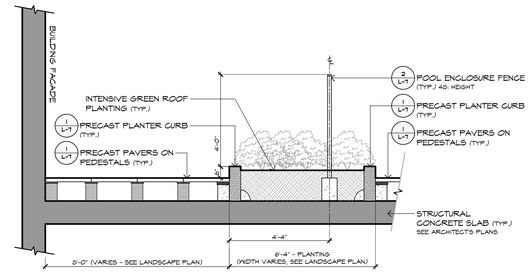
4 L-7 ELEVATION: BBQ GRILL STATION - DOUBLE

1/2" = 1'-0"



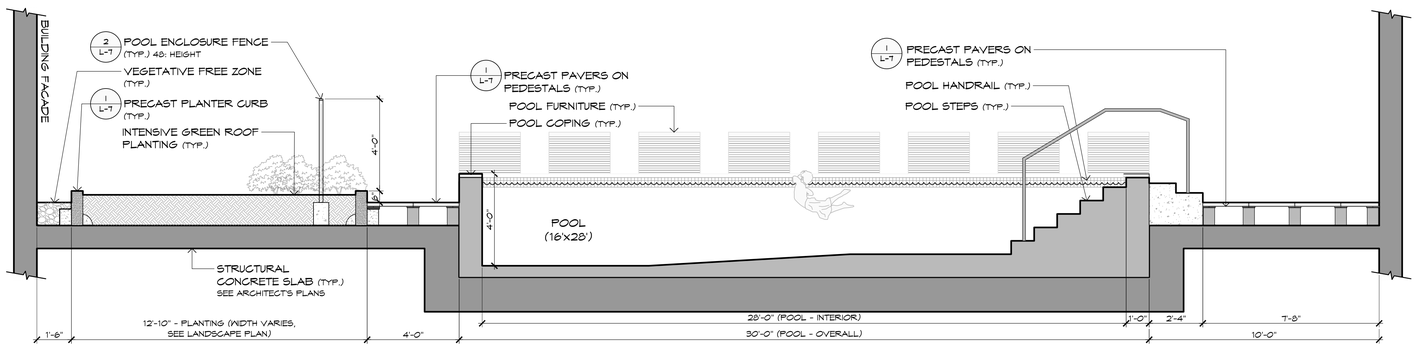
5 L-7 ELEVATION: GRILL & FEATURE WALL

1/2" = 1'-0"



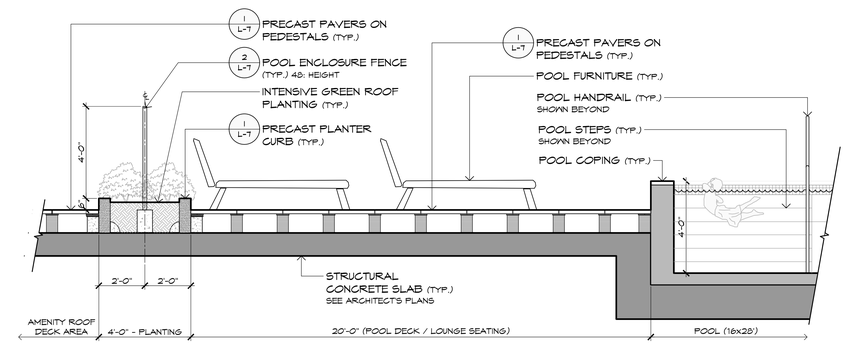
8 L-7 SECTION: PRIVATE TERRACE

1/2" = 1'-0"



6 L-7 SECTION: POOL DECK

3/8" = 1'-0"



7 L-7 SECTION: POOL DECK LOUNGE SEATING

3/8" = 1'-0"

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DRAWING NO.
L-7

1. THE CONTRACTOR SHALL FURNISH QUANTITIES NECESSARY TO COMPLETE THE PLANTING AS SHOWN ON THE PLANTING PLANS.
   A. ALL PLANTS SHALL EQUAL OR EXCEED MEASUREMENTS SPECIFIED IN THE PLANT LIST WHICH ARE THE MINIMUM ACCEPTABLE.
   B. PLANTS SHALL BE MEASURED BEFORE PRUNING. NECESSARY PRUNING SHALL BE PERFORMED AFTER THE PLANT IS UNTIED AND PRIOR TO INSTALLATION. LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY MAJOR PRUNING REQUIREMENTS DUE TO DAMAGE. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL THAT NEEDS SIGNIFICANT PRUNING DUE TO DAMAGE FROM SHIPMENT OR HANDLING.
   C. WHEN FORMAL ARRANGEMENTS OR CONSECUTIVE ORDER OF TREES OR SHRUBS IS SHOWN, STOCK SHALL BE SELECTED FOR UNIFORM HEIGHT AND SPREAD AND LABELED BY NUMBER TO ASSURE SYMMETRY IN PLANTING.
2. WHEN ALL PLANT MATERIAL HAS BEEN SELECTED AND PRE-TAGGED BY THE LANDSCAPE CONTRACTOR, THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED IN ORDER TO SCHEDULE HIS NURSERY INSPECTION WITH A MINIMUM OF 3 DAYS ADVANCE NOTICE.
   A. THE CONTRACTOR SHALL ACCOMPANY THE LANDSCAPE ARCHITECT ON ALL INSPECTIONS.
   B. THE CONTRACTOR SHALL HAVE SUFFICIENT ALTERNATE CHOICES TO PREVENT LOSS OF TIME IN THE EVENT THAT SOME TREES FAIL TO MEET THE APPROVAL OF THE LANDSCAPE ARCHITECT.
   C. ALL TREES MUST BE APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT BEFORE DIGGING BEGINS.
3. LOCATIONS OF PLANT MATERIAL SHOWN ON PLANS ARE APPROXIMATE. FINAL LOCATIONS WILL VARY FROM PLAN AND SHALL BE DETERMINED IN THE FIELD UNDER THE DIRECTION OF THE LANDSCAPE ARCHITECT.
   A. CONTRACTOR SHALL PROVIDE PRE-MARKED, COLOR-CODED FLAGS FOR ALL SHADE TREES, EVERGREEN TREES AND FLOWERING TREES.
   B. LANDSCAPE ARCHITECT SHALL PLACE THE COLOR-CODED FLAGS TO INDICATE PLANT LOCATIONS.
   C. CONTRACTOR SHALL PLACE TREES ABOVE GROUND IN ACCORDANCE WITH THE FLAGGED LOCATION. THE LANDSCAPE ARCHITECT MAY REQUEST THE CONTRACTOR TO MOVE, TURN OR RELOCATE THE PLANT MATERIAL AT THIS TIME. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR PRE-DIG TREE PITS.
   D. UPON FINAL APPROVAL BY THE LANDSCAPE ARCHITECT OF TREE PLACEMENT, CONTRACTOR SHALL PAINT A CIRCLE AROUND THE BALL OF THE TREE, MOVE TREE AND EXCAVATE TREE PIT.
4. PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY; HAVE NORMAL GROWTH HABITS; WELL DEVELOPED BRANCHES, DENSELY FOLIATED; VIGOROUS ROOT SYSTEMS, BE FREE FROM DEFECTS AND INJURIES AND COMPLY WITH ANY SPECIAL INSTRUCTIONS NOTED WITHIN THE PLANT LIST.
5. PLANT MATERIAL SHALL BE PLANTED ON THE DAY OF DELIVERY. IN THE EVENT THIS IS NOT POSSIBLE, THE CONTRACTOR SHALL PROTECT PLANT STOCK WHICH HAS NOT BEEN PLANTED. PLANTS SHALL NOT REMAIN UNPLANTED FOR LONGER THAN A THREE DAY PERIOD AFTER DELIVERY.
6. QUALITY, BRANCHING AND SIZE OF PLANTS, INCLUDING ROOT SIZE, SHALL BE IN ACCORDANCE WITH "AMERICAN STANDARDS FOR NURSERY STOCK" ANSI Z60.1-2014 (OR MOST RECENT EDITION) AS PUBLISHED BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION.
7. B&B PLANTS SHALL BE HANDLED FROM THE BOTTOM OF THE ROOT BALL ONLY. PLANTS WITH BROKEN, SPLIT OR DAMAGED ROOT BALLS SHALL BE REJECTED.
8. ALL PLANTING BEDS SHALL BE MULCHED TO A DEPTH OF 3-4 INCHES WITH SHREDDED HARDWOOD BARK MULCH. MULCH SHOULD NOT COME INTO CONTACT WITH THE ROOT COLLAR OF TREES OR SHRUBS. THE TOP OF THE ROOT BALL FOR ALL B&B PLANTS SHALL BE EXCAVATED TO EXPOSE THE ROOT FLARE. THE ROOT FLARE SHALL BE AT THE TOP OF THE BALL AND PLANTED LEVEL OR 1" ABOVE FINISHED GRADE. ALL BEDLINES SHALL BE CUT FOUR INCHES DEEP INTO A "V" SHAPED GROOVE TO PROVIDE A WELL DEFINED EDGE. THE LAYOUT OF ALL BEDLINES SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT ON-SITE PRIOR TO CUTTING.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL UTILITY MARK OUTS AND COMPLIANCE WITH ALL FEDERAL, STATE OR LOCAL CODES, LAWFUL ORDERS OR REGULATIONS GOVERNING UPON THIS WORK.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION AND MAINTENANCE OF ALL TREE GUYS, STAKES, SUPPORTS AND MULCH RINGS OR BEDS DURING THE CONSTRUCTION AND MAINTENANCE PERIOD.
11. THE CONTRACTOR SHALL REPORT ANY SOIL OR DRAINAGE CONDITIONS CONSIDERED DETRIMENTAL TO THE GROWTH OF THE PROPOSED PLANT MATERIAL. TREES SHALL BE PRUNED OF ANY BRANCHES THAT INTERFERE WITH PEDESTRIANS, VEHICLES OR SIGNS. SHADE TREES MUST BE SINGLE TRUNK, TREE FORM SPECIMENS. ALL PARKING LOT AND STREET TREES SHALL BE LIMBED TO A HEIGHT OF SEVEN FEET.
12. ANY DISCREPANCY BETWEEN THE PLANS AND FIELD CONDITIONS SHALL BE RESOLVED BY THE LANDSCAPE ARCHITECT IN THE FIELD.
13. ALL PLANTED AREAS & LAWN AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM THROUGH THE USE OF SURFACE OR DRIP-IRRIGATION TO PROVIDE ADEQUATE WATER TO PROMOTE HEALTHY PLANT MATERIAL AND SOUND HORTICULTURAL PRACTICE. IRRIGATION CONTRACTOR SHALL SUBMIT PROPOSED IRRIGATION PLANS TO LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
14. PLANTING OPERATIONS SHALL BE PERFORMED DURING PERIODS WITHIN THE PLANTING SEASON WHEN WEATHER AND SOIL CONDITIONS ARE SUITABLE AND IN ACCORDANCE WITH ACCEPTABLE LOCAL PRACTICE. TREES AND SHRUBS SHOULD BE INSTALLED DURING THE FOLLOWING FALL AND SPRING SEASONS, WITH THE EXCEPTION OF TREES WHICH EXPERIENCE A FALL DIGGING HAZARD WHICH SHOULD ONLY BE PLANTED IN THE SPRING.
15. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A MINIMUM PERIOD OF 1 YEAR FROM THE TIME OF LANDSCAPE APPROVAL BY TOWNSHIP LANDSCAPE ARCHITECT AND/OR REVIEWING AUTHORITY.

FALL AUG. 15-DEC. 15 EVERGREEN TREES
OCT. 15-DEC. 15 DECIDUOUS TREES
SPRING MAR. 1-MAY 15 ALL PLANTS

FALL DIGGING HAZARD	
BETULA VARIETIES	LIRIODENDRON TULIPIFERA
CARPINUS VARIETIES	MALUS-IN LEAF
CELTIS VARIETIES	NYSSA SYLVATICA
CERCIDIPHYLLUM VARIETIES	OSTRYA VARIETIES
CRATAEGUS VARIETIES	PRUNUS-ALL STONE FRUITS
FAGUS VARIETIES	PYRUS VARIETIES
HALESIA VARIETIES	QUERCUS-ALL OAKS EXCEPT Q. PALUSTRIS
ILEX OPACA VARIETIES	SALIX-WEEPING VARIETIES
ALL TREEFORM EVERGREEN ILEX VARIETIES	TILLA TOMENTOSA VARIAETIES
LIQUIDAMBAR VARIETIES	ZELKOVA VARIETIES

1 L-8 NOTE: GENERAL PLANTING

1. ALL PLANTED AREAS AND LAWN SHALL BE IRRIGATED. INTENSIVE AND EXTENSIVE PLANTING SHALL BE ZONED SEPARATELY FOR THE PURPOSES OF IRRIGATION. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PROVIDING IRRIGATION LAYOUT, DETAILS, ETC. PRIOR TO CONSTRUCTION.
2. PLANTER WALLS SHALL BE SLEEVED TO MINIMIZE PENETRATIONS THROUGH PLANTER BOTTOMS FOR IRRIGATION LINES.
3. EXTENSIVE GREEN ROOF IRRIGATION SHALL BE PER LIVE ROOF / AMERICAN HYDROTECH MFG. RECOMMENDATIONS.
4. IRRIGATION REQUIREMENTS - MEP PLANS SHALL INCLUDE A 1 INCH IRRIGATION EXCLUSIVE WATER METER AND A 1 INCH REDUCED-PRESSURE BACK FLOW PREVENTION DEVICE WITH A 1 INCH ISOLATION SHUT-OFF IMMEDIATELY DOWNSTREAM OF THE BACKFLOW PREVENTER AND A 1 INCH DRAIN IN THE PIPE TO REMOVE WATER IN THE LINE.
5. THE IRRIGATION SYSTEM WILL REQUIRE 55 PSI DYNAMIC PRESSURE AT A MAXIMUM FLOW RATE OF 20-GPM AT THE IRRIGATION CONTRACTORS POINT OF CONNECTION OUTSIDE OF THE BUILDING AT THE STREETSCAPE LEVEL & THE ROOFTOP.
6. THE POINT OF CONNECTION SHALL BE A COPPER PIPE STUBBED OUT OF THE BUILDING INTO THE PLANTING MEDIA. ONE STUB OUT SHALL BE PROVIDED FOR EACH FLOOR (STREETSCAPE & ROOFTOP) WITH MALE PIPE THREADS. THIS ALLOWS THE IRRIGATION CONTRACTOR TO THREAD A GATE VALVE TO THE COPPER PIPE OUTSIDE OF THE BUILDING. A WINTERIZATION POINT SHALL BE INSTALLED BY THE IRRIGATION CONTRACTOR IMMEDIATELY DOWNSTREAM OF THE COPPER STUB.
7. A DEDICATED 10 AMP, 120-VOLT CIRCUIT WILL BE REQUIRED TO OPERATE THE IRRIGATION CONTROLLER. THE IRRIGATION CONTROLLER WILL NEED TO BE MOUNTED WITHIN A MECHANICAL ROOM. AN APPROXIMATELY 10 INCH X 18 INCH SQUARE WALL SPACE IS REQUIRED AND NEEDS TO BE PROPERLY GROUNDED. A 1.5 INCH ELECTRICAL CONDUIT TO BE USED FOR THE 24-VOLT IRRIGATION CONTROL WIRES WILL BE NEEDED TO BE ROUTED FROM THE IRRIGATION CONTROLLER AND STUBBED OUT OF THE BUILDING TO THE LOCATION OF THE WATER SUPPLY STUB OUT AT THE STREETSCAPE.

2 L-8 NOTE: IRRIGATION

- TESTING FOR ALL SITE TOPSOIL SHALL BE DONE PRIOR TO PLANTING AND SHALL BE CONDUCTED BY A CERTIFIED SOIL TESTING LABORATORY.
- TOPSOIL TEST RESULTS SHALL INCLUDE RECOMMENDATIONS FOR TOPSOIL AMENDMENTS AND FERTILIZER RATES IN ORDER TO ENSURE A PROPER GROWTH MEDIUM FOR SEED MIX AND SOD.
- TOPSOIL SHALL CONTAIN AT LEAST 3% ORGANIC MATTER DETERMINED BY LOSS ON IGNITION OF MOISTURE FREE SAMPLES. THE ACIDITY RANGE SHALL BE PH 5.0 TO 7.0 INCLUSIVE.
- THE MECHANICAL ANALYSIS OF THE SOIL SHALL BE:
- ALL TOPSOIL, BOTH NEWLY FURNISHED AND STOCKPILED (IF ANY), SHALL BE NATURAL TOPSOIL, SANDY LOAM FREE FROM SUBSOIL, AND OBTAINED FROM AN AREA WHICH HAS NEVER BEEN STRIPPED. TOPSOIL SHALL BE OF UNIFORM QUALITY, FREE FROM HARD CLODS, STIFF CLAY, HARD PAN, STONES LARGER THAN 1/2", LIME, CEMENT, ASHES, SLAG, CONCRETE, TAR RESIDUES, TARRED PAPER, BOARDS, CHIPS, STICKS OR ANY OTHER UNDESIRABLE MATERIAL.
- SUBMIT RESULTS TO THE ENGINEER AND LANDSCAPE ARCHITECT.

PASSING	RETAINED	PERCENTAGE
1" SCREEN		100%
1" SCREEN	1/4" SCREEN (GRAVEL NOT MORE THAN)	3%
1/4" SCREEN	#100 USS SIEVE (COURSE, MEDIUM & FINE SAND)	40%-60%
#100 USS SIEVE	(VERY FINE SAND, SILT AND CLAY IN EQUAL PROPORTION)	40%-60%

3 L-8 NOTE: TOPSOIL

TREES, SHRUBS AND GROUND COVERS

PRUNING: PRUNE TREES TO REMOVE DEAD AND DISEASED WOOD AND TO IMPROVE OVERALL HABIT. PRUNE SHRUBS AS NEEDED, AFTER FLOWERING ONLY. PRUNE AT LEAST ONCE PER YEAR. PLANT MATERIAL SHOWN PLANTED IN A MASS OR TOUCHING EACH OTHER ARE TO BE ALLOWED TO GROW TOGETHER IN ORDER TO BE ABLE TO PERFORM AS A SCREEN OR HEDGE. PRUNE HEDGES WIDER AT BASE THAN TOP TO AVOID SHADE ON BOTTOM OF PLANT.
FERTILIZER: RATION 2:1:1 AT 2-3 LBS. ACTUAL, NITROGEN PER 1,000 S.F. FERTILIZE IN SPRING ONLY.
PESTICIDES: APPLY PESTICIDES ONLY AS NEEDED FOR SPECIFIC DISEASES ON INSECT PESTS.
WEED CONTROL: WEED ALL BEDS AS NEEDED TO KEEP WELL GROOMED AND RELATIVELY WEED FREE.
WATER: WATER ALL NEW PLANT MATERIAL AS NEEDED THROUGH FIRST AND SECOND GROWING SEASONS. IF RAIN IS INSUFFICIENT, WATER ALL WOODY PLANTS THOROUGHLY TWO TIMES PER WEEK.
MULCH: RENEW SHREDDED BARK MULCH TO 3" DEPTH EVERY YEAR.
LEAF REMOVAL: REMOVE LEAVES FROM ALL BEDS, TURF AREAS, PARKING AREAS AND WALKS.
REPLACEMENTS: REPLACE ALL DEAD SHRUBS AND TREES WITHIN THE NEXT PLANTING SEASON. (2/15 TO 5/15 OR 10/15 TO 12/30).
* KEEP ALL PAVED AREAS FREE FROM DEBRIS.

TURF:

RENEWAL PROCEDURES: OVER-SEED THIN SPOTS IN SPRING AND FALL. THATCH AS NECESSARY. (4/1 TO 5/30 & 8/16 TO 10/15).
FERTILIZER: RATIO 3:1:2 AT 1 LB. PER 1,000 S.F. FERTILIZE TWO TIMES PER YEAR.
PESTICIDES: INSPECT AND APPLY AS NEEDED FOR DISEASES AND INSECTS.
MOW: MAINTAIN A 2" HEIGHT. MOW AT LEAST ONCE PER WEEK.
MANICURE: TRIM LAWN AND GROUND COVERS ALONG SIDEWALKS AND SHRUB BED EDGES. RAKE AS NEEDED.

4 L-8 NOTE: LANDSCAPE MAINTENANCE CHECKLIST

Planting Notes
Planting Details

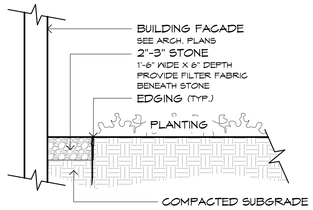
BNE Chatham
Chatham, New Jersey

MBC
MELILLO • BAUER • CARMAN
LANDSCAPE ARCHITECTURE
200 Union Avenue, Brielle, NJ 08730
295 Newark Avenue, Jersey City, NJ 07302
732-528-0664
www.mbcla.design
NJCA No. 21MH00001700

NO.	DATE	REVISION

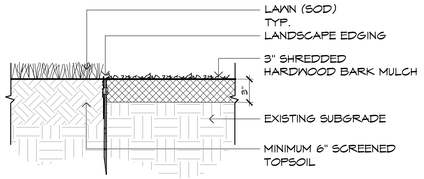
SCALE: AS SHOWN
DATE: 01/15/2026 JOB NO.: 25-156

DRAWING NO.
L-8



1 L-9 SECTION: VEGETATION FREE ZONE

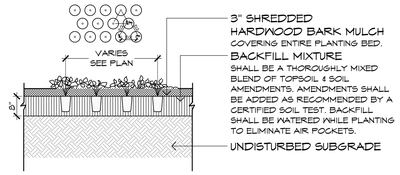
3/4" = 1'-0"



2 L-9 SECTION: PLANTING BED

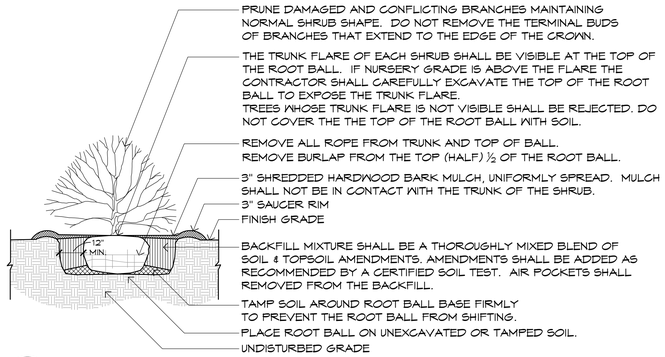
1 1/2" = 1'-0"

NOTE:
WHEN LAYING OUT PLANTS, MAINTAIN EQUAL SPACING WITH PLANTS SET ON A DIAGONAL GRID. (TYPICAL FOR INSTALLATIONS UNLESS GRAPHICALLY DEPICTED OR SPECIFICALLY NOTED FOR A LOOSE ORGANIC LAYOUT



3 L-9 GROUNDCOVER PLANTING

1/2" = 1'-0"

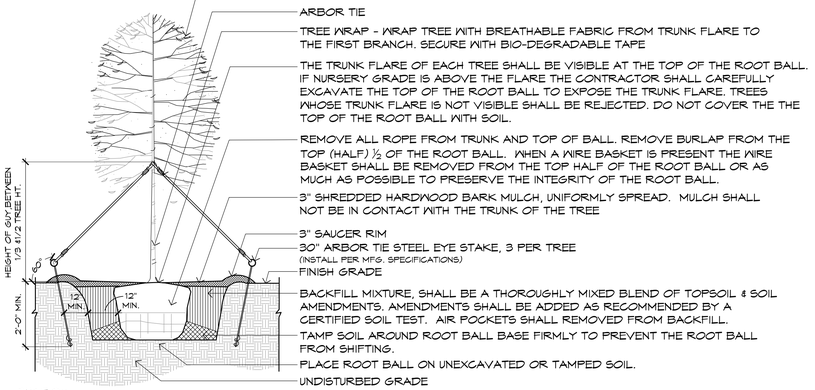


4 L-9 SHRUB PLANTING

1/2" = 1'-0"

PLAN

NOTES:
-DISTANCE OF STAKES APPROXIMATELY EQUAL TO HEIGHT OF ATTACHMENT.
-WHEN PLANTING ON SLOPES, PLACE SINGLE STAKE DOWNHILL, AND TWO STAKES UPHILL.



SECTION

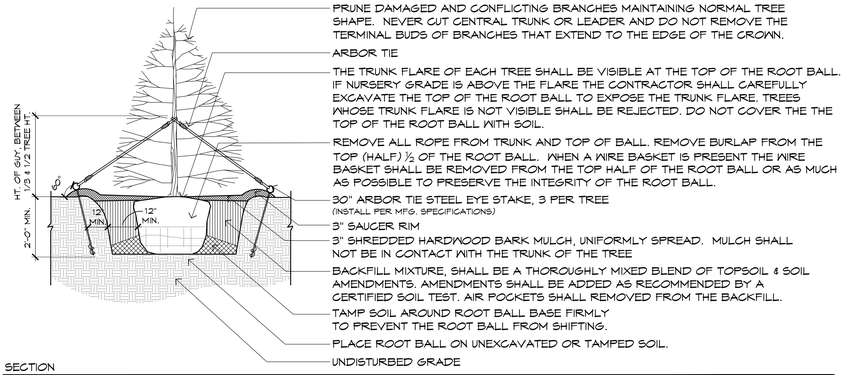
NOTES:
-CONTRACTOR SHALL PARTIALLY FILL WITH WATER A REPRESENTATIVE NUMBER OF PITS IN EACH AREA OF THE PROJECT PRIOR TO PLANTING TO DETERMINE IF THERE IS ADEQUATE PERCOLATION. IF PIT DOESN'T PERCOLATE, MEASURES MUST BE TAKEN TO ASSURE PROPER DRAINAGE BEFORE PLANTING.
-CONTRACTOR SHALL REMOVE STAKING, GUYING AND WRAP AT END OF GUARANTEE PERIOD. All PLANTING MUST BE GUARANTEED FOR ONE FULL GROWING SEASON FROM THE TIME OF FINAL ACCEPTANCE BY THE OWNER OR GOVERNING AUTHORITY.
-ON ALL FALL PLANTINGS THE CONTRACTOR SHALL WRAP THE TREES SPECIFIED BY THE LANDSCAPE ARCHITECT (ACER spp.) FROM THE TRUNK FLARE TO THE FIRST BRANCH. TREE WRAP SHALL BE REMOVED BY APRIL 1. TREE WRAP SHALL BE BREATHABLE AND AS APPROVED BY THE LANDSCAPE ARCHITECT.
-TREE WRAP SHALL BE INSTALLED AT THE TIME OF PLANTING AND BE REMOVED AS DIRECTED BY THE LANDSCAPE ARCHITECT.
-TREE WRAP SHALL BE REMOVED NO LATER THAN 12 MONTHS AFTER PLANTING.
-TREES WHOSE NORTH ORIENTATION IS NOT CHANGED FROM THE NURSERY DO NOT NEED TO BE WRAPPED UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT.
-GUYS ON MULTI-STEM TREES TO BE MADE ON HEAVIEST BRANCHES OF PLANT.

5 L-9 3" CALIPER OR MORE DECIDUOUS TREE PLANTING

1/2" = 1'-0"

PLAN

NOTES:
-DISTANCE OF STAKES APPROXIMATELY EQUAL TO HEIGHT OF ATTACHMENT.
-WHEN PLANTING ON SLOPES, PLACE SINGLE STAKE DOWNHILL, AND TWO STAKES UPHILL.



SECTION

NOTES:
-CONTRACTOR SHALL PARTIALLY FILL WITH WATER A REPRESENTATIVE NUMBER OF PITS IN EACH AREA OF THE PROJECT PRIOR TO PLANTING TO DETERMINE IF THERE IS ADEQUATE PERCOLATION. IF PIT DOESN'T PERCOLATE, MEASURES MUST BE TAKEN TO ASSURE PROPER DRAINAGE BEFORE PLANTING.
-CONTRACTOR SHALL REMOVE STAKING, GUYING AND WRAP AT THE END OF THE GUARANTEE PERIOD.
-ALL PLANTING MUST BE GUARANTEED FOR ONE FULL GROWING SEASON FROM THE TIME OF FINAL ACCEPTANCE BY TOWNSHIP LANDSCAPE ARCHITECT.

6 L-9 EVERGREEN TREE PLANTING

1/2" = 1'-0"

Streetscape
Planting Details

BNE Chatham
Chatham, New Jersey

MBC
MELILLO • BAUER • CARMAN
LANDSCAPE ARCHITECTURE
200 Union Avenue
Brielle, NJ
08730
295 Newark Avenue
Jersey City, NJ
07302
732-528-0664
www.mbcla.design
NJCA No. 21MH00001700

NO.	DATE	REVISION

SCALE: AS SHOWN

DATE: 01/15/2026 JOB NO.: 25-156

DRAWING NO.
L-9

MORRIS COUNTY PLANNING BOARD

P.O. Box 900 Morristown, NJ 07963-0900

March 10, 2026

Vanessa Nienhouse, Secretary
Borough of Chatham Planning Board
54 Fairmount Avenue
Chatham, NJ 07928

SITE PLAN REPORT

NAME: AJDM Chatham (1/15/2026)
LOCATION: 29-39 River Road
FILE NUMBER: 2026-4-2-SP-0

ADVISORY REVIEW

The applicant submitted the following materials for review:

1. Cover letter from AJDM Chatham, LLC, dated February 4, 2026;
2. Site Plan, prepared by Langan Engineering, dated January 15, 2026;
3. Stormwater Management Report, prepared by Langan Engineering, dated January 15, 2026;
4. Stormwater Maintenance Plan, prepared by Langan Engineering, dated January 15, 2026;
5. Traffic Report, prepared by Dolan and Dean Consulting, dated January 15, 2026;

This application is for the redevelopment of several commercial properties into a mixed-use structure on 3 acres. The structure will contain 100 multi-family units and 2,370 sq. ft. of retail. There will be 20 one-bedroom units, 57 two-bedroom units, and 23 three-bedroom units. There will be a 207-space internal garage and 31 surface parking spaces for the retail use. Site amenities include an outdoor turf area and pickleball courts. Access to the site will be from a horseshoe driveway connection to River Road (municipal) with a pick-up/drop-off area and garage entrance. A separate full-access driveway connection along the northern portion of the property to River Road (municipal) will accommodate the surface parking for the proposed retail and another garage entrance.

The property will be served by public sewer and water. The development will result in an approximate net-decrease of 0.11 acres of impervious surface. Stormwater management entails the use of a conveyance system that outfalls towards the back of the property and flows towards the Passaic River. After reviewing aerials of the site and surrounding properties and a site visit by Office of Planning & Preservation staff, it was noted that there is an excess amount of debris piled on the neighboring lot (Block 140 Lot 6). The outfall for the stormwater management system is directed towards this area. The Morris County Planning Board has concerns that the concentrated flow from this point could push the debris into the Passaic River

during an intense storm event. The applicant shall provide information regarding any proposed discharge easements that may be required and should ensure the flow path to the river is kept clear.

This development will predominately be automobile dependent. There is a lack of public transit options linking residents to a variety of services, commercial uses, and employment centers in the surrounding region, and a lack of services and amenities within walking distance to service a development of this density. The nearest bus stop for NJ Transit #70-98 is slightly over ½ mile away and provides service to parts of Florham Park, Essex and Union Counties. Transit to additional commercial and employment centers in Morris County would require transferring to additional bus lines or train lines along that bus route. This can be detrimental to low-income residents that do not have access to an automobile. There are no public schools located within walking distance of the development. The applicant should work with the Borough and Board of Education to establish a bus stop in a safe location near or within the development.

COUNTY REQUIREMENTS (R.S. 40:27-6.7)

The Morris County Office of Planning & Preservation and Morris County Engineering Division have reviewed the submitted materials. Morris County Planning Board site plan approval is withheld until the following requirements are satisfied:

1. Submit a topographic survey and existing conditions plan for the site;
    a. Include, or provide on a separate sheet, the existing conditions of the surrounding sites within 200 feet of the property;
2. Provide information regarding any proposed drainage easements required for the discharge of stormwater to the neighboring property and depict on plan, if applicable;
3. After revision, submit two hard copies of all materials to the Morris County Planning Board and a digital copy of each material to mcdevreview@co.morris.nj.us for review and approval.

MORRIS COUNTY PLANNING BOARD

Mike DiGiulio, PP, AICP, CFM
Senior Planner

Joseph Barilla, P.P., A.I.C.P.
Planning Director

cc: Morris County Planning Board Members
AJDM Chatham, LLC
John DiGiacinto, Langan Engineering
Derek Orth, Inglesino & Taylor
David Battiglia, Municipal Engineer

AJDM CHATHAM, LLC

1 Boland Drive, Suite 201
West Orange, NJ 07054
Tel (973) 992-2443

March 27, 2026

Hand Delivered

Vanessa Nienhouse
Administrative Secretary
Borough of Chatham
54 Fairmount Ave.
Chatham, NJ 07928

RE: **AJDM Chatham, LLC**
River Road Residential Project
1 Apartment Building
100 Total Units
29, 33, 37, 39 River Road
Block 140 Lots 7.01, 8, 9, 10
Borough of Chatham
Morris County, NJ

Dear Ms. Nienhouse:

AJDM Chatham, LLC is the owner of 29, 37 and 39 River Road Properties and contract purchaser of 33 River Road. The four (4) properties contain a total of 3.14 acres of land fronting on River Road. The Applicant is seeking preliminary and final site plan approval for the development and use on the property for 100 residential units in the (AH-1) GAHO-1 zone as such use is permitted. Please note no variances are necessary.

For completeness review and in accordance with the Boroughs requirements enclosed please find fourteen (14) of copies of the following:

1. Application for Development to which are attached Checklists A, C and D, and the
2. Ownership Disclosure is on the application.
3. Owners Consent for Filing the Application (33 River Road). All other lots are owned by the applicant.
4. Owners Permission to Enter Property (29, 33, 37, 39 River Road)
5. Preliminary and Final· Site Plans prepared Langan Engineering dated January 15, 2026.
6. Boundary and Topographic Survey MatrixNeworld Engineering dated and revised November 5, 2025.

7. Wetlands Letter of Absence prepared by Langan Engineering dated January 15, 2026.
8. Stormwater Management Report prepared by Langan Engineering dated January 15, 2026.
9. Traffic Impact Study prepared by Dean and Dolan dated January 15, 2026.
10. Architectural Plans prepared by Minno Wasko dated January 15, 2026.
11. Fiscal Impact Statement (Community Impact Statement) prepared by Langan Engineering dated January 15, 2026.
12. Environmental Impact Statement prepared by Langan Engineering dated January 15, 2026.
13. Photos of property by Chatham River Road Urban Renewal dated January 8, 2026.
14. Letters from the Borough of Chatham, Water & Sewer Dept. that fees are current dated January 14, 2026
15. List of Experts
16. Statement of Reason for Approval of this Application.
17. Public Notice
18. Loading Area Operation Narrative
19. Trash and Recycling Calculations

A link will be sent to your office containing this submission package electronically.

Please do not hesitate to contact me if you have any questions or need any additional information. Thank you.

Very truly yours,
BNE Real Estate Group

Charles Thomas, Jr. PE
Vice President
cthomas@BNErealestate.com

CC: email only
Jonathan Schwartz
Derek Orth, Esq.
John DiGiacinto, PE