TOWN OF NISKAYUNA
Planning Board and Zoning Commission

Agenda
June 12, 2023
7:00 PM

REGULAR AGENDA MEETING

I. CALL TO ORDER

II. ROLL CALL

III. APPROVAL OF MINUTES

IV. PUBLIC HEARINGS

V. PRIVILEGE OF THE FLOOR

VI. PLANNING DEPARTMENT PRESENTATION – Average Density Development Subdivision and Special Use Permit Process and Steps (update).

VII. NEW BUSINESS

1. RESOLUTION: 2023-16: A Resolution for approval of plat plan for a 2-lot minor subdivision and lot line adjustment at Antonia Park / Polsinelli Dr. (40.-1-54.11).

VIII. DISCUSSION ITEM

1. 1222 Troy Schenectady Rd. – An application for site plan approval for a tenant change at a lot that is partially within the Town of Colonie and partially within the Town of Niskayuna.
2. 2386 Algonquin Rd. – An application for a lot line adjustment.

IX. REPORTS

1. Benchmarking update – deadline to submit applications and supporting materials to appear on Planning Board meeting agendas.

X. COMMISSION BUSINESS

XI. ADJOURNMENT

NEXT MEETING: July 10, 2023 at 7 PM
To be Held in the Town Board Room
& via Remote Software

TOWN OF NISKAYUNA
PLANNING BOARD AND ZONING COMMISSION

AGENDA STATEMENT

AGENDA ITEM NO. VII. 1 MEETING DATE: 6/12/2023

ITEM TITLE: RESOLUTION: 2023-16: A Resolution for plat plan approval for a 2-lot minor subdivision and lot line adjustment at Antonia Park / Polsinelli Dr. (40.-1-54.11).

PROJECT LEAD: Ms. Gold

APPLICANT: Fred Polsinelli, Executor of the owner

SUBMITTED BY: Laura Robertson, Town Planner

REVIEWED BY:
■ Conservation Advisory Council (CAC) ☐ Zoning Board of Appeals (ZBA) ☐ Town Board ☐ OTHER:

ATTACHMENTS:
■ Resolution ■ Site Plan ☐ Map ☐ Report ☐ Other:

SUMMARY STATEMENT:

Fred Polsinelli, Executor for the estate of Vincenza Polsinelli, submitted an Application for Site Plan Review for a 2-Lot minor subdivision including a lot line adjustment for Homestead Place at Antonia Park (parcel 40.-1-54.11).

Mr. Polsinelli's engineer, a Town Designated Engineer (TDE) and Town Planning and Engineering staff, have carefully reviewed the proposed project with particular attention on the storm water retention design. Several residents with storm water related professional technical backgrounds who reside downgrade from this project site have met with Town staff and requested that the proposed storm water retention design be reviewed carefully. Collectively, this group's careful review of the proposed system has refined the design by way of 4 iterations of the site plan drawings and Storm Water Management Report. The most recent design was reviewed at the 5/22/23 Planning Board meeting and the Board called for a tentative resolution for plat plan approval for the 6/12/23 meeting.

BACKGROUND INFORMATION

The property is located within the R-1 Low Density Residential zoning district.

A site plan drawing entitled "Homestead Place at Antonia Park Section 9" authored by Gilbert VanGuilder Land Surveyor, PLLC" dated 10/17/22 with a most recent revision date of 12/5/22 was included with the application. The drawing shows the original 8.43 Acre property being divided as noted below.

1. Lot 1 – is a new lot that is 3.10 Acres is size
2. Lot 2 – is a new lot that is 3.02 Acres in size
3. Remaining Area – is 2.31 Acres in size and will be annexed to Lecce Development Corp.

Access to a Town water line is available at the end of the stub road (Polsinelli Dr.). Access to a Town sewer line is available at the intersection of the stub road and Rosehill Blvd.

The Planning Department will work with the applicant on previous wetland delineations on the property to ensure wetlands are properly identified and documented. The PD also recommends adding contours to the sketch plan to make sure drainage channels are properly identified.

The lands to the south of this parcel are deed restricted for no further development – the lands to the west are not. It would be good to discuss whether or not the back parcel of this property can be deed restricted when it is transferred to the adjacent property owner, Lecce Development Corp.

1/9/23 Planning Board meeting – Mr. Polsinelli appeared before the Board and explained his proposed project. The Planning Office and Planning Board requested that the following be added to the sketch plan drawing.

1. Contour lines so that drainage channels are properly identified.
2. Deed restrictions to prevent subsequent subdivision.
3. Water and sewer connections.

A revised site plan drawing with a revision date of 1/20/23 was provided to the Planning Office.

2/1/23 Conservation Advisory Council (CAC) meeting – The CAC reviewed the project and made the following recommendations.

1. Include the delineation of all wetlands on the property on the site plan drawing.
2. Include provisions that the newly created lots shall not be subdivided.
3. Have a TDE review the utility service and drainage for the property.

On 2/6/23 the applicant's engineer provided the following 6-page sketch plan drawing set to the Planning Office.

Page No.	Title	Author	Rev
1	Homestead Place at Antonia Park	Gilbert VanGuilder Land Surveyor, PLLC	1/20/23
2	Overall Site Plan	Brett Steenburgh, P.E. PLLC	2/3/23
3	Detailed Grading & Utility Plan	Brett Steenburgh, P.E. PLLC	2/3/23
4	E & SC Plan	Brett Steenburgh, P.E. PLLC	2/3/23
5	Details	Brett Steenburgh, P.E. PLLC	2/3/23
6	Details	Brett Steenburgh, P.E. PLLC	2/3/23

The Planning Office reviewed the 6-page drawing set relative to the PB and CAC requests listed above and noted the following.

No.	Description of Request	Status
1	Add contour lines and drainage paths	Contour lines added to pg. 3 but proposed drainage plan adds a new catch basin feeding an existing closed pipe Town storm water system that is already at maximum capacity
2	Deed restrict additional subdivision	A future subdivision note is included on pg. 3 but it only refers to "lot 4", two different lots are also identified as lot 2.
3	Show water and sewer connections	Shown on dwg. but an analysis should be performed to assure that the existing town utility systems can support the proposed connections.
4	Include wetland delineation	Wetlands are shown in the back lot but a reference note

		indicates the delineation is from a survey performed in 2006. A more recent survey is appropriate.

2/13/23 Planning Board (PB) meeting – Brett Steenburgh, P.E., the applicant's engineer, attended the meeting. He explained that Mr. Lecce disagreed with deed restricting potential future subdivision of the land that will be annexed to his property via. lot line adjustment. After a short discussion it was agreed that the same "Future Subdivision Note" that is included in the 4-Lot Vincenzo Drive subdivision drawing will be added to the Antonia Park / Polsinelli Dr. 2-Lot subdivision drawing. The note reads as follows.

> "*Any future subdivision of the unrestricted lands of Lot 4 will require a major subdivision review as required under the Town of Niskayuna subdivision law at that time*".

Ms. Robertson asked Mr. Steenburgh to reach out to the Town's Engineering Department immediately to discuss utilities because there were issues with sewer and drainage. The Board called for a resolution for sketch plan approval, SEQR determination and call for a public hearing for the 2/27/23 PB meeting.

2/27/23 Planning Board (PB) meeting – The PB discussed Resolution 2023-06 thereby approving the sketch plan, directing the Town Planner to file a Negative SEQR declaration with (4) comments from the Conservation Advisory Council (CAC) included and calling for a public hearing to be held on March 13, 2023.

Mr. Polsinelli spoke with the Planning Board at the 2/27/2023 and requested that the public hearing be postponed to 3/27/2023. The Planning Department did not file the public hearing in time for this meeting – therefore the resolution should be amended to call for a public hearing at the next available Planning Board meeting, April 17, 2023. The Planning Board took action on this resolution prior to the discussion item this evening.

Due to the unintentional delay and the unusual circumstance of only one PB meeting in April – the Planning Department recommends also calling for a tentative resolution for approval at the April 17, 2023, which can be tabled if there is significant public comment requiring additional items to be addressed. The Planning Department will work on hiring a TDE by April 17 for this project.

The applicant had a meeting with the Engineering Department discussing the issues with connecting into the Town Sewer line. The Engineering Department is currently working on flow metering of the sewer line and is communicating with the DEC on these two potential connections to this line. Because this is an outstanding item, the Planning Board can consider a condition in the resolution that delays the allowance of any building permit until the sewer connections can be made (subject to Town Attorney approval).

3/27/23 Planning Board (PB) meeting – The Board quickly reviewed the project, called for a public hearing to be held at the 4/17/23. The Planning Office noted that a Town Designated Engineer (TDE) had been selected.

Although the Board stated they would be okay calling for a tentative resolution –based on the timeline for selecting the TDE, the Planning Department has delayed this proposed action until it and the Board have time to digest the TDE comments and public concerns. Therefore no resolution is proposed for the Board meeting at the April 17 meeting.

The TDE Comment letter indicates comments and clarifications on the SEAF, requests clearly delineating the wetland 25 foot buffer on the plan, requests confirmation from the applicant on

some water and sewer details and well as confirmation from the Town Engineering Department on any existing downstream drainage issues, requests contours along the northern lot line to understand drainage there and requests additional details in the storm water management report. The letter is attached.

The Planning Department also had an internal meeting with the Highway Department, who requested snow removal areas be delineated on the drawings as well as more separation of the driveways from the initial end of the Town owned street (for maintenance and snow removal purposes).

4/17/23 Planning Board (PB) meeting - A public hearing was held for the subdivision, with several residents in attendance who spoke about concerns with existing and proposed drainage, as well as utility capacity. The Planning Office reviewed the drainage concerns with the TDE, who has completed and initial letter and review of the developer's response letter. At this time, the Town and TDE still have concerns over the infiltration trenches and underground retention areas. More data is necessary to be sure they are sized appropriately to handle the proposed development. Some of the outstanding concerns are listed below in addition to the second TDE letter (attached).

--- Infiltration trenches
  --- Types of soils needed
  --- Test pits to validate soil type & ground water
  --- Can they be use on inclines?
  --- Are they appropriate near roads?
  --- How are they sized?
  --- Work should be shown by design engineer for calculating the size

Planning Office (PO) researched infiltration trenches in surrounding areas, found recommendations that:
  --- Ground water level should be referenced to the bottom of the trench
  --- May not be appropriate for slopes
  --- May not be appropriate near roads
  --- Dependent upon soil type

The PO is scheduling a meeting with the developer's engineer early next week. The Planning Board should discuss the drainage findings and concerns at this meeting.

5/8/23 Planning Board (PB) meeting –

5/16/23 Applicant's engineer provided updated site plan drawing and storm water management report, attached to the PB packet.

The TDE informed the Planning Office that we need to amend their scope of work to perform another review. The Planning Office, TDE and applicant's engineer still need to hold a meeting to update the TDE proposal to complete their technical review.

In an email dated 5/19/2023, the TDE indicated that there is a storm water outlet control structure for each underground basin, the detail for which was missing in the original design. He stated the applicant's engineer was able to model the detention basins to handle the Cornell extreme storm event upper confidence levels. He has asked the applicant's engineer to estimate the number of years it would take before maintenance would be required and he has asked the Town to look into a deed restriction requiring the maintenance of the systems. The

TDE thought perhaps there could be a separate permit that the Town could issue to the property owners that has reporting requirements on the storm water system.

With the new data, the Planning Office will need to update the engineering review escrow, schedule a meeting between the Planning Office, TDE and applicant's engineer, and finalize the storm water calculations and deed restrictions/maintenance requirements. Based upon the outcome of this engineering/legal meeting, the Planning Office recommends preparing a Resolution for subdivision approval at the next PB meeting (June 12).

5/22/23 Planning Board (PB) meeting – Mr. Steenburgh, P.E. updated the Board on developments to the project since the 5/8/23 meeting. He referenced the Rev 3 site plan drawings dated 5/12/23 and the Storm Water Management Report dated 5/12/23. He also spoke to 3 drawings that were emailed to the Planning Office on Saturday 5/20/23 entitled "General Drainage Schematics" that showed how the proposed storm water retention system will operate under 1 year, 10 year and 100 year storm events. Mr. Steenburgh provided a detailed explanation of the proposed storm water system from the genesis of rainwater falling on the roof to the discharge of water exiting the concrete basins. During the ensuing discussion the PB requested the following modifications to the design and called for a tentative resolution for plat plan approval for the 6/12/23 PB meeting.

1. The inclusion of a deed restriction and easement so that if the storm water system is not being properly maintained by the homeowner the Town may perform the maintenance and charge the homeowner.
2. A 2' separation between the driveways of the proposed two lots.
3. Further definition on the site plan drawing regarding where snow will be stored.

5/30/23 – Members of the Town Planning Office & Engineering Department walked the project site and documented key aspects of the existing storm water drainage system along Rowe Road. Particular attention was paid to the surface level drainage stream that runs through the backyards of several homes and eventually enters the subsurface piping network by way of an inlet grate.

5/31/23 – Members of the Planning Office held a meeting with the Town Designated Engineer (TDE) to review the project, review comments and feedback from the TDE and prepare for a review with the Niskayuna Engineering Department.

5/31/23 – Members of the Planning Office held an internal meeting with the Niskayuna Engineering Dept. to review the project, the TDE's feedback and obtain feedback from the Engineering Department. Questions from the meeting were relayed to the TDE and are included in the TDE's comment letter dated 6/1/23. Comments from the Engineering Department are as follows.

1. Separate gutter and footer drain piping that are connected to the storm water retention vault to minimize the likelihood of clogging.
2. Consider the use of 6" diameter pipes for the gutter and footer drain piping to minimize the likelihood of clogging.

6/1/23 – A 3rd TDE comment letter dated 6/1/23 was provided to Mr. Steenburgh that contained comments from the meetings with the TDE and Town Engineering Department, above.

A resolution for plat plan approval is included in the meeting packet materials.

RESOLUTION NO. 2023-16

AT A REGULAR MEETING OF THE PLANNING BOARD AND ZONING COMMISSION OF THE TOWN OF NISKAYUNA DULY CALLED AND HELD ON THE 12TH DAY OF JUNE 2023 AT THE NISKAYUNA TOWN OFFICE BUILDING, ONE NISKAYUNA CIRCLE, IN SAID TOWN AT 7:00 P.M., THE FOLLOWING MEMBERS WERE PRESENT VIRTUALLY OR IN PERSON:

HONORABLE: KEVIN A. WALSH, CHAIRMAN
GENGHIS KHAN
MICHAEL A. SKREBUTENAS
CHRIS LAFLAMME
PATRICK MCPARTLON
DAVID D'ARPINO
LESLIE GOLD
NANCY STRANG
JOSEPH DRESCHER

One of the purposes of the meeting was to take action on a 2-lot Minor subdivision application.

The meeting was duly called to order by the Chairman.

The following resolution was offered by _____.
whom moved its adoption, and seconded by _____.

WHEREAS, Fred Polsinelli, Executor for the estate of Vincenza Polsinelli, has made application to the Planning Board for approval of plat plan for a 2-lot minor subdivision including a lot line adjustment for Homestead Place at Antonia Park at tax map parcel 40.-1-54.11 as shown on a 5-page drawing set by Brett L. Steenburgh, P.E. PLLC as noted below:

Sheet No.	Drawing Name	Drawing Date	Revision
1	Overall Site Plan	2/3/2023	4 (5/31/23)
2	Grading & Utility Plan	2/3/2023	4 (5/31/23)
3	E & SC Plan	2/3/2023	4 (5/31/23)
4	Details	2/3/2023	4 (5/31/23)
5	Details	2/3/2023	4 (5/31/23)

And,

WHEREAS, the zoning classification of the property is R-1: Low Density Residential, and

WHEREAS, the Planning Board, by its Resolution 2023-09, granted sketch plan approval for this project on March 27, 2023, and

WHEREAS, the Planning Board conducted a public hearing on April 17, 2023 to consider the application for minor subdivision, and

WHEREAS, the Planning Board referred this application to the Town's Designated Engineer (TDE) for review and they have responded with comments, and

WHEREAS the Planning Board referred the Environmental Assessment Form to the Niskayuna Conservation Advisory Council (CAC) for their review and on February 1, 2023, the CAC recommended that a negative declaration be prepared with recommendations for the Planning Board to consider, and

WHEREAS the Planning Board, acting in accordance with the State Environmental Quality Review (SEQR) regulations and local law, has contacted all involved agencies, and they have concurred with the Planning Board that it should assume the position of lead agency for this project and on March 27, 2023 via. Resolution 2023-09 made a negative declaration, and

WHEREAS, the Superintendent of Water, Sewer and Engineering has reviewed the proposal and they have responded with comments, and

WHEREAS, this Planning Board and Zoning Commission has discussed the requirements of Chapter 189 of the Code of the Town of Niskayuna for street improvements, drainage, sewerage, water supply, fire protection and similar aspects, as well as the availability of existing services and other pertinent information, and

NOW, THEREFORE, be it hereby

RESOLVED, that the Planning Board and Zoning Commission does hereby grant minor subdivision approval for a 2-Lot subdivision at tax map parcel 40.-1-54.11 as shown on the aforementioned a 5-page drawing set by Brett L. Steenburgh, P.E. PLLC subject to the following conditions:

1. The declaration of intention regarding future construction activity on Lot 4 of the 4 lot subdivision referenced in Niskayuna Planning Board Resolution 2020-15 is attached to this minor subdivision approval and included as a condition herein, as amended to include "Applicant and owners" where designated by the Town Attorney.

2. Prior to recording the plat, a final letter of approval shall be received from the Town Designated Engineer (TDE) regarding all engineering and drainage aspects of the site plan.

3. Prior to recording the plat, any engineering, sewer connection and drainage concerns will be addressed to the satisfaction of the Town Superintendent of Water, Sewer and Engineering.

4. Prior to recording the plat, the aforementioned subdivision drawings shall be revised to include a note stating that no further subdivision of lots 1 or 2 are allowed. "No further subdivision" deed restrictions for lots 1 & 2 shall be provided to the Planning Department for review and approval. The deed restrictions shall be filed jointly with the subdivision plat.

5. As noted under the heading "Future Subdivision Note" of the aforementioned site plan drawings, any future subdivision of the unrestricted lands of the amended Lot 4 (lot line adjusted) will require a major subdivision review as required under the Town of Niskayuna Subdivision Law at that time.

6. Prior to recording the plat, any minor textual changes to the subdivision map will be addressed to the satisfaction of the Town Planning Department.

7. Prior to recording the plat, a tree plan shall be submitted to and approved by the Niskayuna Tree Council. The Planning Board requests that as many trees as possible, including unmarked trees and understory, be preserved during the building permit and construction process so that the forested nature of the land is maintained.

8. Prior to issuing a building permit, the new houses shall be referred to and reviewed by the Architectural Review Board.

9. Prior to issuance of a building permit, the applicant shall participate in a preconstruction meeting with the Town of Niskayuna if so requested by the Planning or Building Department.

10. Prior to site disturbance, the subdivision maps shall be modified to reflect agreed upon decisions of the preconstruction meeting, if any, and distributed as required to the Town and to all involved contractors. Final site plans shall be submitted to the Town labeled "for Construction."

11. Prior to the preconstruction meeting, any questions or concerns raised by the Town Designated Engineer (TDE) will be addressed by the applicant in a formal letter to the Town.

12. Prior to final certificate of occupancy for either of the two new homes, the applicant shall sign a Storm Water Control Facility Maintenance Agreement and Access Easement, in order to ensure the proposed storm water facilities are installed and maintained per plans.

13. In accordance with Chapter 180 of the Soil Erosion and Sediment Control Ordinance of the Town of Niskayuna, the applicant shall put in place soil erosion and sediment control measures sufficient to stabilize disturbed areas. These measures shall be satisfactory to the Superintendent of Water, Sewer, and Engineering and shall remain in place until such time as natural vegetation has been successfully established.

14. Wetland boundaries shall be recorded and shown on any plot plan of a building lot containing wetlands. Wetlands may not be disturbed, drained or physically altered in any way without first contacting the Army Corps of Engineers. Additionally, the Town of Niskayuna requires that no land can be disturbed within a twenty five (25) foot buffer from the boundary of the wetland.

15. Should the garage floor elevation (GFE) for individual lots deviate by more than six inches from the elevations approved for construction by the Planning Board and Zoning Commission or the Building Department, then revised grading plans shall be submitted immediately to the Town's Engineering office for their review and approval.

16. The limits of clearing on this subdivision shall be strictly adhered to during construction. To the maximum extent practicable the applicant shall retain as many of the site's healthy trees and native vegetation as possible. Driveways shall be installed with least possible disturbance to trees.

17. The portion of land "to be annexed to Lecce Development Co, LLC" shall be conveyed in such a manner that the portion is combined with 6 St Gerard Drive (Lot 4 / Lands N/F of Lecce Development Co LLC) immediately and shall at no time be considered a freestanding parcel, per Niskayuna Town Code.

Upon roll call the foregoing resolution was adopted by the following vote:

KEVIN A. WALSH, CHAIRMAN
GENGHIS KHAN
MICHAEL A. SKREBUTENAS

CHRIS LAFLAMME
PATRICK MCPARTLON
DAVID D'ARPINO
LESLIE GOLD
NANCY STRANG
JOSEPH DRESCHER

The Chairman declared the same _____.

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June 1, 2023

Laura Robertson, AICP
Town Planner
One Niskayuna Circle
Niskayuna, NY 12309

Re: Town of Niskayuna
Polsinelli Drive 2-Lot Subdivision Review
Our Project No. 23362

Dear Mrs. Robertson,

We are in receipt of the comment response letter dated 5/15/2023, revised Site Plans dated 5/31/2023, revised Stormwater Management Report dated 5/31/2023, hydrographs for each design storm received on 5/18/2023 and revised SEAF dated 4/25/2023 as prepared by Brett L. Steenburgh, P.E. PLLC. The Applicant proposed a 2-lot subdivision located on 8.43 +/- acres in the Town of Niskayuna, tax map 40.-1-54.11. The project would consist of 2 proposed building lots with the remaining 2.32 +/- acres of land to be annexed to Lecce Development co. LL. Based on our review of the Stormwater Management Report we provide the following comments:

Short Environmental Assessment Form:

1. The Applicant indicated in their response to question 17 that there will be no storm water discharge. As the Proposed Project includes two residential homes and two paved driveways that are increasing the pervious cover of the site, we suggest the Applicant change their answer to question 17 and answer the following questions 17.a and 17.b. **The Applicant has revised question 17 to state: "Storm Water will be attenuated on site and discharged into the Town of Niskayuna Storm Sewer. Existing flows off site towards adjacent properties will be the same or less than existing conditions."**

CAC SEQR Findings EAF:

1. As per the CAC comments, historic wetlands and wetlands are requested to be shown on the site plan. We understand that USACOE wetlands have been shown on the plans, however, has any wetland field investigation been performed to identify additional wetlands on proposed Lot 1 & 2? **The applicant has responded that the wetland boundaries shown on Sheet C-1 were identified by Kevin Weed of Van Guilder Associates and there are no wetlands within the proposed development area.**
2. As per CAC comments, a 25-foot buffer from wetlands and historic wetlands is requested to be shown on the site plan. **A 25' buffer is shown for the identified wetlands.**

Site Plan:

1. ~~Please confirm and label onsite the site plan that there is 10-foot horizontal separation distance between water and sanitary laterals.~~ The Applicant has confirmed that the proper separation is shown.
2. ~~If existing contours on the residential properties to the north and northeast of the parcel to be developed were shown, it would help to determine the potential impacts for runoff from the proposed development.~~ Sheet C-2 Detailed Grading and Utility Plan has been revised to show a

contour that will direct the surface runoff from the proposed northern home away from the neighboring properties to the north.

3. ~~The Town Engineering Department should be consulted about any existing downstream storm sewer issues from the proposed project discharge on Polsinelli Drive. The Applicant has indicated that they have been working with the Town Engineering Department regarding this matter, however, that does not address our comment. We have been advised that there are currently capacity issues with the downstream storm sewer system from the site during short duration, high intensity rainfall events which cause flooding of neighboring properties. How will the stormwater design for this project ensure that there is no increase in the impacts from such events?~~ **The stormwater management design has been revised to include larger stone detention basins with outlet control structures to moderate the flow into the Town storm sewer system for the Cornell Extreme Precipitation Data 7.44 inch upper confidence limit storm event, which is in excess of NYSDEC requirements. The 7.44 inch rainfall event hydrographs should be added to the Storm Water Management Report.**
4. The applicant should obtain information from the Town Engineering Department about the connection requirements for the water services, sanitary sewer laterals and storm sewer connection. The Applicant has indicated that they have been working with the Town Engineering Department regarding this matter. Please inform us once the sewer, storm and water connections are approved by the Town. **Applicant shall continue to work with the Town Engineering Department to determine if the existing 8" sewer line extends to the project site. If it does not currently extend far enough, the addition of two new homes may be considered a sewer extension rather than a simple connection. If it is an extension, then NYSDEC may become involved and the capacity issue in the trunk line along River Road may need to be taken into consideration.**
5. ~~Please provide callouts and references to the corresponding details of the erosion and sediment control practices depicted on the E & SC Plan.~~ The applicant has previously addressed this comment.
6. ~~A Detail of the Subsurface Detention Area should be provided in plan view and longitudinal section (only the transverse section has been provided) so that the perforated piping can be verified to be distributing the flows throughout the entire practice. Sheet C-4 Details, has been updated with additional section views of the subsurface detention areas. A description of how this non-standard stormwater practice is planned to function and design calculations for the sizing need to be provided for review. We are concerned that the vertical pipe within the practice will allow for bypass of the feature and we do not see a means to slowly release the flow at below pre-development rates. NYS Stormwater Design Manual (SWDM) standard practices for underground storage include chambers, vaults and pipes that can decrease the peak flow when used with a controlled flow orifice at the outlet. It is recommended that the design of this style practice be further investigated by the applicant's engineer~~**. This comment has been addressed with a redesign of the stormwater management system and revised details.**
7. **A driveway cross-section detail should be provided for the combined driveway limits (with 2' wide brick paver strip) to show the cross-slopes are evenly distributing the rainwater/stormwater to the respective driveway trenches.**
8. **The Town Engineering Department is concerned with the proposed snow storage area being located extremely close to an existing fire hydrant.**
9. **On Sheet C-2, Detailed Grading and Utility Plan, please confirm if the sewer notes regarding raising of the existing manhole are applicable to this project.**
10. **On Sheet C-2 and C-4, applicant should consider separating the gutter and footing drain pipelines to reduce the likelihood of clogging, as water could back up into the basement if the line clogs. Also,**

consider using a larger diameter pipe for the gutter drain to reduce the likelihood of clogging in the future.

Drainage Schematics (1-yr, 10-yr, 100-yr):

1. **Applicant should consider separating the gutter and footing drain pipelines to reduce the likelihood of clogging, as water could back up into the basement if the line clogs. Also, consider using a larger diameter pipe for the gutter drain to reduce the likelihood of clogging in the future.**

Stormwater Management Report:

1. Infiltration trenches are shown along the house drip edges and driveways, however, it was also mentioned that the soil is not suitable for infiltration (soil group D). Please clarify. The applicant stated in the response that the infiltration trenches were not designed to infiltrate stormwater and an underdrain has been added to direct stormwater to the detention area. The naming convention for this feature should be revised to eliminate the word "infiltration" and the proposed function of the feature should be discussed with backup design calculations provided. If infiltration is to be used, percolation tests and test pits will need to be performed to assess the suitability of the soils for infiltration. The ability to infiltrate water in a slope trench should also be evaluated, as these are typically installed with no slope to promote infiltration. The "infiltration" trenches along the driveway do not have a pretreatment element to prevent the trenches from being clogged in the future with silt and debris. Was any consideration given to using dry swales along the driveway, which is a standard stormwater management practice? Additionally, new tests pits should be performed to locate the seasonal high water table in the location of each stormwater management feature as that could affect the volume available in the proposed stormwater practices. Detailed design calculation need to be provided for the sizing of each proposed practice beginning with the stone drip edge trenches, pipe system and underdrains, driveway trenches, stone detention features to the storm sewer connection to provide backup to the information input into the HydroCAD model. **Sheet C-2 includes a table of soil test pit data that was obtained on 5/12/2023. The results indicate that the soil from 36" to 90" below grade is gray firm clay and no groundwater or mottling was present, which would be suitable for the use of underground stormwater storage with no infiltration. The applicant has stated that no infiltration of any stormwater management practice is proposed. The stone drip edge trenches have been eliminated from the design and the roof runoff will be piped directly to the stone detention basins. Each basin design storage volume is contained in a table in the HydroCAD model output located in Appendix A.**
2. ~~Please provide brief descriptions of the erosion and sediment control practices to be employed during construction in the report.~~ Details regarding the specifics of the proposed erosion and sediment control practices employed during construction have been provided in the updated drawing as well as the O&M section in the manual.
3. Please include an O&M discussion for the proposed infiltration trench and subsurface stone detention basin, as the practices will need to be properly maintained by the homeowners in the future. Details regarding the O&M practices have been included. What mechanism is proposed to require that each property owner properly maintains their private stormwater management systems in the future? The O&M Section of the Report states that stone trenches will need to have the stone removed and washed or replaced if water begins to pond and the subsurface system will require jet vacuum cleaning if water is observed ponding in the cleanout more than 4" deep. These seem like laborious and expensive prospects for the homeowners, which typically means they are not performed. Please

correct "basins" to "trenches" in bullet #5 under "Maintenance of Stone Trenches" and remove the word "infiltration" where not applicable. **The applicant has advised that the redesign of the system allows for easier maintenance through cleanouts accessible at grade for underground piping. The applicant has been asked to provide an estimate of the amount of time it would take to partially clog the system.**

4. Please clarify how sediment in the drip edge and driveway infiltration trenches will be addressed. The applicant has mentioned that the stone trench includes fabric to prevent sediment from entering the system, however, how will sediment build-up in the 4" stone layer above the fabric be removed in the future? (see comment 3 above for O&M issues with this practice). The infiltration trenches along the driveway do not have a pretreatment element to prevent the trenches from being clogged in the future with silt and debris. Was any consideration given to using dry swales along the driveway, which is a standard stormwater management practice? **We agree that dry swales would not be appropriate for the slopes involved per the applicant's response. The applicant is going to install leaf guards on the house gutters to prevent leaves and other roof debris from entering the system, which will now be piped directly to the detention basins. Cleanouts to grade are proposed for this piping so that any sediment can be jetted or vacuumed.**
5. Please provide dimensions, material specifications and installation details for the post-construction practices proposed. Dimensions and material specifications have been provided by the applicant, however, the piping configuration within the subsurface detention areas remain unclear as to how they will function. In one section view, the vertical pipe is called out as 8" diameter and in the other section it is 6" diameter. The pipe sizes stated in the Report do not agree with the pipe sizes on the plans. What mechanism directs the water to the stone bed rather than it just bypassing the stone and going straight to the underdrain via the vertical pipe? Additionally, there does not appear to be filter fabric between the 3" topsoil and stone layer. There does not appear to be a control orifice that would slow down the release of the stormwater into the Town's system. A description of how this practice is supposed to function and detailed design calculations for the sizing need to be provided for review. **The revised design has addressed the prior comments by providing an outlet control structure for each basin and piping the driveway and roof flows directly to the control structure. The control structure will only allow flow to discharge into the Town system through a 3" and 3.5" diameter orifice and higher flow rates coming into the structure will back-up storm water into the detention basins. Then, the flow will be slowly released after the inflow rate (storm event) subsides.**
6. Please provide the NYSDEC worksheets for the infiltration trench and subsurface stone detention area that were used for sizing the practices. The applicant mentioned that the NYSDEC worksheets are not applicable to the proposed practices. If that is the case, please provide detailed calculations showing how the practices were sized. **Each basin design storage volume is contained in a table in the HydroCAD model output contained in Appendix A. The 7.44 inch rainfall event hydrographs need to be added.**
7. Are sump pump discharges from both homes utilized in the surface runoff calculations? Can they be directed to the storm sewer? The applicant clarified that the sump pump discharges will be directed to the stormwater management system. This flow needs to be shown in the detailed design calculations that are to be provided for all stormwater management practices following NYSDEC Stormwater Design Manual guidelines for water quality and quantity controls. The one-year design storm should also be added to the other storm events that were previously analyzed. **The one-year and 100-year Cornell upper confidence limit storm events have been added to the design and**

resultant analysis tables. All design storm conditions show that there will be no increase in post construction discharge at all three design analysis points and there is predicted to be significant decreases up to and including the 10-year design storm event at design point A which is the Town storm sewer connection point.

8. **As the proper operation and maintenance (O&M) of the stormwater management system is important for decreasing post construction flow from the site, it is recommended that the deed for both properties include a requirement to perform the proper O&M of the systems to protect the downstream stormwater system and properties. It should also be stated that the Town of Niskayuna will have the right to perform the maintenance, if the property owner is not following the Stormwater Management Report and then bill the property owners for the cost. An easement on each property should be granted to the Town for such maintenance, if required.**
9. **Section 1.3 Soils; Applicant should add field information obtained from the recent test pit and depth to groundwater.**
10. **Section 2.0; Discussion about roof and footing drains will need to be revised based upon changes recommended in the Site Plan section above.**
11. **Section 4.0 O&M; A description of the deed restriction for each property and easement to the Town to perform maintenance and bill the property owner if it is not being properly or routinely performed by the homeowner needs to be added. Proper operation of the stormwater management system is necessary to reduce the likelihood of stormwater impacts downstream.**

If you have any questions, please feel free to contact me.

Sincerely,
KB Group of NY, Inc. dba PRIME AE Group of NY

Douglas P Cole

Douglas P. Cole, P.E.
Senior Director of Engineering

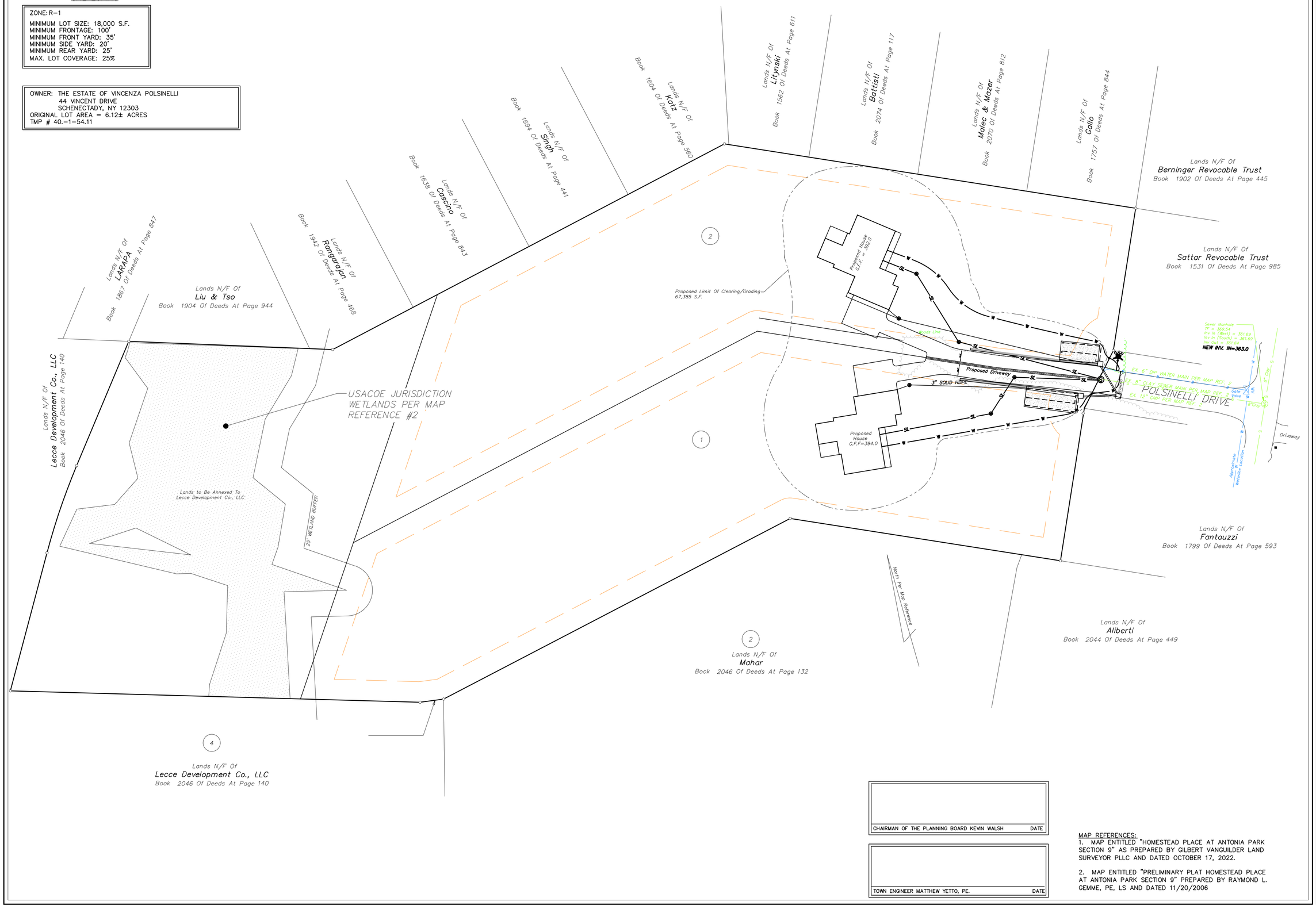
cc: Matthew Yetto, Superintendent of Water, Sewer, and Engineering
Clark A. Henry, Assistant Town Planner
Brett Steenburgh, P.E.

SITE ZONING

ZONE: R-1

MINIMUM LOT SIZE: 18,000 S.F.
MINIMUM FRONTAGE: 100'
MINIMUM FRONT YARD: 35'
MINIMUM SIDE YARD: 20'
MINIMUM REAR YARD: 25'
MAX. LOT COVERAGE: 25%

OWNER: THE ESTATE OF VINCENZA POLSINELLI
44 VINCENT DRIVE
SCHENECTADY, NY 12303
ORIGINAL LOT AREA = 6.12± ACRES
TMP # 40.-1-54.11



CHAIRMAN OF THE PLANNING BOARD KEVIN WALSH DATE

TOWN ENGINEER MATTHEW YETTO, PE. DATE

MAP REFERENCES:
1. MAP ENTITLED "HOMESTEAD PLACE AT ANTONIA PARK SECTION 9" AS PREPARED BY GILBERT VANGUILDER LAND SURVEYOR PLLC AND DATED OCTOBER 17, 2022.

2. MAP ENTITLED "PRELIMINARY PLAT HOMESTEAD PLACE AT ANTONIA PARK SECTION 9" PREPARED BY RAYMOND L. GEMME, PE, LS AND DATED 11/20/2006

NO.	DATE:	REVISIONS:	BY:
4	5-31-23	MODIFIED AS PER BOARD COMMENTS	
3	5-12-23	MODIFIED AS PER TDE AND BOARD COMMENTS	
2	4-25-23	MODIFIED AS PER TDE AND BOARD COMMENTS	
1	4-4-23	MODIFIED PLOT MANAGEMENT	

Scaling off these drawings shall be done only for review and approval purposes. Contractors shall use dimensions and electronic data only for layout and construction.

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ENGINEERING THAT TRANSFORMS IMAGINATION INTO REALITY

OVERALL SITE PLAN
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA
COUNTY OF SCHENECTADY
STATE OF NEW YORK

DRAWN BY: BLS
CHKD BY:
JOB NO.
SCALE: 1" = 40'
DATE: FEBRUARY 3, 2023
SHEET C-1

WATER SERVICE NOTES:
A. ALL WATER SERVICES SHALL BE A MIN. OF 5 FEET DEEP FROM FINISHED GRADE TO THE TOP OF THE PIPE. THE CONTRACTOR SHALL CONSTRUCT THE WATER LINE SO THAT ALL CROSSINGS WITH OTHER UTILITIES HAVE THE REQUIRED CLEARANCES. INVERTS AT THE WATER AND SEWER CROSSINGS ARE NOTED ON THE PLANS

B. WATER LINES SHALL BE LAID AT LEAST 10 FT. HORIZONTALLY FROM ANY EXISITNG OR PROPOSED SEWER. WATER MAINS CROSSINGS SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERITICAL DISTANCE OF 18 IN. BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER

C. HDPE WATER SERVICES SHALL BE INSTALLED WITH TRACER WIRE.

WATER NOTES:
A. THE TOWN OF NISKAYUNA SHALL BE NOTIFIED 72 HOURS PRIOR TO INSTALLATION DISINFECTION AND TESTING OF THE WATER MAIN.

SEWER NOTES:
A. EXISTING MANHOLE SHALL BE RAISED USING A 3 FOOT HIGH BARREL SECTION. THE NEW SECTION SHALL HAVE POLYMER STEPS. THE EXISTING CONE SECTION SHALL BE REMOVED AND THE BARREL SECTION INSTALLED USING NEW BUTYL SEALS. TWO LAYERS OF ASPHALT SEALANT SHALL BE APPLIED TO THE NEW SECTION. THE EXISTING CONE SECTION SHALL BE RE-USED. ALL STEPS SHALL BE ALIGNED.

B. UPON RAISING THE MANHOLE RIM, A POSITIVE PITCH OF THE FINISHED GRADE AWAY FROM THE MANHOLE IN ALL DIRECTIONS SHALL BE ESTABLISHED.

GENERAL NOTES

1. IT IS THE INTENT OF THESE PLANS TO BE IN STRICT CONFORMANCE WITH ALL TOWN OF NISKAYUNA, COUNTY OF SCHENECTADY, STATE OF NEW YORK, AND APPLICABLE FEDERAL RULES REGULATIONS, AND LAWS. IF CONFLICTS ARE NOTED BETWEEN THE ABOVE, AND THESE PLANS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER AND THE TOWN ENGINEER.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, GRADES, ELEVATIONS, AND MATERIALS GIVEN ON THE PLANS.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR ANY DAMAGE DONE OUTSIDE OF THE PROJECT AREA OR LIMITS OF CLEARING.
4. EXCESS BUILDING MATERIAL AND CLEARING DEBRIS SHALL BE DISPOSED OF OFF SITE.
5. UNDERGROUND UTILITIES IF SHOWN HEREON ARE BASED ON VISIBLE PHYSICAL EVIDENCE. THEY SHOULD BE CONSIDERED SCHEMATIC ONLY AND ARE SHOWN TO DEPICT GENERAL UTILITY CONNECTIONS RATHER THAN EXACT UNDERGROUND LOCATIONS.
6. SURVEY BASE MAPPING HAS BEEN PROVIDED BY OTHERS BRETT L. STEENBURGH, P.E., LLC MAKES NO CERTIFICATION AS TO THE ACCURACY AND COMPLETENESS OF SAID MAPPING.
7. CONFLICTS SHOWN ON PLANS OR BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER, OWNER REPRESENTATIVE AND/OR ENGINEER.

GENERAL NOTES:
1. BY ISSUANCE OF A BUILDING PERMIT, THE TOWN OF NISKAYUNA DOES NOT ASSUME ANY LIABILITY FOR STORM WATER DAMAGE BY GENERAL APPROVAL OF THESE PLANS. THE OWNER MUST ASSUME ANY AND ALL LIABILITIES FOR DAMAGE CLAIMED ARISING OUT OF INCREASED STORM WATER FLOW.
2. ALL ON-SITE SANITATION AND WATER FACILITIES SHALL BE DESIGNED TO MEET THE MINIMUM SPECIFICATIONS OF THE STATE HEALTH DEPARTMENT.

SOIL EROSION AND SEDIMENT CONTROL MEASURES:
1. DAMAGE TO SURFACE WATERS RESULTING FROM EROSION AND SEDIMENTATION SHALL BE MINIMIZED BY STABILIZING DISTURBED AREAS AND BY REMOVING SEDIMENT FROM CONSTRUCTION SITE DISCHARGES.
2. INSOFAR AS PRACTICABLE, EXISTING VEGETATION SHALL BE PRESERVED.
3. SITE PREPARATION ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE AREA AND DURATION OF SOIL DISRUPTION.
4. PERMANENT TRAFFIC CORRIDORS SHALL BE ESTABLISHED AND "ROUTES OF CONVENIENCE" SHALL BE AVOIDED.
5. CONSTRUCTION TRAFFIC SHALL NOT CROSS STREAMS OR DITCHES EXCEPT AT SUITABLE CROSSING FACILITIES, AND SHALL NOT OPERATE UNNECESSARILY WITHIN WATERWAYS OR DRAINAGE DITCHES.

MAINTENANCE OF EROSION CONTROL MEASURES:
1. THE DEVELOPER/CONTRACTOR OR HIS BUILDER SHALL INSPECT AND MAINTAIN THE INTEGRITY AND FUNCTION OF ALL TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE DEVELOPMENT PROCESS. TO ASSURE PROPER FUNCTION, SILTATION BARRIERS SHALL BE MAINTAINED IN GOOD CONDITION AND REINFORCED, EXTENDED, REPAIRED, RE-SEEDED AND PROTECTED FROM FURTHER EROSION. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED AND CONTAINED IN APPROPRIATE SPOIL AREAS, WATER SHALL BE APPLIED TO NEWLY SEEDED AREAS AS NEEDED UNTIL GRASS COVER IS WELL ESTABLISHED.

FUTURE SUBDIVISION NOTE:
ANY FUTURE SUBDIVISION OF THE UNRESTRICTED LANDS OF LOT 4 WILL REQUIRE A MAJOR SUBDIVISION REVIEW AS REQUIRED UNDER THE TOWN OF NISKAYUNA SUBDIVISION LAW AT THAT TIME.

Tree Preservation Policy

- *Subdivision approval by the Planning Board authorizes grading and clearing within the road right-of-way and easements only. The applicant shall submit plans for individual lot grading to be approved as part of the building permit application.*
- *The grading plan submitted for the building permit shall identify all trees with a diameter of 5 inches or more as measured 3 feet above the base of the trunk and indicate those that are proposed to be removed and the reason why such removal is necessary.*
- *Any trees removed from a lot in a manner that is not consistent with the approved grading plan for that lot shall be replaced at the expense of the developer before the issuance of the certificate of occupancy. Replacement trees shall be of a type and size satisfactory to the Town Engineer.*
- *The grading plan shall be consistent with the purposes of the Soil Erosion and Sediment Control Ordinance. In particular, erodible materials shall not be stockpiled within the drip line of trees to be preserved.*

Grading Notes

- *The applicant shall treat the grading plan-submitted for the subdivision as advisory only, and shall submit grading plans for review by the Building Inspector on a lot-by-lot basis that are consistent with the Planning Board requirements for tree preservation.*

SOIL TEST

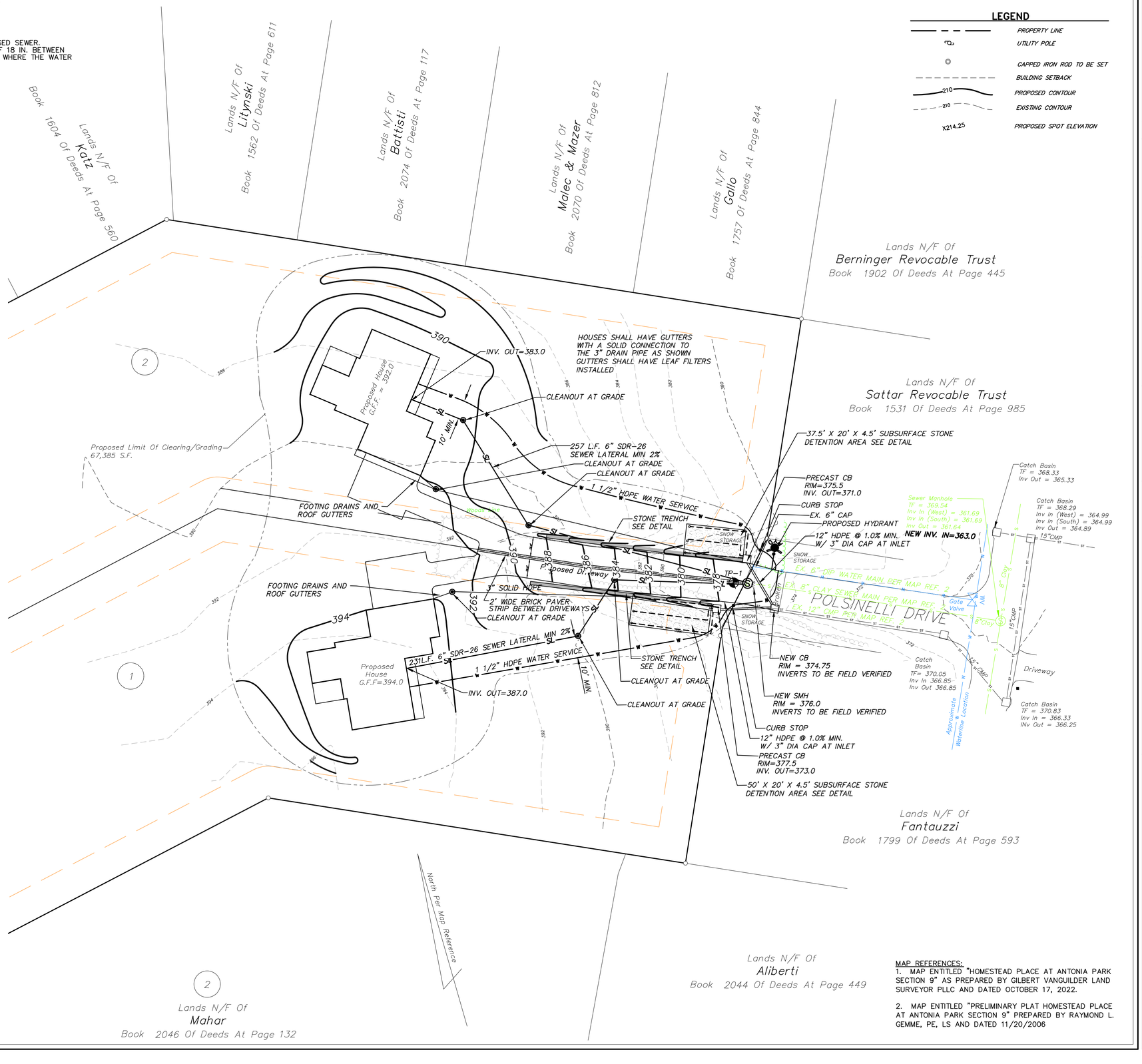
TP-1
0-6" TOPSOIL AND ORGANICS
6" - 36" BR. SANDY SILT DRY
36" - 90" GRAY FIRM CLAY (HARDPAN) DRY

NO GROUNDWATER
NO MOTTLING

TEST PIT PERFORMED ON 5/12/2023 AND WITNESSED BY BRETT L. STEENBURGH P.E.

CHAIRMAN OF THE PLANNING BOARD KEVIN WALSH DATE

TOWN ENGINEER MATTHEW YETTO, PE. DATE



LEGEND

- PROPERTY LINE
- UTILITY POLE
- CAPPED IRON ROD TO BE SET
- BUILDING SETBACK
- 210 PROPOSED CONTOUR
- 210 EXISTING CONTOUR
- X214.25 PROPOSED SPOT ELEVATION

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1	1-4-23	SITE PLAN SUBMITTAL	

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(518) 365-0675
bsteenburgh@gmail.com

ENGINEERING THAT TRANSFORMS
IMAGINATION INTO REALITY

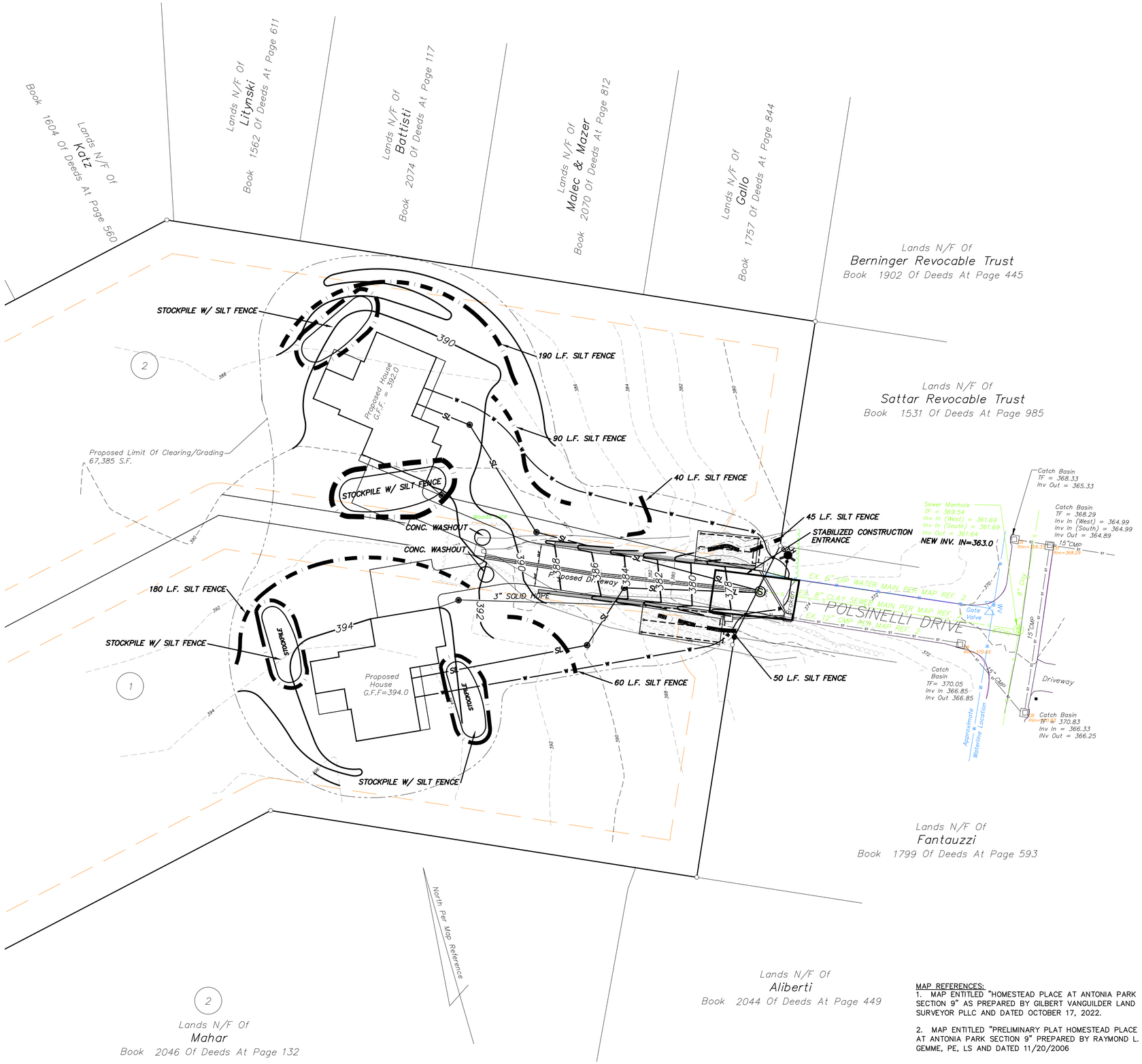
DETAILED GRADING AND UTILITY PLAN
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA

COUNTY OF SCHENECTADY STATE OF NEW YORK

DRAWN BY: BLS
CHECKED BY:
CAD FILE:
JOB NO.
DATE: FEBRUARY 3, 2023

SCALE: 1" = 30'

SHEET C-2



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CHAIRMAN OF THE PLANNING BOARD KEVIN WALSH DATE

TOWN ENGINEER MATTHEW YETTO, PE. DATE

NO.	DATE:	REVISIONS:	BY:
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3	5-12-23	MODIFIED AS PER TOE AND BOARD COMMENTS	
2	4-24-23	MODIFIED AS PER TOE AND BOARD COMMENTS	
1	1-4-23	MODIFIED DUE TO NEW MANAGEMENT	

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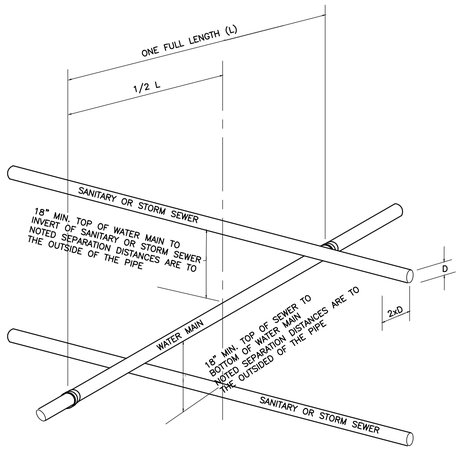
ENGINEERING THAT TRANSFORMS IMAGINATION INTO REALITY

E & SC PLAN
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA
COUNTY OF SCHENECTADY STATE OF NEW YORK

DRAWN BY: BLS
CHECKED BY:
CAD FILE:
JOB NO.
DATE: FEBRUARY 3, 2023
SCALE: 1" = 30'
SHEET C-3



VERTICAL PIPE CROSSING DETAIL
(NOT TO SCALE)

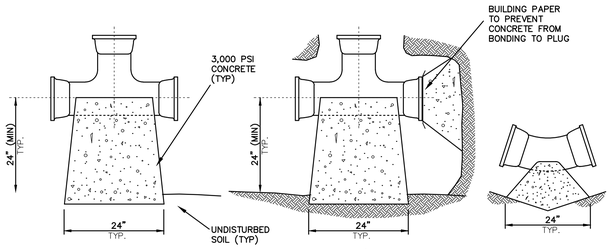


TABLE 1

SAFE BEARING LOADS OF SOILS & MULTIPLICATION FACTORS FOR MODIFICATION OF THRUST BLOCK AREAS (TABLE 2)		
SOIL	SOIL BEARING CAPACITY (LB/FT²)	FACTOR
MUCK PEAT	0	–
SOFT CLAY	300	4.00
SAND	1000	2.00
SAND & GRAVEL	1500	1.33
SAND & GRAVEL w/CLAY	2000	1.00
SHALE	5000	0.40

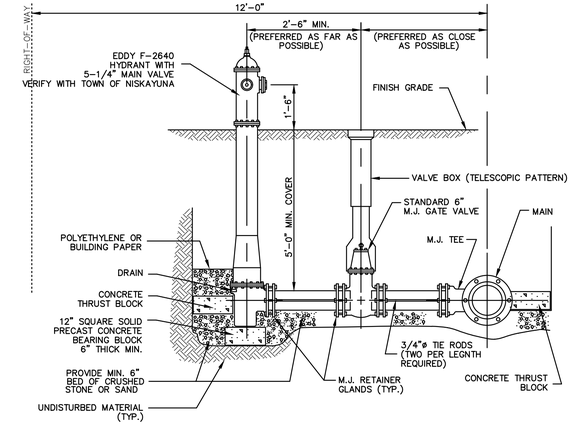
TABLE 2

BEARING AREAS (FT²) FOR CONCRETE THRUST BLOCKS					
PIPE SIZE	TEE	90° BEND	45° BEND	22.5° BEND	11.25° BEND
100 P.S.I.G. INTERNAL PRESSURE					
3" & 4"	1	1	1	1	–
6"	2	2	1	1	–
8"	3	3	2	1	1
10"	6	8	3	2	1
12"	6	8	4	2	1
14"	11	11	6	3	1
16"	14	14	8	4	2
18"	18"	18	10	5	3
20"	22	22	12	7	3
24"	32	32	17	9	4

NOTE: BEARING AREAS SHOWN IN TABLE 2 SHALL BE MULTIPLIED BY FACTORS NOTED IN TABLE 1 TO ESTABLISH REQUIRED BEARING AREAS FOR SOIL CONDITIONS.

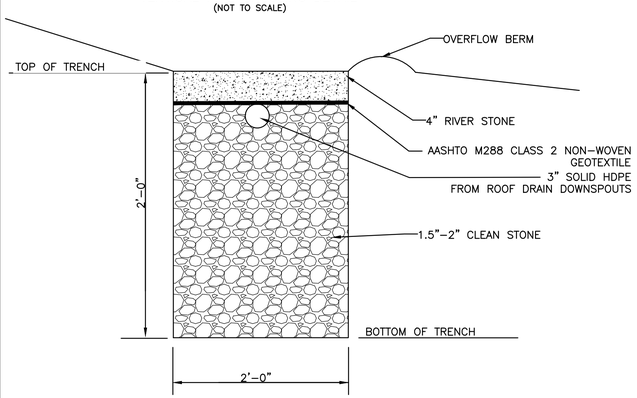
TYPICAL HORIZONTAL THRUST BLOCK DETAIL

N.T.S.



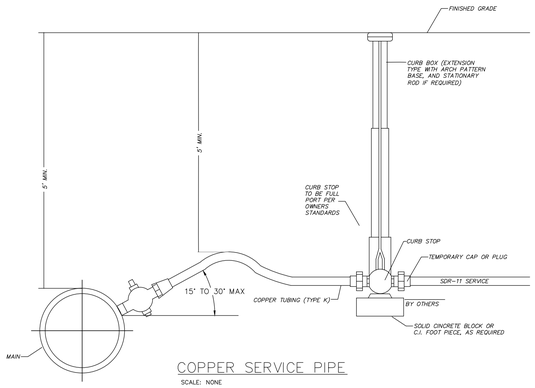
HYDRANT INSTALLATION DETAIL

N.T.S.

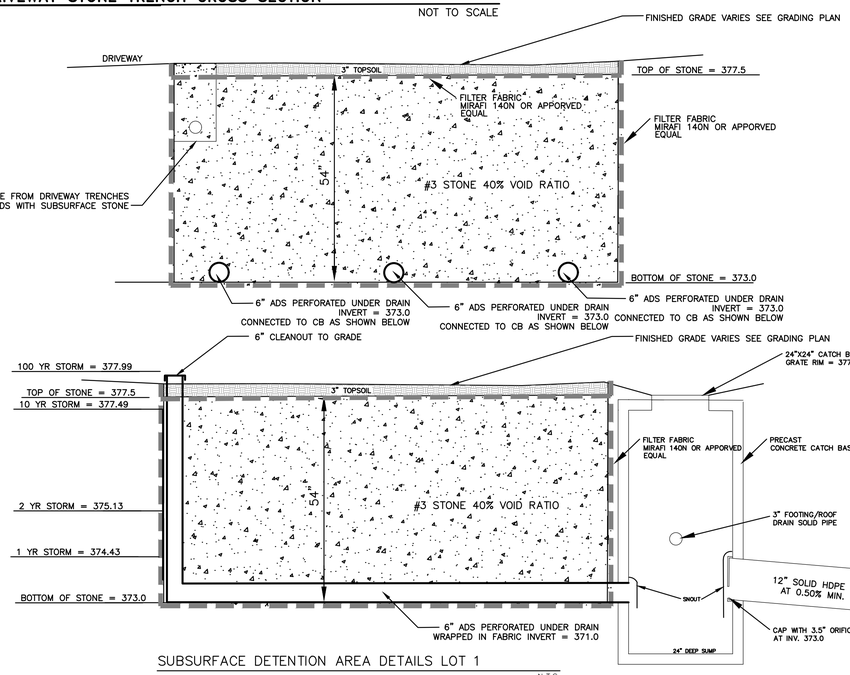


DRIVEWAY STONE TRENCH CROSS SECTION

NOT TO SCALE

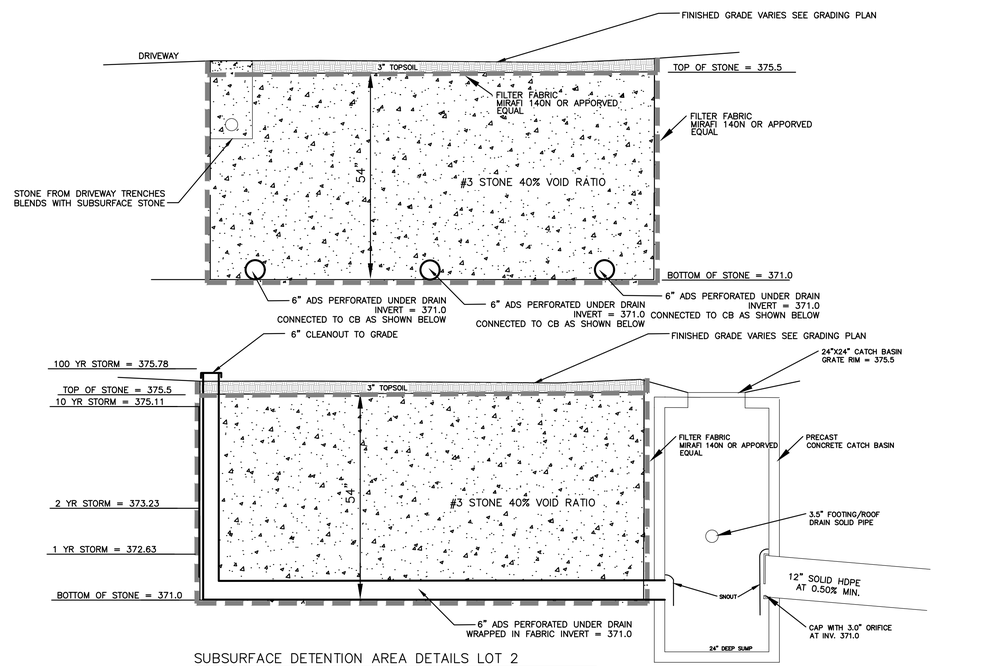


COPPER SERVICE PIPE
SCALE: NONE



SUBSURFACE DETENTION AREA DETAILS LOT 1

N.T.S.



SUBSURFACE DETENTION AREA DETAILS LOT 2

N.T.S.

CHAIRMAN OF THE PLANNING BOARD KEVIN WALSH DATE

TOWN ENGINEER MATTHEW YETTO, PE. DATE

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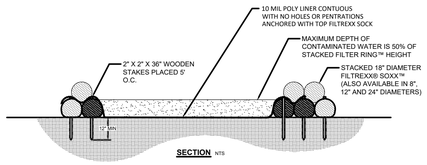
ENGINEERING THAT TRANSFORMS IMAGINATION INTO REALITY

DETAILS
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA
COUNTY OF SCHENECTADY
STATE OF NEW YORK

DRAWN BY: BLS
CHECKED BY: BLS
JOB NO.
DATE: FEBRUARY 3, 2023

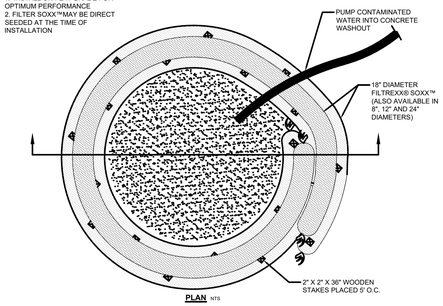
SCALE: AS NOTED

SHEET C-4



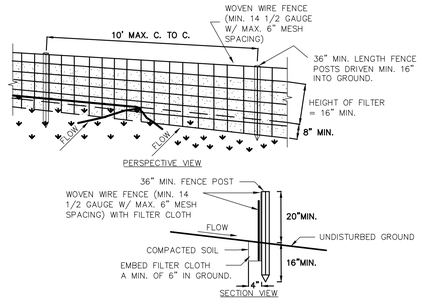
SECTION NTS

NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. FILTER SOXX™MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION



PLAN NTS

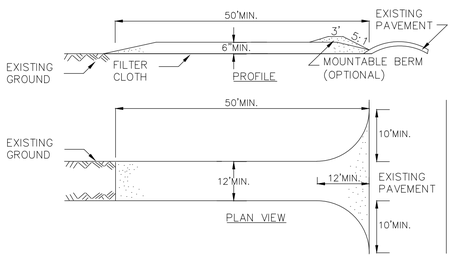
FILTREXX® CONCRETE WASHOUT
NTS



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

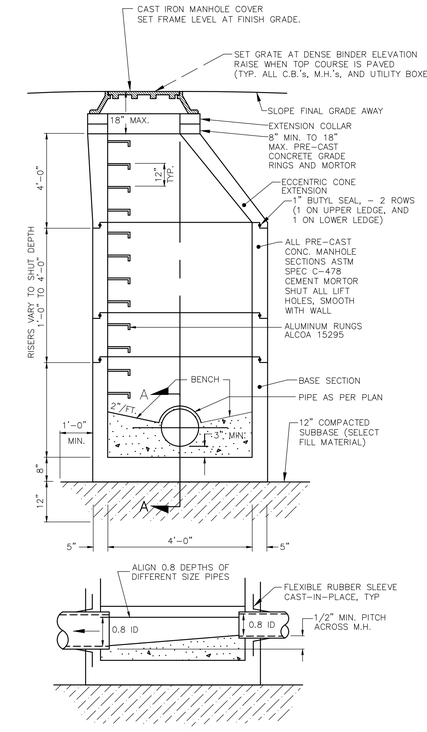
SILT FENCE DETAIL
(NOT TO SCALE)



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE – USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CON-STRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

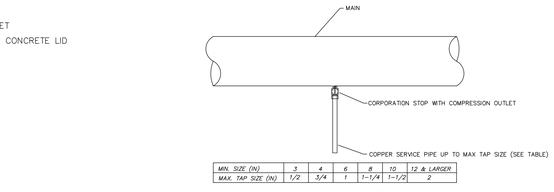
STABILIZED CONSTRUCTION ENTRANCE DETAIL
(NOT TO SCALE)



SECTION A-A

TYPICAL PRE-CAST CONCRETE MANHOLE
(NOT TO SCALE)

STANDARD SQUARE PRECAST CONCRETE CATCH BASIN (TYPE 2)
(NOT TO SCALE)



MIN. SIZE (IN)	3	4	6	8	10	12 & LARGER
MAX. TAP SIZE (IN)	1/2	3/4	1	1-1/4	1-1/2	2

NOTE: THE MAXIMUM TAP SIZE OF AN 8" WATER MAIN IS 1-1/4"

TYPICAL COPPER SERVICE PIPE CONNECTION DETAIL
SCALE: NONE

TESTING OF WATER SERVICE MAIN NOTES

1. AFTER TRENCH HAS BEEN BACKFILLED, HYDROSTATIC ACCEPTANCE TESTS, CONSISTING OF A PRESSURE TEST AND A LEAKAGE TEST, SHALL BE PERFORMED ON ALL SECTIONS OF WATER MAINS INSTALLED. LEAKAGE TEST SHALL BE CONDUCTED CONCURRENTLY WITH PRESSURE TEST. TEST SECTION SHALL BE LIMITED TO ABOUT 2000 FT. (MAX.) UNLESS OTHERWISE APPROVED BY ENGINEER.

2. ALL TESTS, INSPECTIONS ETC. SHALL BE PERFORMED AND EVIDENCE OR COMPLIANCE SHALL BE FORWARDED TO OWNER/ENGINEER AND THE MUNICIPALITY PRIOR TO ACCEPTANCE.

3. ALL WATER FOR TESTS SHALL BE FURNISHED AND DISPOSED OF BY CONTRACTOR AT HIS EXPENSE. SOURCE AND/OR QUALITY OF WATER WHICH CONTRACTOR PROPOSES TO USE IN TESTING LINES SHALL BE ACCEPTABLE TO ENGINEER.

4. HYDROSTATIC PRESUMPTIVE TESTS MAY BE PERFORMED WHEN SYSTEM IS PARTIALLY BACKFILLED TO SIMPLY CHECK WORK, BUT ACCEPTANCE OF SYSTEM SHALL BE BASED ON HYDROSTATIC TESTS RUN ON FINISHED SYSTEM AFTER IT HAS BEEN COMPLETELY BACKFILLED. ALL HYDROSTATIC TESTS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 4 OF AWWA STANDARD C600-93, AS MODIFIED HEREIN.

5. FOR THE PRESSURE TEST, SYSTEM SHALL BE PRESSURIZED AND MAINTAINED AT A MINIMUM OF 150 POUNDS PER SQUARE INCH, OR 1.5 TIMES THE WORKING PRESSURE, WHICH EVER IS GREATER, BASED ON ELEVATION OF LOWEST POINT IN SECTION BEING TESTED AND CORRECTED TO ELEVATION OF GAUGE. PROVISIONS SHALL BE MADE TO RELIEVE AIR TRAPPED AT HIGH POINTS IN SYSTEM THROUGH ADJACENT HYDRANTS OR THROUGH TAPS AND CORPORATION STOPS INSTALLED FOR THIS PURPOSE BY CONTRACTOR. AFTER THIS PRESSURE HAS BEEN MAINTAINED SUCCESSFULLY, WITH FURTHER PUMPING AS REQUIRED, FOR A PERIOD OF AT LEAST TWO HOURS, THE SECTION UNDER TEST SHALL BE CONSIDERED TO HAVE PASSED THE PRESSURE TEST.

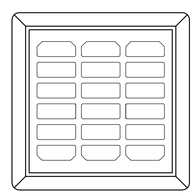
6. LEAKAGE TEST SHALL BE PERFORMED CONCURRENTLY USING A MINIMUM TEST PRESSURE OF 150 POUNDS PER SQUARE INCH, OR 1.5 TIMES THE WORKING PRESSURE, WHICHEVER IS GREATER, BASED ON ELEVATION OF LOWEST POINT IN SECTION UNDER TEST AND CORRECTED TO ELEVATION OF GAUGE. LEAKAGE TEST DURATION SHALL BE A MIN. OF 2 HOURS AFTER LEAKAGE RATE HAS STABILIZED.

7. MAXIMUN ALLOWABLE LEAKAGE SHALL BE AS SHOWN IN THE FOLLOWING TABLE:
*ALLOWABLE LEAKAGE PER 100 FT. OF PIPELINE * AVG. TEST PRESSURE NOMINAL PIPE DIAMETER-IN.*

PSI (BAR)	6	8
250 (17)	0.71	0.95
225 (16)	0.68	0.90
200 (14)	0.64	0.85
175 (12)	0.59	0.80
150 (10)	0.55	0.75
125 (9)	0.50	0.67
100 (7)	0.45	0.60

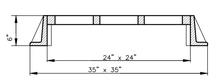
8. IF LEAKAGE IN SYSTEM EXCEEDS SPECIFIED AMOUNT, CONTRACTOR SHALL (AT NO ADDED COST TO OWNER) LOCATE, REPAIR, AND/OR REPLACE DEFECT(S) AND RETEST PIPING SYSTEM.

PLAN



NOTES:
1. CEMENT MORTAR ALL AROUND FRAME.
2. FRAMES AND COVERS BY NEENAH FOUNDRY

NEENAH FOUNDRY # R-3210A TYPE C



SECTION

INLET STRUCTURE FRAME & COVER
(NOT TO SCALE)

CHAIRMAN OF THE PLANNING BOARD KEVIN WALSH DATE

TOWN ENGINEER MATTHEW YETTO, PE. DATE

NO.	DATE:	REVISIONS:	BY:
4	5-31-23	MODIFIED AS PER BOARD COMMENTS	
3	5-12-23	MODIFIED AS PER BOARD COMMENTS	
2	4-25-23	MODIFIED AS PER TOE AND BOARD COMMENTS	
1	1-4-23	MODIFIED PER TOE MANAGEMENT	

Scaling off these drawings shall be done only for review and approval purposes. Contractors shall use dimensions and electronic data only for layout and construction.

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N.Y.S. LIC. NO. 075459

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ENGINEERING THAT TRANSFORMS IMAGINATION INTO REALITY

DETAILS
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA STATE OF NEW YORK
COUNTY OF SCHENECTADY

DRAWN BY: BLS
CHECKED BY: JOB NO.
DATE: FEBRUARY 3, 2023
SCALE: AS NOTED
SHEET C-5

SITE ZONING

ZONE: R-1
MINIMUM LOT SIZE: 18,000 S.F.
MINIMUM FRONTAGE: 100'
MINIMUM FRONT YARD: 35'
MINIMUM SIDE YARD: 20'
MINIMUM REAR YARD: 25'
MAX. LOT COVERAGE: 25%

OWNER: THE ESTATE OF VINCENZA POLSINELLI
44 VINCENT DRIVE
SCHENECTADY, NY 12303
ORIGINAL LOT AREA = 6.12± ACRES
TMP # 40.-1-54.11

Lands N/F Of
LARAPA
Book 1867 Of Deeds At Page 847

Lands N/F Of
Liu & Tso
Book 1904 Of Deeds At Page 944

Lands N/F Of
Rangarajan
Book 1942 Of Deeds At Page 468

Lands N/F Of
Casano
Book 1636 Of Deeds At Page 843

Lands N/F Of
Singh
Book 1694 Of Deeds At Page 441

Lands N/F Of
Katz
Book 1604 Of Deeds At Page 560

Lands N/F Of
Litynski
Book 1562 Of Deeds At Page 611

Lands N/F Of
Battisti
Book 2074 Of Deeds At Page 117

Lands N/F Of
Malec & Mazer
Book 2070 Of Deeds At Page 812

Lands N/F Of
Gallo
Book 1757 Of Deeds At Page 844

Lands N/F Of
Berninger Revocable Trust
Book 1902 Of Deeds At Page 445

Lands N/F Of
Sattar Revocable Trust
Book 1531 Of Deeds At Page 985

Lands N/F Of
Lecce Development Co., LLC
Book 2046 Of Deeds At Page 140

USACOE JURISDICTION WETLANDS PER MAP REFERENCE #2

Lands to Be Annexed To Lecce Development Co., LLC

25' WETLAND BUFFER

Proposed Limit Of Clearing/Grading 67,385 S.F.

Proposed House G.F.F.= 396.0

Proposed House G.F.F=394.0

Proposed Driveway

3" SOLID HDPE

Woods Line

Sewer Manhole
TF = 369.54
Inv In (West) = 361.69
Inv In (South) = 361.69
Inv Out = 361.69
NEW INV. IN=363.0

EX. 6" DIP. WATER MAIN, PER MAP REF. 2

EX. 8" CLAY SEWER MAIN, PER MAP REF. 2

EX. 12" CMP, PER MAP REF. 2

POLSINELLI DRIVE

Gate Valve

8" Clay

4" Clay

Driveway

Approximate Waterline Location

North Per Map Reference

Lands N/F Of
Fantauzzi
Book 1799 Of Deeds At Page 593

Lands N/F Of
Aliberti
Book 2044 Of Deeds At Page 449

Lands N/F Of
Mahar
Book 2046 Of Deeds At Page 132

Lands N/F Of
Lecce Development Co., LLC
Book 2046 Of Deeds At Page 140

CHAIRMAN OF THE PLANNING BOARD KEVIN WALSH DATE

TOWN ENGINEER MATTHEW YETTO, PE. DATE

MAP REFERENCES:
1. MAP ENTITLED "HOMESTEAD PLACE AT ANTONIA PARK SECTION 9" AS PREPARED BY GILBERT VANGUILDER LAND SURVEYOR PLLC AND DATED OCTOBER 17, 2022.

2. MAP ENTITLED "PRELIMINARY PLAT HOMESTEAD PLACE AT ANTONIA PARK SECTION 9" PREPARED BY RAYMOND L. GEMME, PE, LS AND DATED 11/20/2006

NO.	DATE:	REVISIONS:	BY:
3	5-12-23	MODIFIED AS PER TDE AND BOARD COMMENTS	
2	4-25-23	MODIFIED AS PER TDE AND BOARD COMMENTS	
1	4-4-23	PRELIMINARY SITE MANAGEMENT	

BRETT L. STEENBURGH, P.E. PLLC
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ENGINEERING THAT TRANSFORMS IMAGINATION INTO REALITY

OVERALL SITE PLAN
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA
COUNTY OF SCHENECTADY
STATE OF NEW YORK

DRAWN BY: BLS
CHKD BY:
JOB NO.
SCALE: 1" = 40'
DATE: FEBRUARY 3, 2023
SHEET C-1

WATER SERVICE NOTES:
A. ALL WATER SERVICES SHALL BE A MIN. OF 5 FEET DEEP FROM FINISHED GRADE TO THE TOP OF THE PIPE. THE CONTRACTOR SHALL CONSTRUCT THE WATER LINE SO THAT ALL CROSSINGS WITH OTHER UTILITIES HAVE THE REQUIRED CLEARANCES. INVERTS AT THE WATER AND SEWER CROSSINGS ARE NOTED ON THE PLANS

B. WATER LINES SHALL BE LAID AT LEAST 10 FT. HORIZONTALLY FROM ANY EXISITNG OR PROPOSED SEWER. WATER MAINS CROSSINGS SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERITICAL DISTANCE OF 18 IN. BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER

C. HDPE WATER SERVICES SHALL BE INSTALLED WITH TRACER WIRE.

WATER NOTES:
A. THE TOWN OF NISKAYUNA SHALL BE NOTIFIED 72 HOURS PRIOR TO INSTALLATION DISINFECTION AND TESTING OF THE WATER MAIN.

SEWER NOTES:
A. EXISTING MANHOLE SHALL BE RAISED USING A 3 FOOT HIGH BARREL SECTION. THE NEW SECTION SHALL HAVE POLYMER STEPS. THE EXISTING CONE SECTION SHALL BE REMOVED AND THE BARREL SECTION INSTALLED USING NEW BUTYL SEALS. TWO LAYERS OF ASPHALT SEALANT SHALL BE APPLIED TO THE NEW SECTION. THE EXISTING CONE SECTION SHALL BE RE-USED. ALL STEPS SHALL BE ALIGNED.

B. UPON RAISING THE MANHOLE RIM, A POSITIVE PITCH OF THE FINISHED GRADE AWAY FROM THE MANHOLE IN ALL DIRECTIONS SHALL BE ESTABLISHED.

GENERAL NOTES

1. IT IS THE INTENT OF THESE PLANS TO BE IN STRICT CONFORMANCE WITH ALL TOWN OF NISKAYUNA, COUNTY OF SCHENECTADY, STATE OF NEW YORK, AND APPLICABLE FEDERAL RULES REGULATIONS, AND LAWS. IF CONFLICTS ARE NOTED BETWEEN THE ABOVE, AND THESE PLANS, IT SHALL BE BROUGHT TO THE ATTENTION OF THE DESIGN ENGINEER AND THE TOWN ENGINEER.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, GRADES, ELEVATIONS, AND MATERIALS GIVEN ON THE PLANS.
3. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR ANY DAMAGE DONE OUTSIDE OF THE PROJECT AREA OR LIMITS OF CLEARING.
4. EXCESS BUILDING MATERIAL AND CLEARING DEBRIS SHALL BE DISPOSED OF OFF SITE.
5. UNDERGROUND UTILITIES IF SHOWN HEREON ARE BASED ON VISIBLE PHYSICAL EVIDENCE. THEY SHOULD BE CONSIDERED SCHEMATIC ONLY AND ARE SHOWN TO DEPICT GENERAL UTILITY CONNECTIONS RATHER THAN EXACT UNDERGROUND LOCATIONS.
6. SURVEY BASE MAPPING HAS BEEN PROVIDED BY OTHERS BRETT L. STEENBURGH, P.E., LLC MAKES NO CERTIFICATION AS TO THE ACCURACY AND COMPLETENESS OF SAID MAPPING.
7. CONFLICTS SHOWN ON PLANS OR BETWEEN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER, OWNER REPRESENTATIVE AND/OR ENGINEER.

GENERAL NOTES:
1. BY ISSUANCE OF A BUILDING PERMIT, THE TOWN OF NISKAYUNA DOES NOT ASSUME ANY LIABILITY FOR STORM WATER DAMAGE BY GENERAL APPROVAL OF THESE PLANS. THE OWNER MUST ASSUME ANY AND ALL LIABILITIES FOR DAMAGE CLAIMED ARISING OUT OF INCREASED STORM WATER FLOW.
2. ALL ON-SITE SANITATION AND WATER FACILITIES SHALL BE DESIGNED TO MEET THE MINIMUM SPECIFICATIONS OF THE STATE HEALTH DEPARTMENT.

SOIL EROSION AND SEDIMENT CONTROL MEASURES:
1. DAMAGE TO SURFACE WATERS RESULTING FROM EROSION AND SEDIMENTATION SHALL BE MINIMIZED BY STABILIZING DISTURBED AREAS AND BY REMOVING SEDIMENT FROM CONSTRUCTION SITE DISCHARGES.
2. INSOFAR AS PRACTICABLE, EXISTING VEGETATION SHALL BE PRESERVED.
3. SITE PREPARATION ACTIVITIES SHALL BE PLANNED TO MINIMIZE THE AREA AND DURATION OF SOIL DISRUPTION.
4. PERMANENT TRAFFIC CORRIDORS SHALL BE ESTABLISHED AND "ROUTES OF CONVENIENCE" SHALL BE AVOIDED.
5. CONSTRUCTION TRAFFIC SHALL NOT CROSS STREAMS OR DITCHES EXCEPT AT SUITABLE CROSSING FACILITIES, AND SHALL NOT OPERATE UNNECESSARILY WITHIN WATERWAYS OR DRAINAGE DITCHES.

MAINTENANCE OF EROSION CONTROL MEASURES:
1. THE DEVELOPER/CONTRACTOR OR HIS BUILDER SHALL INSPECT AND MAINTAIN THE INTEGRITY AND FUNCTION OF ALL TEMPORARY EROSION CONTROL MEASURES THROUGHOUT THE DURATION OF THE DEVELOPMENT PROCESS. TO ASSURE PROPER FUNCTION, SILTATION BARRIERS SHALL BE MAINTAINED IN GOOD CONDITION AND REINFORCED, EXTENDED, REPAIRED, RE-SEEDED AND PROTECTED FROM FURTHER EROSION. ALL ACCUMULATED SEDIMENT SHALL BE REMOVED AND CONTAINED IN APPROPRIATE SPOIL AREAS, WATER SHALL BE APPLIED TO NEWLY SEEDED AREAS AS NEEDED UNTIL GRASS COVER IS WELL ESTABLISHED.

FUTURE SUBDIVISION NOTE:
ANY FUTURE SUBDIVISION OF THE UNRESTRICTED LANDS OF LOT 4 WILL REQUIRE A MAJOR SUBDIVISION REVIEW AS REQUIRED UNDER THE TOWN OF NISKAYUNA SUBDIVISION LAW AT THAT TIME.

Tree Preservation Policy

- *Subdivision approval by the Planning Board authorizes grading and clearing within the road right-of-way and easements only. The applicant shall submit plans for individual lot grading to be approved as part of the building permit application.*
- *The grading plan submitted for the building permit shall identify all trees with a diameter of 5 inches or more as measured 3 feet above the base of the trunk and indicate those that are proposed to be removed and the reason why such removal is necessary.*
- *Any trees removed from a lot in a manner that is not consistent with the approved grading plan for that lot shall be replaced at the expense of the developer before the issuance of the certificate of occupancy. Replacement trees shall be of a type and size satisfactory to the Town Engineer.*
- *The grading plan shall be consistent with the purposes of the Soil Erosion and Sediment Control Ordinance. In particular, erodible materials shall not be stockpiled within the drip line of trees to be preserved.*

Grading Notes

- *The applicant shall treat the grading plan-submitted for the subdivision as advisory only, and shall submit grading plans for review by the Building Inspector on a lot-by-lot basis that are consistent with the Planning Board requirements for tree preservation.*

SOIL TEST

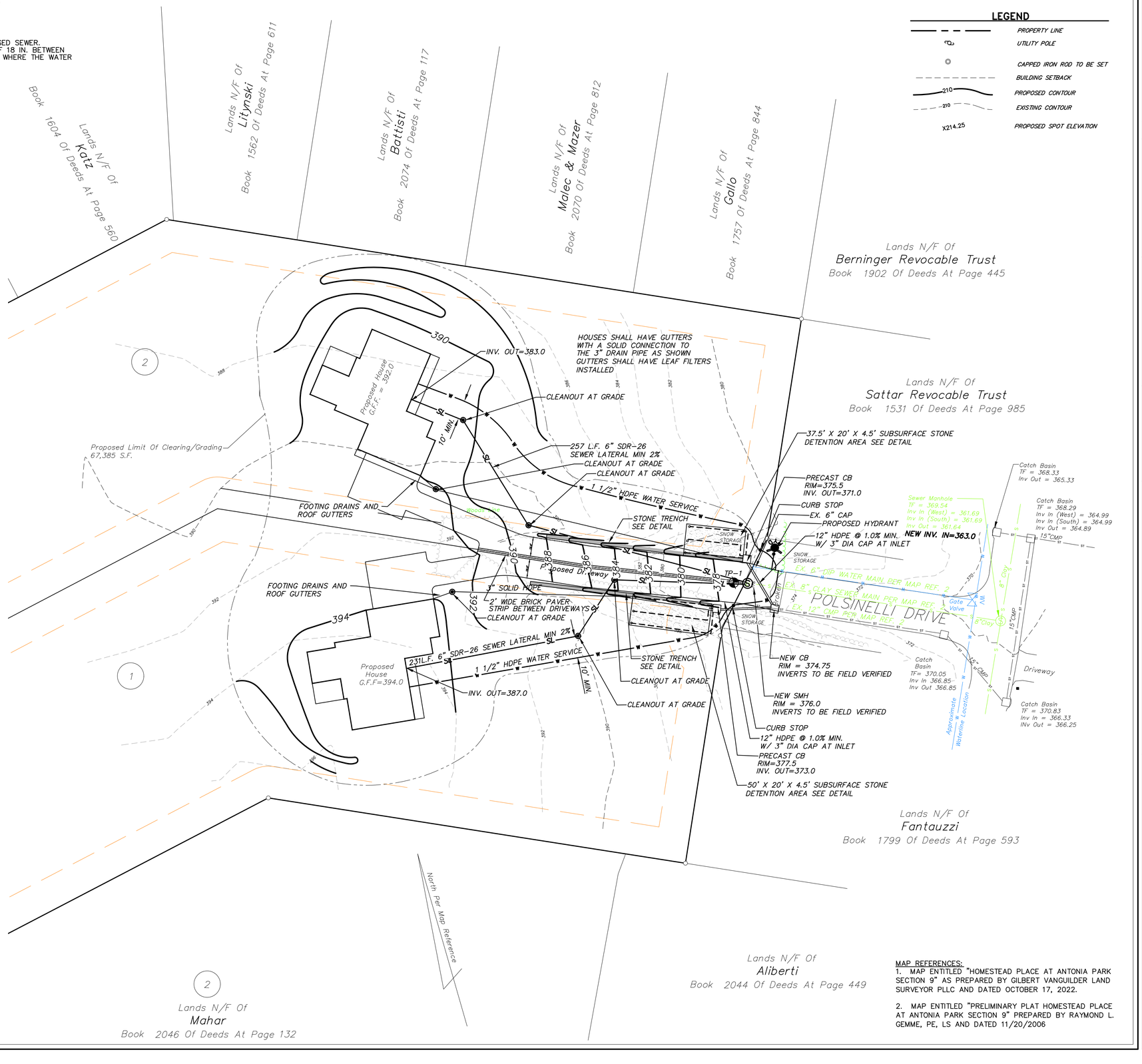
TP-1
0-6" TOPSOIL AND ORGANICS
6" - 36" BR. SANDY SILT DRY
36" - 90" GRAY FIRM CLAY (HARDPAN) DRY

NO GROUNDWATER
NO MOTTLING

TEST PIT PERFORMED ON 5/12/2023 AND WITNESSED BY BRETT L. STEENBURGH P.E.

CHAIRMAN OF THE PLANNING BOARD KEVIN WALSH DATE

TOWN ENGINEER MATTHEW YETTO, PE. DATE



NO.	DATE:	REVISIONS:	BY:
3	5-12-23	MODIFIED AS PER TOE AND BOARD COMMENTS	
2	4-25-23	MODIFIED AS PER TOE AND BOARD COMMENTS	
1	1-4-23	SITE PLAN SUBMITTAL	

BRETT L. STEENBURGH P.E.
N.Y.S. LIC. NO. 075459

DETAILED GRADING AND UTILITY PLAN
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA
COUNTY OF SCHENECTADY STATE OF NEW YORK

DRAWN BY: BLS
CHECKED BY:
CAD FILE:
JOB NO.
DATE: FEBRUARY 3, 2023
SCALE: 1" = 30'
SHEET C-2

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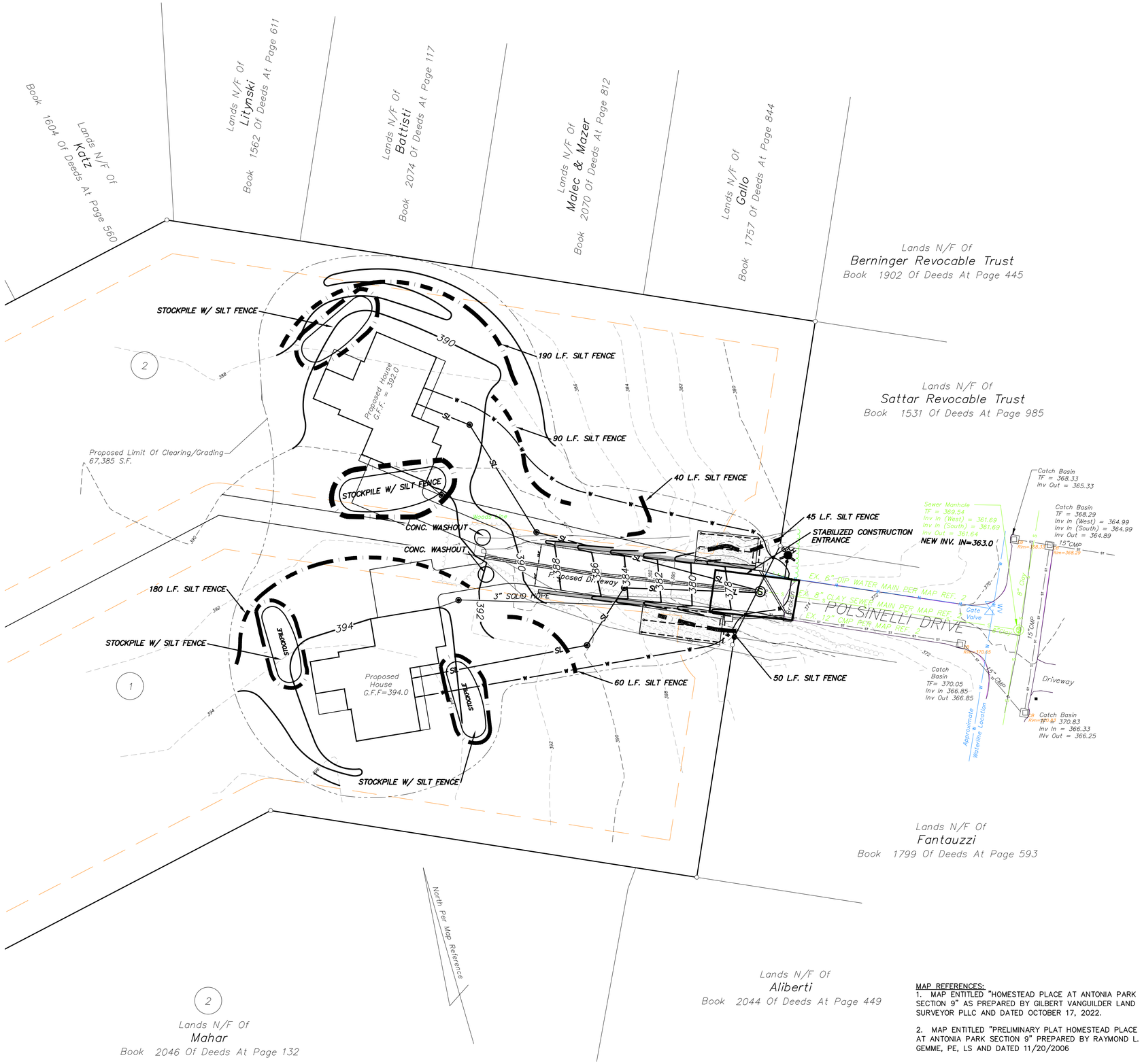
ENGINEERING THAT TRANSFORMS
IMAGINATION INTO REALITY



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TOWN ENGINEER MATTHEW YETTO, PE. DATE

NO.	DATE:	REVISIONS:	BY:
3	5-12-23	MODIFIED AS PER TOE AND BOARD COMMENTS	
2	4-26-23	MODIFIED AS PER TOE AND BOARD COMMENTS	
1	1-4-23	MODIFIED DUE TO NEW MANAGEMENT	

Scaling off these drawings shall be done only for review and approval purposes. Contractors shall use dimensions and electronic data only for layout and construction.

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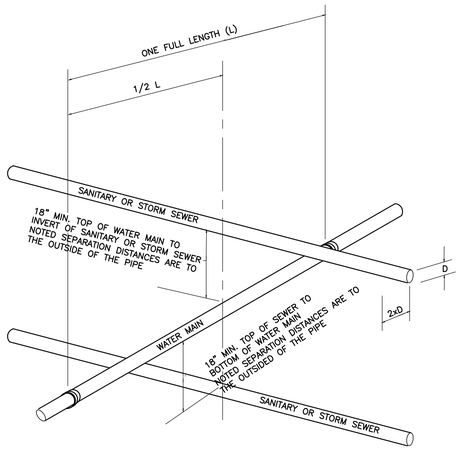
bsteenburghpe@gmail.com

ENGINEERING THAT TRANSFORMS IMAGINATION INTO REALITY

E & SC PLAN
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA
COUNTY OF SCHENECTADY STATE OF NEW YORK

DRAWN BY: BLS
CHECKED BY:
CAD FILE:
JOB NO.
DATE: FEBRUARY 3, 2023
SCALE: 1" = 30'
SHEET C-3



VERTICAL PIPE CROSSING DETAIL
(NOT TO SCALE)

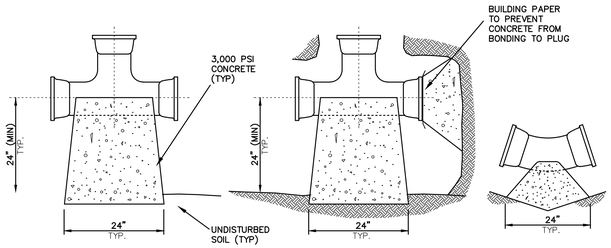


TABLE 1

SAFE BEARING LOADS OF SOILS & MULTIPLICATION FACTORS FOR MODIFICATION OF THRUST BLOCK AREAS (TABLE 2)

SOIL	SOIL BEARING CAPACITY (LB/FT²)	FACTOR
MUCK PEAT	0	–
SOFT CLAY	300	4.00
SAND	1000	2.00
SAND & GRAVEL	1500	1.33
SAND & GRAVEL w/CLAY	2000	1.00
SHALE	5000	0.40

TABLE 2

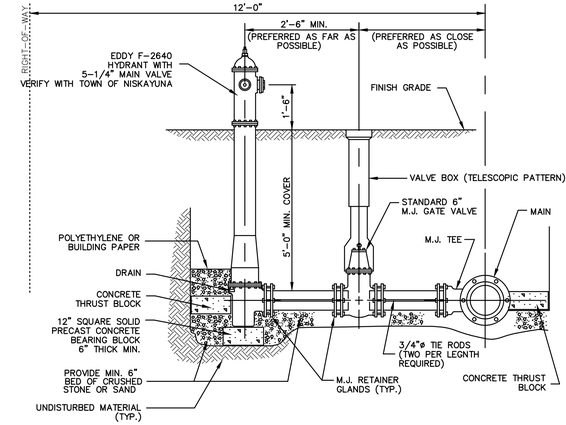
BEARING AREAS (FT²) FOR CONCRETE THRUST BLOCKS

PIPE SIZE	TEE	90° BEND	45° BEND	22.5° BEND	11.25° BEND
100 P.S.I.G. INTERNAL PRESSURE					
3" & 4"	1	1	1	1	–
6"	2	2	1	1	–
8"	3	3	2	1	1
10"	6	8	3	2	1
12"	6	8	4	2	1
14"	11	11	6	3	1
16"	14	14	8	4	2
18"	18"	18	10	5	3
20"	22	22	12	7	3
24"	32	32	17	9	4

NOTE: BEARING AREAS SHOWN IN TABLE 2 SHALL BE MULTIPLIED BY FACTORS NOTED IN TABLE 1 TO ESTABLISH REQUIRED BEARING AREAS FOR SOIL CONDITIONS.

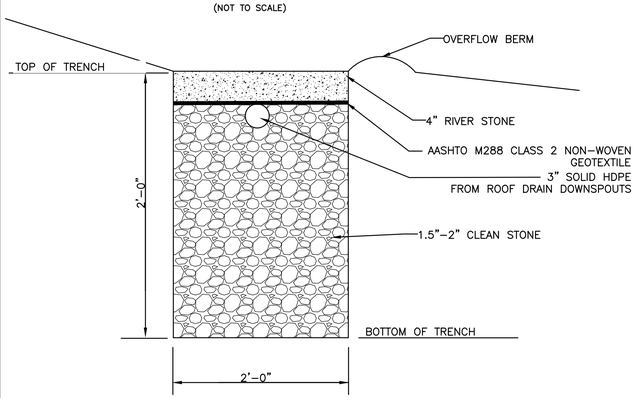
TYPICAL HORIZONTAL THRUST BLOCK DETAIL

N.T.S.



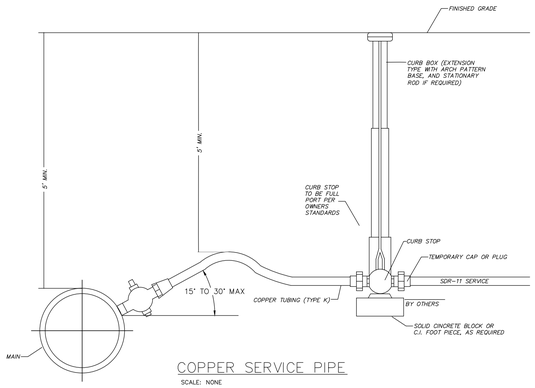
HYDRANT INSTALLATION DETAIL

N.T.S.

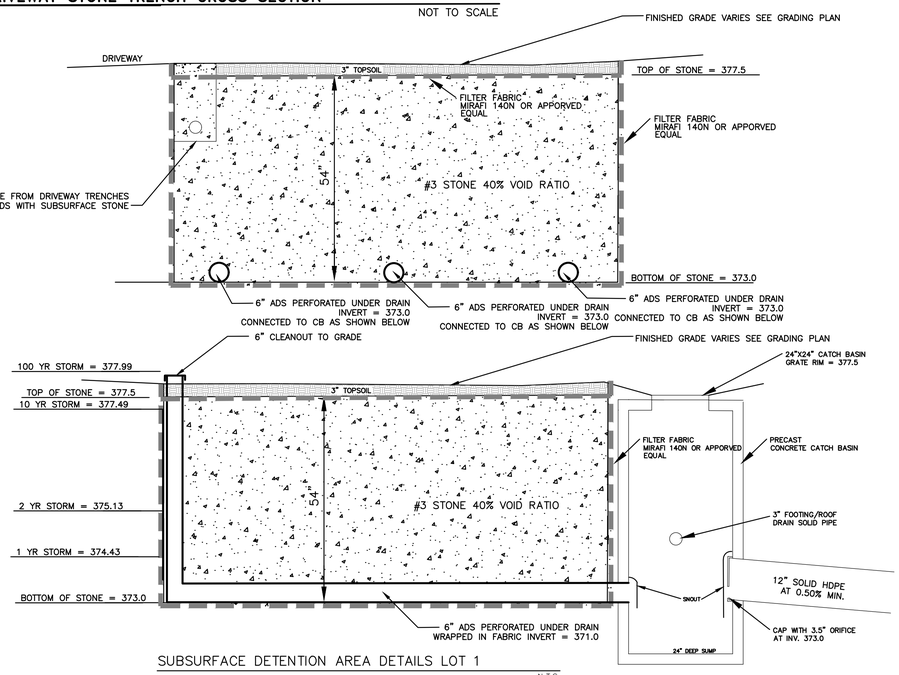


DRIVEWAY STONE TRENCH CROSS SECTION

NOT TO SCALE

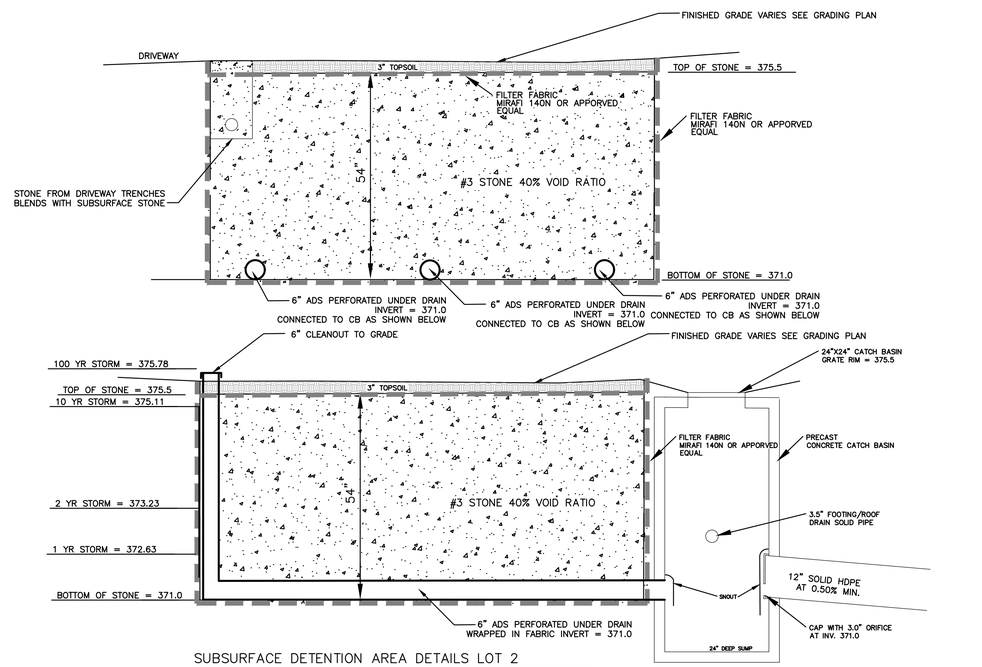


COPPER SERVICE PIPE
SCALE: NONE



SUBSURFACE DETENTION AREA DETAILS LOT 1

N.T.S.



SUBSURFACE DETENTION AREA DETAILS LOT 2

N.T.S.

CHAIRMAN OF THE PLANNING BOARD KEVIN WALSH DATE

TOWN ENGINEER MATTHEW YETTO, PE. DATE

NO.	DATE:	REVISIONS:	BY:
3	5-12-23	MODIFIED AS PER TIE AND BOARD COMMENTS	
2	4-25-23	MODIFIED AS PER PLANNING MANAGER	
1	4-4-23	ADDED DETAILS	

Scaling off these drawings shall be done only for review and approval purposes. Contractors shall use dimensions and electronic data only for layout and construction.

BRETT L. STEENBURGH, P.E. PLLC
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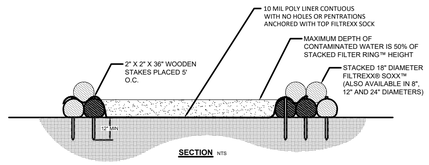
bsteenburghpe@gmail.com

ENGINEERING THAT TRANSFORMS IMAGINATION INTO REALITY

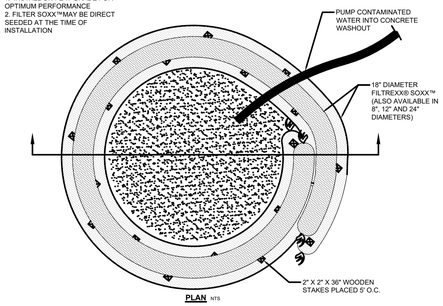
DETAILS
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA
COUNTY OF SCHENECTADY
STATE OF NEW YORK

DRAWN BY: BLS
CHECKED BY: BLS
JOB NO.
SCALE: AS NOTED
DATE: FEBRUARY 3, 2023
SHEET C-4



SECTION NTS

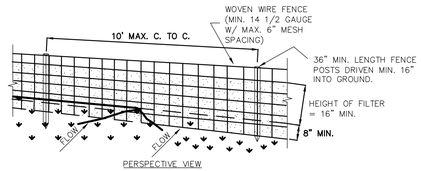
NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2. FILTER SOXX™MAY BE DIRECT SEEDED AT THE TIME OF INSTALLATION



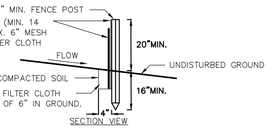
PLAN NTS

FILTREXX® CONCRETE WASHOUT

NTS



PERSPECTIVE VIEW



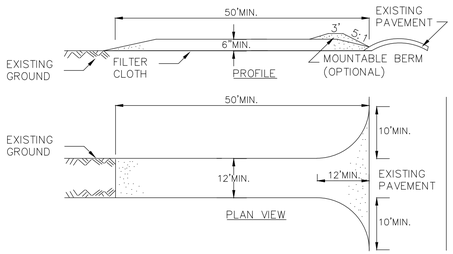
SECTION VIEW

CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE DETAIL

(NOT TO SCALE)

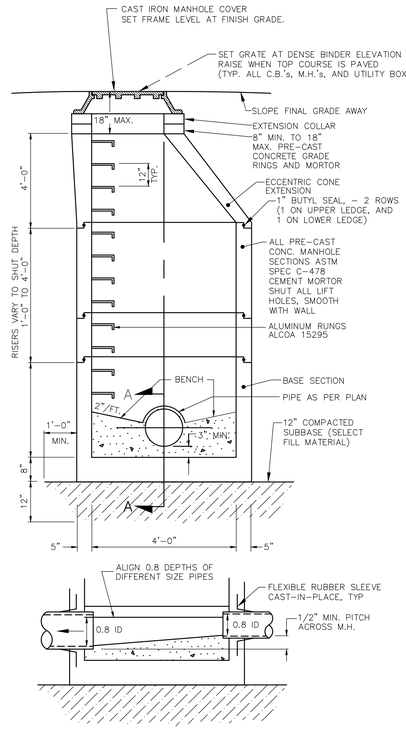


CONSTRUCTION SPECIFICATIONS

1. STONE SIZE – USE 2" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CON-STRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACTED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

STABILIZED CONSTRUCTION ENTRANCE DETAIL

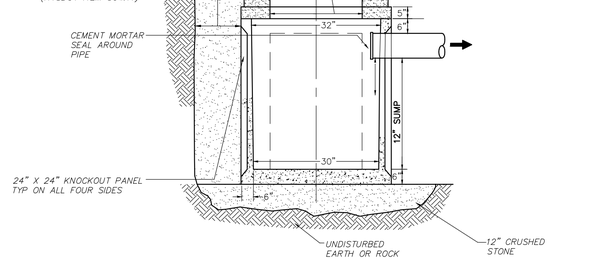
(NOT TO SCALE)



SECTION A-A

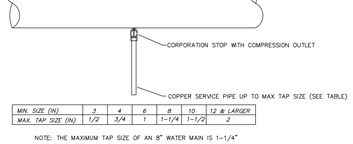
TYPICAL PRE-CAST CONCRETE MANHOLE

(NOT TO SCALE)



STANDARD SQUARE PRECAST CONCRETE CATCH BASIN (TYPE 2)

(NOT TO SCALE)



MIN. SIZE (IN)	3	4	6	8	10	12 & LARGER
MAX. TAP SIZE (IN)	1/2	3/4	1	1-1/4	1-1/2	2

NOTE: THE MAXIMUM TAP SIZE OF AN 8" WATER MAIN IS 1-1/4"

TYPICAL COPPER SERVICE PIPE CONNECTION DETAIL

SCALE: NONE

TESTING OF WATER SERVICE MAIN NOTES

1. AFTER TRENCH HAS BEEN BACKFILLED, HYDROSTATIC ACCEPTANCE TESTS, CONSISTING OF A PRESSURE TEST AND A LEAKAGE TEST, SHALL BE PERFORMED ON ALL SECTIONS OF WATER MAINS INSTALLED. LEAKAGE TEST SHALL BE CONDUCTED CONCURRENTLY WITH PRESSURE TEST. TEST SECTION SHALL BE LIMITED TO ABOUT 2000 FT. (MAX.) UNLESS OTHERWISE APPROVED BY ENGINEER.

2. ALL TESTS, INSPECTIONS ETC. SHALL BE PERFORMED AND EVIDENCE OR COMPLIANCE SHALL BE FORWARDED TO OWNER/ENGINEER AND THE MUNICIPALITY PRIOR TO ACCEPTANCE.

3. ALL WATER FOR TESTS SHALL BE FURNISHED AND DISPOSED OF BY CONTRACTOR AT HIS EXPENSE. SOURCE AND/OR QUALITY OF WATER WHICH CONTRACTOR PROPOSES TO USE IN TESTING LINES SHALL BE ACCEPTABLE TO ENGINEER.

4. HYDROSTATIC PRESUMPTIVE TESTS MAY BE PERFORMED WHEN SYSTEM IS PARTIALLY BACKFILLED TO SIMPLY CHECK WORK, BUT ACCEPTANCE OF SYSTEM SHALL BE BASED ON HYDROSTATIC TESTS RUN ON FINISHED SYSTEM AFTER IT HAS BEEN COMPLETELY BACKFILLED. ALL HYDROSTATIC TESTS SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 4 OF AWWA STANDARD C600-93, AS MODIFIED HEREIN.

5. FOR THE PRESSURE TEST, SYSTEM SHALL BE PRESSURIZED AND MAINTAINED AT A MINIMUM OF 150 POUNDS PER SQUARE INCH, OR 1.5 TIMES THE WORKING PRESSURE, WHICH EVER IS GREATER, BASED ON ELEVATION OF LOWEST POINT IN SECTION BEING TESTED AND CORRECTED TO ELEVATION OF GAUGE. PROVISIONS SHALL BE MADE TO RELIEVE AIR TRAPPED AT HIGH POINTS IN SYSTEM THROUGH ADJACENT HYDRANTS OR THROUGH TAPS AND CORPORATION STOPS INSTALLED FOR THIS PURPOSE BY CONTRACTOR. AFTER THIS PRESSURE HAS BEEN MAINTAINED SUCCESSFULLY, WITH FURTHER PUMPING AS REQUIRED, FOR A PERIOD OF AT LEAST TWO HOURS, THE SECTION UNDER TEST SHALL BE CONSIDERED TO HAVE PASSED THE PRESSURE TEST.

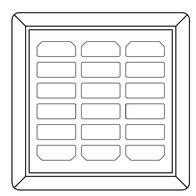
6. LEAKAGE TEST SHALL BE PERFORMED CONCURRENTLY USING A MINIMUM TEST PRESSURE OF 150 POUNDS PER SQUARE INCH, OR 1.5 TIMES THE WORKING PRESSURE, WHICHEVER IS GREATER, BASED ON ELEVATION OF LOWEST POINT IN SECTION UNDER TEST AND CORRECTED TO ELEVATION OF GAUGE. LEAKAGE TEST DURATION SHALL BE A MIN. OF 2 HOURS AFTER LEAKAGE RATE HAS STABILIZED.

7. MAXIMUN ALLOWABLE LEAKAGE SHALL BE AS SHOWN IN THE FOLLOWING TABLE:
*ALLOWABLE LEAKAGE PER 100 FT. OF PIPELINE * AVG. TEST PRESSURE NOMINAL PIPE DIAMETER-IN.*

PSI (BAR)	6	8
250 (17)	0.71	0.95
225 (16)	0.68	0.90
200 (14)	0.64	0.85
175 (12)	0.59	0.80
150 (10)	0.55	0.75
125 (9)	0.50	0.67
100 (7)	0.45	0.60

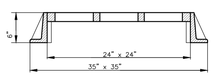
8. IF LEAKAGE IN SYSTEM EXCEEDS SPECIFIED AMOUNT, CONTRACTOR SHALL (AT NO ADDED COST TO OWNER) LOCATE, REPAIR, AND/OR REPLACE DEFECT(S) AND RETEST PIPING SYSTEM.

PLAN



NOTES:
1. CEMENT MORTAR ALL AROUND FRAME.
2. FRAMES AND COVERS BY NEENAH FOUNDRY

NEENAH FOUNDRY # R-3210A TYPE C



SECTION

INLET STRUCTURE FRAME & COVER

(NOT TO SCALE)

CHAIRMAN OF THE PLANNING BOARD KEVIN WALSH DATE

TOWN ENGINEER MATTHEW YETTO, PE. DATE

NO.	DATE:	REVISIONS:	BY:
3	5-12-23	MODIFIED AS PER TIE AND BOARD COMMENTS	BLS
2	4-25-23	MODIFIED AS PER TIE AND BOARD COMMENTS	BLS
1	3-14-23	MODIFIED PER PLANNING MANAGEMENT	BLS

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N.Y.S. LIC. NO. 075459

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ENGINEERING THAT TRANSFORMS IMAGINATION INTO REALITY

DETAILS
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA STATE OF NEW YORK

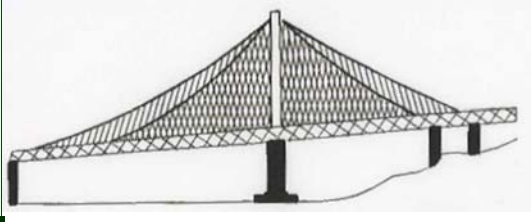
COUNTY OF SCHENECTADY
DRAWN BY: BLS
CHECKED BY: JOB NO.
DATE: FEBRUARY 3, 2023
SCALE: AS NOTED
SHEET C-5

STORMWATER MANAGEMENT REPORT

LOCATION
Polsinelli Drive
Town of Niskayuna
State of New York

PREPARED FOR
Fred Polsinelli

Date Prepared
April 7, 2023
Revised April 25, 2023
Revised May 12, 2023
Revised May 31, 2023



Brett L. Steenburgh, P.E. PLLC
2832 Rosendale Road
Niskayuna, NY 12309
(518) 365-0675
Civil ♦ environmental ♦ structural Engineering

1.0 PROJECT DESCRIPTION

The parcel is located at the terminus of Polsinelli Drive in the Town of Niskayuna. The parcel is owned by The Estate of Vincenza Polsinelli and is 6.12 Acres in size. The parcel is vacant and wooded with minimal underbrush.

It is proposed to develop two residential building lots off the terminus of Polsinelli Drive. Each house will be serviced by a 12' driveway separated by a 2' wide brick paver strip along the common property line.

1.1 NATURE OF CONSTRUCTION

The project will consist of the disturbance 1.37 acres and stabilization of approximately 1.37 acres of land. There will be minimal clearing along the side lines of the proposed lots.

1.2 AREA OF DISTURBANCE

The project will consist of the disturbance 1.37 acres of land. Since the area of disturbance is less than five acres for a residential development, the project does not require a NYSDEC SPDES permit for construction activity.

1.3 SOILS

Although the Web Soil Survey indicates gravely silt present on the subject parcel test pits performed on the parcel for a previous subdivision indicated hardpan and silt near Polsinelli Drive with some areas of silty gravel at the top of the hill. A site walk confirmed that there is minimal infiltration into the existing soils, therefore hydrologic soil group D has been used in all drainage calculations.

2.0 STORMWATER MANAGEMENT OBJECTIVES

The stormwater objectives for this development are a function of limited downstream capacity issues. The town and residents along Rowe Road have expressed concerns regarding the capacity of the storm sewer along Rowe Road as well as other downstream issues. Therefore, even though the proposed development is minimal it is necessary to attenuate stormwater on the parcel before discharge off site. The objective is to maintain or reduce the stormwater off site for the proposed two lots.

Under the existing conditions, stormwater from the proposed area of development leaves the site at three locations. Location A is the terminus of Polsinelli Drive. Location B is the rear of the adjoining residential properties near the northeast property corner of the development and location C is at the northerly property boundary with the residential properties. Each of these locations have been identified as analysis points for the stomwater runoff calculations.

Under the proposed conditions, all stormwater from developed impervious areas will be directed to analysis point A at the terminus of Polsinelli Drive. Portions of the yard and undeveloped areas will discharge to analysis points B and C. Since the overall runoff curve number for the parcel has increased through the development of impervious areas (rooftops and driveways) it is necessary to attenuate storm water on the parcel before discharge off site into the storm sewer system in Polsinelli Drive.

The proposed houses will be constructed gutters with leaf guards to capture roof runoff. The gutters will be directed with the footing drains to the proposed storm water management practices for attenuation.

In order to capture the storm water produced on the driveway a stone trench will be constructed along the edge of the driveway for each house. To maintain pre-development conditions, it is necessary to attenuate the stormwater conveyed to this trench. The trench will flow along the edge of the driveway to a subsurface stone attenuation basin. The attenuation basin will be an off line practice controlled by a catch basin structure. The roof drains and footing drains will connect directly to the catch basin. The catch basin will have a 12" outlet pipe with cap. The cap will have an orifice cut into it to allow storm water to back up into a gallery of (3) 6" underdrains in the subsurface stone basin. Water will be stored in the stone basin until the engineered orifice allows it to drain off site into the Town of Niskayuna Storm Sewer. Each basin and orifice have been designed to manage all storm events from the 1 year 24-hour storm to an extreme flood storm of 7.44 inches in 24 hours without exceeding pre development runoff rates.

The underdrain pipes have been designed with cleanouts at each end for easy long-term maintenance.

A completed HydroCAD analysis has been performed to evaluate the effect of the development on downstream infrastructure at each analysis point. The analysis has been completed for the 1, 2, 10- and 100-year storm events. The Cornell extreme precipitation values have been utilized for each storm event as follows:

1 Year Storm = 2.18
2 Year Storm = 2.57 in
10 Year Storm = 3.65 in
100 Year Storm = 6.07 in

In addition to the Cornell extreme precipitation, we analyzed the system using the charts in the NYSSDM which have been deemed as outdated as well as the peak 24-hour rainfall to occur at Albany County Airport since 1939.

1 Year Storm = 2.18
10 Year Storm = 3.9 in
100 Year Storm = 6.4 in

100 Year Cornell Upper Limit = 7.44 in
Peak Rainfall at ALB = 5.6 in (9/16/99)

From the HydroCAD analysis we have been able to determine the peak rate of runoff off from the parcel in both the pre and post development conditions. The following tables document the peak runoff rate to each of the analysis points for each of the calculated storm events:

Analysis Point A - Cornell

Storm Event	Existing Runoff (CFS)	Proposed Runoff (CFS)	Percent Reduction
1 Year = 2.18 in	0.62	0.45	29%
2 Year = 2.57in	0.90	0.54	40%
10 Year = 3.65 in	1.79	0.78	57%
100 Year = 6.07 in	4.03	3.97	2%

Analysis Point B - Cornell

Storm Event	Existing Runoff (CFS)	Proposed Runoff (CFS)	Percent Reduction
1 Year = 2.18 in	0.45	0.43	0%
2 Year = 2.57in	0.65	0.63	0%
10 Year = 3.65 in	1.28	1.23	0%
100 Year = 6.07 in	2.86	2.74	2%

Analysis Point C - Cornell

Storm Event	Existing Runoff (CFS)	Proposed Runoff (CFS)	Percent Reduction
1 Year = 2.18 in	0.78	0.74	5%
2 Year = 2.57in	1.13	1.08	4%
10 Year = 3.65 in	2.24	2.14	5%
100 Year = 6.07 in	5.03	4.81	10%

Analysis Point A - NYSSDM

Storm Event	Existing Runoff (CFS)	Proposed Runoff (CFS)	Percent Reduction
1 Year = 2.18 in	0.62	0.45	29%
10 Year = 3.9 in	2.01	1.19	41%
100 Year = 6.4 in	4.34	4.27	2%
100 Year Cornell – upper limit 7.44in	5.35	5.19	3%
Alb MAX = 5.6 in	3.58	3.44	4%

Analysis Point B - NYSSDM

Storm Event	Existing Runoff (CFS)	Proposed Runoff (CFS)	Percent Reduction
1 Year = 2.18 in	0.45	0.43	0%
10 Year = 3.9 in	1.43	1.38	1%
100 Year = 6.4 in	3.08	2.96	4%
100 Year Cornell – upper limit 7.44in	3.78	3.63	4%
Alb MAX = 5.6 in	2.54	2.44	4%

Analysis Point C - NYSSDM

Storm Event	Existing Runoff (CFS)	Proposed Runoff (CFS)	Percent Reduction
1 Year = 2.18 in	0.78	0.74	5%
10 Year = 3.9 in	2.52	2.41	4%
100 Year = 6.4 in	5.42	5.19	4%
100 Year Cornell – upper limit 7.44in	6.67	6.38	4%
Alb MAX = 5.6 in	4.47	4.28	4%

Based on the above information and supporting calculations, it is our professional opinion that the proposed development will not have an adverse impact on downstream infrastructure.

3.0 EROSION AND SEDIMENT CONTROL SEQUENCE:

The erosion and sediment control practices shown on the design plans shall be implemented in the following sequence:

1. All silt fence and stabilized construction entrance shall be installed prior clearing.
2. Clear the areas of disturbance (no grubbing)
3. Excavate areas for the subsurface stone storage areas
4. Install catch basin in Polsinelli Drive with pipes to subsurface storage areas.
5. Install temporary wrapped underdrain in bottom of storage area
6. Grub site and grade to direct runoff to the storage areas
7. Excavate foundations any stockpiles shall be surrounded completely by silt fence
8. Construct homes
9. Rough grade driveways to subbase level
10. Install trenches along driveways and all piping from houses
11. Pave driveways

12. Stabilize all disturbed areas as per blue book
13. Construct the subsurface basins (stone piping etc.)
14. Remove all erosion control practices upon establishment of vegetation per blue book.

The operator shall initiate stabilization measures as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 14 days after the construction activity in that portion of the site has temporarily or permanently been ceased. This requirement does not apply to the following:

- Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceased is precluded by snow cover or frozen ground conditions, stabilization measures shall be initiated as soon as practicable.

- Where construction activity on a portion of the site is temporarily ceased, and earth-disturbing activities will be resumed within 7 days, temporary stabilization measures need not be initiated on that portion of the site.

4.0 Operation and Maintenance

Maintenance of Stone Trenches

Inspections:

The homeowner should inspect the stone trenches both around the house and along the driveway annually. Inspections should include (but are not limited to):

- Washing away of stone
- Clogging with yard debris
- Ponding at surface between storms
- Erosion of any kind
- Ponding within the basins

Maintenance:

The homeowner shall replace the surface stone if ponding in the trenches is noted between storms. The stone shall be removed and filter fabric replaced. Stone can be re-used if washed thoroughly.

Maintenance of Subsurface System

Inspections:

The homeowner shall open the cleanout annually. If water is noted ponding in the cleanout between storm events more than 12" deep, or if

the catch basin is surcharging during small storm events the system shall be cleaned as noted below in the maintenance section

Maintenance:

If water is noted ponding the cleanout between storm events as noted above, the system shall be cleaned using a jet vacuum system. The stone underdrain and overflow shall be cleaned. The piping to the catch basin shall also be cleaned.

Appendix A

Storm Water Management Calculations

NOTE: 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONTACT THE U.F.P.O. TO LOCATE ALL UNDERGROUND UTILITIES. 1-800-962-7962

Lands N/F Of
Katz
Book 1604 Of Deeds At Page 560

Lands N/F Of
Litynski
1562 Of Deeds

Lands N/F Of
Battisti
Book 2074 Of Deeds At Pag

Lands N/F Of
Malec & Mazer
Book 2070 Of Deeds At Page 812

Lands N/F Of
Gallo
Book 1757 Of Deeds At Page 844

Lands N/F Of
Berninger Revocable Trust
Book 190[illegible] Of Deeds At Page 445

Lands N/F Of
Sattar Revocable Trust
Book 1531 Of Deeds At Page 985

ANALYSIS C

ANALYSIS B

ANALYSIS A

EX-B
AREA = 30,008 S.F.
RCN = 79

EX-C
AREA = 60,108 S.F.
RCN = 79

EX-POLSINELLI DR.
AREA = 50,100 S.F.
RCN = 79

TC=24.8 MIN.

TC=19.9 MIN.

TC=26.5 MIN.

Proposed Limit Of Clearing/Grading
67,385 S.F.

Woods Line

POLSINELLI DRIVE

EX. 6" DIP WATER MAIN PER MAP REF. 2

EX. 8" CLAY SEWER MAIN PER MAP REF. 3

EX. 12" CMP PER MAP REF. 2

Broken

Gate Valve

Approximate Waterline Location

Sewer Manhoe
TF = 369.54
Inv In (West) = 361.69
Inv In (South) = 361.69
Inv Out = 361.64

Catch Basin
TF = 368.33
Inv Out = 365.33

Catch Basin
TF = 368.29
Inv In (West) =
Inv In (South) =
Inv Out = 364.

CB Rim=368.33

15"CMP

CB Rim=368.29

8" clay

15"CMP

CB Rim=370.05

Catch Basin
TF= 370.05
Inv In 366.85
Inv Out 366.85

Driveway

Catch Basin
TF = 370.83
Inv In = 366.33
INv Out = 366.25

Lands N/F Of
Fantauzzi
Book 1799 Of Deeds At Page 593

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NOT FOR CONSTRUCTION

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bsteenburgh@yahoo.com
CIVIL ENVIRONMENTAL STRUCTURAL

EXISTING DRAINAGE

FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA
COUNTY OF SCHENECTADY STATE OF NEW YORK

DRAWN BY:	CHECKED BY:	SCALE: 1" = 50'
CADD FILE:	JOB NO.	SHEET 1 OF 1
DATE:		

Lands N/F Of
Katz
1604 Of Deeds At Page 560

Lands N/F Of
Lityr
1562 Of De

Lands N/F
Battisti
Book 2074 Of Deeds A

Lands N/F Of
Malec & Mazer
Book 2070 Of Deeds At Page

Lands N/F Of
Gallo
Book 1757 Of Deeds At Page 844

Lands N/F Of
Berninger Revocable Trust
Book 190[illegible] Of Deeds At Page 445

Lands N/F Of
Sattar Revocable Trust
Book 1531 Of Deeds At Page 985

Lands N/F Of
Fantauzzi
Book 1799 Of Deeds At Page 593

ANALYSIS C

ANALYSIS B

ANALYSIS A

TC=24.8 MIN.

TC=18.3 MIN.

TC=11.1 MIN.

TC=25.7 MIN.

P-B
RCN 79 = 27,523 S.F.

P-C
RCN 79 = 57,357

Proposed House
G.F.F. = 392.0

Proposed Limit Of Clearing/Grading
67,385 S.F.

LOT 2 DRIVEWAY
RCN 98 = 5,336 S.F.
RCN 80 = 9,047 S.F.

Proposed Driveway

3" SOLID HDPE

Proposed
House
G.F.F=394.0

LOT 1 DRIVEWAY
RCN 98 = 1,850 S.F.
RCN 80 = 8,194 S.F.
RCN 79 = 21,385 S.F.

Woods Line

Catch Basin
TF = 368.33
Inv Out = 365.33

Sewer Manhoie
TF = 369.54
Inv In (West) = 361.69
Inv In (South) = 361.69
Inv Out = 361.64
NEW INV. IN=363.0

Catch Basin
TF = 368.29
Inv In (West) = 364
Inv In (South) = 36
Inv Out = 364.89

EX. 6" DIP WATER MAIN PER MAP REF. 2

EX. 8" CLAY SEWER MAIN PER MAP REF. 3

EX. 12" CMP PER MAP REF. 2

Broken

Gate Valve

POLSINELLI DRIVE

8" Clay

15" CMP

Catch
Basin
TF= 370.05
Inv In 366.85
Inv Out 366.85

Catch Basin
TF = 370.83
Inv In = 366.33
INv Out = 366.25

Driveway

Approximate W Waterline Location

North Per

NOTE: 48 HOURS PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONTACT THE U.F.P.O. TO LOCATE ALL UNDERGROUND UTILITIES. 1-800-962-7962

FOR INFORMATION ONLY
NOT FOR CONSTRUCTION

NO.	DATE:	REVISIONS	BY:

BRETT L. STEENBURGH, P.E.
N.Y.S. LIC. NO. 075458

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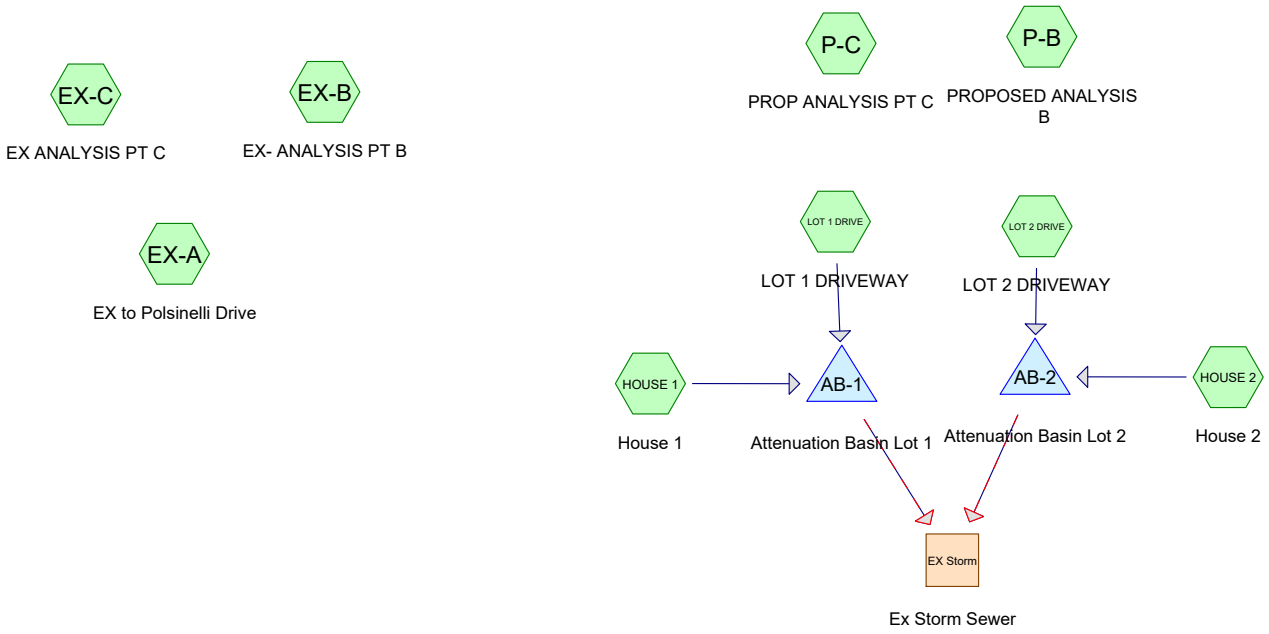
CIVIL ENVIRONMENTAL STRUCTURAL ENGINEERING

PROPOSED DRAINAGE
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA
COUNTY OF SCHENECTADY STATE OF NEW YORK

DRAWN BY:
CADD FILE:
DATE:
CHECKED BY:
JOB NO.
SCALE: 1" = 50'
SHEET 1 OF 1



Subcat Reach Pond Link

Routing Diagram for Pollsinelli
Prepared by HP, Printed 5/31/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.396	80	>75% Grass cover, Good, HSG D (LOT 1 DRIVE, LOT 2 DRIVE)
0.023	98	Hardscape allowance (HOUSE 1, HOUSE 2)
0.192	98	House Footprint (HOUSE 1, HOUSE 2)
0.165	98	Paved parking, HSG A (LOT 1 DRIVE, LOT 2 DRIVE)
4.539	79	Woods, Fair, HSG D (EX-A, EX-B, EX-C, P-C)
1.123	79	Woods/grass comb., Good, HSG D (LOT 1 DRIVE, P-B)
6.438	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.165	HSG A	LOT 1 DRIVE, LOT 2 DRIVE
0.000	HSG B	
0.000	HSG C	
6.058	HSG D	EX-A, EX-B, EX-C, LOT 1 DRIVE, LOT 2 DRIVE, P-B, P-C
0.215	Other	HOUSE 1, HOUSE 2
6.438		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.396	0.000	0.396	>75% Grass cover, Good	LOT 1 DRIVE, LOT 2 DRIVE
0.000	0.000	0.000	0.000	0.023	0.023	Hardscape allowance	HOUSE 1, HOUSE 2
0.000	0.000	0.000	0.000	0.192	0.192	House Footprint	HOUSE 1, HOUSE 2
0.165	0.000	0.000	0.000	0.000	0.165	Paved parking	LOT 1 DRIVE, LOT 2 DRIVE
0.000	0.000	0.000	4.539	0.000	4.539	Woods, Fair	EX-A, EX-B, EX-C, P-C
0.000	0.000	0.000	1.123	0.000	1.123	Woods/grass comb., Good	LOT 1 DRIVE, P-B
0.165	**0.000**	**0.000**	**6.058**	**0.215**	**6.438**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	EX Storm	0.00	-5.00	100.0	0.0500	0.012	0.0	12.0	0.0
2	AB-1	373.00	372.85	30.0	0.0050	0.012	0.0	3.5	0.0
3	AB-2	371.00	370.85	30.0	0.0050	0.012	0.0	3.0	0.0

Time span=5.00-24.00 hrs, dt=0.05 hrs, 381 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-A: EX to Polsinelli Drive Runoff Area=50,100 sf 0.00% Impervious Runoff Depth>0.63"
Flow Length=300' Tc=26.5 min CN=79 Runoff=0.62 cfs 0.060 af

Subcatchment EX-B: EX- ANALYSIS PT B Runoff Area=30,008 sf 0.00% Impervious Runoff Depth>0.63"
Flow Length=240' Tc=19.9 min CN=79 Runoff=0.45 cfs 0.036 af

Subcatchment EX-C: EX ANALYSIS PT C Runoff Area=60,108 sf 0.00% Impervious Runoff Depth>0.63"
Flow Length=372' Tc=24.8 min CN=79 Runoff=0.78 cfs 0.072 af

Subcatchment HOUSE 1: House 1 Runoff Area=4,683 sf 100.00% Impervious Runoff Depth>1.92"
Tc=6.0 min CN=98 Runoff=0.32 cfs 0.017 af

Subcatchment HOUSE 2: House 2 Runoff Area=4,683 sf 100.00% Impervious Runoff Depth>1.92"
Tc=6.0 min CN=98 Runoff=0.32 cfs 0.017 af

Subcatchment LOT 1 DRIVE: LOT 1 Runoff Area=31,429 sf 5.89% Impervious Runoff Depth>0.67"
Flow Length=240' Tc=25.7 min CN=80 Runoff=0.43 cfs 0.040 af

Subcatchment LOT 2 DRIVE: LOT 2 Runoff Area=14,383 sf 37.10% Impervious Runoff Depth>1.04"
Flow Length=240' Tc=27.7 min CN=87 Runoff=0.31 cfs 0.029 af

Subcatchment P-B: PROPOSED ANALYSIS Runoff Area=27,523 sf 0.00% Impervious Runoff Depth>0.63"
Flow Length=220' Tc=18.3 min CN=79 Runoff=0.43 cfs 0.033 af

Subcatchment P-C: PROP ANALYSIS PT C Runoff Area=57,515 sf 0.00% Impervious Runoff Depth>0.63"
Flow Length=372' Tc=24.8 min CN=79 Runoff=0.74 cfs 0.069 af

Reach EX Storm: Ex Storm Sewer Avg. Flow Depth=0.15' Max Vel=5.80 fps Inflow=0.45 cfs 0.102 af
12.0" Round Pipe n=0.012 L=100.0' S=0.0500 '/' Capacity=8.63 cfs Outflow=0.45 cfs 0.102 af

Pond AB-1: Attenuation Basin Lot 1 Peak Elev=374.43' Storage=571 cf Inflow=0.48 cfs 0.057 af
Primary=0.26 cfs 0.057 af Secondary=0.00 cfs 0.000 af Outflow=0.26 cfs 0.057 af

Pond AB-2: Attenuation Basin Lot 2 Peak Elev=372.73' Storage=518 cf Inflow=0.44 cfs 0.046 af
Primary=0.19 cfs 0.045 af Secondary=0.00 cfs 0.000 af Outflow=0.19 cfs 0.045 af

Total Runoff Area = 6.438 ac Runoff Volume = 0.373 af Average Runoff Depth = 0.70"
94.10% Pervious = 6.058 ac 5.90% Impervious = 0.380 ac

Summary for Subcatchment EX-A: EX to Polsinelli Drive

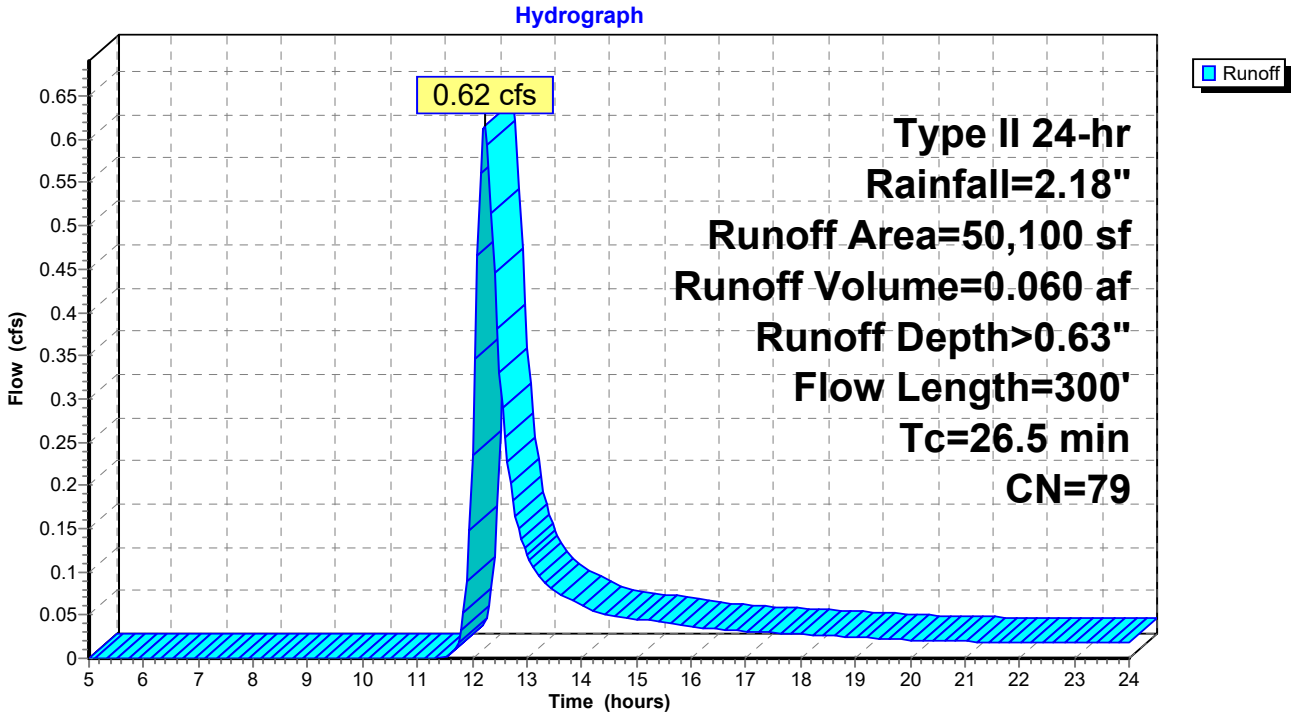
Runoff = 0.62 cfs @ 12.23 hrs, Volume= 0.060 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.18"

Area (sf)	CN	Description
50,100	79	Woods, Fair, HSG D
50,100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
2.7	200	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
26.5	300	Total			

Subcatchment EX-A: EX to Polsinelli Drive



Summary for Subcatchment EX-B: EX- ANALYSIS PT B

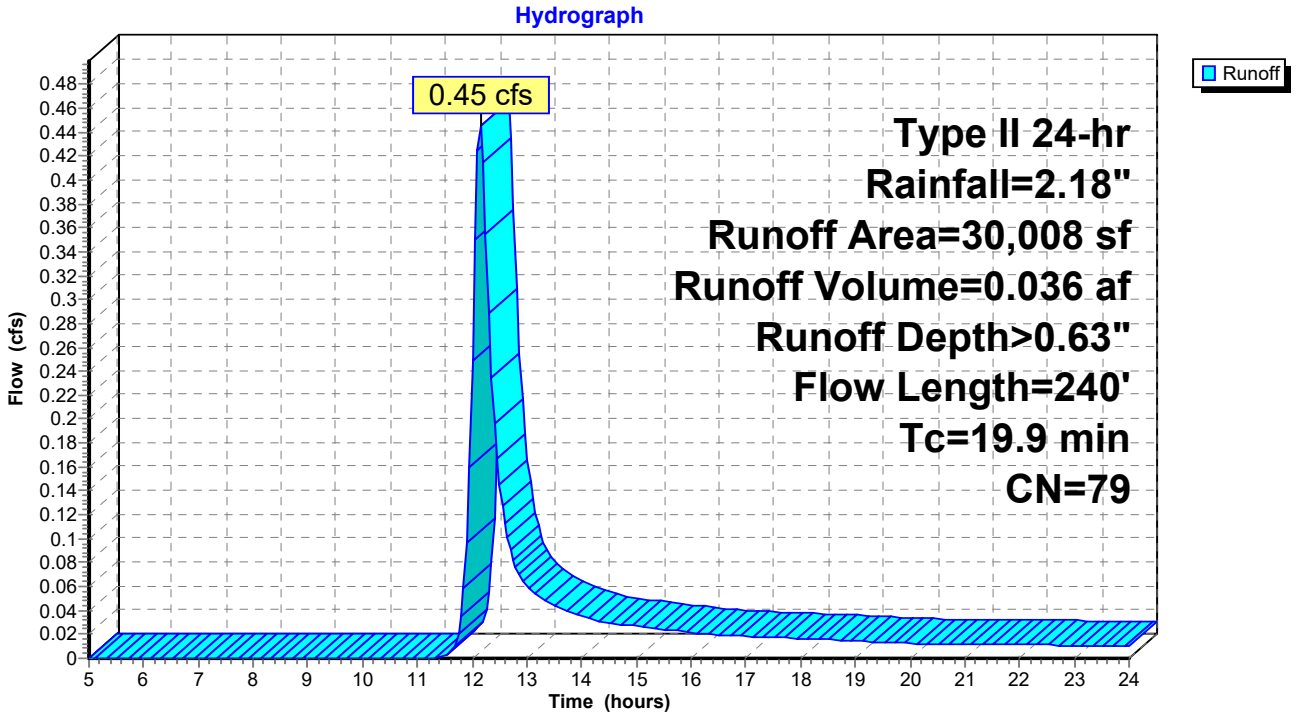
Runoff = 0.45 cfs @ 12.15 hrs, Volume= 0.036 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.18"

Area (sf)	CN	Description
30,008	79	Woods, Fair, HSG D
30,008		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	100	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
1.8	140	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
19.9	240	Total			

Subcatchment EX-B: EX- ANALYSIS PT B



Summary for Subcatchment EX-C: EX ANALYSIS PT C

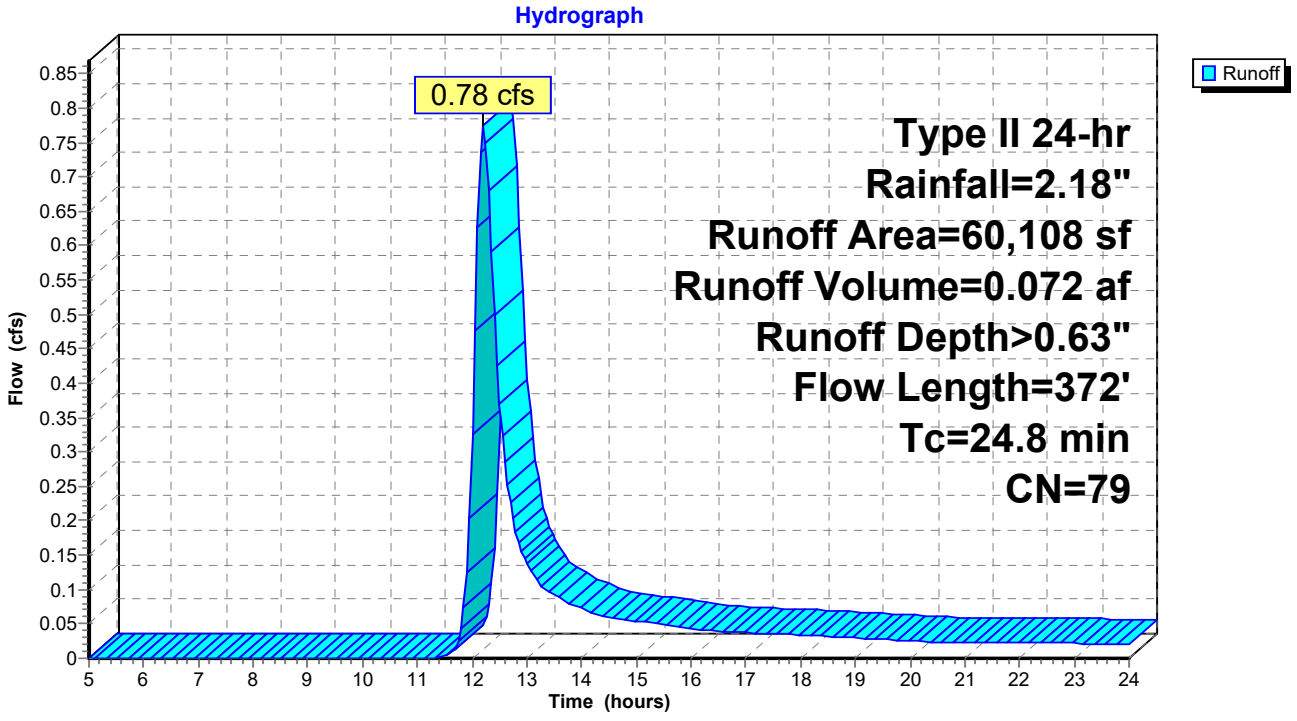
Runoff = 0.78 cfs @ 12.21 hrs, Volume= 0.072 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.18"

Area (sf)	CN	Description
60,108	79	Woods, Fair, HSG D
60,108		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
4.5	272	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
24.8	372	Total			

Subcatchment EX-C: EX ANALYSIS PT C



Summary for Subcatchment HOUSE 1: House 1

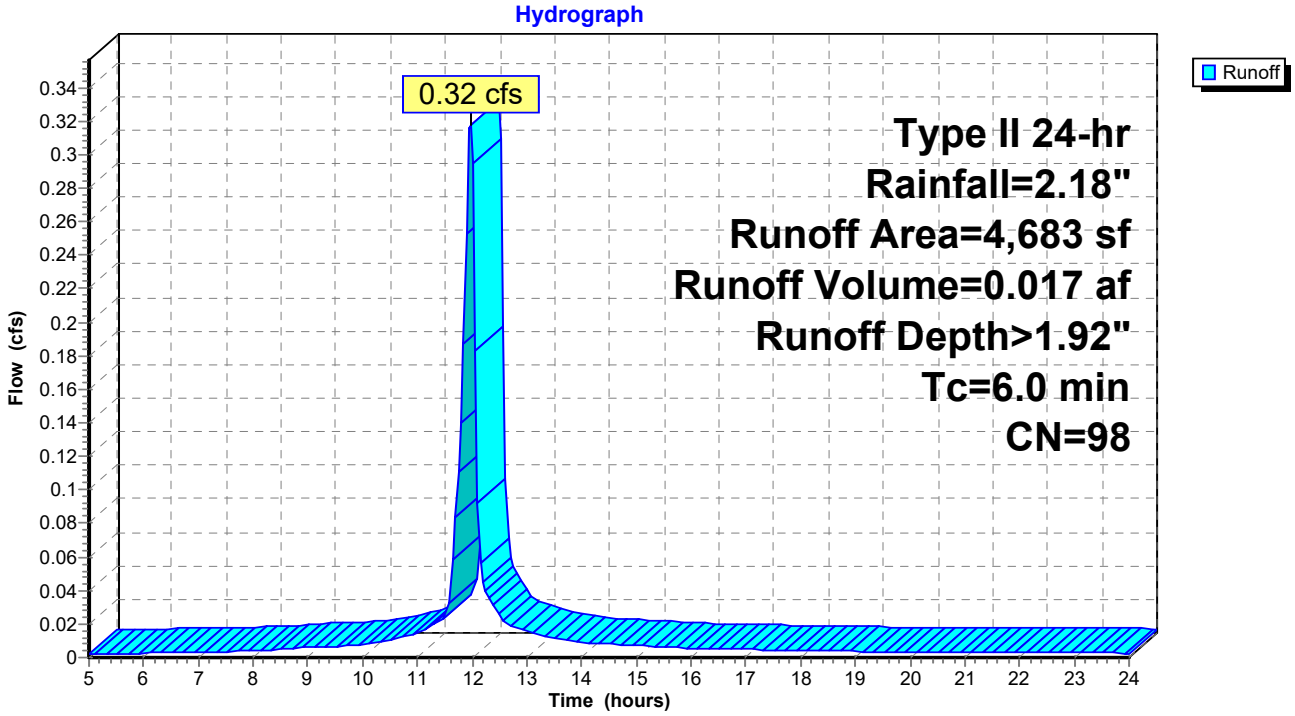
Runoff = 0.32 cfs @ 11.96 hrs, Volume= 0.017 af, Depth> 1.92"
Routed to Pond AB-1 : Attenuation Basin Lot 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.18"

	Area (sf)	CN	Description
*	4,183	98	House Footprint
*	500	98	Hardscape allowance
	4,683	98	Weighted Average
	4,683		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Min.**

Subcatchment HOUSE 1: House 1



Summary for Subcatchment HOUSE 2: House 2

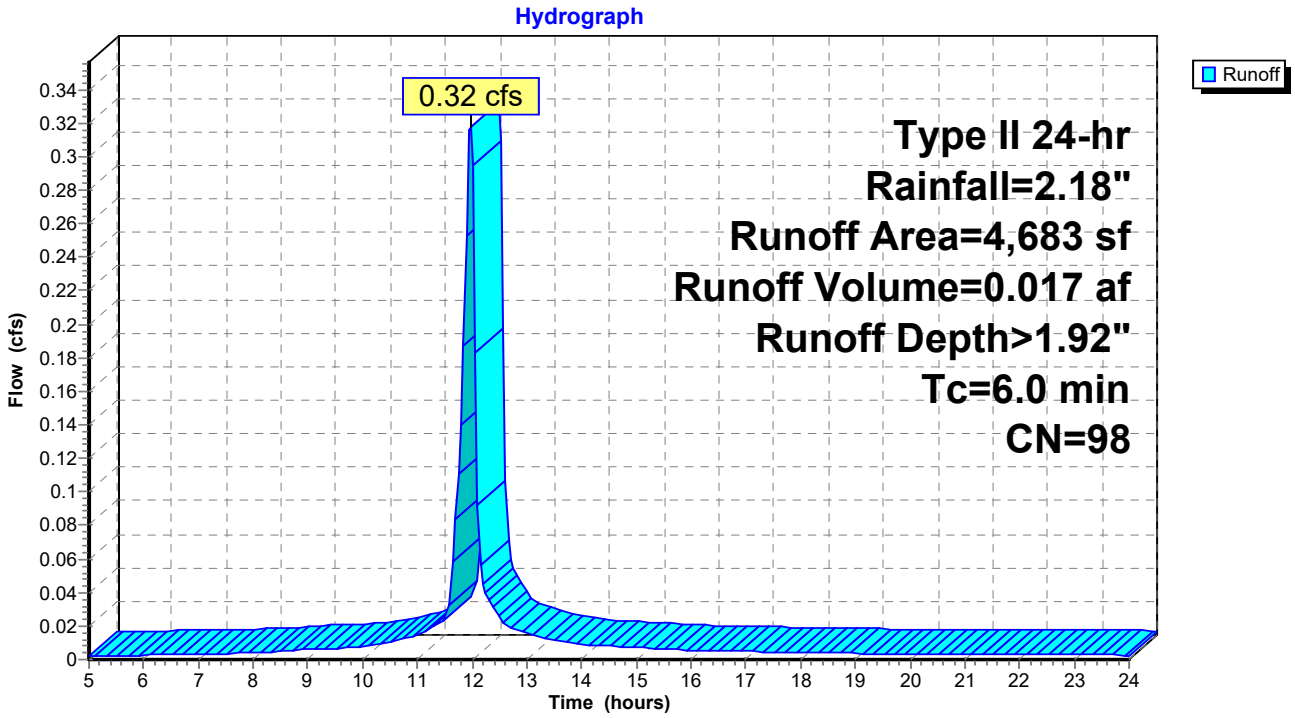
Runoff = 0.32 cfs @ 11.96 hrs, Volume= 0.017 af, Depth> 1.92"
Routed to Pond AB-2 : Attenuation Basin Lot 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.18"

	Area (sf)	CN	Description
*	4,183	98	House Footprint
*	500	98	Hardscape allowance
	4,683	98	Weighted Average
	4,683		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Min.**

Subcatchment HOUSE 2: House 2



Summary for Subcatchment LOT 1 DRIVE: LOT 1 DRIVEWAY

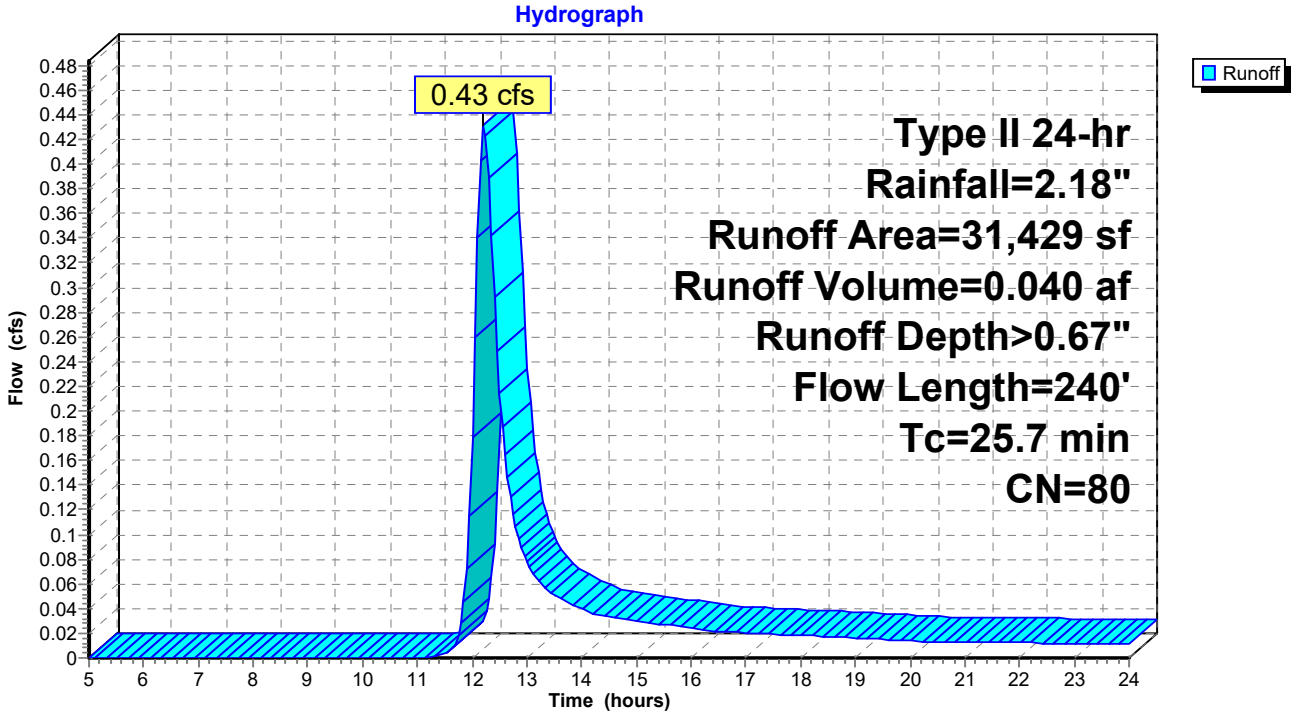
Runoff = 0.43 cfs @ 12.21 hrs, Volume= 0.040 af, Depth> 0.67"
Routed to Pond AB-1 : Attenuation Basin Lot 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.18"

Area (sf)	CN	Description
1,850	98	Paved parking, HSG A
8,194	80	>75% Grass cover, Good, HSG D
21,385	79	Woods/grass comb., Good, HSG D
31,429	80	Weighted Average
29,579		94.11% Pervious Area
1,850		5.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
1.9	140	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.7	240	Total			

Subcatchment LOT 1 DRIVE: LOT 1 DRIVEWAY



Summary for Subcatchment LOT 2 DRIVE: LOT 2 DRIVEWAY

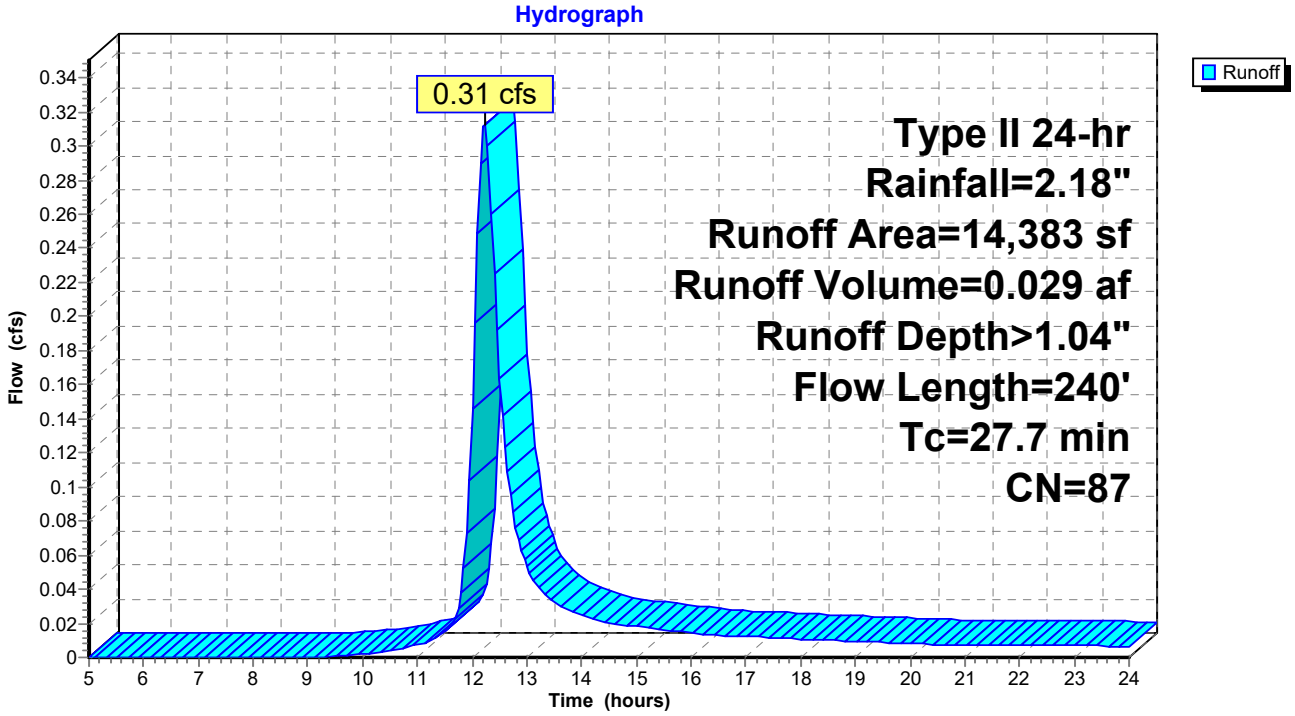
Runoff = 0.31 cfs @ 12.22 hrs, Volume= 0.029 af, Depth> 1.04"
Routed to Pond AB-2 : Attenuation Basin Lot 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.18"

Area (sf)	CN	Description
5,336	98	Paved parking, HSG A
9,047	80	>75% Grass cover, Good, HSG D
14,383	87	Weighted Average
9,047		62.90% Pervious Area
5,336		37.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.3	100	0.0150	0.06		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.60"
0.4	140	0.1000	6.42		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
27.7	240	Total			

Subcatchment LOT 2 DRIVE: LOT 2 DRIVEWAY



Summary for Subcatchment P-B: PROPOSED ANALYSIS B

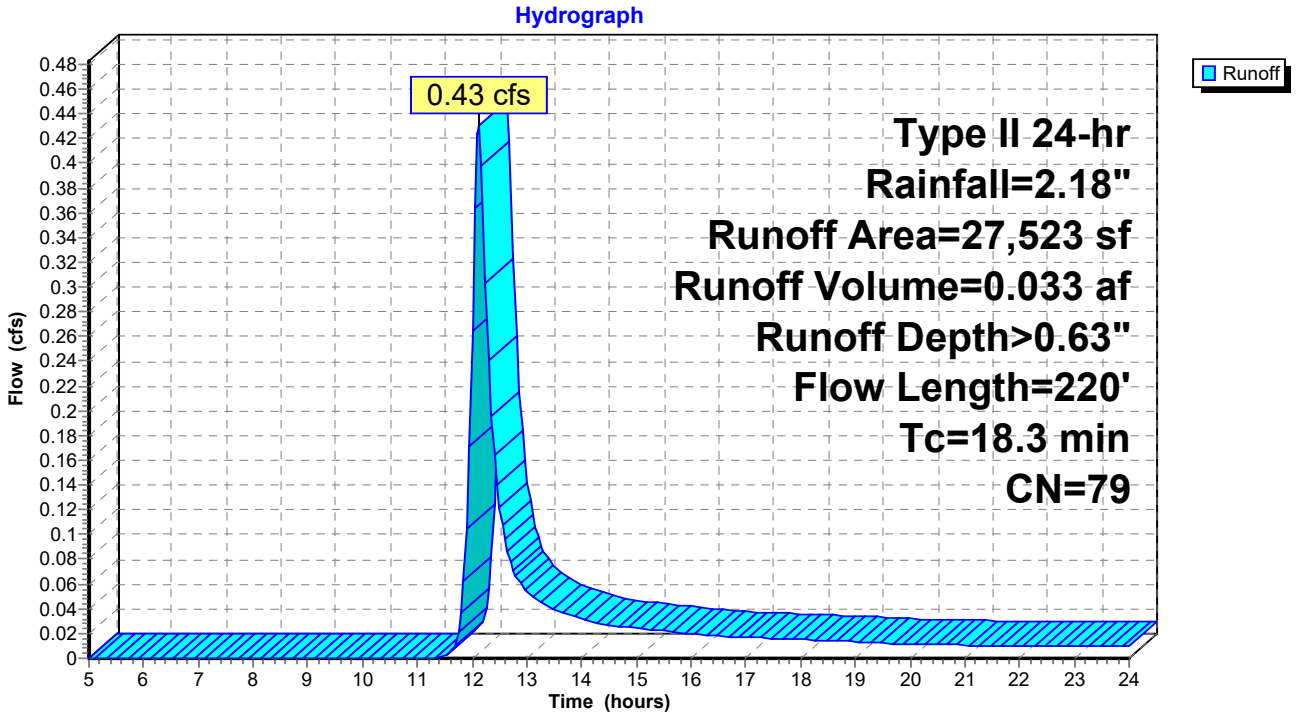
Runoff = 0.43 cfs @ 12.12 hrs, Volume= 0.033 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.18"

Area (sf)	CN	Description
27,523	79	Woods/grass comb., Good, HSG D
27,523		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.60"
1.5	120	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.3	220	Total			

Subcatchment P-B: PROPOSED ANALYSIS B



Summary for Subcatchment P-C: PROP ANALYSIS PT C

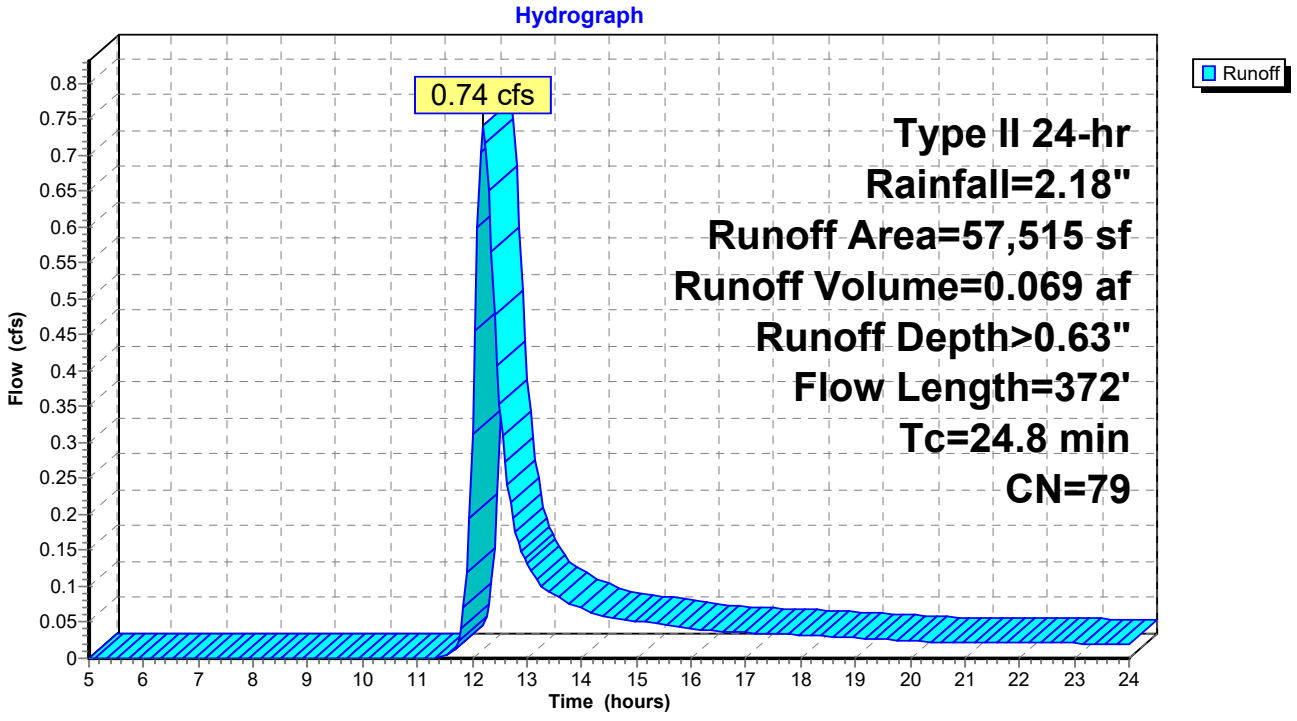
Runoff = 0.74 cfs @ 12.21 hrs, Volume= 0.069 af, Depth> 0.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.18"

Area (sf)	CN	Description
57,515	79	Woods, Fair, HSG D
57,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
4.5	272	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
24.8	372	Total			

Subcatchment P-C: PROP ANALYSIS PT C



Summary for Reach EX Storm: Ex Storm Sewer

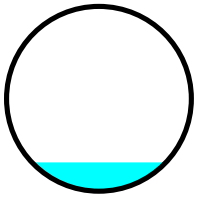
[52] Hint: Inlet/Outlet conditions not evaluated
[65] Warning: Inlet elevation not specified

Inflow Area = 1.267 ac, 30.00% Impervious, Inflow Depth > 0.97"
Inflow = 0.45 cfs @ 12.49 hrs, Volume= 0.102 af
Outflow = 0.45 cfs @ 12.49 hrs, Volume= 0.102 af, Atten= 0%, Lag= 0.5 min

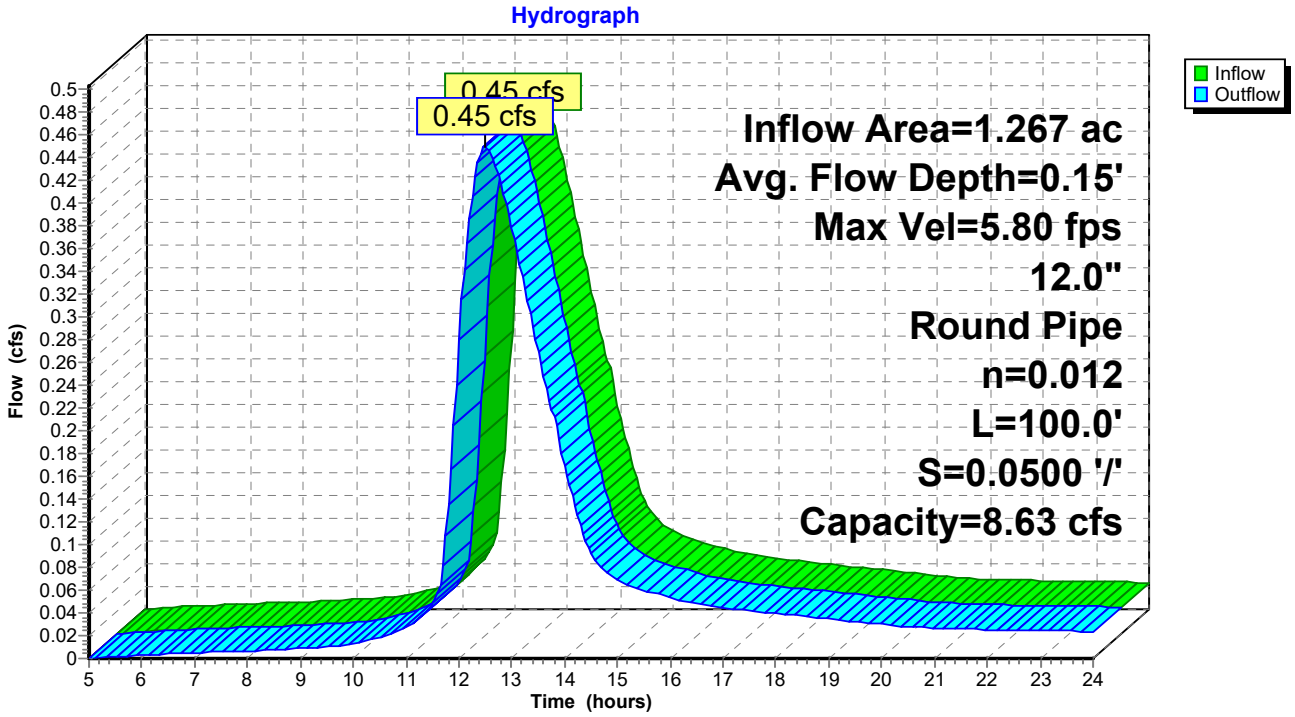
Routing by Stor-Ind+Trans method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 5.80 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.71 fps, Avg. Travel Time= 0.6 min

Peak Storage= 8 cf @ 12.49 hrs
Average Depth at Peak Storage= 0.15' , Surface Width= 0.72'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.63 cfs

12.0" Round Pipe
n= 0.012
Length= 100.0' Slope= 0.0500 '/'
Inlet Invert= 0.00', Outlet Invert= -5.00'



Reach EX Storm: Ex Storm Sewer



Summary for Pond AB-1: Attenuation Basin Lot 1

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.829 ac, 18.09% Impervious, Inflow Depth > 0.83"
Inflow = 0.48 cfs @ 12.20 hrs, Volume= 0.057 af
Outflow = 0.26 cfs @ 12.48 hrs, Volume= 0.057 af, Atten= 46%, Lag= 16.6 min
Primary = 0.26 cfs @ 12.48 hrs, Volume= 0.057 af
Routed to Reach EX Storm : Ex Storm Sewer
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach EX Storm : Ex Storm Sewer

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 374.43' @ 12.48 hrs Surf.Area= 1,000 sf Storage= 571 cf

Plug-Flow detention time= 32.9 min calculated for 0.057 af (98% of inflow)
Center-of-Mass det. time= 24.1 min (867.2 - 843.1)

Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	7,300 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 18,250 cf Overall x 40.0% Voids

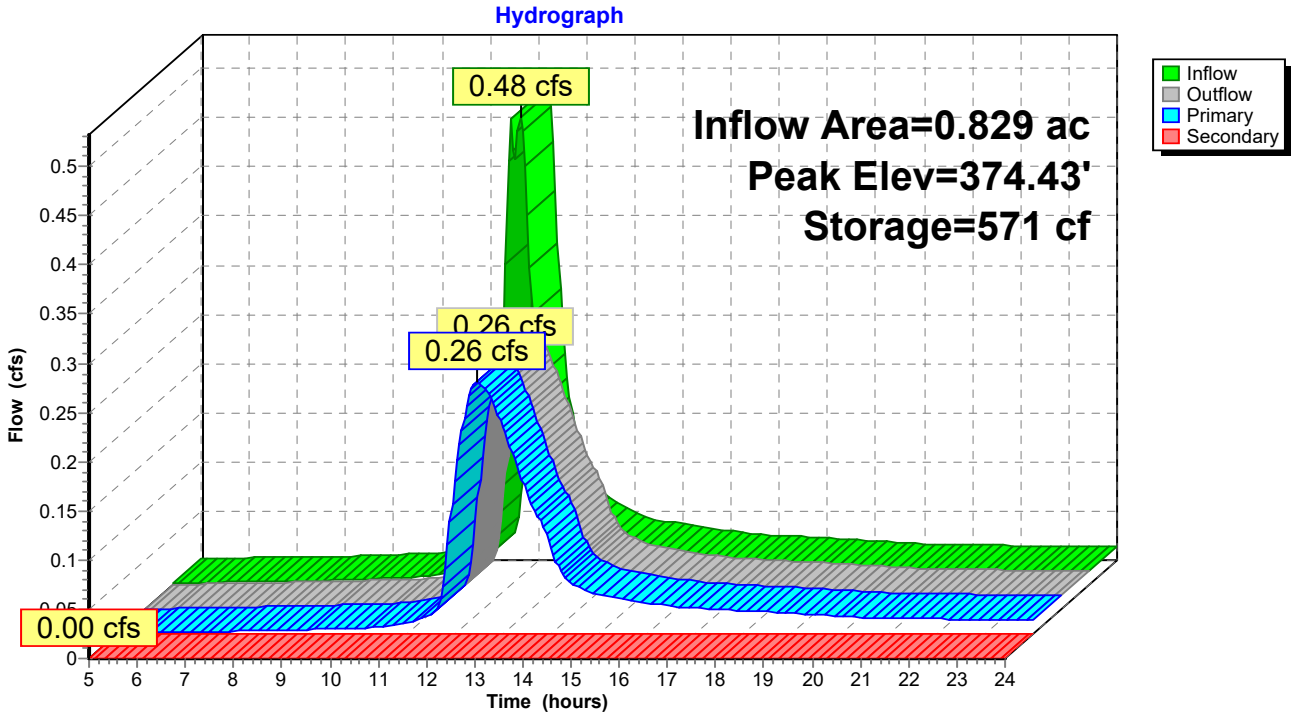
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
373.00	1,000	0	0
374.00	1,000	1,000	1,000
375.00	1,000	1,000	2,000
376.00	1,000	1,000	3,000
377.00	1,000	1,000	4,000
377.50	1,000	500	4,500
380.00	10,000	13,750	18,250

Device	Routing	Invert	Outlet Devices
#1	Primary	373.00'	**3.5" Round Culvert** L= 30.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 373.00' / 372.85' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.07 sf
#2	Secondary	377.50'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.26 cfs @ 12.48 hrs HW=374.43' (Free Discharge)
1=Culvert (Barrel Controls 0.26 cfs @ 3.83 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=373.00' (Free Discharge)
2=Orifice/Grate (Controls 0.00 cfs)

Pond AB-1: Attenuation Basin Lot 1



Summary for Pond AB-2: Attenuation Basin Lot 2

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.438 ac, 52.55% Impervious, Inflow Depth > 1.26"
Inflow = 0.44 cfs @ 11.99 hrs, Volume= 0.046 af
Outflow = 0.19 cfs @ 12.50 hrs, Volume= 0.045 af, Atten= 56%, Lag= 30.5 min
Primary = 0.19 cfs @ 12.50 hrs, Volume= 0.045 af
Routed to Reach EX Storm : Ex Storm Sewer
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach EX Storm : Ex Storm Sewer

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 372.73' @ 12.50 hrs Surf.Area= 750 sf Storage= 518 cf

Plug-Flow detention time= 35.3 min calculated for 0.045 af (99% of inflow)
Center-of-Mass det. time= 27.9 min (846.6 - 818.6)

Volume	Invert	Avail.Storage	Storage Description
#1	371.00'	2,425 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 6,063 cf Overall x 40.0% Voids

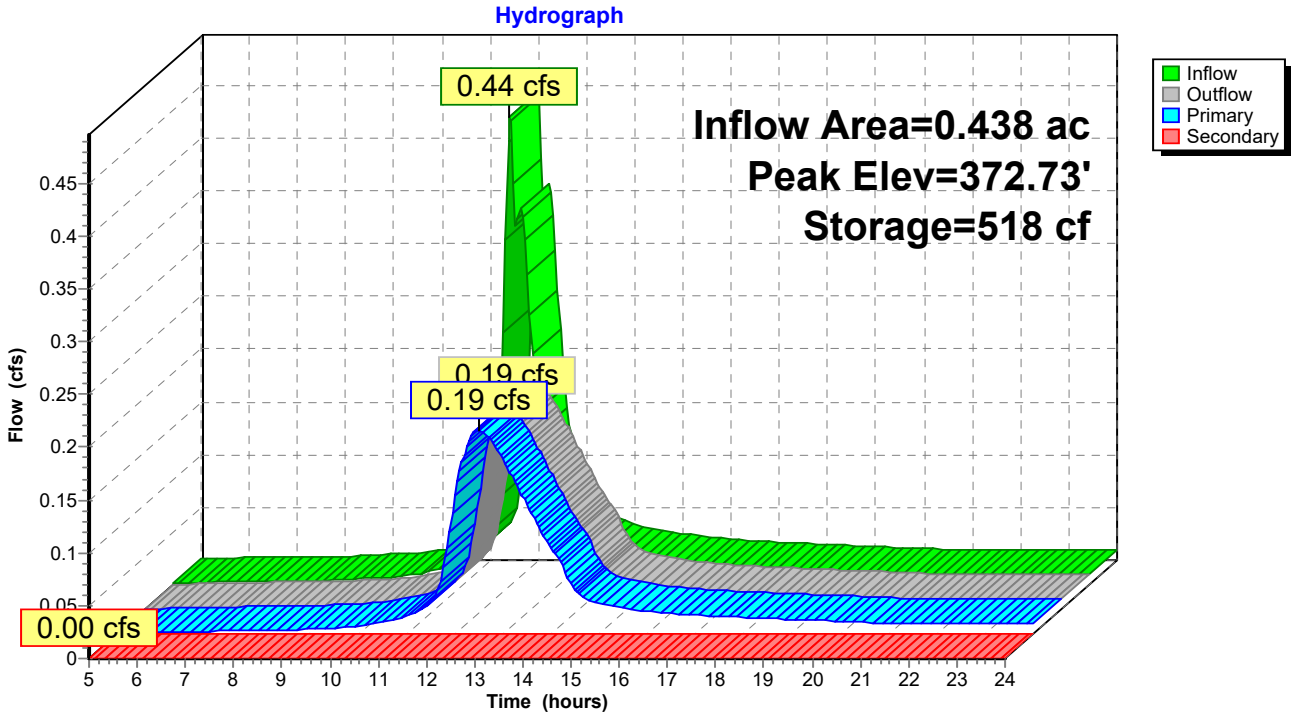
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
371.00	750	0	0
372.00	750	750	750
373.00	750	750	1,500
374.00	750	750	2,250
375.00	750	750	3,000
375.50	750	375	3,375
376.00	10,000	2,688	6,063

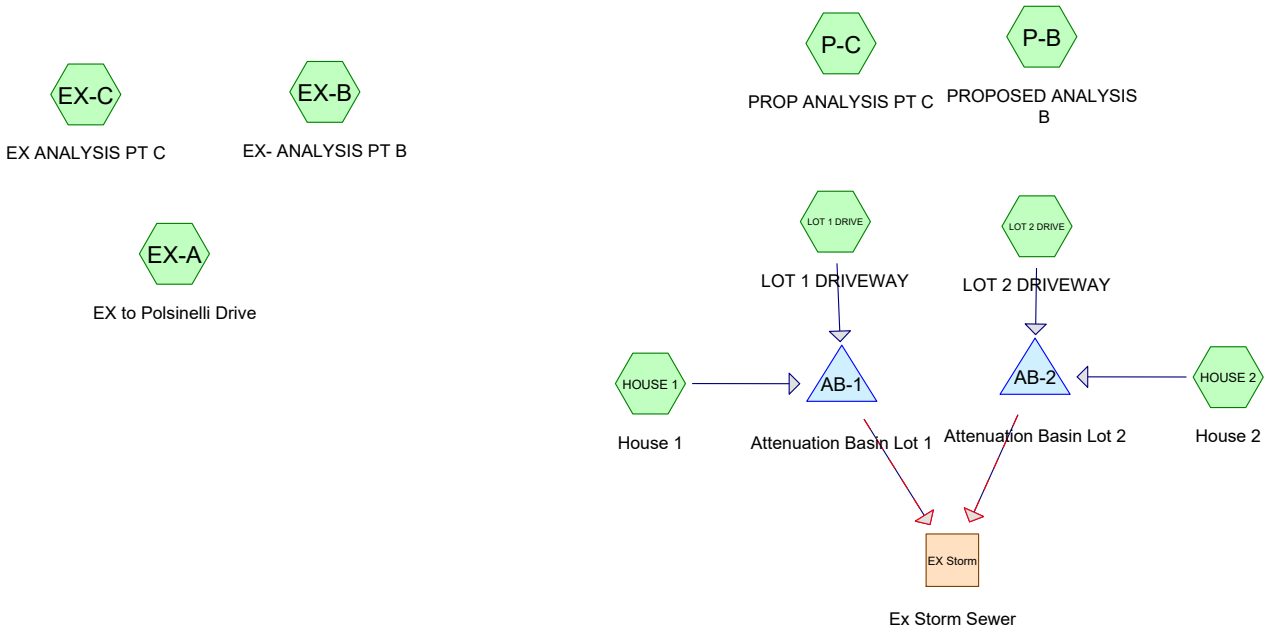
Device	Routing	Invert	Outlet Devices
#1	Primary	371.00'	**3.0" Round Culvert** L= 30.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 371.00' / 370.85' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.05 sf
#2	Secondary	375.50'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.19 cfs @ 12.50 hrs HW=372.72' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.19 cfs @ 3.92 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=371.00' (Free Discharge)
↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond AB-2: Attenuation Basin Lot 2





Subcat Reach Pond Link

Routing Diagram for Pollsinelli
Prepared by HP, Printed 5/31/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.396	80	>75% Grass cover, Good, HSG D (LOT 1 DRIVE, LOT 2 DRIVE)
0.023	98	Hardscape allowance (HOUSE 1, HOUSE 2)
0.192	98	House Footprint (HOUSE 1, HOUSE 2)
0.165	98	Paved parking, HSG A (LOT 1 DRIVE, LOT 2 DRIVE)
4.539	79	Woods, Fair, HSG D (EX-A, EX-B, EX-C, P-C)
1.123	79	Woods/grass comb., Good, HSG D (LOT 1 DRIVE, P-B)
6.438	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.165	HSG A	LOT 1 DRIVE, LOT 2 DRIVE
0.000	HSG B	
0.000	HSG C	
6.058	HSG D	EX-A, EX-B, EX-C, LOT 1 DRIVE, LOT 2 DRIVE, P-B, P-C
0.215	Other	HOUSE 1, HOUSE 2
6.438		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.396	0.000	0.396	>75% Grass cover, Good	LOT 1 DRIVE, LOT 2 DRIVE
0.000	0.000	0.000	0.000	0.023	0.023	Hardscape allowance	HOUSE 1, HOUSE 2
0.000	0.000	0.000	0.000	0.192	0.192	House Footprint	HOUSE 1, HOUSE 2
0.165	0.000	0.000	0.000	0.000	0.165	Paved parking	LOT 1 DRIVE, LOT 2 DRIVE
0.000	0.000	0.000	4.539	0.000	4.539	Woods, Fair	EX-A, EX-B, EX-C, P-C
0.000	0.000	0.000	1.123	0.000	1.123	Woods/grass comb., Good	LOT 1 DRIVE, P-B
0.165	**0.000**	**0.000**	**6.058**	**0.215**	**6.438**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	EX Storm	0.00	-5.00	100.0	0.0500	0.012	0.0	12.0	0.0
2	AB-1	373.00	372.85	30.0	0.0050	0.012	0.0	3.5	0.0
3	AB-2	371.00	370.85	30.0	0.0050	0.012	0.0	3.0	0.0

Time span=5.00-24.00 hrs, dt=0.05 hrs, 381 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-A: EX to Polsinelli Drive Runoff Area=50,100 sf 0.00% Impervious Runoff Depth>0.88"
Flow Length=300' Tc=26.5 min CN=79 Runoff=0.90 cfs 0.084 af

Subcatchment EX-B: EX- ANALYSIS PT B Runoff Area=30,008 sf 0.00% Impervious Runoff Depth>0.88"
Flow Length=240' Tc=19.9 min CN=79 Runoff=0.65 cfs 0.050 af

Subcatchment EX-C: EX ANALYSIS PT C Runoff Area=60,108 sf 0.00% Impervious Runoff Depth>0.88"
Flow Length=372' Tc=24.8 min CN=79 Runoff=1.13 cfs 0.101 af

Subcatchment HOUSE 1: House 1 Runoff Area=4,683 sf 100.00% Impervious Runoff Depth>2.30"
Tc=6.0 min CN=98 Runoff=0.38 cfs 0.021 af

Subcatchment HOUSE 2: House 2 Runoff Area=4,683 sf 100.00% Impervious Runoff Depth>2.30"
Tc=6.0 min CN=98 Runoff=0.38 cfs 0.021 af

Subcatchment LOT 1 DRIVE: LOT 1 Runoff Area=31,429 sf 5.89% Impervious Runoff Depth>0.93"
Flow Length=240' Tc=25.7 min CN=80 Runoff=0.62 cfs 0.056 af

Subcatchment LOT 2 DRIVE: LOT 2 Runoff Area=14,383 sf 37.10% Impervious Runoff Depth>1.36"
Flow Length=240' Tc=27.7 min CN=87 Runoff=0.41 cfs 0.037 af

Subcatchment P-B: PROPOSED ANALYSIS Runoff Area=27,523 sf 0.00% Impervious Runoff Depth>0.88"
Flow Length=220' Tc=18.3 min CN=79 Runoff=0.63 cfs 0.046 af

Subcatchment P-C: PROP ANALYSIS PT C Runoff Area=57,515 sf 0.00% Impervious Runoff Depth>0.88"
Flow Length=372' Tc=24.8 min CN=79 Runoff=1.08 cfs 0.097 af

Reach EX Storm: Ex Storm Sewer Avg. Flow Depth=0.17' Max Vel=6.13 fps Inflow=0.54 cfs 0.133 af
12.0" Round Pipe n=0.012 L=100.0' S=0.0500 '/' Capacity=8.63 cfs Outflow=0.54 cfs 0.133 af

Pond AB-1: Attenuation Basin Lot 1 Peak Elev=375.13' Storage=851 cf Inflow=0.67 cfs 0.076 af
Primary=0.32 cfs 0.076 af Secondary=0.00 cfs 0.000 af Outflow=0.32 cfs 0.076 af

Pond AB-2: Attenuation Basin Lot 2 Peak Elev=373.34' Storage=702 cf Inflow=0.55 cfs 0.058 af
Primary=0.23 cfs 0.057 af Secondary=0.00 cfs 0.000 af Outflow=0.23 cfs 0.057 af

Total Runoff Area = 6.438 ac Runoff Volume = 0.513 af Average Runoff Depth = 0.96"
94.10% Pervious = 6.058 ac 5.90% Impervious = 0.380 ac

Summary for Subcatchment EX-A: EX to Polsinelli Drive

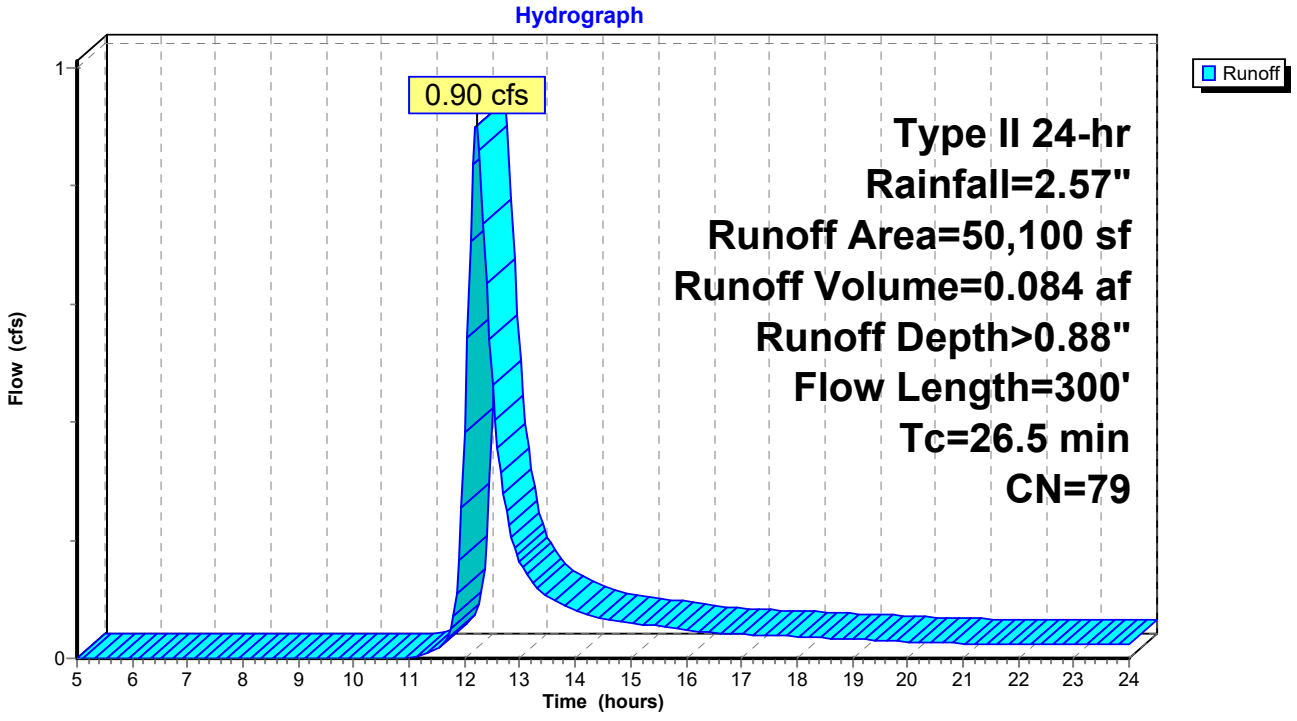
Runoff = 0.90 cfs @ 12.22 hrs, Volume= 0.084 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.57"

Area (sf)	CN	Description
50,100	79	Woods, Fair, HSG D
50,100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
2.7	200	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
26.5	300	Total			

Subcatchment EX-A: EX to Polsinelli Drive



Summary for Subcatchment EX-B: EX- ANALYSIS PT B

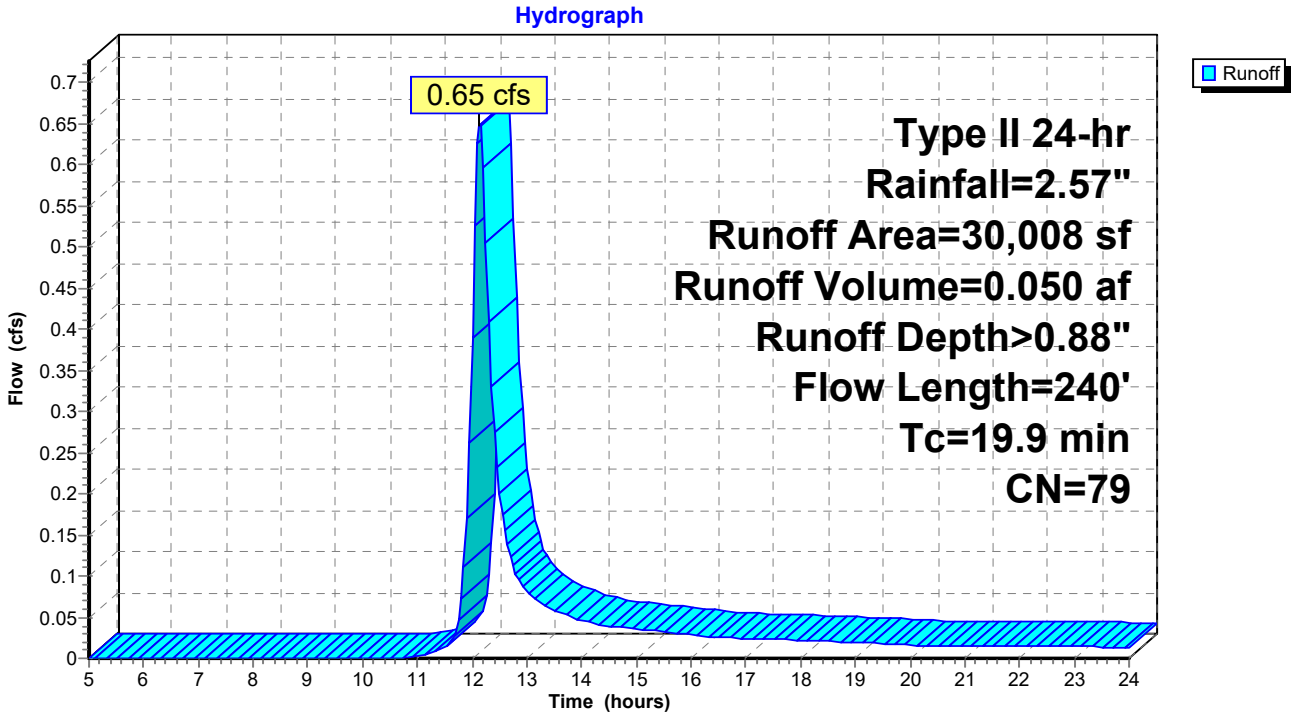
Runoff = 0.65 cfs @ 12.14 hrs, Volume= 0.050 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.57"

Area (sf)	CN	Description
30,008	79	Woods, Fair, HSG D
30,008		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	100	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
1.8	140	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
19.9	240	Total			

Subcatchment EX-B: EX- ANALYSIS PT B



Summary for Subcatchment EX-C: EX ANALYSIS PT C

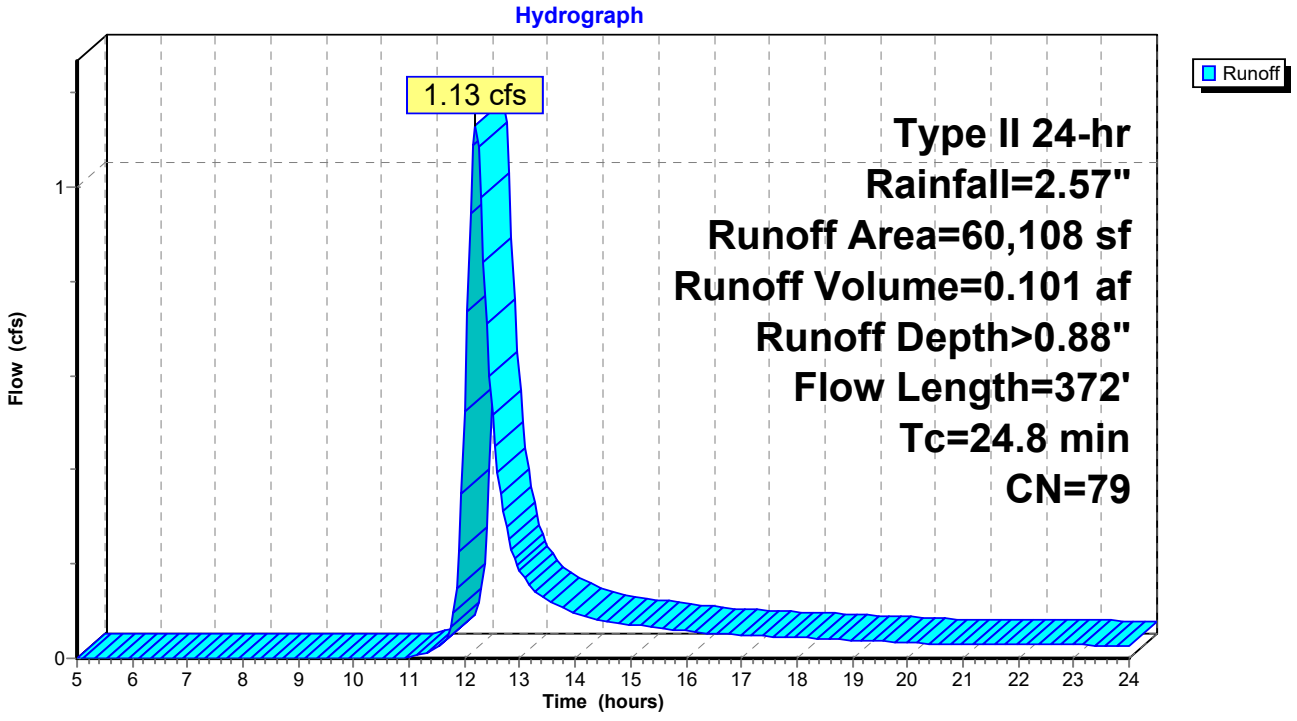
Runoff = 1.13 cfs @ 12.20 hrs, Volume= 0.101 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.57"

Area (sf)	CN	Description
60,108	79	Woods, Fair, HSG D
60,108		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
4.5	272	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
24.8	372	Total			

Subcatchment EX-C: EX ANALYSIS PT C



Summary for Subcatchment HOUSE 1: House 1

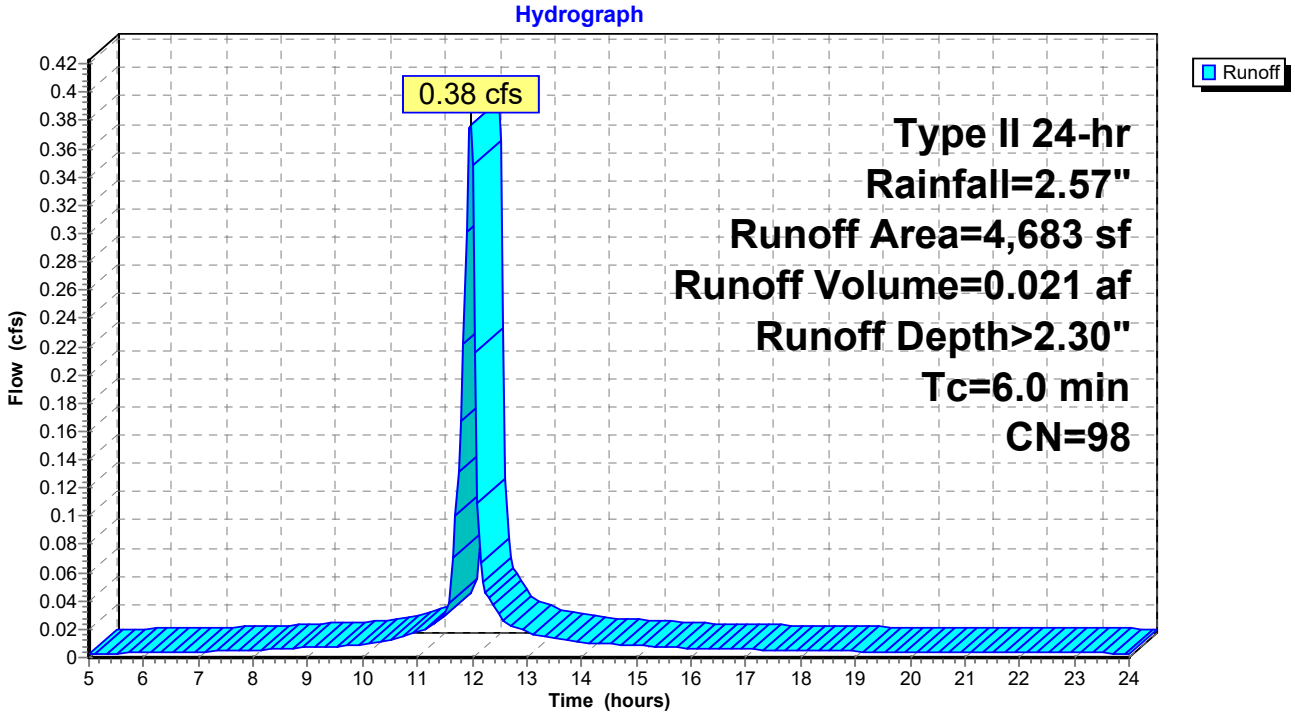
Runoff = 0.38 cfs @ 11.96 hrs, Volume= 0.021 af, Depth> 2.30"
Routed to Pond AB-1 : Attenuation Basin Lot 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.57"

	Area (sf)	CN	Description
*	4,183	98	House Footprint
*	500	98	Hardscape allowance
	4,683	98	Weighted Average
	4,683		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Min.**

Subcatchment HOUSE 1: House 1



Summary for Subcatchment HOUSE 2: House 2

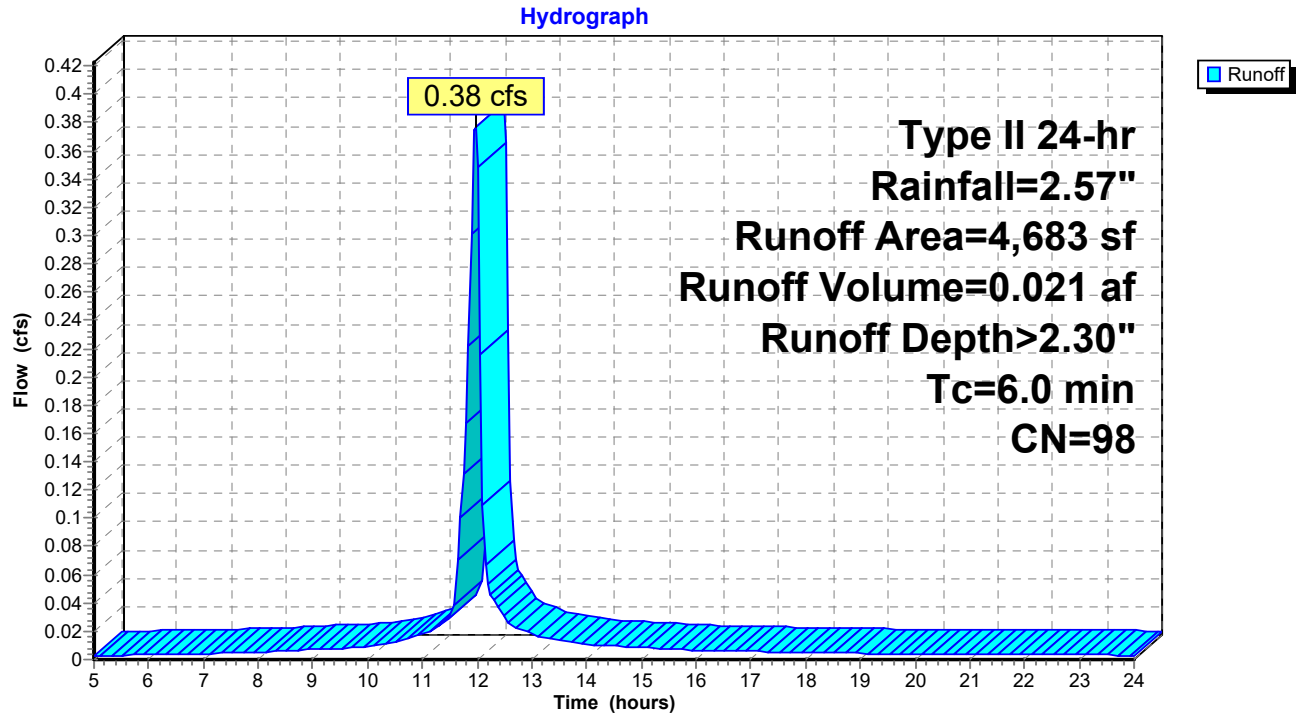
Runoff = 0.38 cfs @ 11.96 hrs, Volume= 0.021 af, Depth> 2.30"
Routed to Pond AB-2 : Attenuation Basin Lot 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.57"

	Area (sf)	CN	Description
*	4,183	98	House Footprint
*	500	98	Hardscape allowance
	4,683	98	Weighted Average
	4,683		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Min.**

Subcatchment HOUSE 2: House 2



Summary for Subcatchment LOT 1 DRIVE: LOT 1 DRIVEWAY

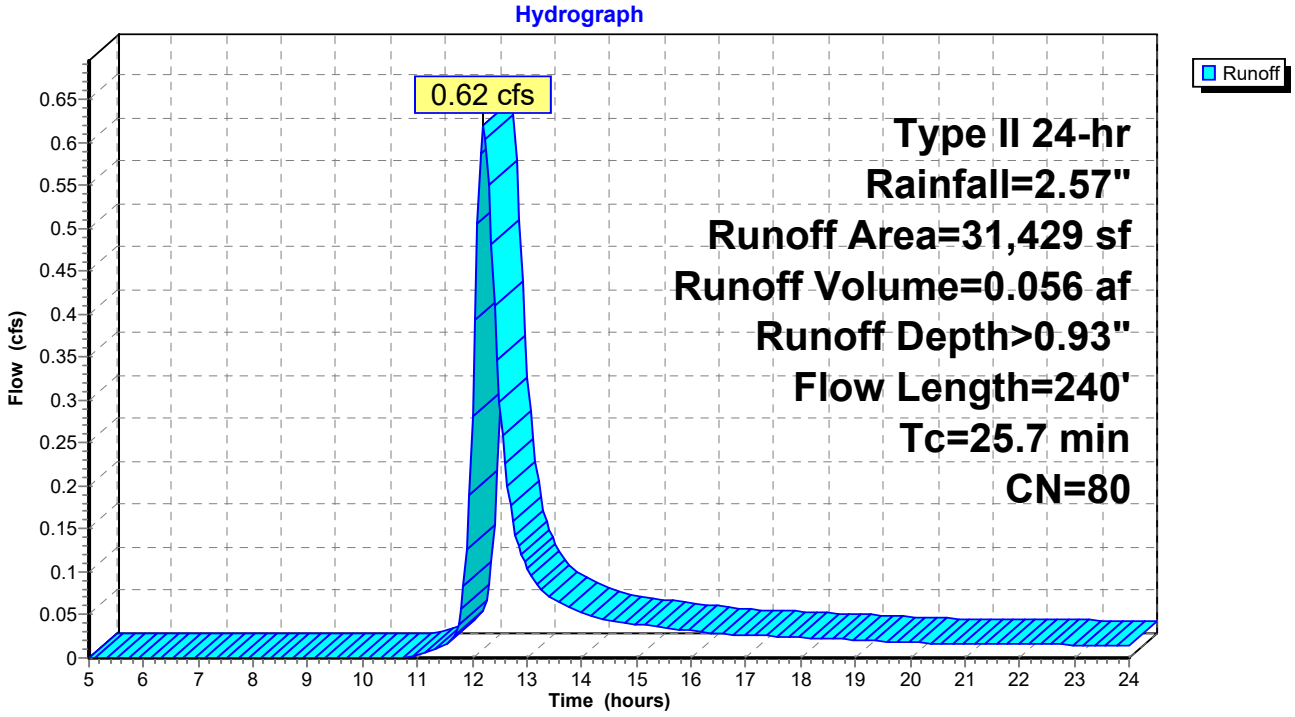
Runoff = 0.62 cfs @ 12.21 hrs, Volume= 0.056 af, Depth> 0.93"
Routed to Pond AB-1 : Attenuation Basin Lot 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.57"

Area (sf)	CN	Description
1,850	98	Paved parking, HSG A
8,194	80	>75% Grass cover, Good, HSG D
21,385	79	Woods/grass comb., Good, HSG D
31,429	80	Weighted Average
29,579		94.11% Pervious Area
1,850		5.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
1.9	140	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.7	240	Total			

Subcatchment LOT 1 DRIVE: LOT 1 DRIVEWAY



Summary for Subcatchment LOT 2 DRIVE: LOT 2 DRIVEWAY

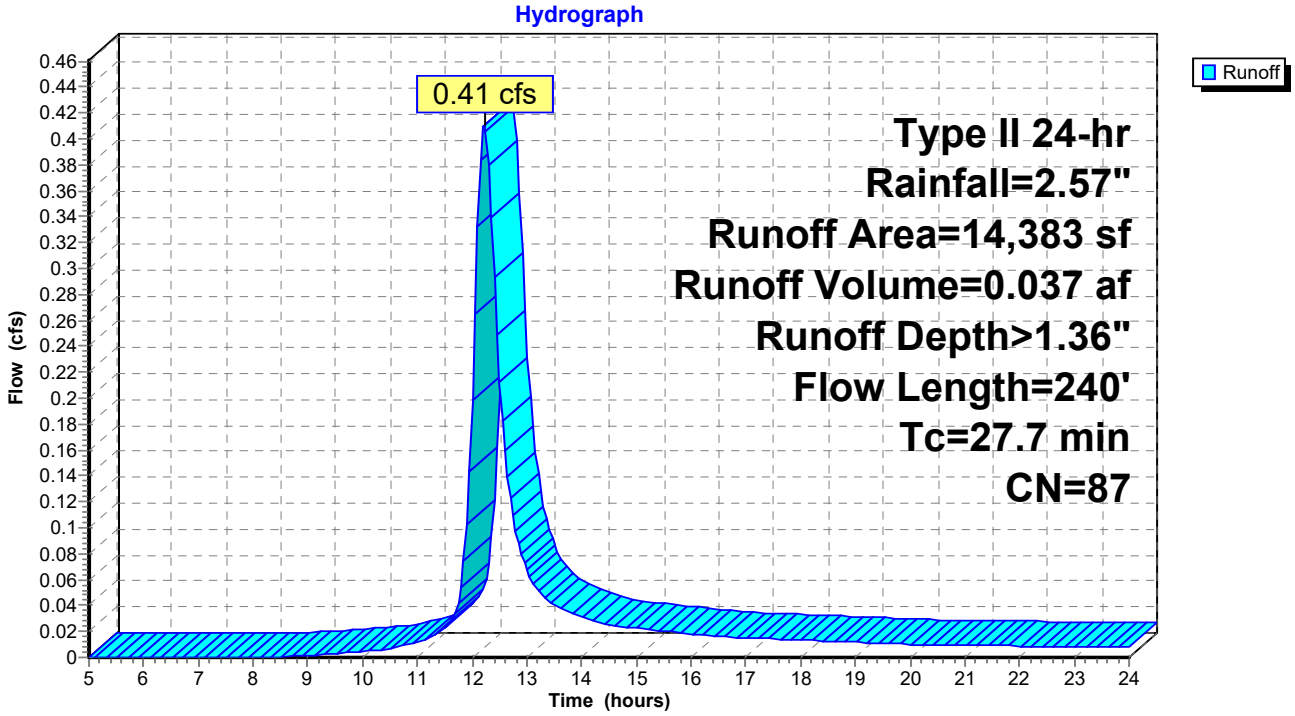
Runoff = 0.41 cfs @ 12.22 hrs, Volume= 0.037 af, Depth> 1.36"
Routed to Pond AB-2 : Attenuation Basin Lot 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.57"

Area (sf)	CN	Description
5,336	98	Paved parking, HSG A
9,047	80	>75% Grass cover, Good, HSG D
14,383	87	Weighted Average
9,047		62.90% Pervious Area
5,336		37.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.3	100	0.0150	0.06		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.60"
0.4	140	0.1000	6.42		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
27.7	240	Total			

Subcatchment LOT 2 DRIVE: LOT 2 DRIVEWAY



Summary for Subcatchment P-B: PROPOSED ANALYSIS B

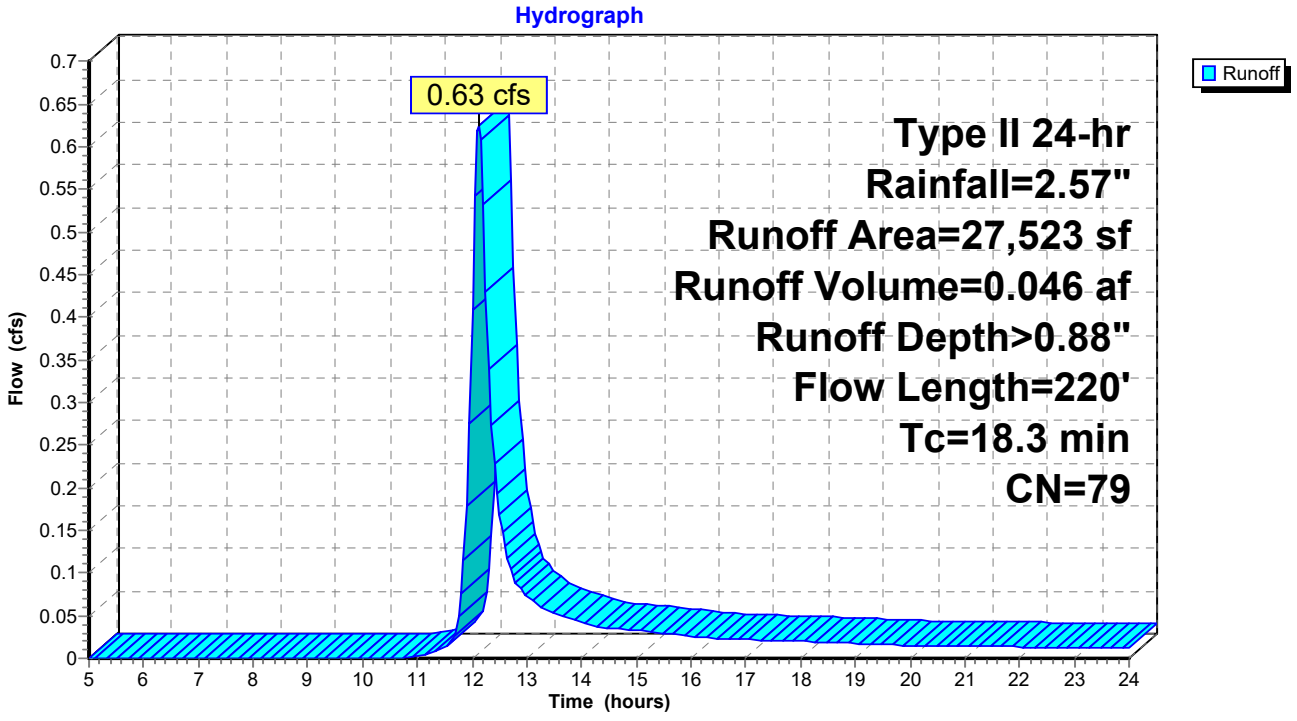
Runoff = 0.63 cfs @ 12.12 hrs, Volume= 0.046 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.57"

Area (sf)	CN	Description
27,523	79	Woods/grass comb., Good, HSG D
27,523		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.60"
1.5	120	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.3	220	Total			

Subcatchment P-B: PROPOSED ANALYSIS B



Summary for Subcatchment P-C: PROP ANALYSIS PT C

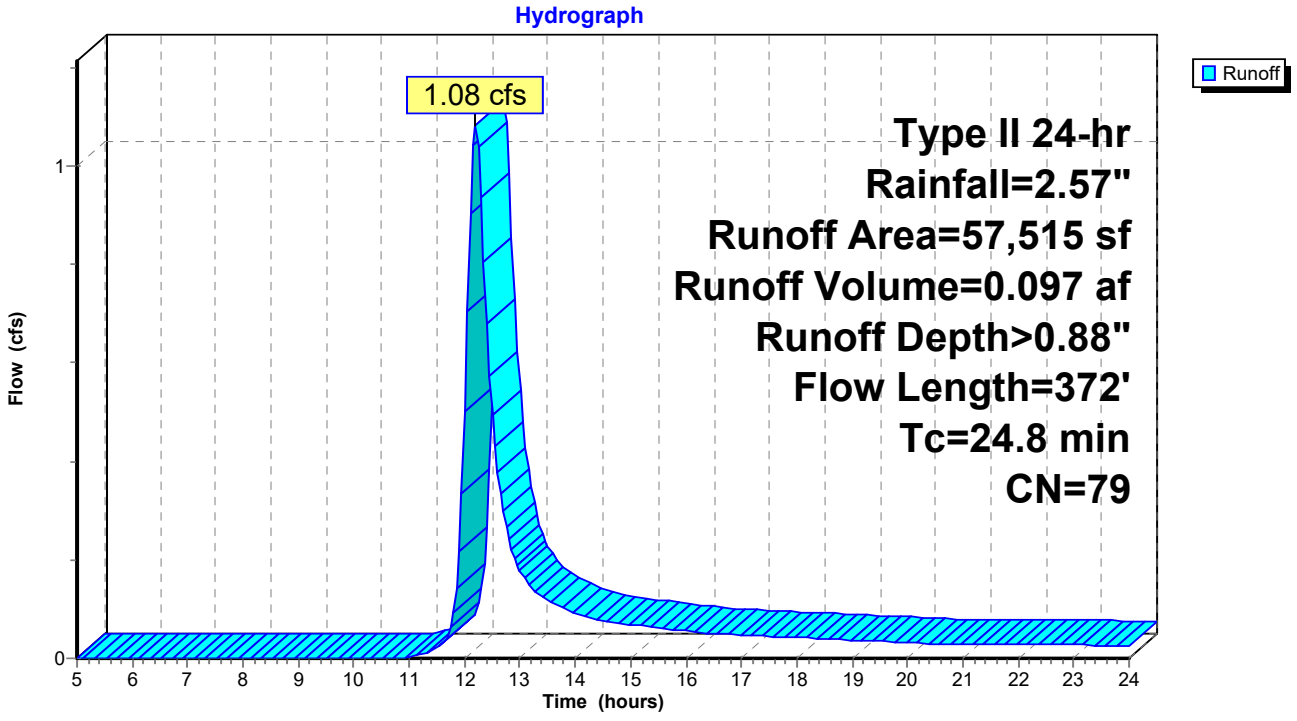
Runoff = 1.08 cfs @ 12.20 hrs, Volume= 0.097 af, Depth> 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=2.57"

Area (sf)	CN	Description
57,515	79	Woods, Fair, HSG D
57,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
4.5	272	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
24.8	372	Total			

Subcatchment P-C: PROP ANALYSIS PT C



Summary for Reach EX Storm: Ex Storm Sewer

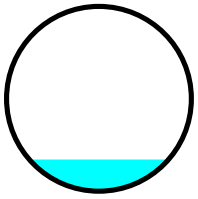
[52] Hint: Inlet/Outlet conditions not evaluated
[65] Warning: Inlet elevation not specified

Inflow Area = 1.267 ac, 30.00% Impervious, Inflow Depth > 1.26"
Inflow = 0.54 cfs @ 12.52 hrs, Volume= 0.133 af
Outflow = 0.54 cfs @ 12.52 hrs, Volume= 0.133 af, Atten= 0%, Lag= 0.4 min

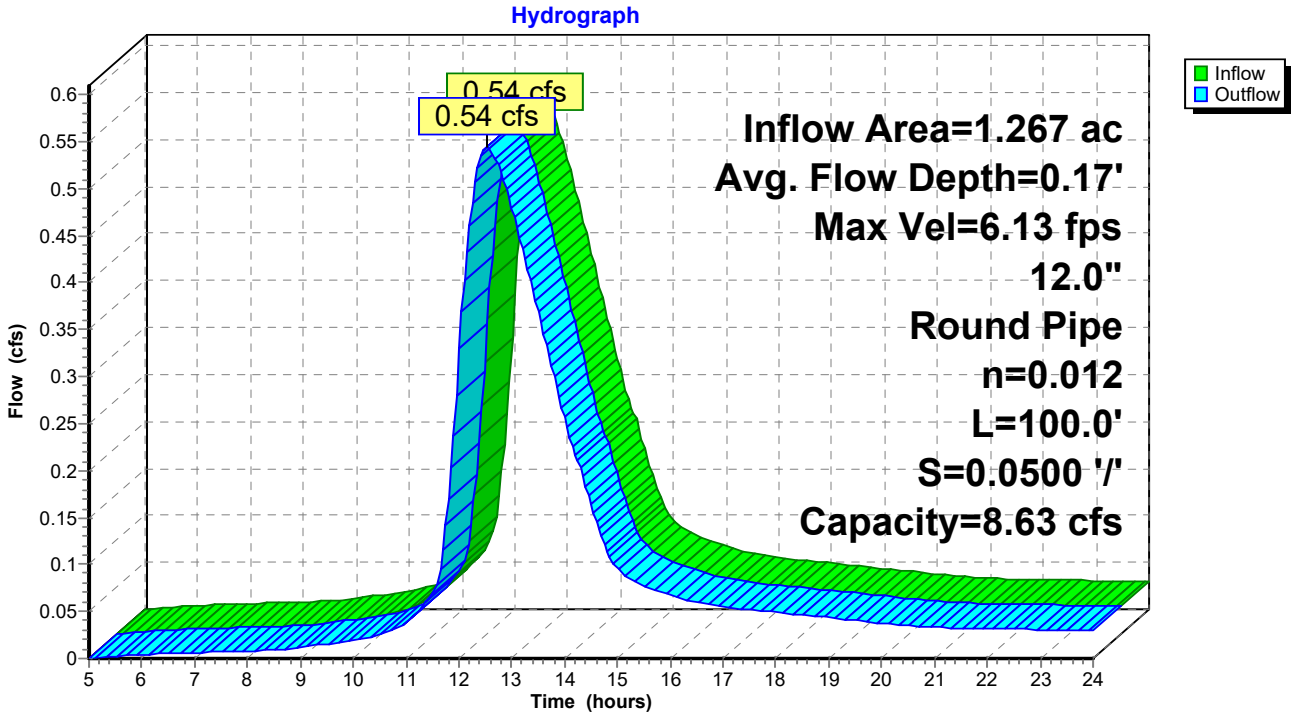
Routing by Stor-Ind+Trans method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.13 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 2.94 fps, Avg. Travel Time= 0.6 min

Peak Storage= 9 cf @ 12.52 hrs
Average Depth at Peak Storage= 0.17' , Surface Width= 0.75'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.63 cfs

12.0" Round Pipe
n= 0.012
Length= 100.0' Slope= 0.0500 '/'
Inlet Invert= 0.00', Outlet Invert= -5.00'



Reach EX Storm: Ex Storm Sewer



Summary for Pond AB-1: Attenuation Basin Lot 1

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.829 ac, 18.09% Impervious, Inflow Depth > 1.11"
Inflow = 0.67 cfs @ 12.20 hrs, Volume= 0.076 af
Outflow = 0.32 cfs @ 12.51 hrs, Volume= 0.076 af, Atten= 53%, Lag= 19.0 min
Primary = 0.32 cfs @ 12.51 hrs, Volume= 0.076 af
Routed to Reach EX Storm : Ex Storm Sewer
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach EX Storm : Ex Storm Sewer

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 375.13' @ 12.51 hrs Surf.Area= 1,000 sf Storage= 851 cf

Plug-Flow detention time= 34.9 min calculated for 0.076 af (99% of inflow)
Center-of-Mass det. time= 27.3 min (865.8 - 838.5)

Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	7,300 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 18,250 cf Overall x 40.0% Voids

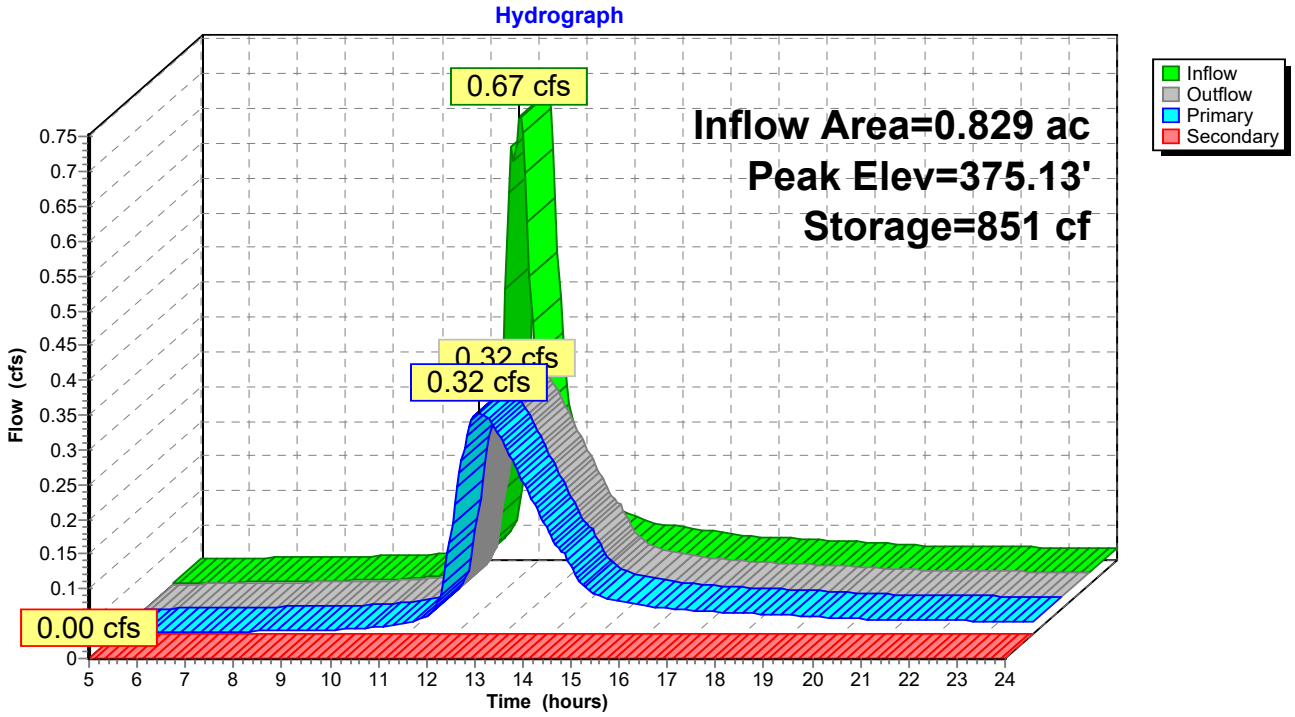
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
373.00	1,000	0	0
374.00	1,000	1,000	1,000
375.00	1,000	1,000	2,000
376.00	1,000	1,000	3,000
377.00	1,000	1,000	4,000
377.50	1,000	500	4,500
380.00	10,000	13,750	18,250

Device	Routing	Invert	Outlet Devices
#1	Primary	373.00'	**3.5" Round Culvert** L= 30.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 373.00' / 372.85' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.07 sf
#2	Secondary	377.50'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.32 cfs @ 12.51 hrs HW=375.13' (Free Discharge)
1=Culvert (Barrel Controls 0.32 cfs @ 4.76 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=373.00' (Free Discharge)
2=Orifice/Grate (Controls 0.00 cfs)

Pond AB-1: Attenuation Basin Lot 1



Summary for Pond AB-2: Attenuation Basin Lot 2

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.438 ac, 52.55% Impervious, Inflow Depth > 1.59"
Inflow = 0.55 cfs @ 11.99 hrs, Volume= 0.058 af
Outflow = 0.23 cfs @ 12.52 hrs, Volume= 0.057 af, Atten= 59%, Lag= 32.0 min
Primary = 0.23 cfs @ 12.52 hrs, Volume= 0.057 af
Routed to Reach EX Storm : Ex Storm Sewer
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach EX Storm : Ex Storm Sewer

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 373.34' @ 12.52 hrs Surf.Area= 750 sf Storage= 702 cf

Plug-Flow detention time= 37.7 min calculated for 0.057 af (99% of inflow)
Center-of-Mass det. time= 31.2 min (845.8 - 814.7)

Volume	Invert	Avail.Storage	Storage Description
#1	371.00'	2,425 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 6,063 cf Overall x 40.0% Voids

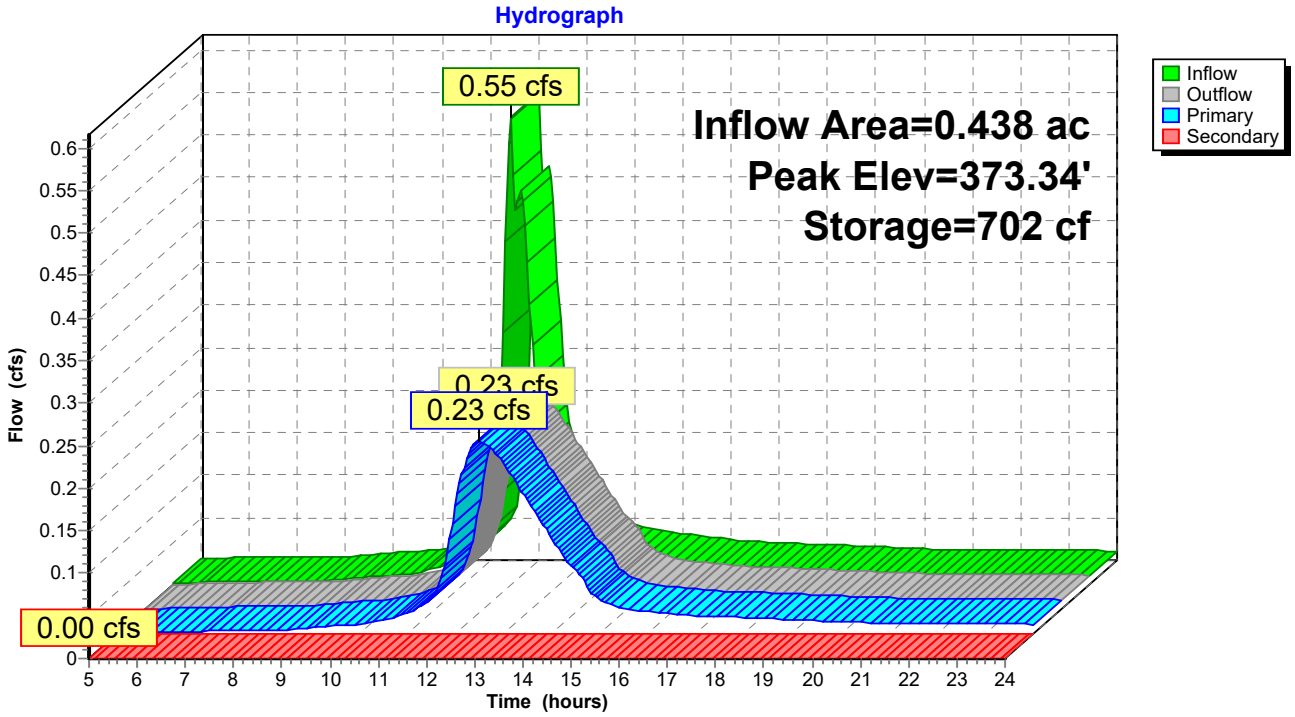
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
371.00	750	0	0
372.00	750	750	750
373.00	750	750	1,500
374.00	750	750	2,250
375.00	750	750	3,000
375.50	750	375	3,375
376.00	10,000	2,688	6,063

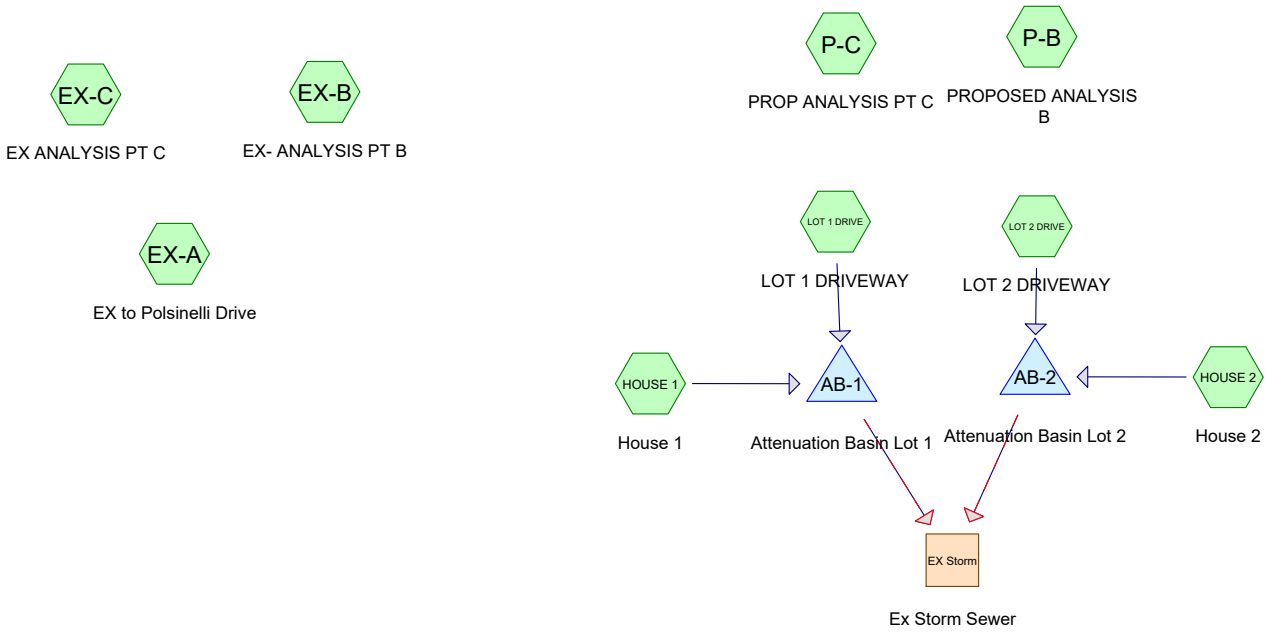
Device	Routing	Invert	Outlet Devices
#1	Primary	371.00'	**3.0" Round Culvert** L= 30.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 371.00' / 370.85' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.05 sf
#2	Secondary	375.50'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.23 cfs @ 12.52 hrs HW=373.34' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.23 cfs @ 4.60 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=371.00' (Free Discharge)
↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond AB-2: Attenuation Basin Lot 2





Subcat Reach Pond Link

Routing Diagram for Pollsinelli
Prepared by HP, Printed 5/31/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.396	80	>75% Grass cover, Good, HSG D (LOT 1 DRIVE, LOT 2 DRIVE)
0.023	98	Hardscape allowance (HOUSE 1, HOUSE 2)
0.192	98	House Footprint (HOUSE 1, HOUSE 2)
0.165	98	Paved parking, HSG A (LOT 1 DRIVE, LOT 2 DRIVE)
4.539	79	Woods, Fair, HSG D (EX-A, EX-B, EX-C, P-C)
1.123	79	Woods/grass comb., Good, HSG D (LOT 1 DRIVE, P-B)
6.438	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.165	HSG A	LOT 1 DRIVE, LOT 2 DRIVE
0.000	HSG B	
0.000	HSG C	
6.058	HSG D	EX-A, EX-B, EX-C, LOT 1 DRIVE, LOT 2 DRIVE, P-B, P-C
0.215	Other	HOUSE 1, HOUSE 2
6.438		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.396	0.000	0.396	>75% Grass cover, Good	LOT 1 DRIVE, LOT 2 DRIVE
0.000	0.000	0.000	0.000	0.023	0.023	Hardscape allowance	HOUSE 1, HOUSE 2
0.000	0.000	0.000	0.000	0.192	0.192	House Footprint	HOUSE 1, HOUSE 2
0.165	0.000	0.000	0.000	0.000	0.165	Paved parking	LOT 1 DRIVE, LOT 2 DRIVE
0.000	0.000	0.000	4.539	0.000	4.539	Woods, Fair	EX-A, EX-B, EX-C, P-C
0.000	0.000	0.000	1.123	0.000	1.123	Woods/grass comb., Good	LOT 1 DRIVE, P-B
0.165	**0.000**	**0.000**	**6.058**	**0.215**	**6.438**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	EX Storm	0.00	-5.00	100.0	0.0500	0.012	0.0	12.0	0.0
2	AB-1	373.00	372.85	30.0	0.0050	0.012	0.0	3.5	0.0
3	AB-2	371.00	370.85	30.0	0.0050	0.012	0.0	3.0	0.0

Time span=5.00-24.00 hrs, dt=0.05 hrs, 381 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-A: EX to Polsinelli Drive Runoff Area=50,100 sf 0.00% Impervious Runoff Depth>1.67"
Flow Length=300' Tc=26.5 min CN=79 Runoff=1.79 cfs 0.160 af

Subcatchment EX-B: EX- ANALYSIS PT B Runoff Area=30,008 sf 0.00% Impervious Runoff Depth>1.67"
Flow Length=240' Tc=19.9 min CN=79 Runoff=1.28 cfs 0.096 af

Subcatchment EX-C: EX ANALYSIS PT C Runoff Area=60,108 sf 0.00% Impervious Runoff Depth>1.67"
Flow Length=372' Tc=24.8 min CN=79 Runoff=2.24 cfs 0.192 af

Subcatchment HOUSE 1: House 1 Runoff Area=4,683 sf 100.00% Impervious Runoff Depth>3.33"
Tc=6.0 min CN=98 Runoff=0.54 cfs 0.030 af

Subcatchment HOUSE 2: House 2 Runoff Area=4,683 sf 100.00% Impervious Runoff Depth>3.33"
Tc=6.0 min CN=98 Runoff=0.54 cfs 0.030 af

Subcatchment LOT 1 DRIVE: LOT 1 Runoff Area=31,429 sf 5.89% Impervious Runoff Depth>1.74"
Flow Length=240' Tc=25.7 min CN=80 Runoff=1.20 cfs 0.105 af

Subcatchment LOT 2 DRIVE: LOT 2 Runoff Area=14,383 sf 37.10% Impervious Runoff Depth>2.30"
Flow Length=240' Tc=27.7 min CN=87 Runoff=0.70 cfs 0.063 af

Subcatchment P-B: PROPOSED ANALYSIS Runoff Area=27,523 sf 0.00% Impervious Runoff Depth>1.68"
Flow Length=220' Tc=18.3 min CN=79 Runoff=1.23 cfs 0.088 af

Subcatchment P-C: PROP ANALYSIS PT C Runoff Area=57,515 sf 0.00% Impervious Runoff Depth>1.67"
Flow Length=372' Tc=24.8 min CN=79 Runoff=2.14 cfs 0.184 af

Reach EX Storm: Ex Storm Sewer Avg. Flow Depth=0.20' Max Vel=6.82 fps Inflow=0.78 cfs 0.226 af
12.0" Round Pipe n=0.012 L=100.0' S=0.0500 '/' Capacity=8.63 cfs Outflow=0.78 cfs 0.226 af

Pond AB-1: Attenuation Basin Lot 1 Peak Elev=377.49' Storage=1,798 cf Inflow=1.28 cfs 0.135 af
Primary=0.47 cfs 0.133 af Secondary=0.00 cfs 0.000 af Outflow=0.47 cfs 0.133 af

Pond AB-2: Attenuation Basin Lot 2 Peak Elev=375.25' Storage=1,276 cf Inflow=0.86 cfs 0.093 af
Primary=0.31 cfs 0.092 af Secondary=0.00 cfs 0.000 af Outflow=0.31 cfs 0.092 af

Total Runoff Area = 6.438 ac Runoff Volume = 0.949 af Average Runoff Depth = 1.77"
94.10% Pervious = 6.058 ac 5.90% Impervious = 0.380 ac

Summary for Subcatchment EX-A: EX to Polsinelli Drive

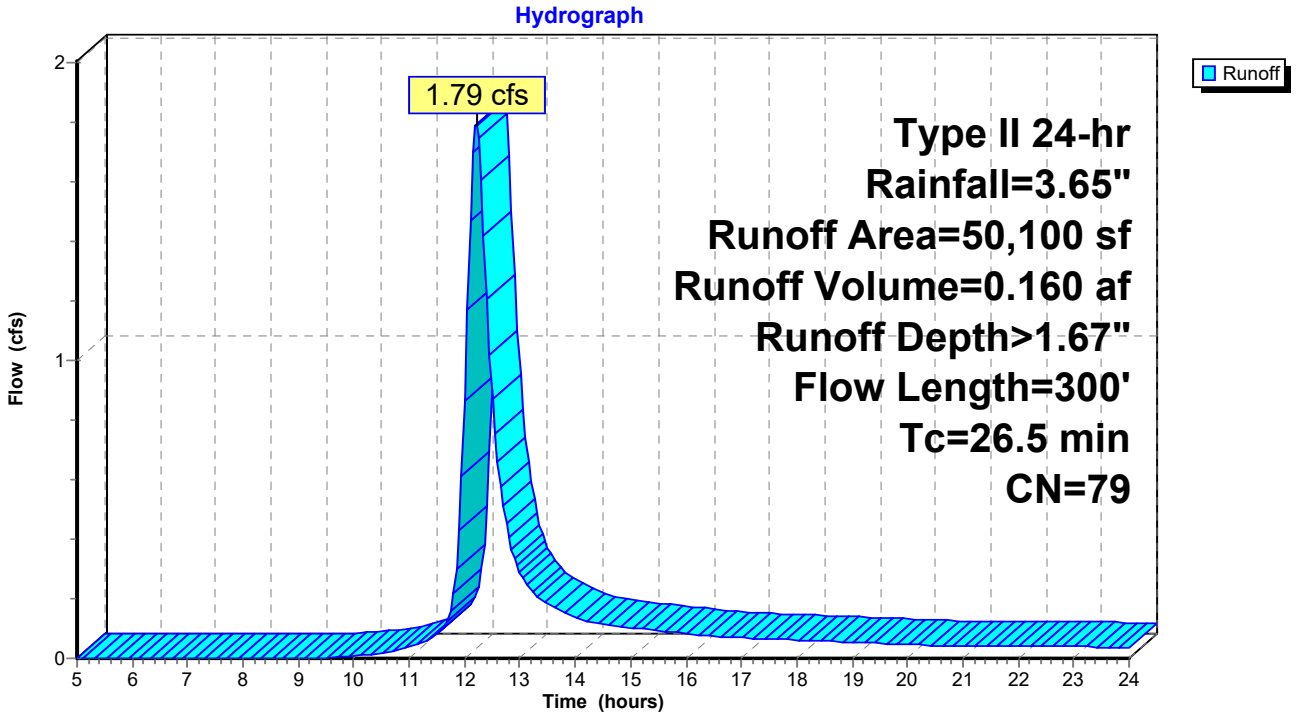
Runoff = 1.79 cfs @ 12.21 hrs, Volume= 0.160 af, Depth> 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.65"

Area (sf)	CN	Description
50,100	79	Woods, Fair, HSG D
50,100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
2.7	200	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
26.5	300	Total			

Subcatchment EX-A: EX to Polsinelli Drive



Summary for Subcatchment EX-B: EX- ANALYSIS PT B

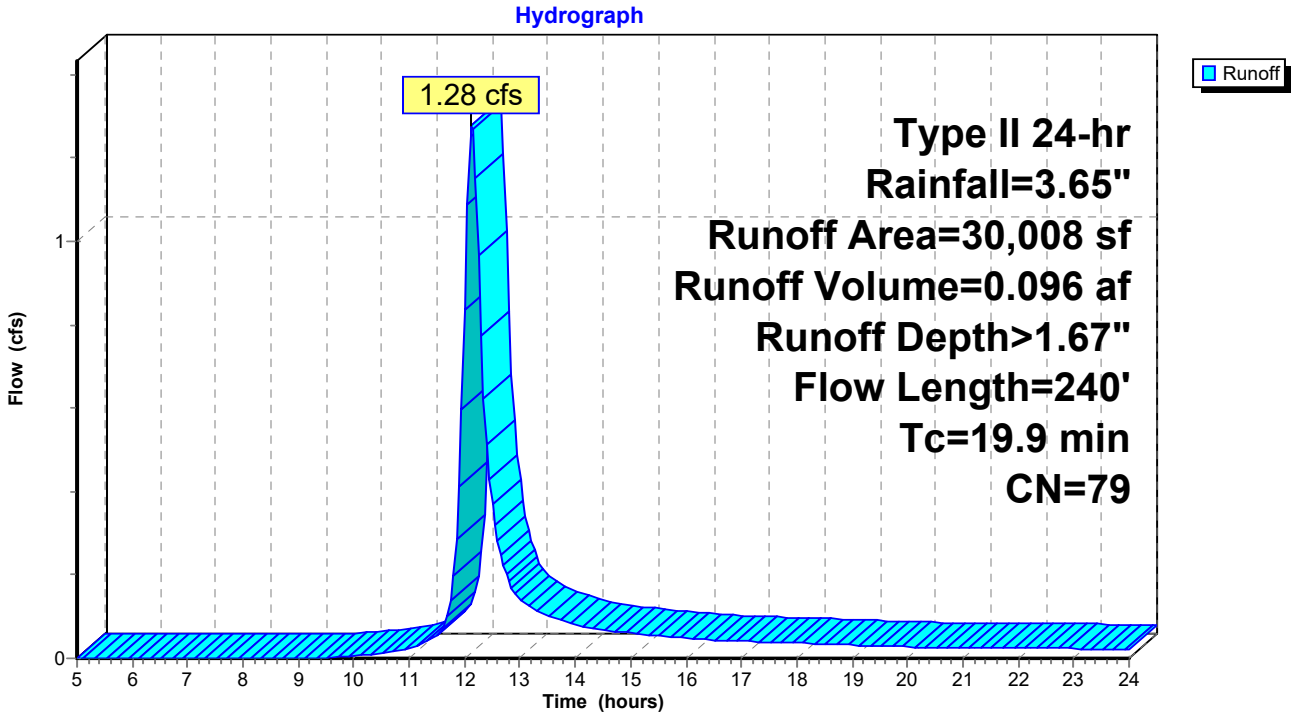
Runoff = 1.28 cfs @ 12.13 hrs, Volume= 0.096 af, Depth> 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.65"

Area (sf)	CN	Description
30,008	79	Woods, Fair, HSG D
30,008		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	100	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
1.8	140	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
19.9	240	Total			

Subcatchment EX-B: EX- ANALYSIS PT B



Summary for Subcatchment EX-C: EX ANALYSIS PT C

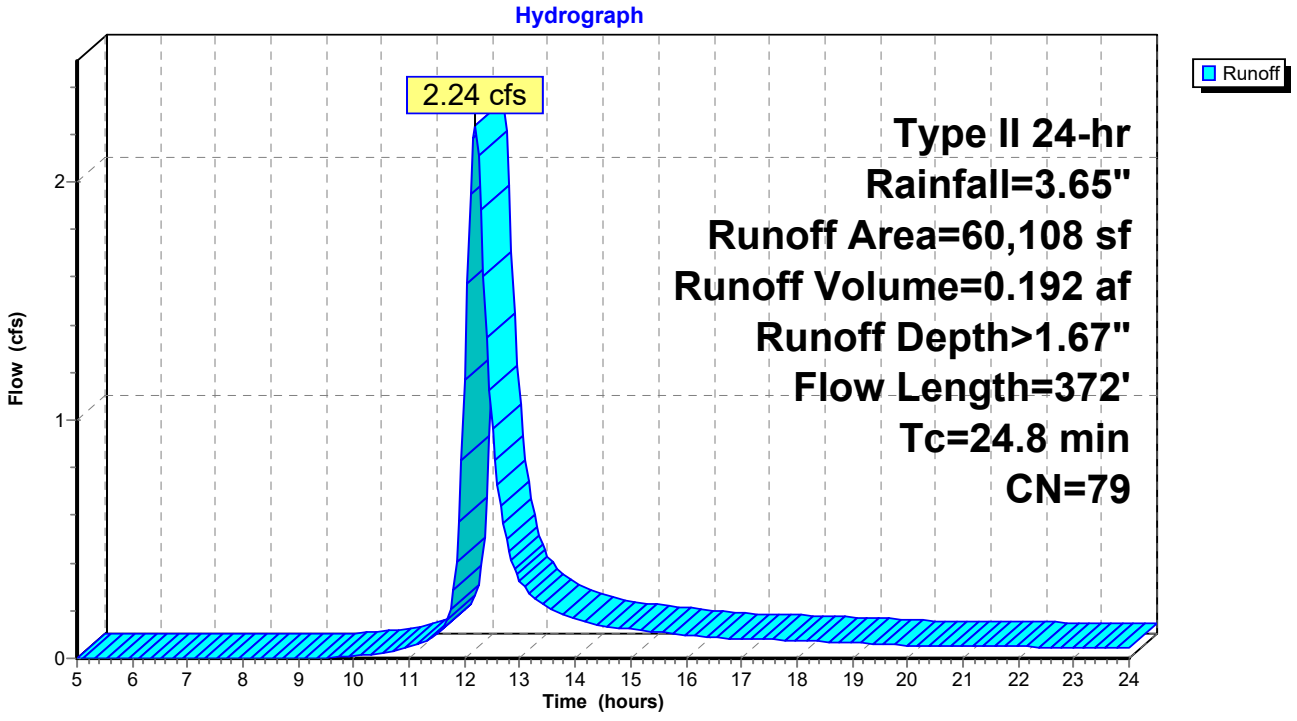
Runoff = 2.24 cfs @ 12.19 hrs, Volume= 0.192 af, Depth> 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.65"

Area (sf)	CN	Description
60,108	79	Woods, Fair, HSG D
60,108		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
4.5	272	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
24.8	372	Total			

Subcatchment EX-C: EX ANALYSIS PT C



Summary for Subcatchment HOUSE 1: House 1

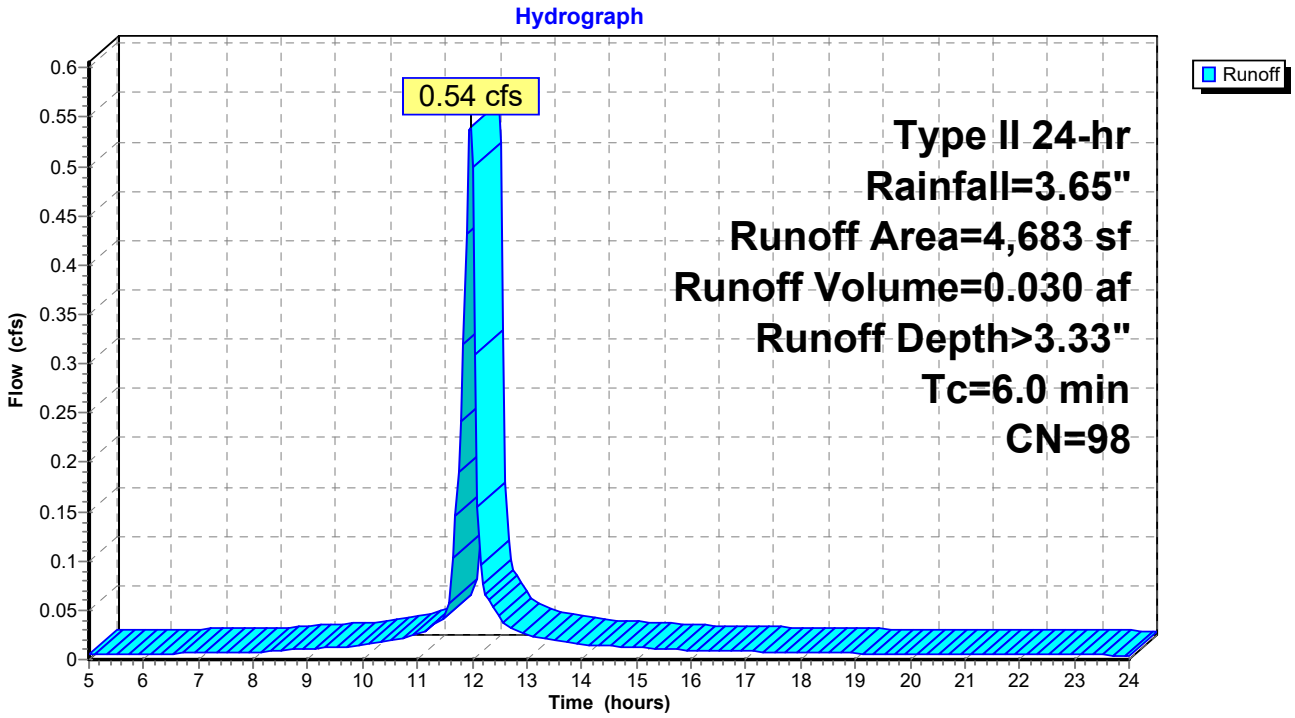
Runoff = 0.54 cfs @ 11.96 hrs, Volume= 0.030 af, Depth> 3.33"
Routed to Pond AB-1 : Attenuation Basin Lot 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.65"

	Area (sf)	CN	Description
*	4,183	98	House Footprint
*	500	98	Hardscape allowance
	4,683	98	Weighted Average
	4,683		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Min.**

Subcatchment HOUSE 1: House 1



Summary for Subcatchment HOUSE 2: House 2

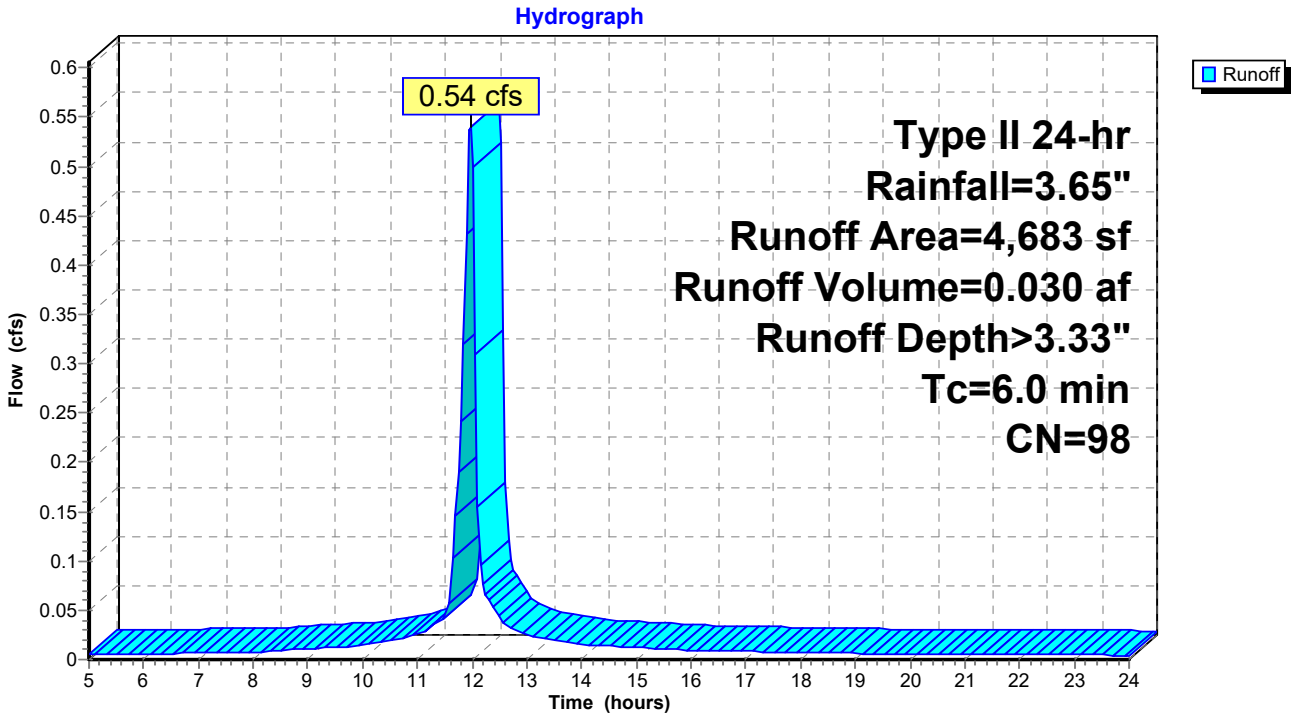
Runoff = 0.54 cfs @ 11.96 hrs, Volume= 0.030 af, Depth> 3.33"
Routed to Pond AB-2 : Attenuation Basin Lot 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.65"

	Area (sf)	CN	Description
*	4,183	98	House Footprint
*	500	98	Hardscape allowance
	4,683	98	Weighted Average
	4,683		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Min.**

Subcatchment HOUSE 2: House 2



Summary for Subcatchment LOT 1 DRIVE: LOT 1 DRIVEWAY

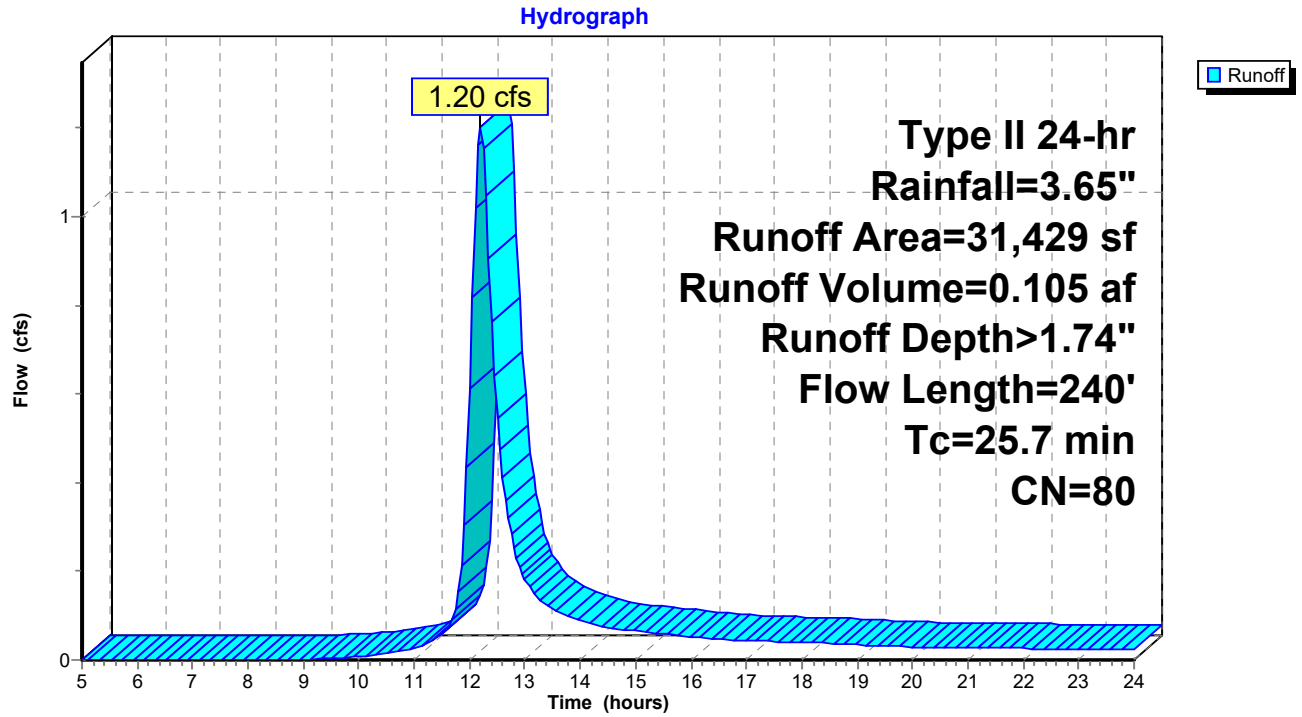
Runoff = 1.20 cfs @ 12.20 hrs, Volume= 0.105 af, Depth> 1.74"
Routed to Pond AB-1 : Attenuation Basin Lot 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.65"

Area (sf)	CN	Description
1,850	98	Paved parking, HSG A
8,194	80	>75% Grass cover, Good, HSG D
21,385	79	Woods/grass comb., Good, HSG D
31,429	80	Weighted Average
29,579		94.11% Pervious Area
1,850		5.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
1.9	140	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.7	240	Total			

Subcatchment LOT 1 DRIVE: LOT 1 DRIVEWAY



Summary for Subcatchment LOT 2 DRIVE: LOT 2 DRIVEWAY

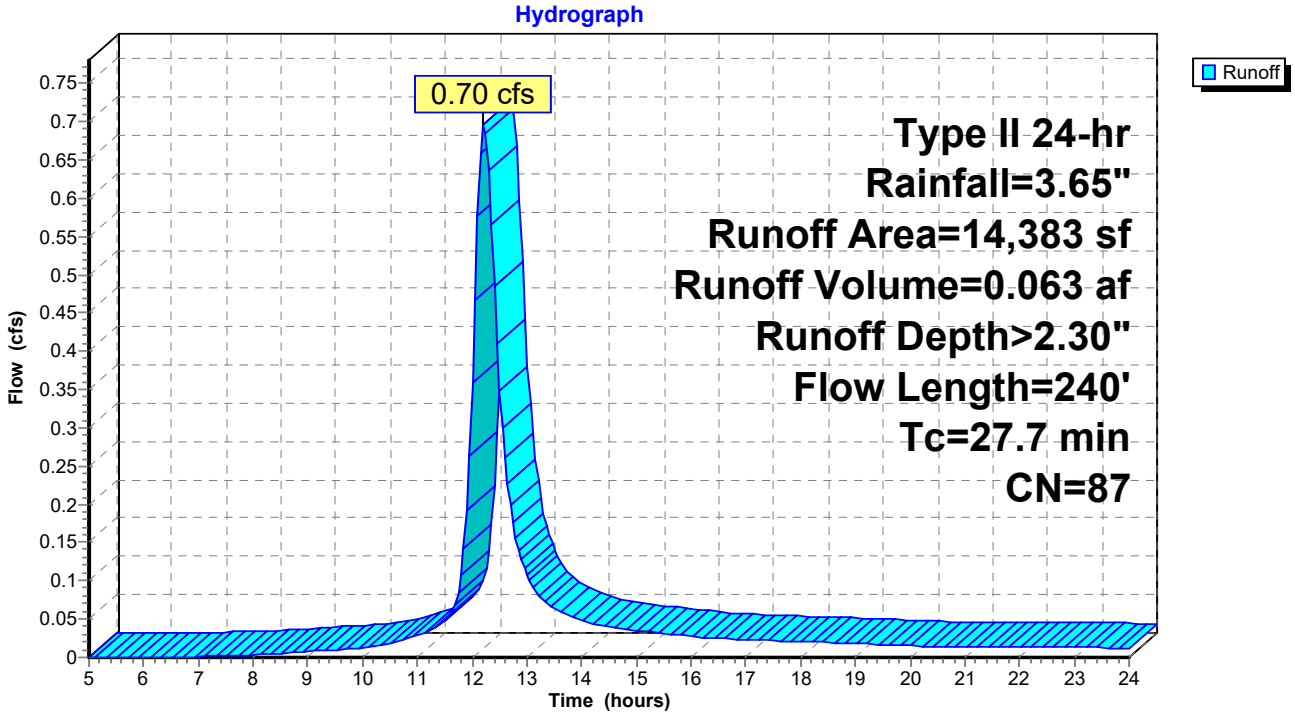
Runoff = 0.70 cfs @ 12.21 hrs, Volume= 0.063 af, Depth> 2.30"
Routed to Pond AB-2 : Attenuation Basin Lot 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.65"

Area (sf)	CN	Description
5,336	98	Paved parking, HSG A
9,047	80	>75% Grass cover, Good, HSG D
14,383	87	Weighted Average
9,047		62.90% Pervious Area
5,336		37.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.3	100	0.0150	0.06		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.60"
0.4	140	0.1000	6.42		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
27.7	240	Total			

Subcatchment LOT 2 DRIVE: LOT 2 DRIVEWAY



Summary for Subcatchment P-B: PROPOSED ANALYSIS B

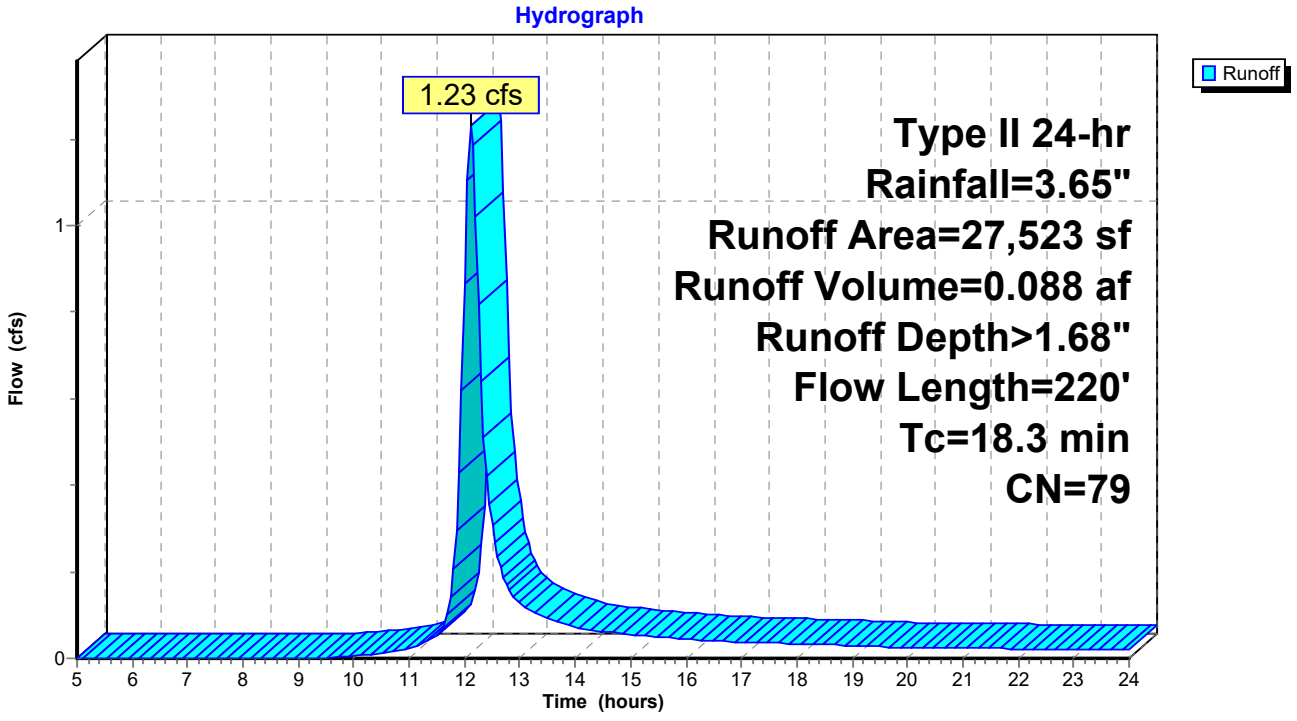
Runoff = 1.23 cfs @ 12.11 hrs, Volume= 0.088 af, Depth> 1.68"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.65"

Area (sf)	CN	Description
27,523	79	Woods/grass comb., Good, HSG D
27,523		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.60"
1.5	120	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.3	220	Total			

Subcatchment P-B: PROPOSED ANALYSIS B



Summary for Subcatchment P-C: PROP ANALYSIS PT C

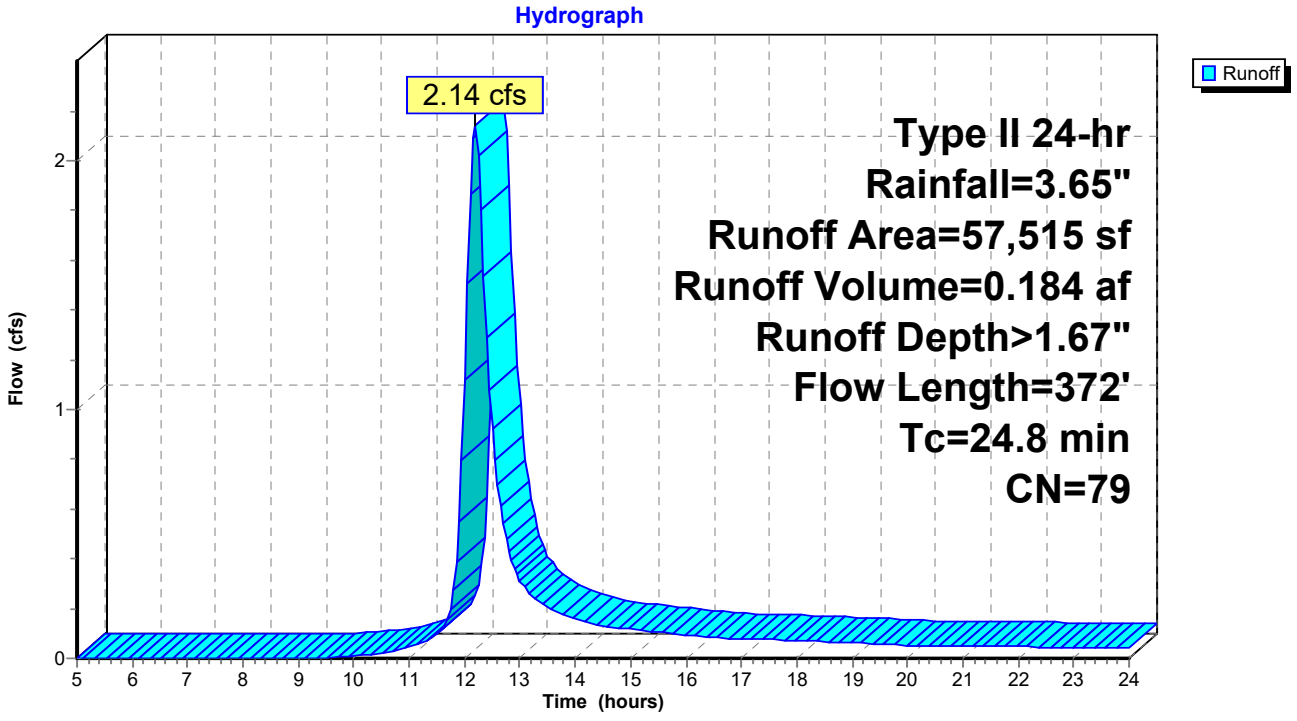
Runoff = 2.14 cfs @ 12.19 hrs, Volume= 0.184 af, Depth> 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=3.65"

Area (sf)	CN	Description
57,515	79	Woods, Fair, HSG D
57,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
4.5	272	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
24.8	372	Total			

Subcatchment P-C: PROP ANALYSIS PT C



Summary for Reach EX Storm: Ex Storm Sewer

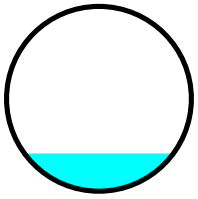
[52] Hint: Inlet/Outlet conditions not evaluated
[65] Warning: Inlet elevation not specified

Inflow Area = 1.267 ac, 30.00% Impervious, Inflow Depth > 2.14"
Inflow = 0.78 cfs @ 12.58 hrs, Volume= 0.226 af
Outflow = 0.78 cfs @ 12.59 hrs, Volume= 0.226 af, Atten= 0%, Lag= 0.5 min

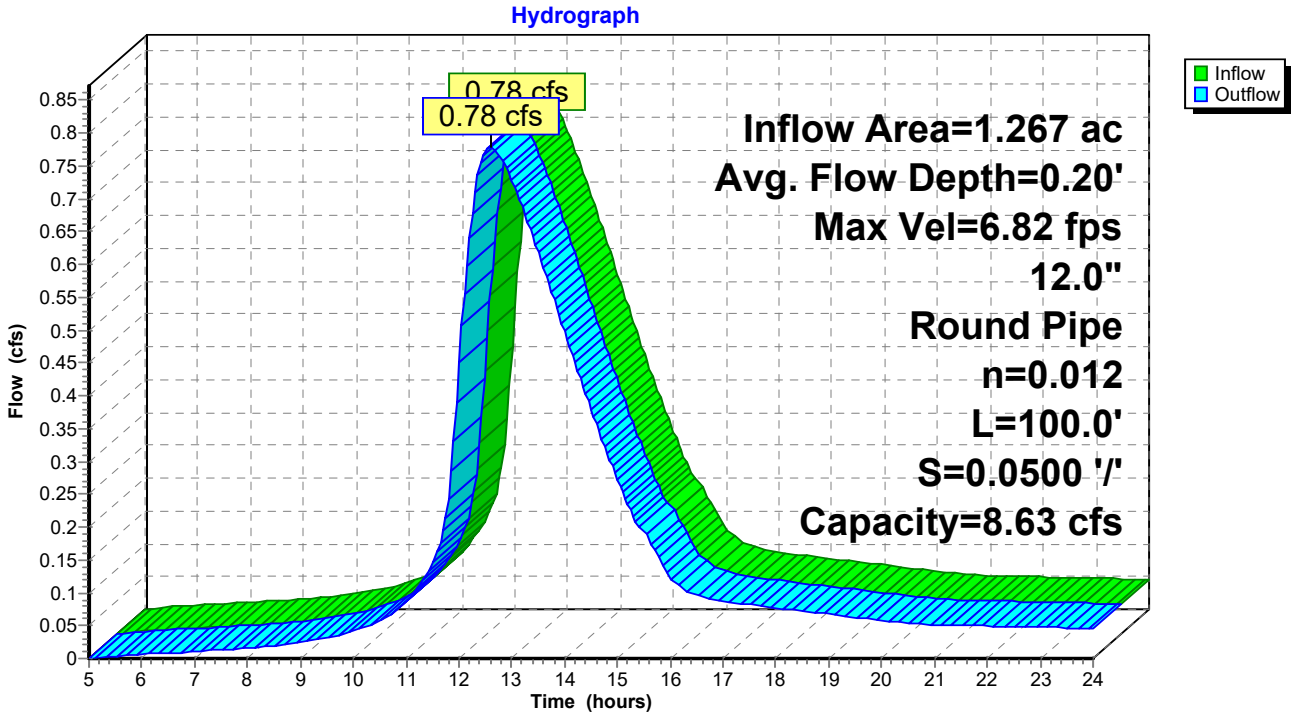
Routing by Stor-Ind+Trans method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 6.82 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.48 fps, Avg. Travel Time= 0.5 min

Peak Storage= 11 cf @ 12.59 hrs
Average Depth at Peak Storage= 0.20' , Surface Width= 0.80'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.63 cfs

12.0" Round Pipe
n= 0.012
Length= 100.0' Slope= 0.0500 '/'
Inlet Invert= 0.00', Outlet Invert= -5.00'



Reach EX Storm: Ex Storm Sewer



Summary for Pond AB-1: Attenuation Basin Lot 1

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.829 ac, 18.09% Impervious, Inflow Depth > 1.95"
Inflow = 1.28 cfs @ 12.19 hrs, Volume= 0.135 af
Outflow = 0.47 cfs @ 12.58 hrs, Volume= 0.133 af, Atten= 63%, Lag= 23.6 min
Primary = 0.47 cfs @ 12.58 hrs, Volume= 0.133 af
Routed to Reach EX Storm : Ex Storm Sewer
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach EX Storm : Ex Storm Sewer

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 377.49' @ 12.58 hrs Surf.Area= 1,000 sf Storage= 1,798 cf

Plug-Flow detention time= 42.7 min calculated for 0.133 af (99% of inflow)
Center-of-Mass det. time= 36.8 min (865.3 - 828.4)

Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	7,300 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 18,250 cf Overall x 40.0% Voids

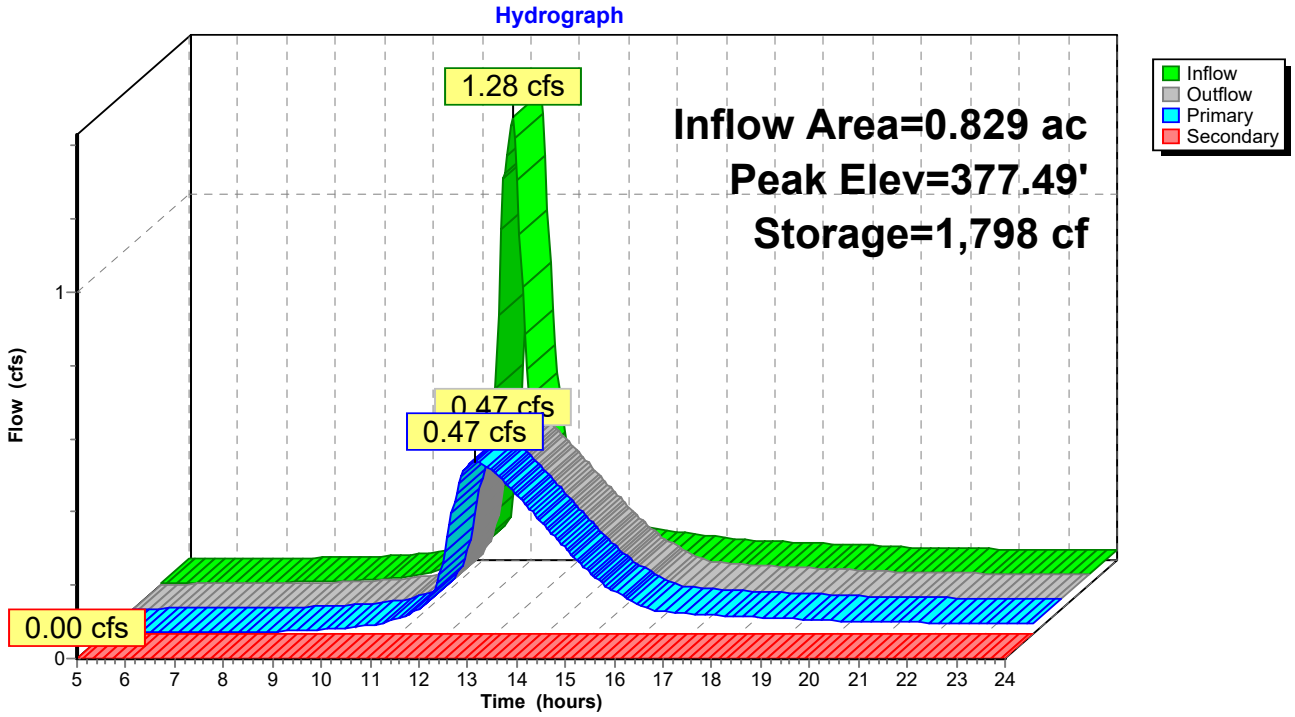
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
373.00	1,000	0	0
374.00	1,000	1,000	1,000
375.00	1,000	1,000	2,000
376.00	1,000	1,000	3,000
377.00	1,000	1,000	4,000
377.50	1,000	500	4,500
380.00	10,000	13,750	18,250

Device	Routing	Invert	Outlet Devices
#1	Primary	373.00'	**3.5" Round Culvert** L= 30.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 373.00' / 372.85' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.07 sf
#2	Secondary	377.50'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.47 cfs @ 12.58 hrs HW=377.49' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.47 cfs @ 7.04 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=373.00' (Free Discharge)
↑—**2=Orifice/Grate** (Controls 0.00 cfs)

Pond AB-1: Attenuation Basin Lot 1



Summary for Pond AB-2: Attenuation Basin Lot 2

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.438 ac, 52.55% Impervious, Inflow Depth > 2.55"
Inflow = 0.86 cfs @ 12.00 hrs, Volume= 0.093 af
Outflow = 0.31 cfs @ 12.59 hrs, Volume= 0.092 af, Atten= 64%, Lag= 35.4 min
Primary = 0.31 cfs @ 12.59 hrs, Volume= 0.092 af
Routed to Reach EX Storm : Ex Storm Sewer
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach EX Storm : Ex Storm Sewer

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 375.25' @ 12.59 hrs Surf.Area= 750 sf Storage= 1,276 cf

Plug-Flow detention time= 45.0 min calculated for 0.092 af (99% of inflow)
Center-of-Mass det. time= 39.8 min (845.9 - 806.1)

Volume	Invert	Avail.Storage	Storage Description
#1	371.00'	2,425 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 6,063 cf Overall x 40.0% Voids

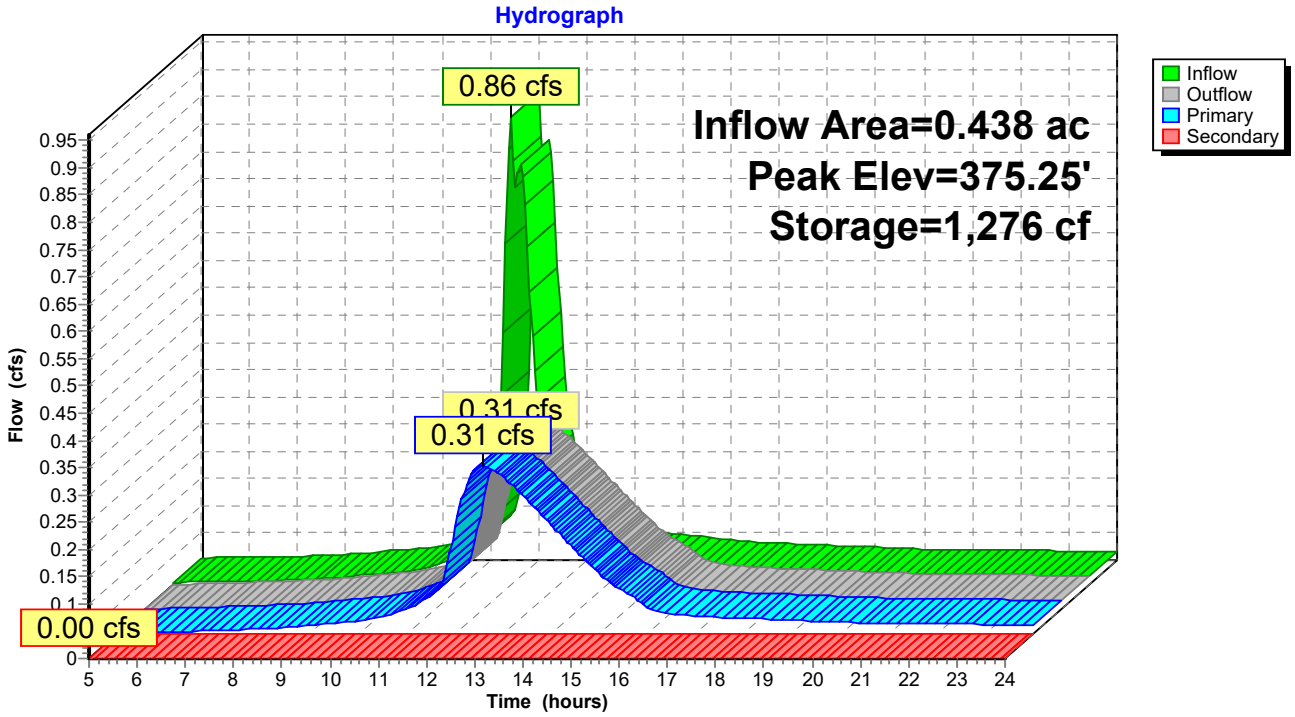
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
371.00	750	0	0
372.00	750	750	750
373.00	750	750	1,500
374.00	750	750	2,250
375.00	750	750	3,000
375.50	750	375	3,375
376.00	10,000	2,688	6,063

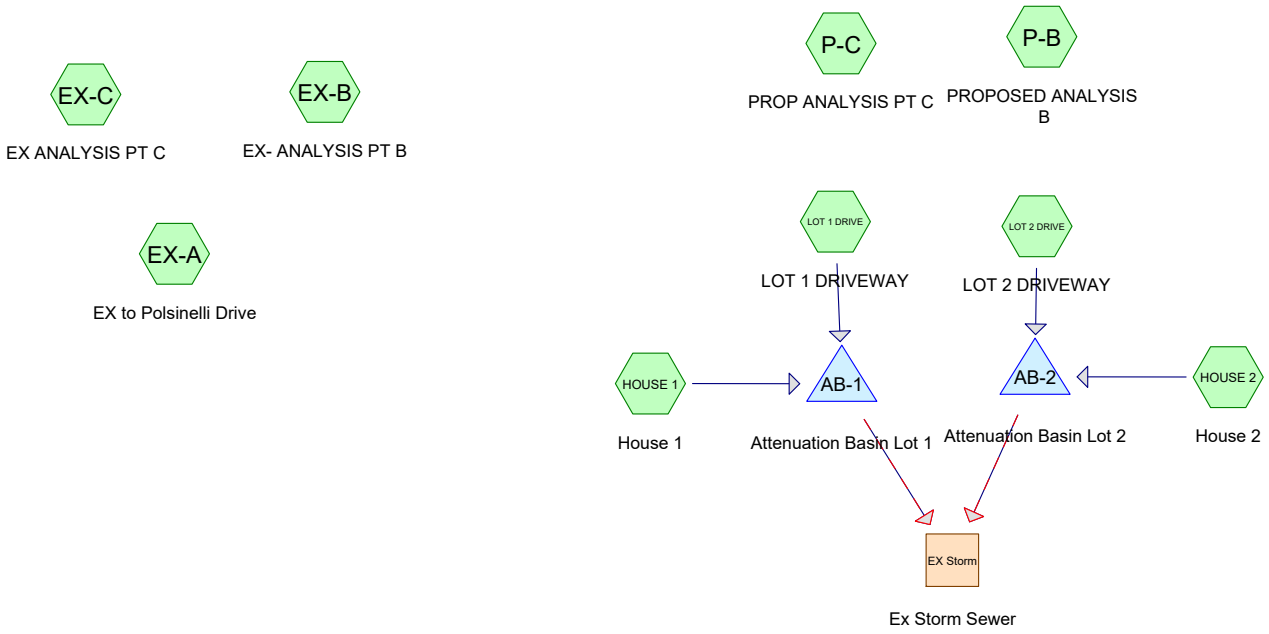
Device	Routing	Invert	Outlet Devices
#1	Primary	371.00'	**3.0" Round Culvert** L= 30.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 371.00' / 370.85' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.05 sf
#2	Secondary	375.50'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.31 cfs @ 12.59 hrs HW=375.25' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.31 cfs @ 6.27 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=371.00' (Free Discharge)
↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond AB-2: Attenuation Basin Lot 2





Subcat Reach Pond Link

Routing Diagram for Pollsinelli
Prepared by HP, Printed 5/31/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.396	80	>75% Grass cover, Good, HSG D (LOT 1 DRIVE, LOT 2 DRIVE)
0.023	98	Hardscape allowance (HOUSE 1, HOUSE 2)
0.192	98	House Footprint (HOUSE 1, HOUSE 2)
0.165	98	Paved parking, HSG A (LOT 1 DRIVE, LOT 2 DRIVE)
4.539	79	Woods, Fair, HSG D (EX-A, EX-B, EX-C, P-C)
1.123	79	Woods/grass comb., Good, HSG D (LOT 1 DRIVE, P-B)
6.438	**80**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.165	HSG A	LOT 1 DRIVE, LOT 2 DRIVE
0.000	HSG B	
0.000	HSG C	
6.058	HSG D	EX-A, EX-B, EX-C, LOT 1 DRIVE, LOT 2 DRIVE, P-B, P-C
0.215	Other	HOUSE 1, HOUSE 2
6.438		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.396	0.000	0.396	>75% Grass cover, Good	LOT 1 DRIVE, LOT 2 DRIVE
0.000	0.000	0.000	0.000	0.023	0.023	Hardscape allowance	HOUSE 1, HOUSE 2
0.000	0.000	0.000	0.000	0.192	0.192	House Footprint	HOUSE 1, HOUSE 2
0.165	0.000	0.000	0.000	0.000	0.165	Paved parking	LOT 1 DRIVE, LOT 2 DRIVE
0.000	0.000	0.000	4.539	0.000	4.539	Woods, Fair	EX-A, EX-B, EX-C, P-C
0.000	0.000	0.000	1.123	0.000	1.123	Woods/grass comb., Good	LOT 1 DRIVE, P-B
0.165	**0.000**	**0.000**	**6.058**	**0.215**	**6.438**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	EX Storm	0.00	-5.00	100.0	0.0500	0.012	0.0	12.0	0.0
2	AB-1	373.00	372.85	30.0	0.0050	0.012	0.0	3.5	0.0
3	AB-2	371.00	370.85	30.0	0.0050	0.012	0.0	3.0	0.0

Time span=5.00-24.00 hrs, dt=0.05 hrs, 381 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment EX-A: EX to Polsinelli Drive Runoff Area=50,100 sf 0.00% Impervious Runoff Depth>3.72"
Flow Length=300' Tc=26.5 min CN=79 Runoff=4.03 cfs 0.356 af

Subcatchment EX-B: EX- ANALYSIS PT B Runoff Area=30,008 sf 0.00% Impervious Runoff Depth>3.73"
Flow Length=240' Tc=19.9 min CN=79 Runoff=2.86 cfs 0.214 af

Subcatchment EX-C: EX ANALYSIS PT C Runoff Area=60,108 sf 0.00% Impervious Runoff Depth>3.72"
Flow Length=372' Tc=24.8 min CN=79 Runoff=5.03 cfs 0.428 af

Subcatchment HOUSE 1: House 1 Runoff Area=4,683 sf 100.00% Impervious Runoff Depth>5.62"
Tc=6.0 min CN=98 Runoff=0.90 cfs 0.050 af

Subcatchment HOUSE 2: House 2 Runoff Area=4,683 sf 100.00% Impervious Runoff Depth>5.62"
Tc=6.0 min CN=98 Runoff=0.90 cfs 0.050 af

Subcatchment LOT 1 DRIVE: LOT 1 Runoff Area=31,429 sf 5.89% Impervious Runoff Depth>3.82"
Flow Length=240' Tc=25.7 min CN=80 Runoff=2.65 cfs 0.230 af

Subcatchment LOT 2 DRIVE: LOT 2 Runoff Area=14,383 sf 37.10% Impervious Runoff Depth>4.56"
Flow Length=240' Tc=27.7 min CN=87 Runoff=1.35 cfs 0.125 af

Subcatchment P-B: PROPOSED ANALYSIS Runoff Area=27,523 sf 0.00% Impervious Runoff Depth>3.73"
Flow Length=220' Tc=18.3 min CN=79 Runoff=2.74 cfs 0.196 af

Subcatchment P-C: PROP ANALYSIS PT C Runoff Area=57,515 sf 0.00% Impervious Runoff Depth>3.72"
Flow Length=372' Tc=24.8 min CN=79 Runoff=4.81 cfs 0.409 af

Reach EX Storm: Ex Storm Sewer Avg. Flow Depth=0.48' Max Vel=10.76 fps Inflow=3.92 cfs 0.453 af
12.0" Round Pipe n=0.012 L=100.0' S=0.0500 '/' Capacity=8.63 cfs Outflow=3.97 cfs 0.453 af

Pond AB-1: Attenuation Basin Lot 1 Peak Elev=377.99' Storage=2,167 cf Inflow=2.78 cfs 0.280 af
Primary=0.50 cfs 0.206 af Secondary=2.20 cfs 0.073 af Outflow=2.69 cfs 0.278 af

Pond AB-2: Attenuation Basin Lot 2 Peak Elev=375.78' Storage=1,726 cf Inflow=1.57 cfs 0.176 af
Primary=0.33 cfs 0.137 af Secondary=0.96 cfs 0.037 af Outflow=1.29 cfs 0.175 af

Total Runoff Area = 6.438 ac Runoff Volume = 2.060 af Average Runoff Depth = 3.84"
94.10% Pervious = 6.058 ac 5.90% Impervious = 0.380 ac

Summary for Subcatchment EX-A: EX to Polsinelli Drive

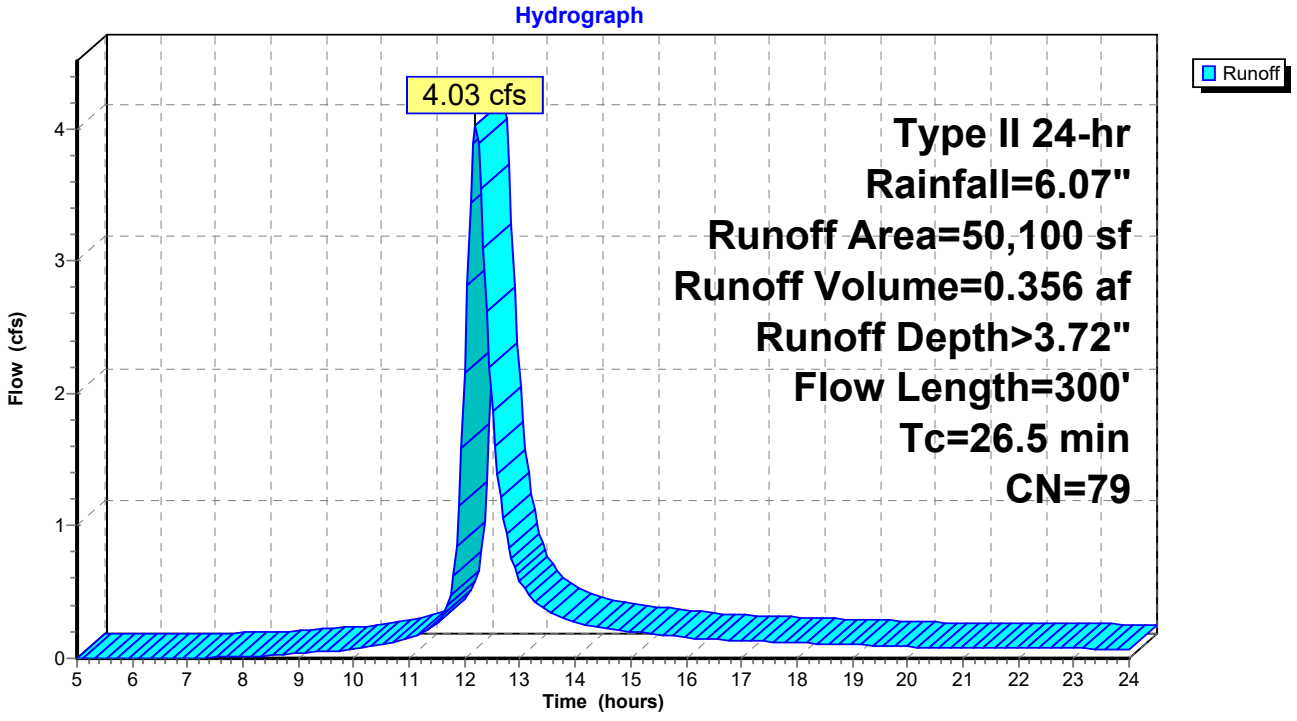
Runoff = 4.03 cfs @ 12.20 hrs, Volume= 0.356 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=6.07"

Area (sf)	CN	Description
50,100	79	Woods, Fair, HSG D
50,100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
2.7	200	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
26.5	300	Total			

Subcatchment EX-A: EX to Polsinelli Drive



Summary for Subcatchment EX-B: EX- ANALYSIS PT B

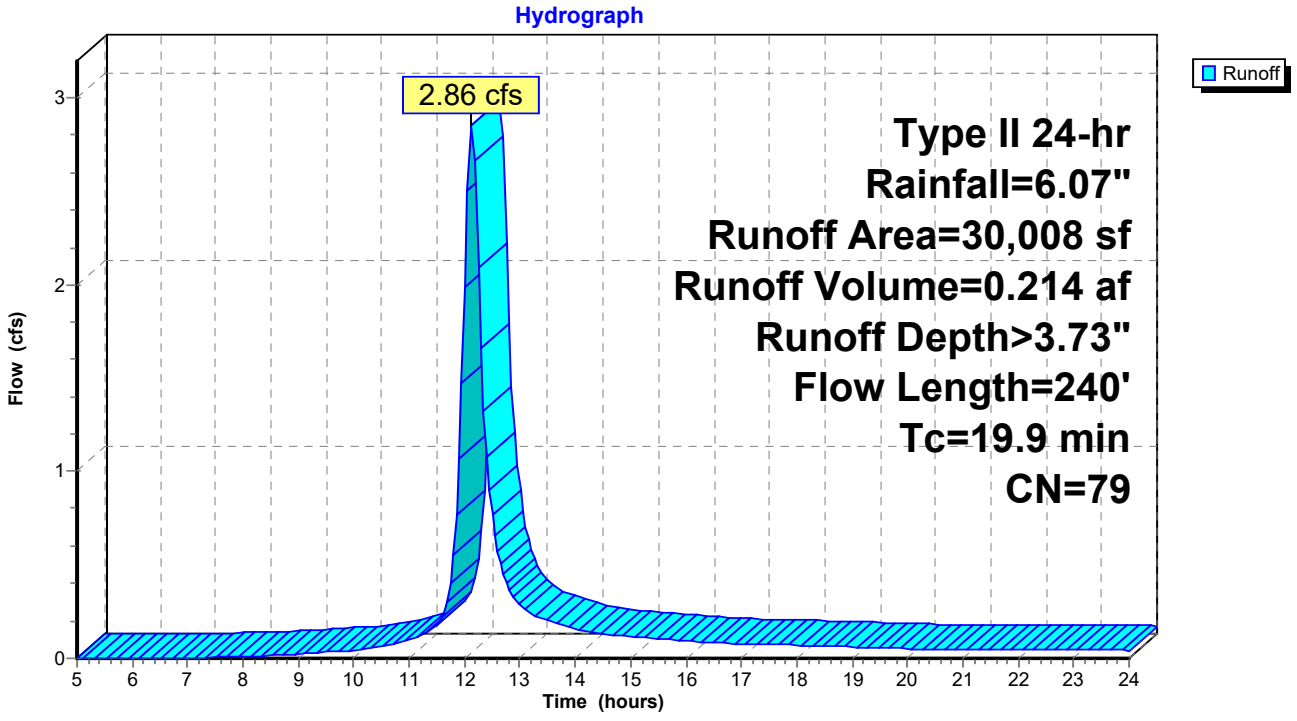
Runoff = 2.86 cfs @ 12.12 hrs, Volume= 0.214 af, Depth> 3.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=6.07"

Area (sf)	CN	Description
30,008	79	Woods, Fair, HSG D
30,008		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.1	100	0.0400	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
1.8	140	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
19.9	240	Total			

Subcatchment EX-B: EX- ANALYSIS PT B



Summary for Subcatchment EX-C: EX ANALYSIS PT C

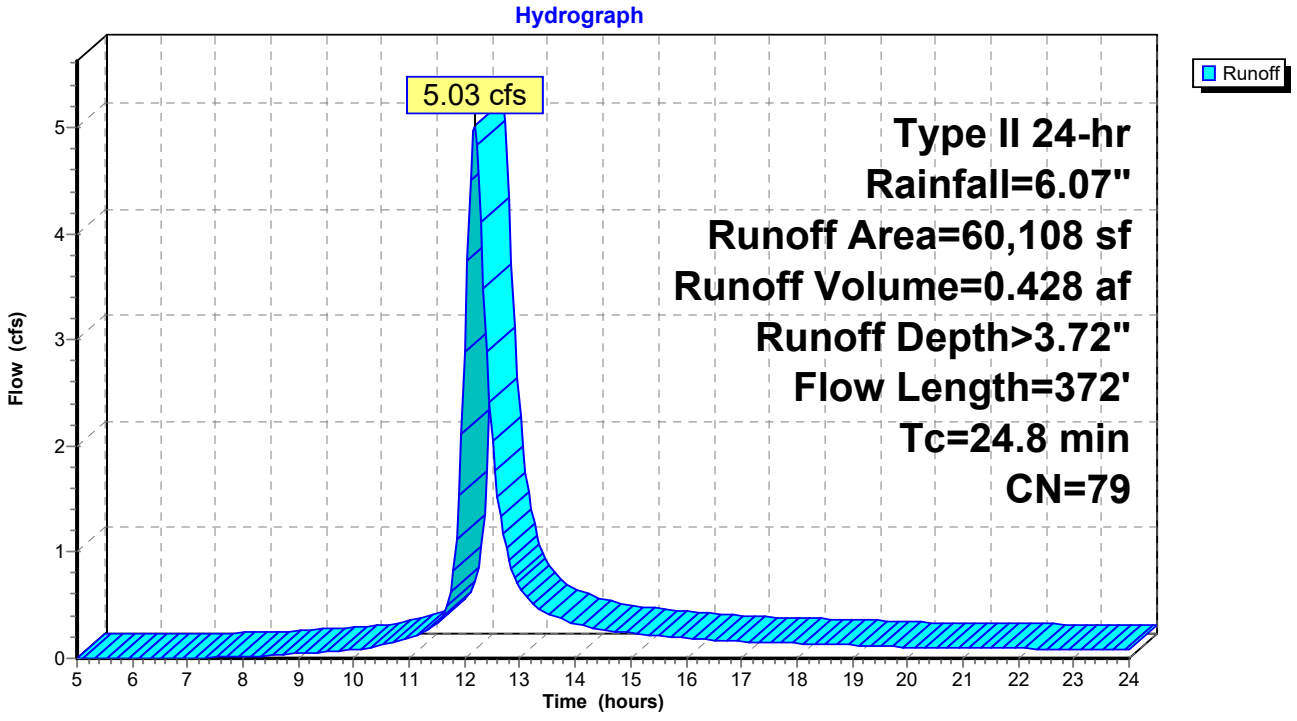
Runoff = 5.03 cfs @ 12.18 hrs, Volume= 0.428 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=6.07"

Area (sf)	CN	Description
60,108	79	Woods, Fair, HSG D
60,108		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
4.5	272	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
24.8	372	Total			

Subcatchment EX-C: EX ANALYSIS PT C



Summary for Subcatchment HOUSE 1: House 1

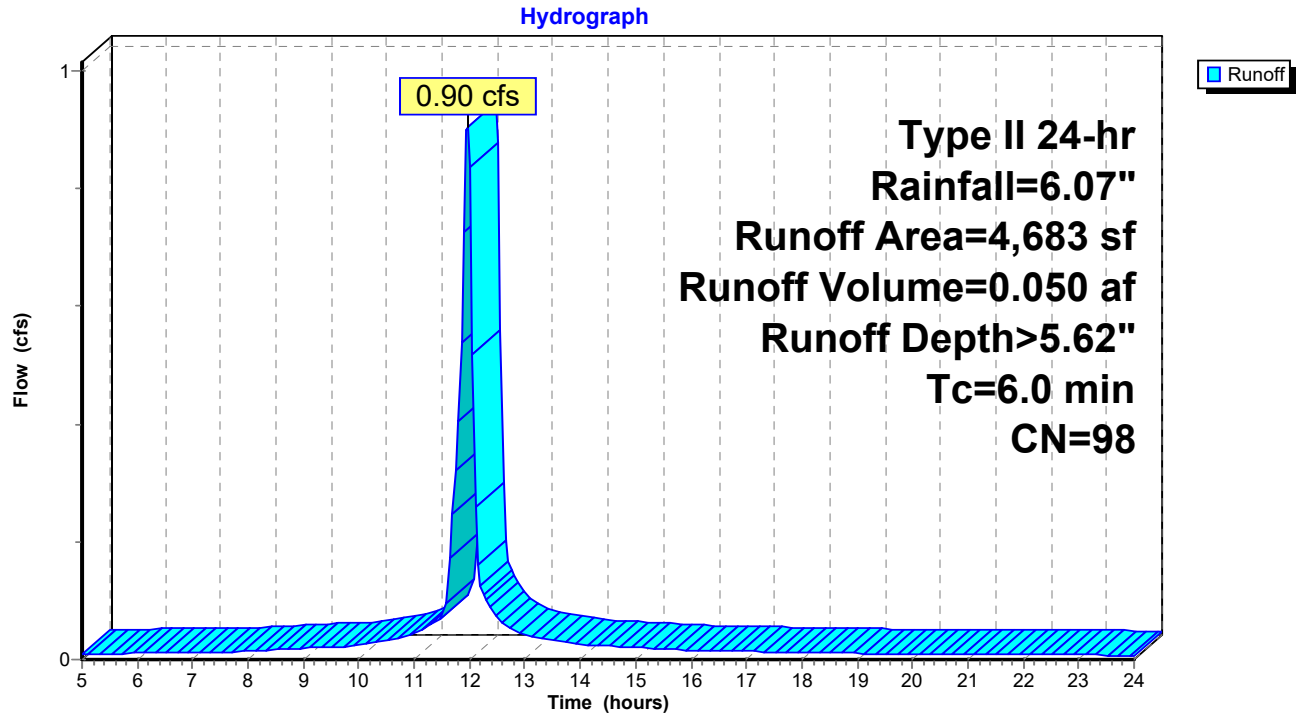
Runoff = 0.90 cfs @ 11.96 hrs, Volume= 0.050 af, Depth> 5.62"
Routed to Pond AB-1 : Attenuation Basin Lot 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=6.07"

	Area (sf)	CN	Description
*	4,183	98	House Footprint
*	500	98	Hardscape allowance
	4,683	98	Weighted Average
	4,683		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Min.**

Subcatchment HOUSE 1: House 1



Summary for Subcatchment HOUSE 2: House 2

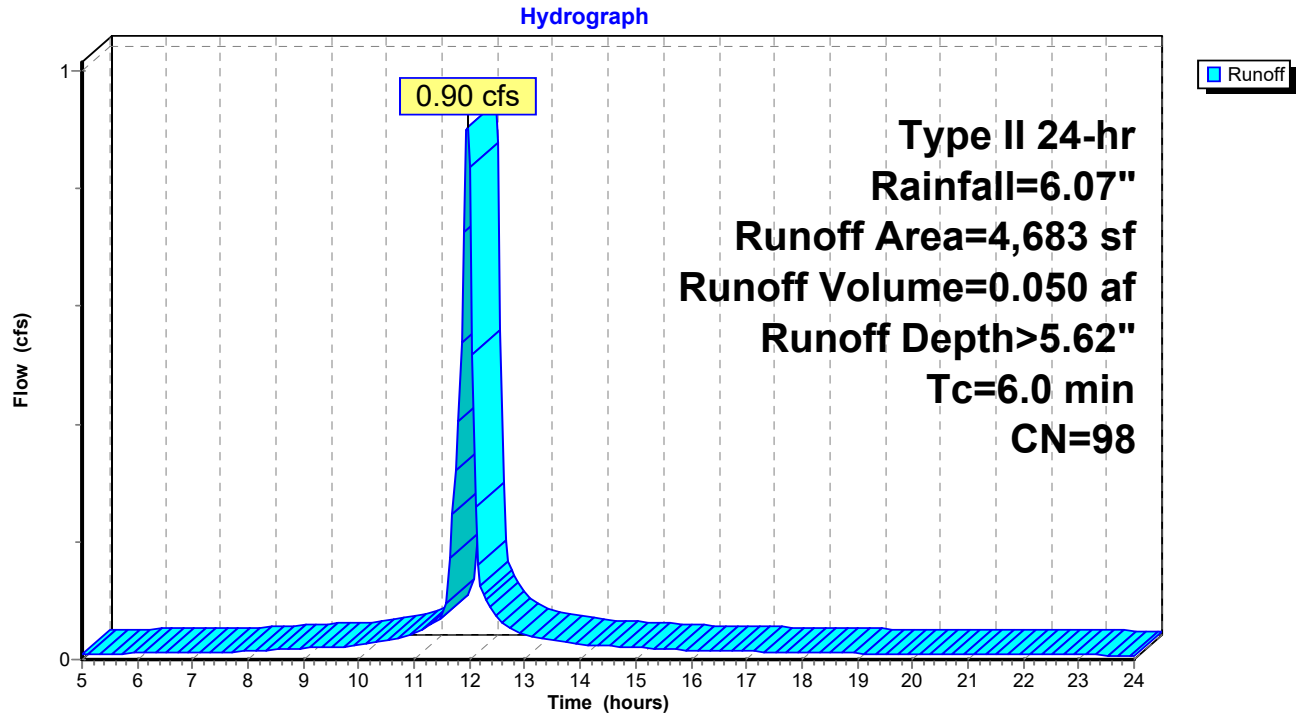
Runoff = 0.90 cfs @ 11.96 hrs, Volume= 0.050 af, Depth> 5.62"
Routed to Pond AB-2 : Attenuation Basin Lot 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=6.07"

	Area (sf)	CN	Description
*	4,183	98	House Footprint
*	500	98	Hardscape allowance
	4,683	98	Weighted Average
	4,683		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry, TR-55 Min.**

Subcatchment HOUSE 2: House 2



Summary for Subcatchment LOT 1 DRIVE: LOT 1 DRIVEWAY

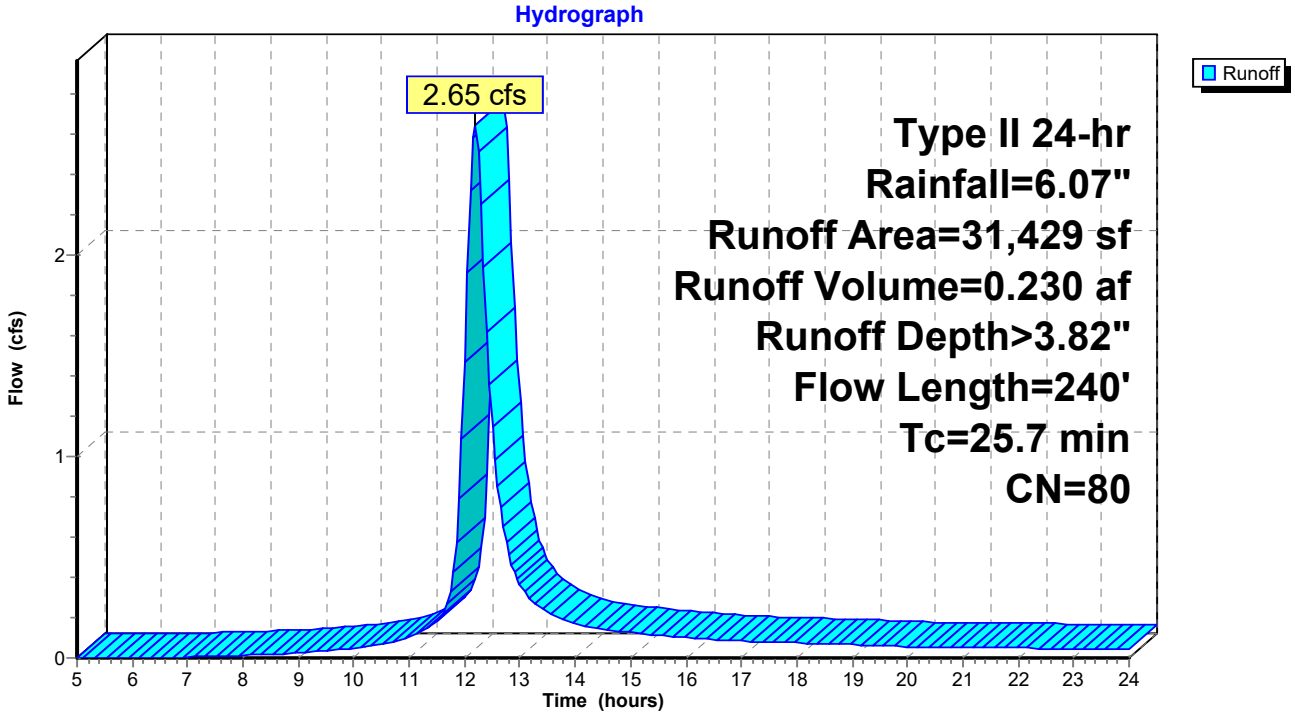
Runoff = 2.65 cfs @ 12.19 hrs, Volume= 0.230 af, Depth> 3.82"
Routed to Pond AB-1 : Attenuation Basin Lot 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=6.07"

Area (sf)	CN	Description
1,850	98	Paved parking, HSG A
8,194	80	>75% Grass cover, Good, HSG D
21,385	79	Woods/grass comb., Good, HSG D
31,429	80	Weighted Average
29,579		94.11% Pervious Area
1,850		5.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
23.8	100	0.0200	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
1.9	140	0.0600	1.22		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
25.7	240	Total			

Subcatchment LOT 1 DRIVE: LOT 1 DRIVEWAY



Summary for Subcatchment LOT 2 DRIVE: LOT 2 DRIVEWAY

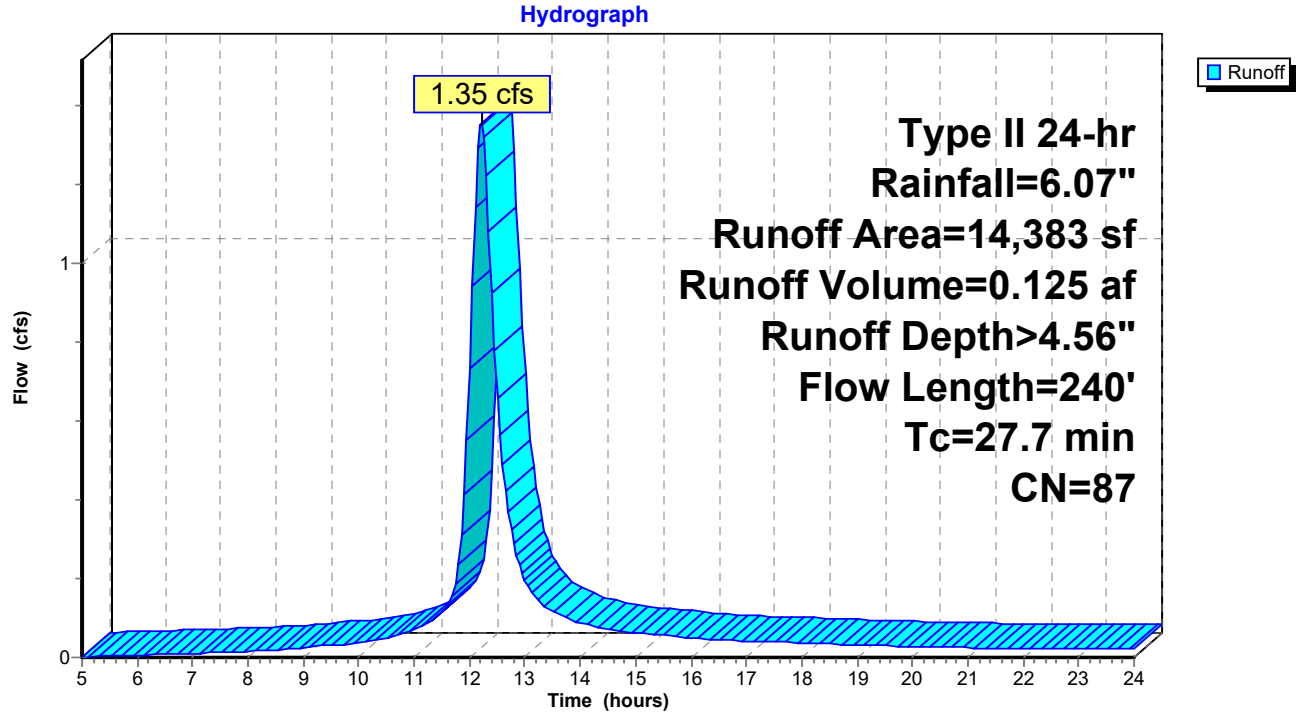
Runoff = 1.35 cfs @ 12.21 hrs, Volume= 0.125 af, Depth> 4.56"
Routed to Pond AB-2 : Attenuation Basin Lot 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=6.07"

Area (sf)	CN	Description
5,336	98	Paved parking, HSG A
9,047	80	>75% Grass cover, Good, HSG D
14,383	87	Weighted Average
9,047		62.90% Pervious Area
5,336		37.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.3	100	0.0150	0.06		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.60"
0.4	140	0.1000	6.42		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
27.7	240	Total			

Subcatchment LOT 2 DRIVE: LOT 2 DRIVEWAY



Summary for Subcatchment P-B: PROPOSED ANALYSIS B

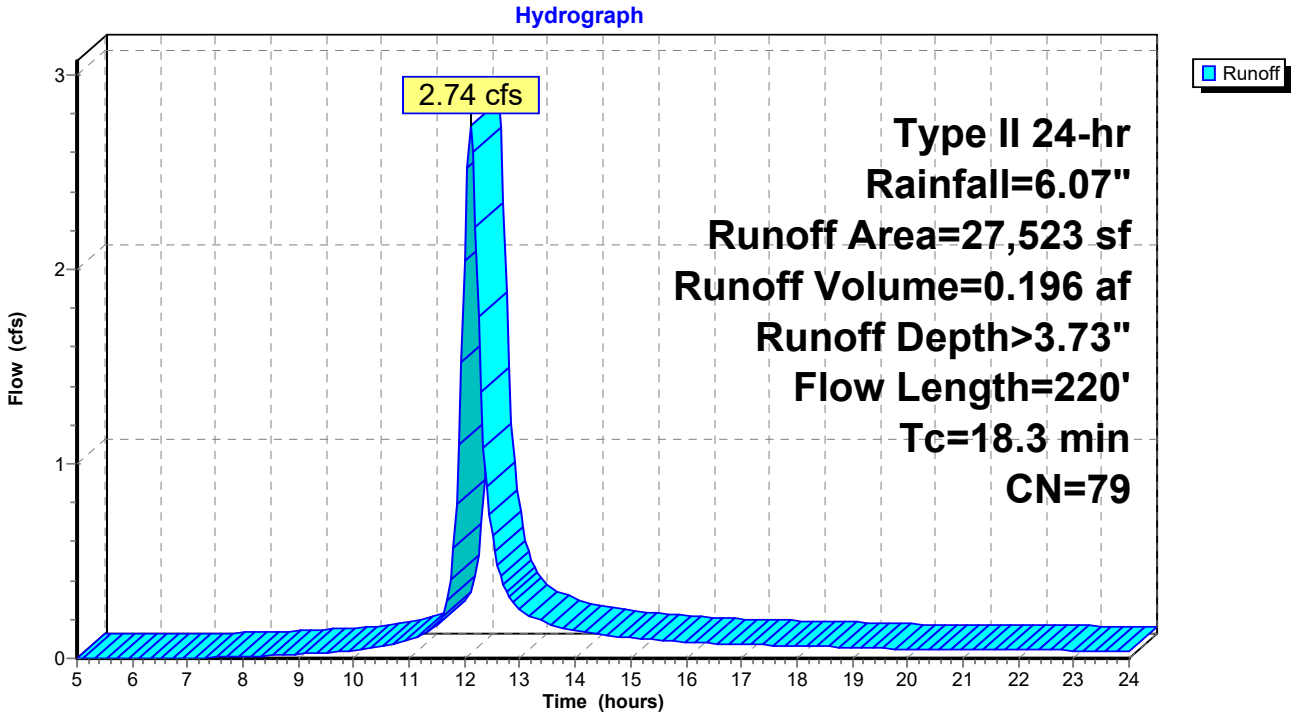
Runoff = 2.74 cfs @ 12.11 hrs, Volume= 0.196 af, Depth> 3.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=6.07"

Area (sf)	CN	Description
27,523	79	Woods/grass comb., Good, HSG D
27,523		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.8	100	0.0500	0.10		**Sheet Flow,** Grass: Bermuda n= 0.410 P2= 2.60"
1.5	120	0.0700	1.32		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
18.3	220	Total			

Subcatchment P-B: PROPOSED ANALYSIS B



Summary for Subcatchment P-C: PROP ANALYSIS PT C

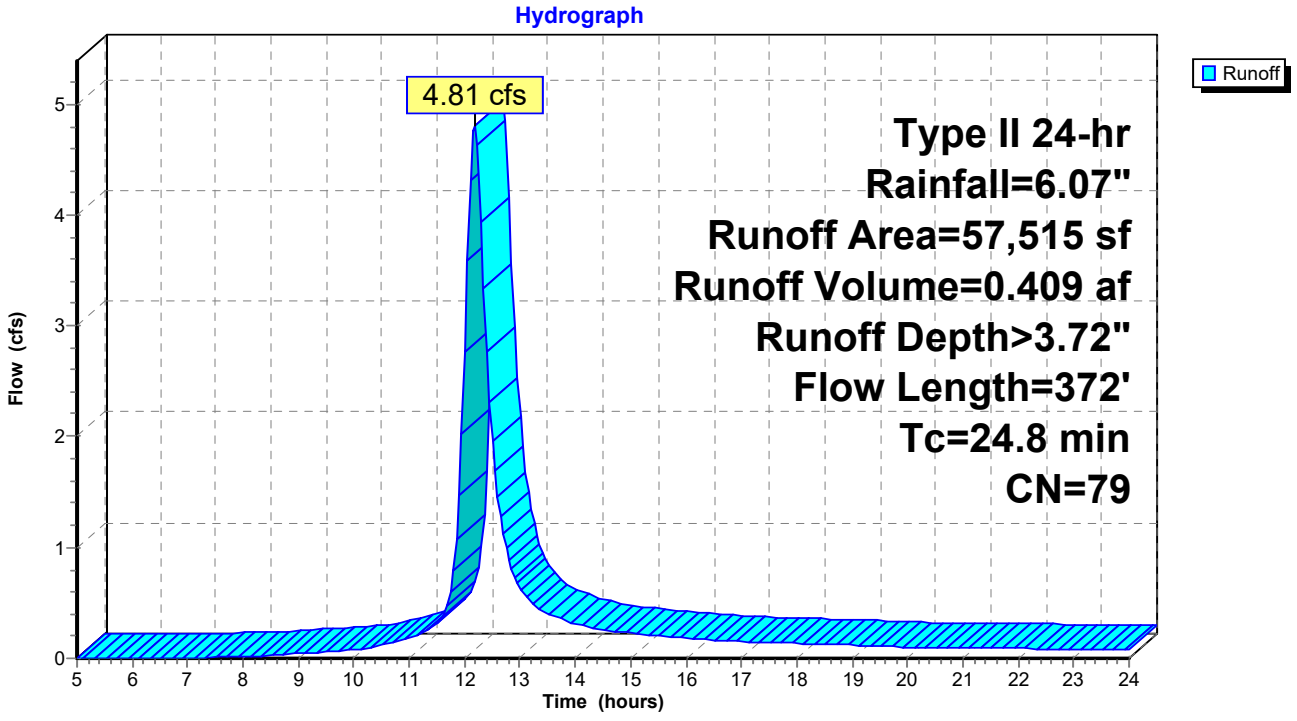
Runoff = 4.81 cfs @ 12.18 hrs, Volume= 0.409 af, Depth> 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr Rainfall=6.07"

Area (sf)	CN	Description
57,515	79	Woods, Fair, HSG D
57,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.3	100	0.0300	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.60"
4.5	272	0.0400	1.00		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
24.8	372	Total			

Subcatchment P-C: PROP ANALYSIS PT C



Summary for Reach EX Storm: Ex Storm Sewer

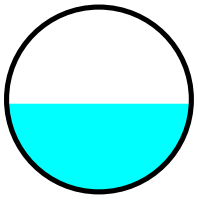
[52] Hint: Inlet/Outlet conditions not evaluated
[65] Warning: Inlet elevation not specified
[88] Warning: Qout>Qin may require smaller dt or Finer Routing

Inflow Area = 1.267 ac, 30.00% Impervious, Inflow Depth > 4.29"
Inflow = 3.92 cfs @ 12.25 hrs, Volume= 0.453 af
Outflow = 3.97 cfs @ 12.26 hrs, Volume= 0.453 af, Atten= 0%, Lag= 0.1 min

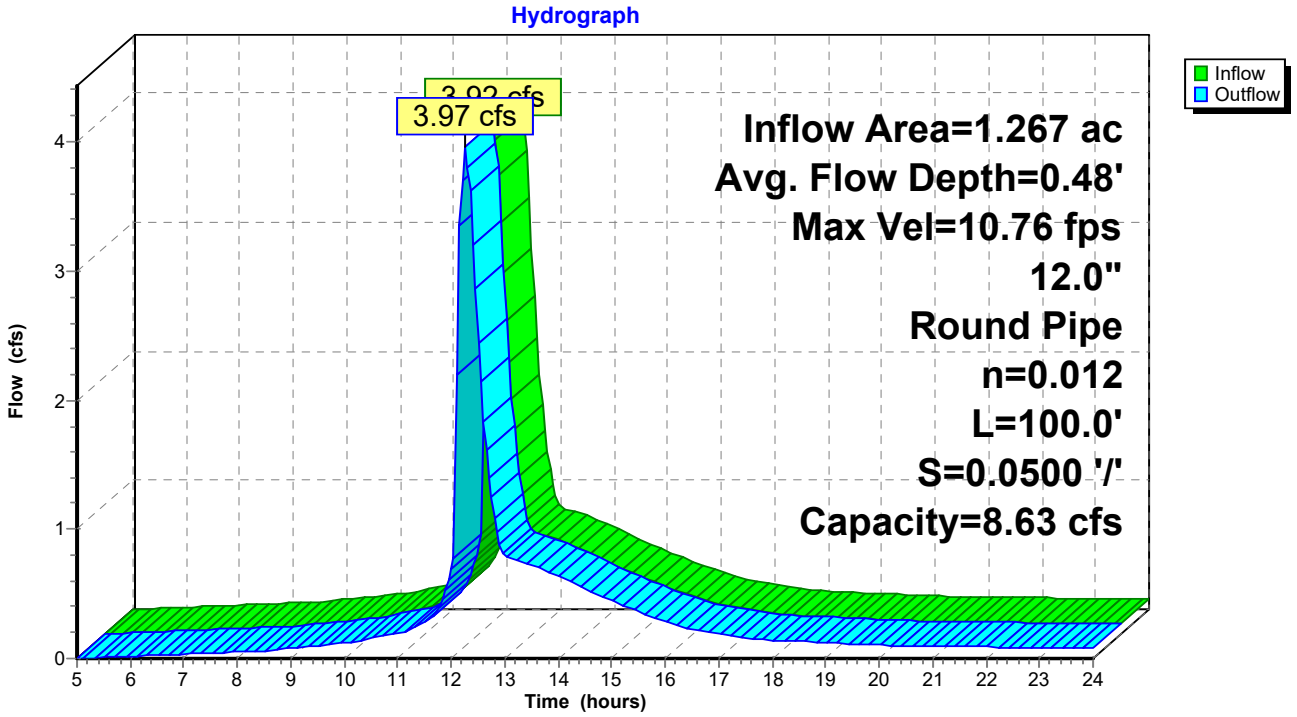
Routing by Stor-Ind+Trans method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 10.76 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 4.29 fps, Avg. Travel Time= 0.4 min

Peak Storage= 37 cf @ 12.25 hrs
Average Depth at Peak Storage= 0.48' , Surface Width= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.63 cfs

12.0" Round Pipe
n= 0.012
Length= 100.0' Slope= 0.0500 '/'
Inlet Invert= 0.00', Outlet Invert= -5.00'



Reach EX Storm: Ex Storm Sewer



Summary for Pond AB-1: Attenuation Basin Lot 1

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.829 ac, 18.09% Impervious, Inflow Depth > 4.06"
Inflow = 2.78 cfs @ 12.18 hrs, Volume= 0.280 af
Outflow = 2.69 cfs @ 12.23 hrs, Volume= 0.278 af, Atten= 3%, Lag= 3.1 min
Primary = 0.50 cfs @ 12.23 hrs, Volume= 0.206 af
Routed to Reach EX Storm : Ex Storm Sewer
Secondary = 2.20 cfs @ 12.23 hrs, Volume= 0.073 af
Routed to Reach EX Storm : Ex Storm Sewer

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 377.99' @ 12.23 hrs Surf.Area= 2,759 sf Storage= 2,167 cf

Plug-Flow detention time= 31.9 min calculated for 0.278 af (99% of inflow)
Center-of-Mass det. time= 27.8 min (841.2 - 813.4)

Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	7,300 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 18,250 cf Overall x 40.0% Voids

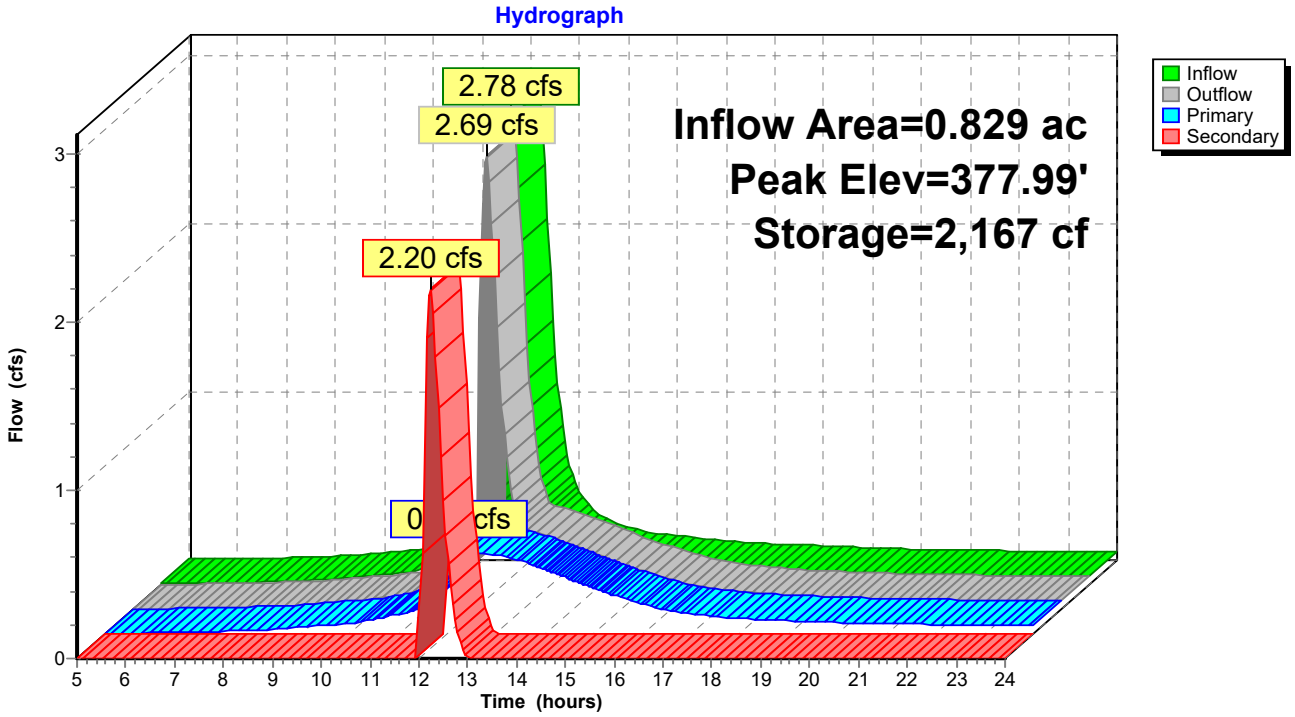
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
373.00	1,000	0	0
374.00	1,000	1,000	1,000
375.00	1,000	1,000	2,000
376.00	1,000	1,000	3,000
377.00	1,000	1,000	4,000
377.50	1,000	500	4,500
380.00	10,000	13,750	18,250

Device	Routing	Invert	Outlet Devices
#1	Primary	373.00'	**3.5" Round Culvert** L= 30.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 373.00' / 372.85' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.07 sf
#2	Secondary	377.50'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.50 cfs @ 12.23 hrs HW=377.99' (Free Discharge)
1=Culvert (Barrel Controls 0.50 cfs @ 7.43 fps)

Secondary OutFlow Max=2.17 cfs @ 12.23 hrs HW=377.99' (Free Discharge)
2=Orifice/Grate (Orifice Controls 2.17 cfs @ 2.24 fps)

Pond AB-1: Attenuation Basin Lot 1



Summary for Pond AB-2: Attenuation Basin Lot 2

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.438 ac, 52.55% Impervious, Inflow Depth > 4.82"
Inflow = 1.57 cfs @ 12.00 hrs, Volume= 0.176 af
Outflow = 1.29 cfs @ 12.31 hrs, Volume= 0.175 af, Atten= 18%, Lag= 18.8 min
Primary = 0.33 cfs @ 12.31 hrs, Volume= 0.137 af
Routed to Reach EX Storm : Ex Storm Sewer
Secondary = 0.96 cfs @ 12.31 hrs, Volume= 0.037 af
Routed to Reach EX Storm : Ex Storm Sewer

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 375.78' @ 12.31 hrs Surf.Area= 5,944 sf Storage= 1,726 cf

Plug-Flow detention time= 37.0 min calculated for 0.174 af (99% of inflow)
Center-of-Mass det. time= 33.0 min (827.0 - 793.9)

Volume	Invert	Avail.Storage	Storage Description
#1	371.00'	2,425 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 6,063 cf Overall x 40.0% Voids

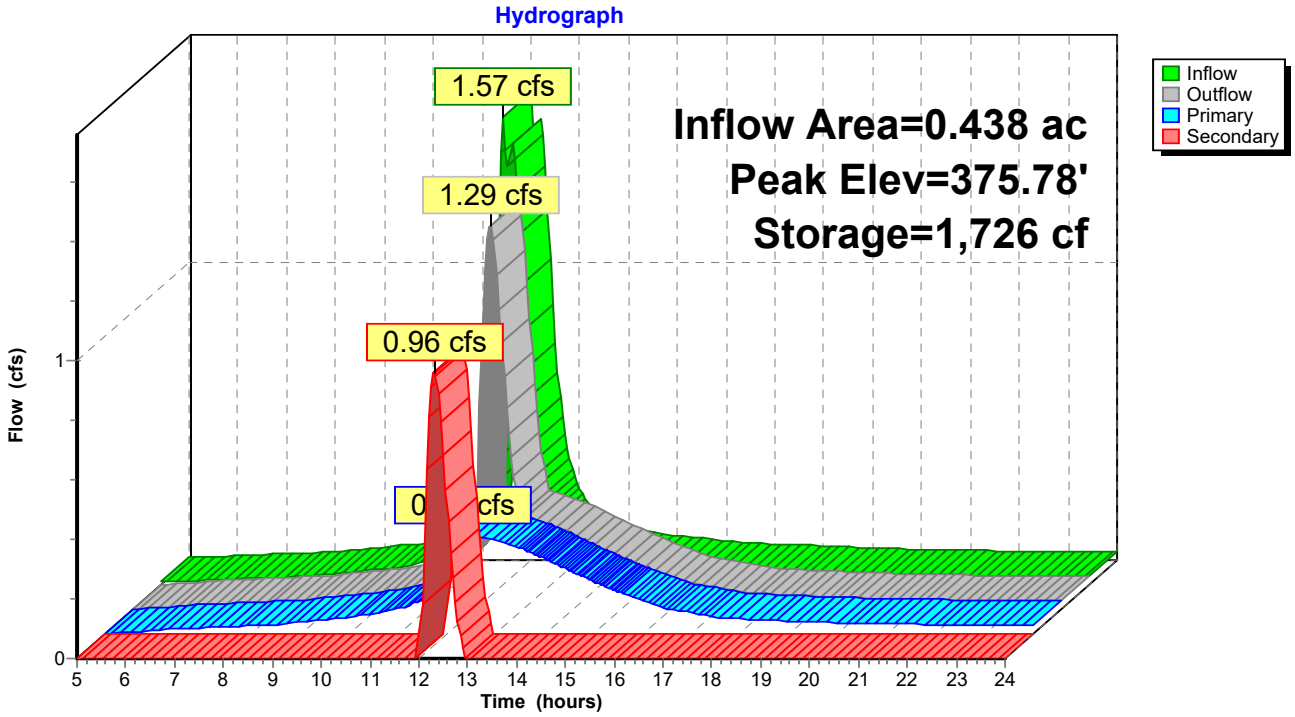
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
371.00	750	0	0
372.00	750	750	750
373.00	750	750	1,500
374.00	750	750	2,250
375.00	750	750	3,000
375.50	750	375	3,375
376.00	10,000	2,688	6,063

Device	Routing	Invert	Outlet Devices
#1	Primary	371.00'	**3.0" Round Culvert** L= 30.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 371.00' / 370.85' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.05 sf
#2	Secondary	375.50'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.33 cfs @ 12.31 hrs HW=375.78' (Free Discharge)
1=Culvert (Barrel Controls 0.33 cfs @ 6.66 fps)

Secondary OutFlow Max=0.95 cfs @ 12.31 hrs HW=375.78' (Free Discharge)
2=Orifice/Grate (Orifice Controls 0.95 cfs @ 1.70 fps)

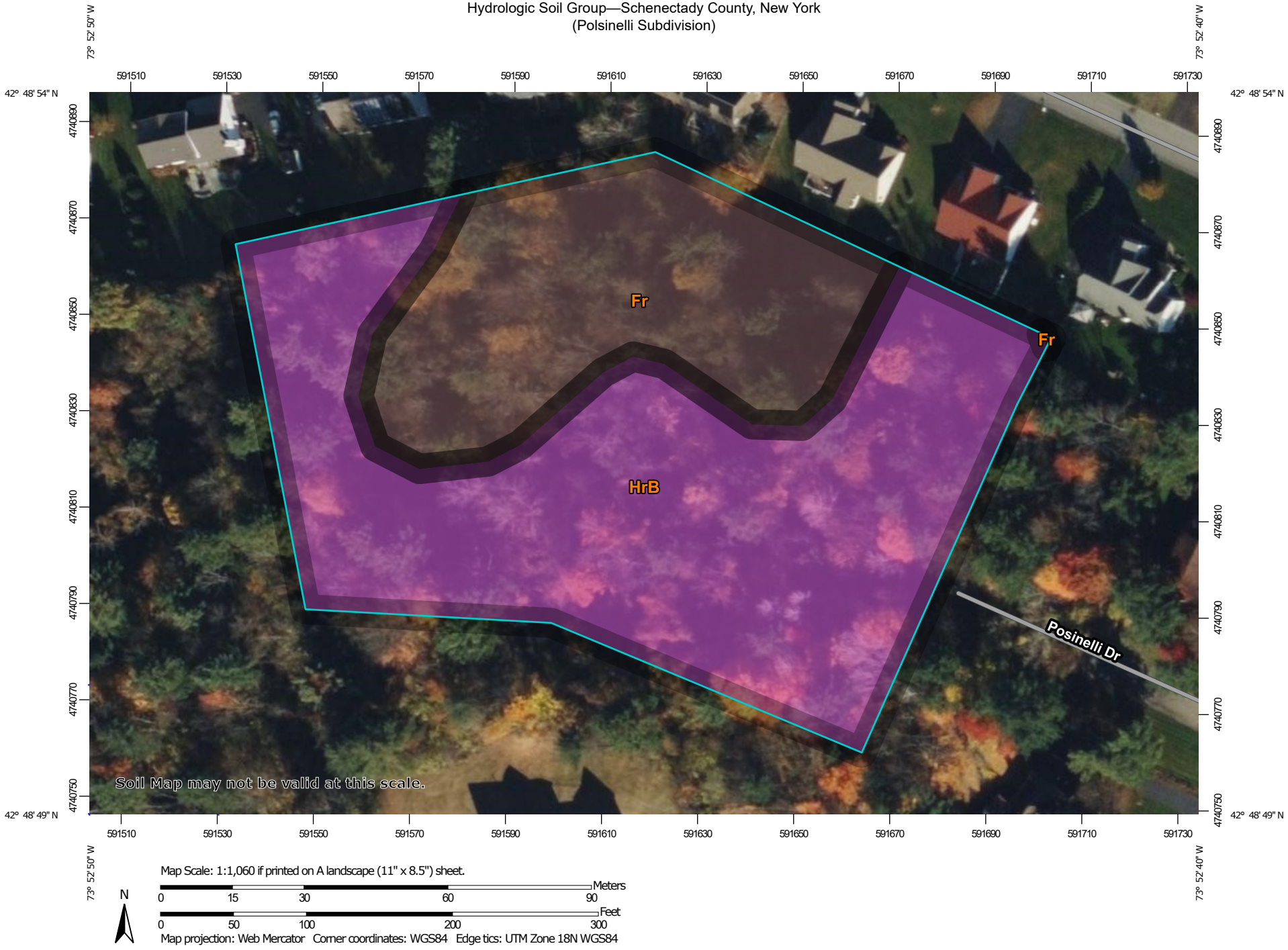
Pond AB-2: Attenuation Basin Lot 2



Appendix B

Soils Report

Hydrologic Soil Group—Schenectady County, New York
(Polsinelli Subdivision)



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Soil Rating Lines

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Soil Rating Points

A
A/D
B
B/D
C
C/D
D
Not rated or not available

Water Features

Streams and Canals

Transportation

Rails
Interstate Highways
US Routes
Major Roads
Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

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

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

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

Soil Survey Area: Schenectady County, New York
Survey Area Data: Version 21, Sep 10, 2022

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

Date(s) aerial images were photographed: Aug 15, 2021—Nov 8, 2021

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

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
Fr	Fredon silt loam	B/D	1.1	33.6%
HrB	Howard gravelly silt loam, 3 to 8 percent slopes	A	2.3	66.4%
Totals for Area of Interest			**3.4**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Appendix C

Attenuation Basin Stage Storage Tables

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	AB-1	373.00	372.85	30.0	0.0050	0.012	0.0	3.5	0.0

Summary for Pond AB-1: Attenuation Basin Lot 1

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.829 ac, 18.09% Impervious, Inflow Depth > 1.95"
Inflow = 1.28 cfs @ 12.19 hrs, Volume= 0.135 af
Outflow = 0.47 cfs @ 12.58 hrs, Volume= 0.133 af, Atten= 63%, Lag= 23.6 min
Primary = 0.47 cfs @ 12.58 hrs, Volume= 0.133 af
Routed to Reach EX Storm : Ex Storm Sewer
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach EX Storm : Ex Storm Sewer

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 377.49' @ 12.58 hrs Surf.Area= 1,000 sf Storage= 1,798 cf

Plug-Flow detention time= 42.7 min calculated for 0.133 af (99% of inflow)
Center-of-Mass det. time= 36.8 min (865.3 - 828.4)

Volume	Invert	Avail.Storage	Storage Description
#1	373.00'	7,300 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 18,250 cf Overall x 40.0% Voids

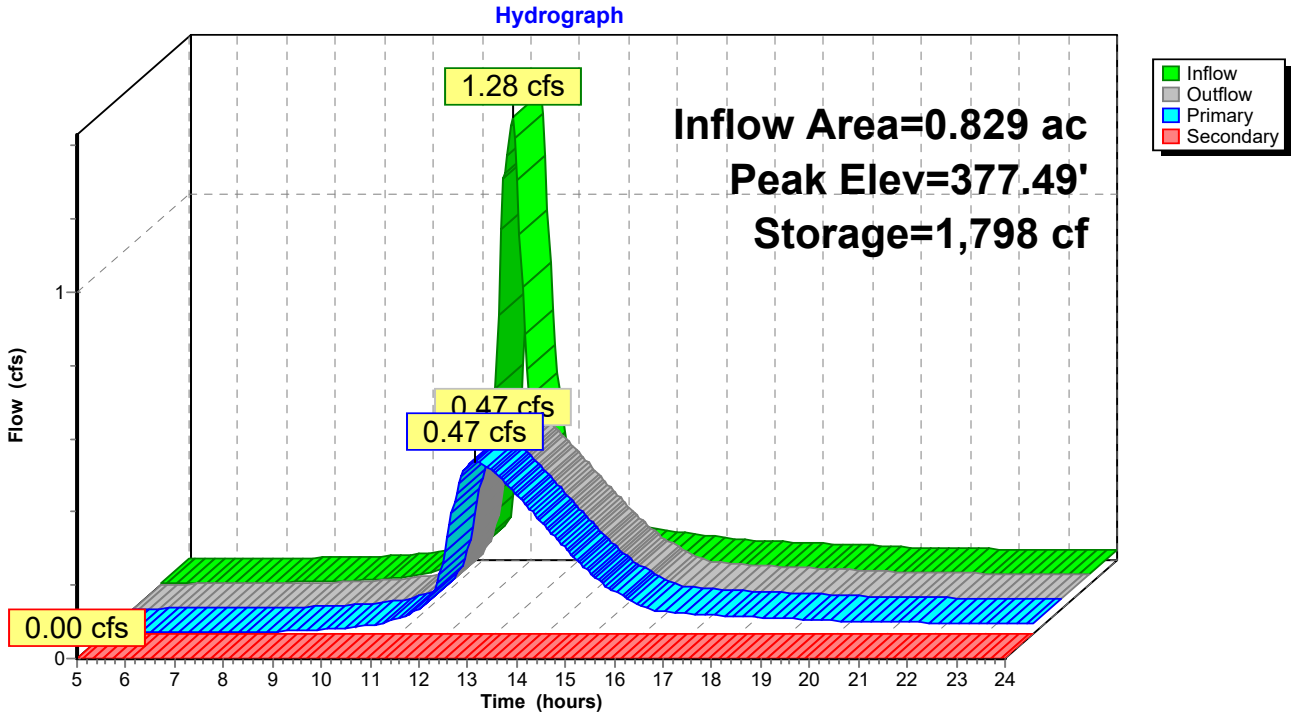
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
373.00	1,000	0	0
374.00	1,000	1,000	1,000
375.00	1,000	1,000	2,000
376.00	1,000	1,000	3,000
377.00	1,000	1,000	4,000
377.50	1,000	500	4,500
380.00	10,000	13,750	18,250

Device	Routing	Invert	Outlet Devices
#1	Primary	373.00'	**3.5" Round Culvert** L= 30.0' CMP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 373.00' / 372.85' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.07 sf
#2	Secondary	377.50'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

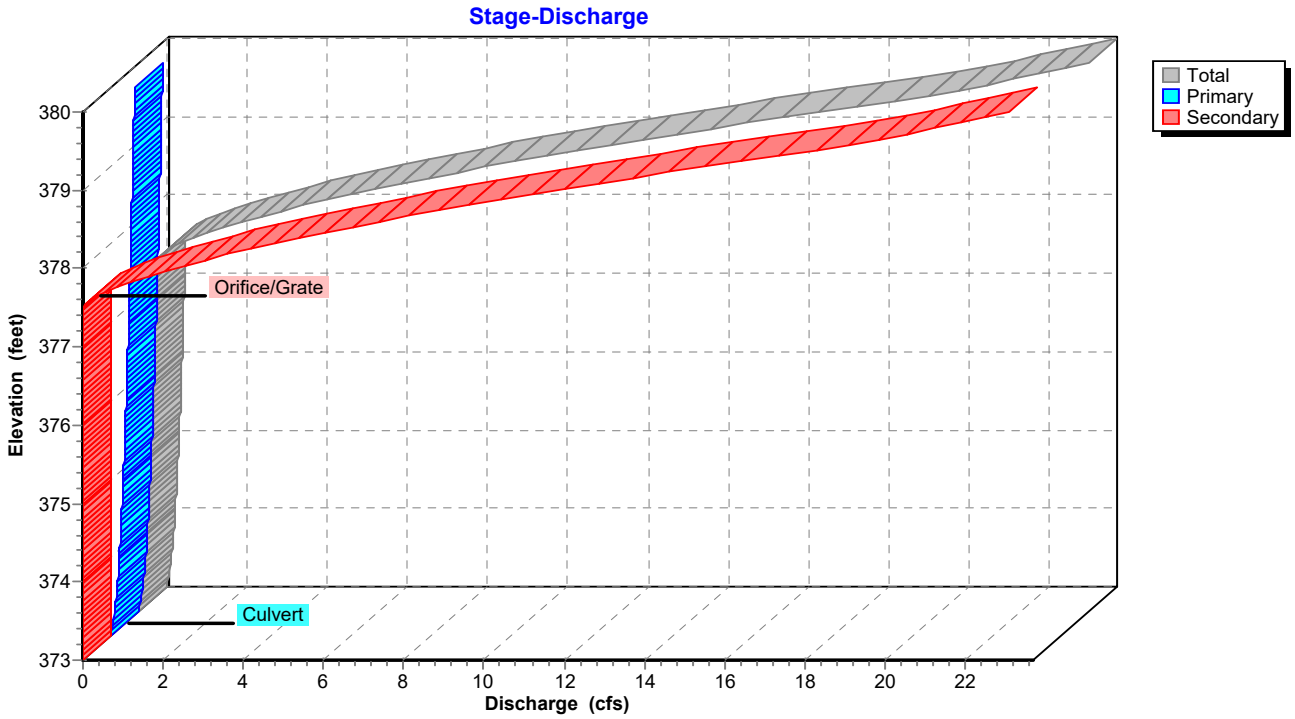
Primary OutFlow Max=0.47 cfs @ 12.58 hrs HW=377.49' (Free Discharge)
1=Culvert (Barrel Controls 0.47 cfs @ 7.04 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=373.00' (Free Discharge)
2=Orifice/Grate (Controls 0.00 cfs)

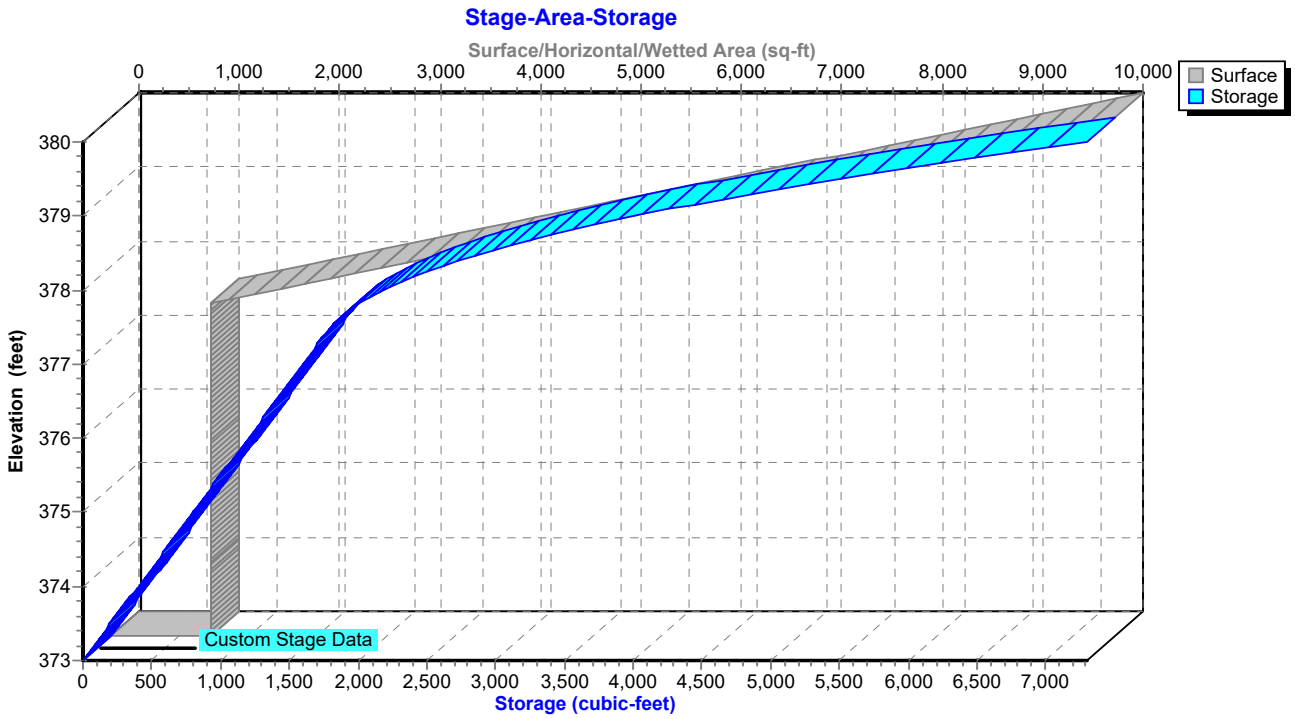
Pond AB-1: Attenuation Basin Lot 1



Pond AB-1: Attenuation Basin Lot 1



Pond AB-1: Attenuation Basin Lot 1



Hydrograph for Pond AB-1: Attenuation Basin Lot 1

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0	373.00	0.00	0.00	**0.00**
5.50	0.01	7	373.02	0.00	0.00	0.00
6.00	0.01	12	373.03	0.00	0.00	0.00
6.50	0.01	16	373.04	0.00	0.00	0.00
7.00	0.01	19	373.05	0.00	0.00	0.00
7.50	0.01	22	373.06	0.01	0.01	0.00
8.00	0.01	25	373.06	0.01	0.01	0.00
8.50	0.01	28	373.07	0.01	0.01	0.00
9.00	0.01	31	373.08	0.01	0.01	0.00
9.50	0.01	35	373.09	0.01	0.01	0.00
10.00	0.02	41	373.10	0.02	0.02	0.00
10.50	0.03	53	373.13	0.03	0.03	0.00
11.00	0.05	70	373.17	0.04	0.04	0.00
11.50	0.10	100	373.25	0.08	0.08	0.00
12.00	**1.11**	607	374.52	0.26	0.26	0.00
12.50	**0.59**	**1,781**	**377.45**	**0.47**	**0.47**	0.00
13.00	0.21	**1,568**	**376.92**	**0.44**	**0.44**	0.00
13.50	0.13	1,134	375.83	0.37	0.37	0.00
14.00	0.10	747	374.87	0.30	0.30	0.00
14.50	0.09	450	374.12	0.22	0.22	0.00
15.00	0.08	255	373.64	0.16	0.16	0.00
15.50	0.07	149	373.37	0.12	0.12	0.00
16.00	0.06	99	373.25	0.07	0.07	0.00
16.50	0.06	86	373.22	0.06	0.06	0.00
17.00	0.05	81	373.20	0.05	0.05	0.00
17.50	0.05	78	373.20	0.05	0.05	0.00
18.00	0.05	75	373.19	0.05	0.05	0.00
18.50	0.04	72	373.18	0.05	0.05	0.00
19.00	0.04	70	373.17	0.04	0.04	0.00
19.50	0.04	67	373.17	0.04	0.04	0.00
20.00	0.03	64	373.16	0.04	0.04	0.00
20.50	0.03	61	373.15	0.03	0.03	0.00
21.00	0.03	60	373.15	0.03	0.03	0.00
21.50	0.03	59	373.15	0.03	0.03	0.00
22.00	0.03	59	373.15	0.03	0.03	0.00
22.50	0.03	58	373.15	0.03	0.03	0.00
23.00	0.03	58	373.14	0.03	0.03	0.00
23.50	0.03	57	373.14	0.03	0.03	0.00
24.00	0.03	57	373.14	0.03	0.03	0.00

Stage-Discharge for Pond AB-1: Attenuation Basin Lot 1

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
373.00	0.00	0.00	0.00
373.10	0.01	0.01	0.00
373.20	0.05	0.05	0.00
373.30	0.10	0.10	0.00
373.40	0.11	0.11	0.00
373.50	0.14	0.14	0.00
373.60	0.15	0.15	0.00
373.70	0.17	0.17	0.00
373.80	0.18	0.18	0.00
373.90	0.20	0.20	0.00
374.00	0.21	0.21	0.00
374.10	0.22	0.22	0.00
374.20	0.23	0.23	0.00
374.30	0.24	0.24	0.00
374.40	0.25	0.25	0.00
374.50	0.26	0.26	0.00
374.60	0.27	0.27	0.00
374.70	0.28	0.28	0.00
374.80	0.29	0.29	0.00
374.90	0.30	0.30	0.00
375.00	0.31	0.31	0.00
375.10	0.32	0.32	0.00
375.20	0.32	0.32	0.00
375.30	0.33	0.33	0.00
375.40	0.34	0.34	0.00
375.50	0.35	0.35	0.00
375.60	0.35	0.35	0.00
375.70	0.36	0.36	0.00
375.80	0.37	0.37	0.00
375.90	0.37	0.37	0.00
376.00	0.38	0.38	0.00
376.10	0.39	0.39	0.00
376.20	0.39	0.39	0.00
376.30	0.40	0.40	0.00
376.40	0.41	0.41	0.00
376.50	0.41	0.41	0.00
376.60	0.42	0.42	0.00
376.70	0.43	0.43	0.00
376.80	0.43	0.43	0.00
376.90	0.44	0.44	0.00
377.00	0.44	0.44	0.00
377.10	0.45	0.45	0.00
377.20	0.45	0.45	0.00
377.30	0.46	0.46	0.00
377.40	0.47	0.47	0.00
377.50	0.47	0.47	0.00
377.60	0.68	0.48	0.20
377.70	1.06	0.48	0.57
377.80	1.54	0.49	1.05
377.90	2.12	0.49	1.62
378.00	2.77	0.50	2.27
378.10	3.49	0.50	2.98
378.20	4.27	0.51	3.76
378.30	5.11	0.51	4.59
378.40	6.00	0.52	5.48
378.50	6.94	0.52	6.42
378.60	7.93	0.53	7.41
378.70	8.97	0.53	8.44
378.80	10.05	0.54	9.52
378.90	11.18	0.54	10.63
379.00	12.34	0.55	11.79
379.10	13.54	0.55	12.99
379.20	14.79	0.56	14.23
379.30	16.06	0.56	15.50
379.40	17.38	0.56	16.81
379.50	18.73	0.57	18.16
379.60	19.91	0.57	19.33
379.70	20.95	0.58	20.37
379.80	21.92	0.58	21.34
379.90	22.83	0.59	22.25
380.00	**23.70**	**0.59**	**23.11**

Stage-Area-Storage for Pond AB-1: Attenuation Basin Lot 1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
373.00	1,000	0
373.10	1,000	40
373.20	1,000	80
373.30	1,000	120
373.40	1,000	160
373.50	1,000	200
373.60	1,000	240
373.70	1,000	280
373.80	1,000	320
373.90	1,000	360
374.00	1,000	400
374.10	1,000	440
374.20	1,000	480
374.30	1,000	520
374.40	1,000	560
374.50	1,000	600
374.60	1,000	640
374.70	1,000	680
374.80	1,000	720
374.90	1,000	760
375.00	1,000	800
375.10	1,000	840
375.20	1,000	880
375.30	1,000	920
375.40	1,000	960
375.50	1,000	1,000
375.60	1,000	1,040
375.70	1,000	1,080
375.80	1,000	1,120
375.90	1,000	1,160
376.00	1,000	1,200
376.10	1,000	1,240
376.20	1,000	1,280
376.30	1,000	1,320
376.40	1,000	1,360
376.50	1,000	1,400
376.60	1,000	1,440
376.70	1,000	1,480
376.80	1,000	1,520
376.90	1,000	1,560
377.00	1,000	1,600
377.10	1,000	1,640
377.20	1,000	1,680
377.30	1,000	1,720
377.40	1,000	1,760
377.50	1,000	1,800
377.60	1,360	1,847
377.70	1,720	1,909
377.80	2,080	1,985
377.90	2,440	2,075
378.00	2,800	2,180
378.10	3,160	2,299
378.20	3,520	2,433
378.30	3,880	2,581
378.40	4,240	2,743
378.50	4,600	2,920
378.60	4,960	3,111
378.70	5,320	3,317
378.80	5,680	3,537
378.90	6,040	3,771
379.00	6,400	4,020
379.10	6,760	4,283
379.20	7,120	4,561
379.30	7,480	4,853
379.40	7,840	5,159
379.50	8,200	5,480
379.60	8,560	5,815
379.70	8,920	6,165
379.80	9,280	6,529
379.90	9,640	6,907
380.00	**10,000**	**7,300**

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	AB-2	371.00	370.85	30.0	0.0050	0.012	0.0	3.0	0.0

Summary for Pond AB-2: Attenuation Basin Lot 2

[82] Warning: Early inflow requires earlier time span

Inflow Area = 0.438 ac, 50.79% Impervious, Inflow Depth > 2.49"
Inflow = 0.84 cfs @ 11.99 hrs, Volume= 0.091 af
Outflow = 0.30 cfs @ 12.58 hrs, Volume= 0.090 af, Atten= 64%, Lag= 35.3 min
Primary = 0.30 cfs @ 12.58 hrs, Volume= 0.090 af
Routed to Reach EX Storm : Ex Storm Sewer
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach EX Storm : Ex Storm Sewer

Routing by Stor-Ind method, Time Span= 5.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 375.11' @ 12.58 hrs Surf.Area= 750 sf Storage= 1,233 cf

Plug-Flow detention time= 44.6 min calculated for 0.090 af (99% of inflow)
Center-of-Mass det. time= 39.2 min (847.1 - 807.9)

Volume	Invert	Avail.Storage	Storage Description
#1	371.00'	2,425 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc) 6,063 cf Overall x 40.0% Voids

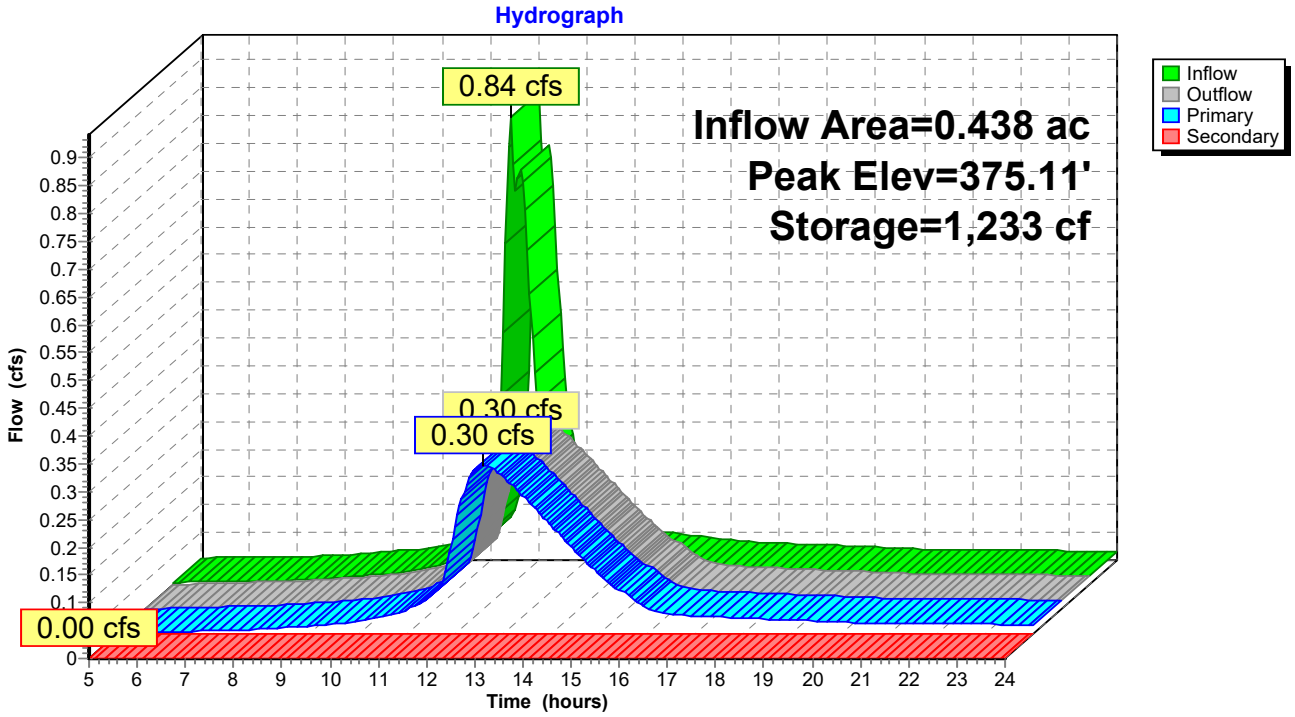
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
371.00	750	0	0
372.00	750	750	750
373.00	750	750	1,500
374.00	750	750	2,250
375.00	750	750	3,000
375.50	750	375	3,375
376.00	10,000	2,688	6,063

Device	Routing	Invert	Outlet Devices
#1	Primary	371.00'	**3.0" Round Culvert** L= 30.0' CMP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 371.00' / 370.85' S= 0.0050 '/' Cc= 0.900 n= 0.012, Flow Area= 0.05 sf
#2	Secondary	375.50'	**24.0" W x 24.0" H Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

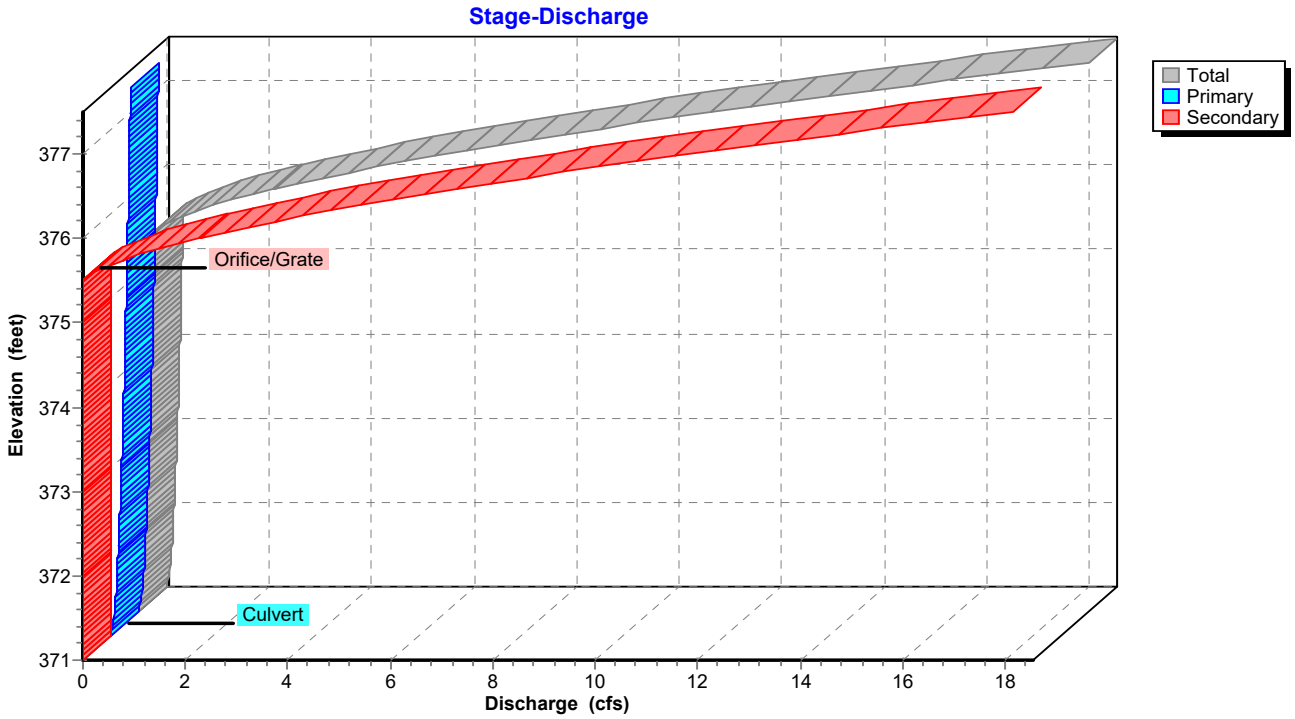
Primary OutFlow Max=0.30 cfs @ 12.58 hrs HW=375.11' (Free Discharge)
1=Culvert (Barrel Controls 0.30 cfs @ 6.16 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=371.00' (Free Discharge)
2=Orifice/Grate (Controls 0.00 cfs)

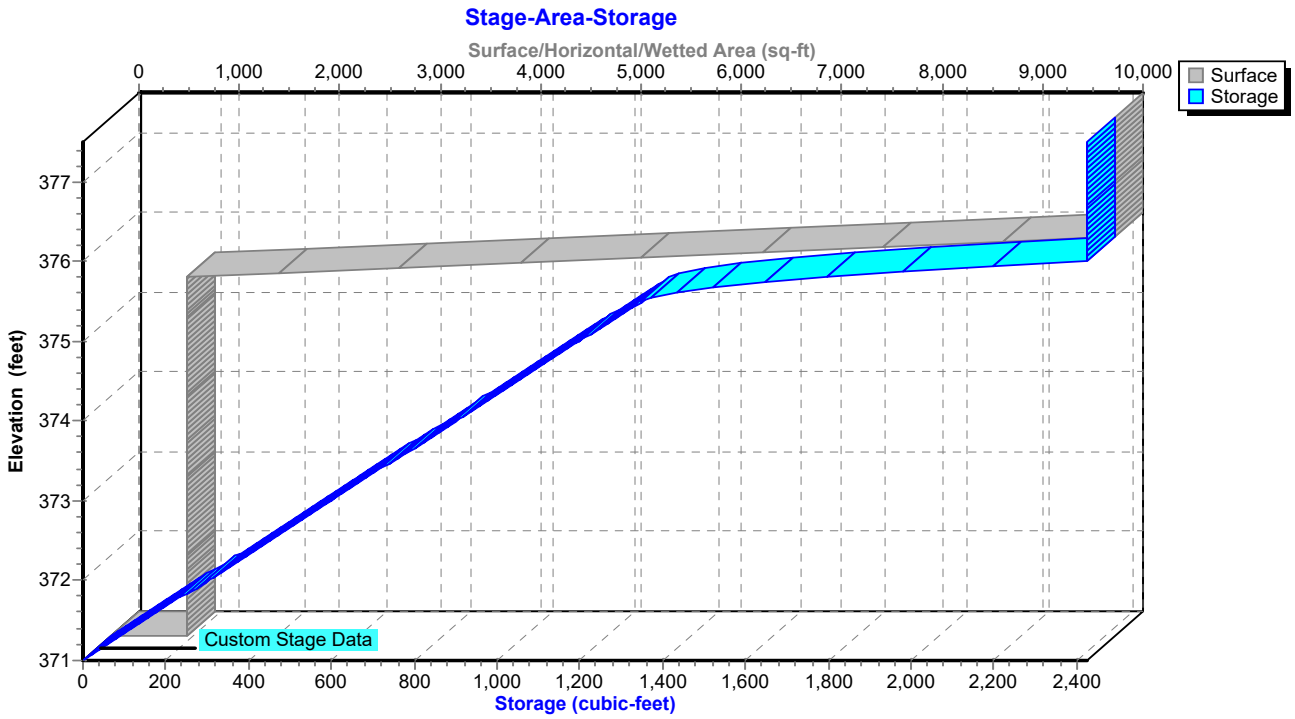
Pond AB-2: Attenuation Basin Lot 2



Pond AB-2: Attenuation Basin Lot 2



Pond AB-2: Attenuation Basin Lot 2



Hydrograph for Pond AB-2: Attenuation Basin Lot 2

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)
5.00	0.00	0	371.00	0.00	0.00	**0.00**
5.50	0.01	7	371.02	0.00	0.00	0.00
6.00	0.01	12	371.04	0.00	0.00	0.00
6.50	0.01	15	371.05	0.00	0.00	0.00
7.00	0.01	18	371.06	0.01	0.01	0.00
7.50	0.01	21	371.07	0.01	0.01	0.00
8.00	0.01	23	371.08	0.01	0.01	0.00
8.50	0.01	26	371.09	0.01	0.01	0.00
9.00	0.02	30	371.10	0.01	0.01	0.00
9.50	0.02	35	371.12	0.02	0.02	0.00
10.00	0.03	40	371.13	0.02	0.02	0.00
10.50	0.04	47	371.16	0.03	0.03	0.00
11.00	0.05	59	371.20	0.04	0.04	0.00
11.50	0.09	82	371.27	0.07	0.07	0.00
12.00	**0.84**	520	372.73	0.19	0.19	0.00
12.50	0.38	**1,222**	**375.07**	**0.30**	**0.30**	0.00
13.00	0.13	**1,083**	**374.61**	**0.28**	**0.28**	0.00
13.50	0.08	793	373.64	0.24	0.24	0.00
14.00	0.06	530	372.77	0.20	0.20	0.00
14.50	0.05	323	372.08	0.15	0.15	0.00
15.00	0.05	181	371.60	0.11	0.11	0.00
15.50	0.04	99	371.33	0.08	0.08	0.00
16.00	0.04	61	371.20	0.05	0.05	0.00
16.50	0.03	52	371.17	0.04	0.04	0.00
17.00	0.03	49	371.16	0.03	0.03	0.00
17.50	0.03	47	371.16	0.03	0.03	0.00
18.00	0.03	45	371.15	0.03	0.03	0.00
18.50	0.03	44	371.15	0.03	0.03	0.00
19.00	0.02	42	371.14	0.02	0.02	0.00
19.50	0.02	41	371.14	0.02	0.02	0.00
20.00	0.02	39	371.13	0.02	0.02	0.00
20.50	0.02	37	371.12	0.02	0.02	0.00
21.00	0.02	36	371.12	0.02	0.02	0.00
21.50	0.02	36	371.12	0.02	0.02	0.00
22.00	0.02	35	371.12	0.02	0.02	0.00
22.50	0.02	35	371.12	0.02	0.02	0.00
23.00	0.02	34	371.11	0.02	0.02	0.00
23.50	0.02	34	371.11	0.02	0.02	0.00
24.00	0.02	33	371.11	0.02	0.02	0.00

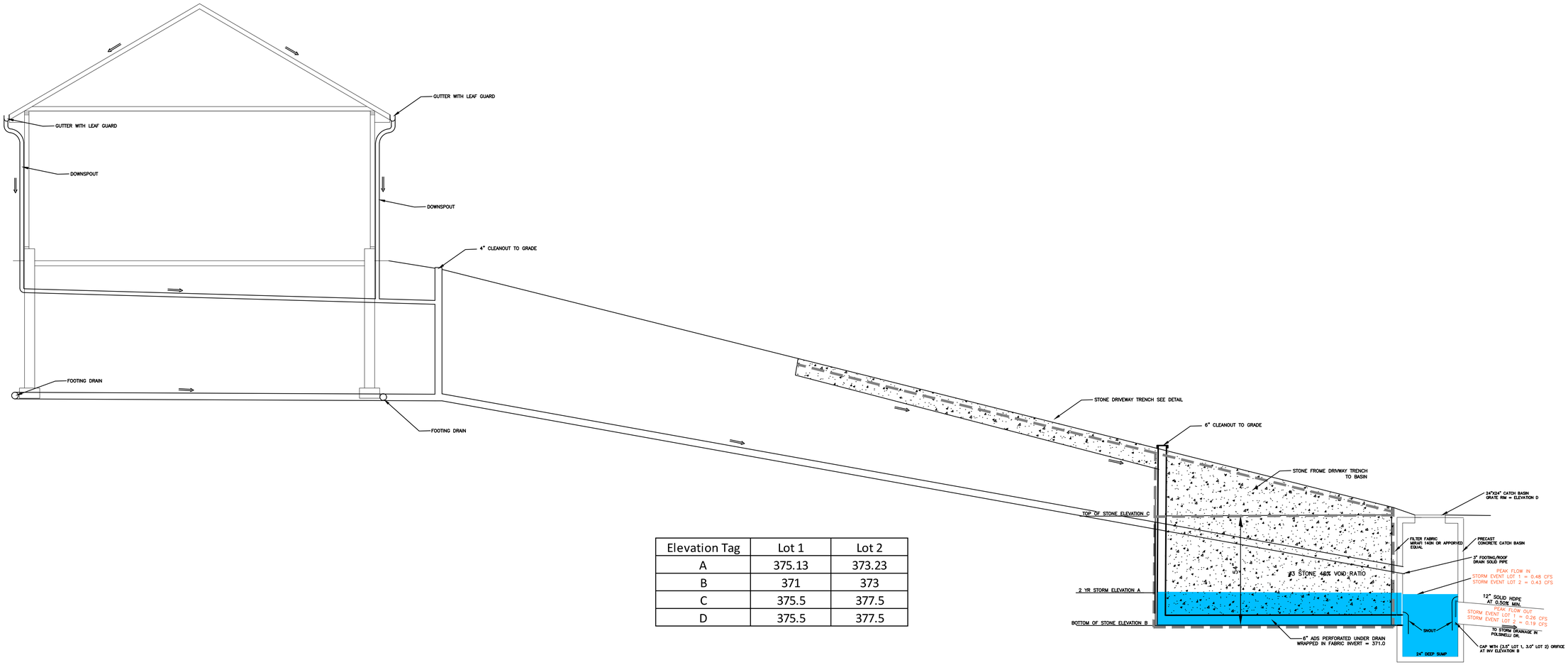
Stage-Discharge for Pond AB-2: Attenuation Basin Lot 2

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
371.00	0.00	0.00	0.00
371.10	0.01	0.01	0.00
371.20	0.04	0.04	0.00
371.30	0.07	0.07	0.00
371.40	0.08	0.08	0.00
371.50	0.10	0.10	0.00
371.60	0.11	0.11	0.00
371.70	0.12	0.12	0.00
371.80	0.13	0.13	0.00
371.90	0.14	0.14	0.00
372.00	0.14	0.14	0.00
372.10	0.15	0.15	0.00
372.20	0.16	0.16	0.00
372.30	0.17	0.17	0.00
372.40	0.17	0.17	0.00
372.50	0.18	0.18	0.00
372.60	0.19	0.19	0.00
372.70	0.19	0.19	0.00
372.80	0.20	0.20	0.00
372.90	0.20	0.20	0.00
373.00	0.21	0.21	0.00
373.10	0.21	0.21	0.00
373.20	0.22	0.22	0.00
373.30	0.22	0.22	0.00
373.40	0.23	0.23	0.00
373.50	0.23	0.23	0.00
373.60	0.24	0.24	0.00
373.70	0.24	0.24	0.00
373.80	0.25	0.25	0.00
373.90	0.25	0.25	0.00
374.00	0.26	0.26	0.00
374.10	0.26	0.26	0.00
374.20	0.27	0.27	0.00
374.30	0.27	0.27	0.00
374.40	0.27	0.27	0.00
374.50	0.28	0.28	0.00
374.60	0.28	0.28	0.00
374.70	0.29	0.29	0.00
374.80	0.29	0.29	0.00
374.90	0.29	0.29	0.00
375.00	0.30	0.30	0.00
375.10	0.30	0.30	0.00
375.20	0.31	0.31	0.00
375.30	0.31	0.31	0.00
375.40	0.31	0.31	0.00
375.50	0.32	0.32	0.00
375.60	0.52	0.32	0.20
375.70	0.90	0.32	0.57
375.80	1.38	0.33	1.05
375.90	1.96	0.33	1.62
376.00	2.60	0.33	2.27
376.10	3.32	0.34	2.98
376.20	4.10	0.34	3.76
376.30	4.94	0.34	4.59
376.40	5.83	0.35	5.48
376.50	6.77	0.35	6.42
376.60	7.76	0.35	7.41
376.70	8.80	0.36	8.44
376.80	9.88	0.36	9.52
376.90	11.00	0.36	10.63
377.00	12.16	0.37	11.79
377.10	13.36	0.37	12.99
377.20	14.60	0.37	14.23
377.30	15.88	0.38	15.50
377.40	17.19	0.38	16.81
377.50	**18.54**	**0.38**	**18.16**

Stage-Area-Storage for Pond AB-2: Attenuation Basin Lot 2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
371.00	750	0
371.10	750	30
371.20	750	60
371.30	750	90
371.40	750	120
371.50	750	150
371.60	750	180
371.70	750	210
371.80	750	240
371.90	750	270
372.00	750	300
372.10	750	330
372.20	750	360
372.30	750	390
372.40	750	420
372.50	750	450
372.60	750	480
372.70	750	510
372.80	750	540
372.90	750	570
373.00	750	600
373.10	750	630
373.20	750	660
373.30	750	690
373.40	750	720
373.50	750	750
373.60	750	780
373.70	750	810
373.80	750	840
373.90	750	870
374.00	750	900
374.10	750	930
374.20	750	960
374.30	750	990
374.40	750	1,020
374.50	750	1,050
374.60	750	1,080
374.70	750	1,110
374.80	750	1,140
374.90	750	1,170
375.00	750	1,200
375.10	750	1,230
375.20	750	1,260
375.30	750	1,290
375.40	750	1,320
375.50	750	1,350
375.60	2,600	1,417
375.70	4,450	1,558
375.80	6,300	1,773
375.90	8,150	2,062
376.00	**10,000**	**2,425**
376.10	10,000	2,425
376.20	10,000	2,425
376.30	10,000	2,425
376.40	10,000	2,425
376.50	10,000	2,425
376.60	10,000	2,425
376.70	10,000	2,425
376.80	10,000	2,425
376.90	10,000	2,425
377.00	10,000	2,425
377.10	10,000	2,425
377.20	10,000	2,425
377.30	10,000	2,425
377.40	10,000	2,425
377.50	10,000	2,425

GENERAL DRAINAGE SCHEMATIC 1-YEAR STORM (2.18 INCHES)



Elevation Tag	Lot 1	Lot 2
A	375.13	373.23
B	371	373
C	375.5	377.5
D	375.5	377.5

NO.	DATE:	REVISIONS:	BY:

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Scaling off these drawings shall be done only for review and approval purposes. Contractors shall use dimensions and electronic data only for layout and construction.

STATE OF NEW YORK
BRETT L. STEENBURGH P.E.
N.Y.S. LICENSE 075459

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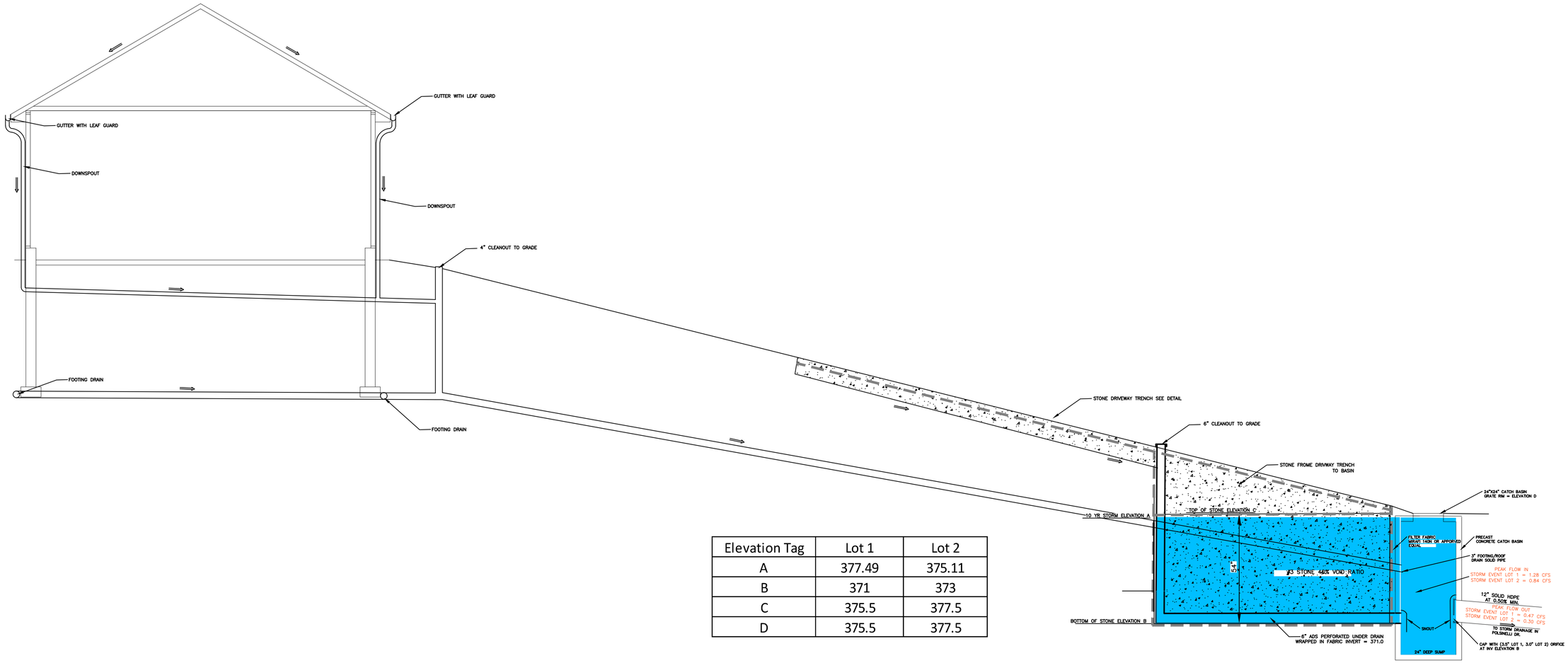
ENGINEERING THAT TRANSFORMS IMAGINATION INTO REALITY

DRAINAGE SCHEMATIC
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA STATE OF NEW YORK
COUNTY OF SCHENECTADY

DRAWN BY: BLS	CHECKED BY:	SCALE: NOT TO SCALE	SHEET SCH-1
CAD FILE:	JOB NO:		
DATE: FEBRUARY 3, 2023			

GENERAL DRAINAGE SCHEMATIC 10-YEAR STORM (3.65 INCHES)



Elevation Tag	Lot 1	Lot 2
A	377.49	375.11
B	371	373
C	375.5	377.5
D	375.5	377.5

NO.	DATE:	REVISIONS:	BY:

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ENGINEERING THAT TRANSFORMS IMAGINATION INTO REALITY

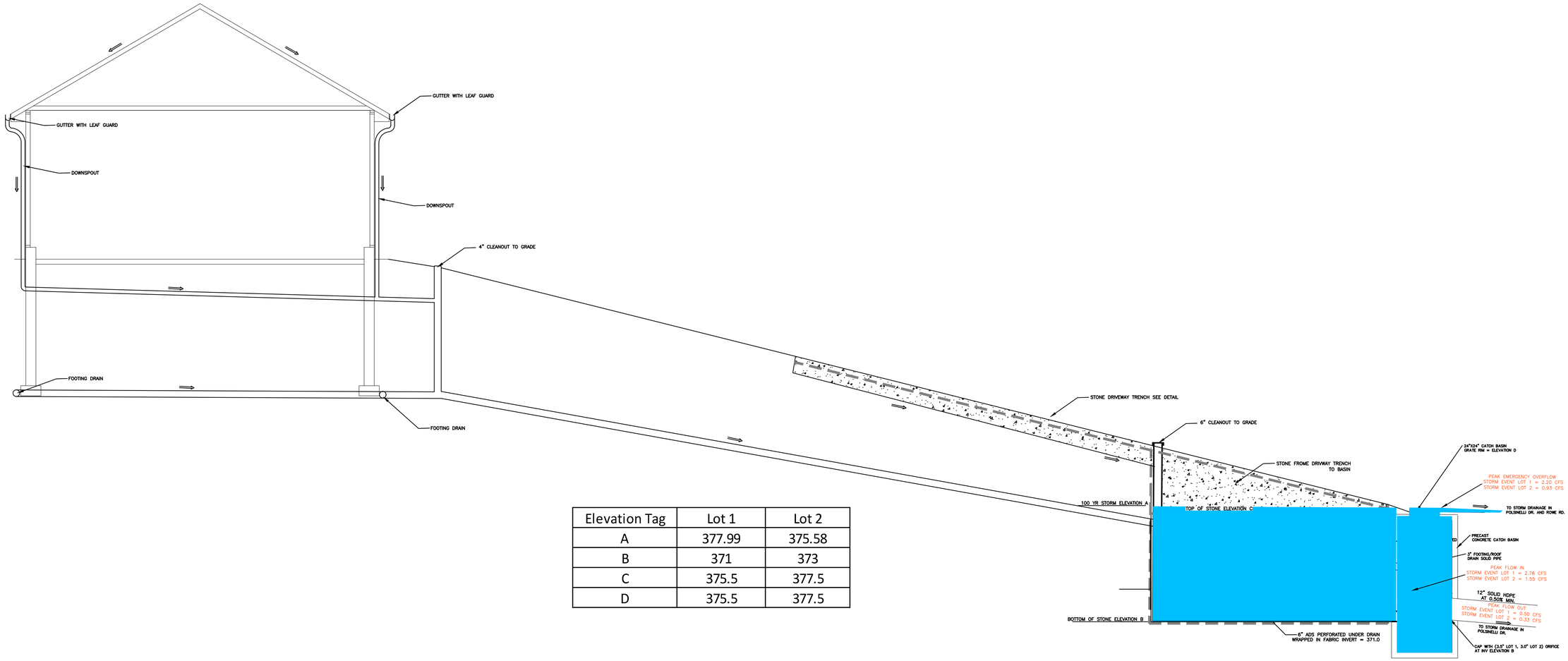
DRAINAGE SCHEMATIC
FRED POLSINELLI
POLSINELLI DRIVE
TOWN OF NISKAYUNA STATE OF NEW YORK
COUNTY OF SCHENECTADY

DRAWN BY: BLS
CHECKED BY:
JOB NO:
DATE: FEBRUARY 3, 2023

SCALE: NOT TO SCALE

SHEET SCH-1

GENERAL DRAINAGE SCHEMATIC 100-YEAR STORM (6.07 INCHES)



Elevation Tag	Lot 1	Lot 2
A	377.99	375.58
B	371	373
C	375.5	377.5
D	375.5	377.5

NO.	DATE:	REVISIONS:	BY:

Dig Safely. New York Call 811 before you dig

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DRAWN BY: BLS
CHECKED BY:
JOB NO:
DATE: FEBRUARY 3, 2023
SCALE: NOT TO SCALE
SHEET SCH-1

TOWN OF NISKAYUNA
PLANNING BOARD AND ZONING COMMISSION

AGENDA STATEMENT

AGENDA ITEM NO. VIII. 1 MEETING DATE: 6/12/2023

ITEM TITLE: DISCUSSION: 1222 Troy Schenectady Rd. – An application for site plan review for a tenant change at a lot that is partially within the Town of Colonie and partially within the Town of Niskayuna.

PROJECT LEAD: TBD

APPLICANT: Patrick Rafferty, agent for the owner (Jason Karampatsos)

SUBMITTED BY: Laura Robertson, Town Planner

REVIEWED BY:
☐ Conservation Advisory Council (CAC) ☐ Zoning Board of Appeals (ZBA) ☐ Town Board
☐ OTHER:

ATTACHMENTS:
☐ Resolution ■ Site Plan ☐ Map ☐ Report ☐ Other:

SUMMARY STATEMENT:

Patrick Rafferty, agent for the property owner Jason Karampatsos, submitted an application for site plan review for a tenant change at a lot that is proportioned as follows between Niskayuna & Colonie.

	Total (sq. ft.)	Niskayuna (sq. ft. / %)	Colonie (sq. ft. / %)
Lot area	73,749	26,982 (37%)	46,767 (63%)
Building area	17,657	1,266 (7%)	16,391 (93%)

The property is located within the C-N Neighborhood Commercial zoning district.

Mr. Rafferty's proposal is to use the site as a place of worship including a before and after school child care center that operates daily and a food pantry that operates for 2 hours per week.

BACKGROUND INFORMATION

The following documents were provided with the application.

- Floor plan drawings
  - A 3-page floor plan drawing entitled "Feasibility study for Capital Church" by C2 Architecture, PC dated 5/23/23 with no subsequent revisions.
- Data sheet
  - A 1-page data sheet was provided by the applicant that includes the square footage values for the lot, building and the portions of each that are in Niskayuna and Colonie.
- Road survey sheet

- A 1-page Road Survey sheet was provided that shows the striping of parking spaces

The Planning Office reviewed the materials submitted and noted the following.

SUMMARY

Due to the shared nature of this property between the Town of Colonie and the Town of Niskayuna analyzing the portions of the lot and building in each town becomes quite complicated. It is the recommendation of the Planning Office that due to the fact that ***63%*** of the lot area and ***93%*** of the building area lie within the Town of Colonie, the use of the property should be governed by Colonie code. The Niskayuna zoning code has been used as a feasibility check to determine that adequate parking exists for the proposed use. Using values for a typical place of worship approximately 51 parking spaces are required and approximately 68 exist.

Principal Use -- Analysis

As shown in the Floor Plan Drawings the portion of the building that lies within the Town of Niskayuna will contain a place of worship.

- Section 220-10 District Regulations E C-N Neighborhood Commercial zoning district of the Niskayuna zoning code does not list places of worship, religious educational facilities and parish houses as permitted principal or special principal uses.

As shown in the Floor Plan Drawings the portion of the building that lies within the Town of Niskayuna will contain a food pantry that operates 2 hours per week and a before and after school center and child care center.

- Section 220-10 District Regulations E C-N Neighborhood Commercial zoning district (3) Special principal uses -- of the Niskayuna zoning code includes neighborhood retail convenience stores and child-care centers in an independent building.

Parking – Place of Worship

Schedule I-B R-1 Low Density Residential District of the Niskayuna zoning code includes the following requirements for places of worship. Actual values for the entire lot or building (Colonie & Niskayuna) are included for reference. (Note: 1222 Troy Schenectady Rd. is not within the R-1 zoning district – this analysis is provided as a general reference)

Minimum Lot Size Required	Actual Lot Size	Parking Spaces Required	Actual Parking Spaces
2 acres	1.8 acres	1 / 200 sq. ft. of floor area but not less than 1 space for each 4 seats where provided (89 spaces or 51)	Approx. 68

17,657 sq. ft. floor area / 200 sq. ft. / parking space = 89 parking spaces
201 seats / 4 parking spaces / seat = 51 parking spaces

Parking – For Only the Portion of the Building in Niskayuna

The data sheet shows that 633 sq. ft. of the building that is within Niskayuna is proposed to be used as a food pantry and 633 sq. ft. of the building in Niskayuna is proposed to be used as a child care center.

Schedule I-D C-N District of the Niskayuna zoning code includes the following requirements for food pantries. All values are for only the portion of the lot / building in Niskayuna.

Use	Area in Niskayuna	Parking spaces req'd.	Actual parking spaces
Food pantry	633 sf	3	Approx. 55
Child care	633 sf	TBD	Approx. 52

Food pantry = 633 sq. ft. floor area / 225 sq. ft. / parking space = 3
Child care = 1 space for each employee pus 0.15 space for each child

The Planning Board should review the proposed plan with the applicant.

TOWN OF NISKAYUNA

Application for Site Plan Review

Applicant (Owner or Agent):

Name Capital Church Patrick Rafferty, as Agent Dr. Jason Karampatsos, as Owner

Address 31 Vly Road

Colonie, NY 12205

Telephone 518-456-3022 Fax _____

Location:

Number & Street 1222 Troy Schenectady Road

Section-Block-Lot _____ - _____- _____

Zoning District CN - Neighborhood Commercial

Proposal Description:

Capital Church is seeking approval to use the Niskyuna related portion of this property for a community food pantry on the Main Level, and for a Childrens Before and After School program and/or Daycare in the lower level.

Refer to Survey, Floor Plans and Data Sheet provided.

Each site plan application shall be accompanied by:

1. Twelve (12) site plan maps prepared by a licensed engineer, architect or surveyor.

    a. The site plan shall include the following: the title of the drawing, including the name(s), address(es), phone and fax numbers of the applicant and the name address, phone and fax number of the person, firm or organization preparing the map.
    b. The North point, date and scale.
    c. Boundaries of the property.
    d. Existing watercourses and direction of existing and proposed drainage flow.
    e. The location of all proposed site improvements; proposed water and utility facilities; a description of the method of sewage disposal and location of such facilities; the location of all proposed signs; and location of proposed areas of vegetation.

2. A lighting plan showing the lighting distribution of existing or proposed lights, specifications, photometric data, and catalog cuts of the proposed fixture(s) which meet the requirements of Article VIIIB of the Zoning Ordinance of the Town of Niskayuna entitled “Guidelines for Lighting of Outdoor Areas under Site Plan Review”.

3. Six (6) copies of the short or long Environmental Assessment Form (EAF), as required by 6NYCRR Part 617, “State Environmental Quality Review”, and Chapter 95, “Environmental Quality Review”, of the Code of the Town of Niskayuna.

4. If the application is being made by someone other than the current property owner, the applicant or the agent for the applicant must provide proof that they are authorized to pursue this site plan approval. Such proof may be in the form of a contract for sale or letter by the current owner that the applicant/agent is authorized to proceed with this application.

5. Administration Fees: An application for site plan approval shall be submitted to the Planning Board at least ten (10) business days prior to a regular meeting of the Planning Board. Each petition shall be accompanied by a minimum fee of ***two hundred dollars ($200.00)*** plus an additional fee based on the square footage of new building construction. Fees are payable to the Town of Niskayuna.

6. Consulting Fees: The cost incurred by the Town for the review of an application by the Town Engineer, consulting engineering firm or other consulting fees, in connection with a Board's review of a proposed application shall be charged to the applicant. The Board to whom the application is made shall obtain an estimate from any designated consultant of the amount sufficient to defray the cost of such services and shall collect from the applicant the estimated charges. Any portion of the estimated charges so collected, which are not expended by the Town, shall be returned to the applicant. Any such costs incurred by the Town beyond the estimated charges initially collected from the applicant, shall be collected from the applicant prior to final action upon the application.

Signature of applicant: _____ as Agent Date: 6/6/23

Signature of owner (if different from applicant): _____

Date: 6/6/23

Applicant – Capital Church
31 Vly Rd.
Colonie, NY 12205

Date- Tuesday, June 6, 2023

For Location – 1222 Troy Schenectady Road
Niskayuna NY, 12309

Total Lot size - 73,749 SF
Total in Niskayuna - 26,982 SF (36.59%)
Total in Colonie - 46,767 SF (63.41%)

Total Square footage of building (all levels)- 17,657sf
Total Square footage in Niskayuna (all levels)- 1,266sf (7.17%)
Total SF in Town of Colonie (all levels)- 16,391 (92.83%)

Total SF of 1st Fl. (Main Level) – 7,961sf

Food Pantry occupies 1,390 sf (17.46%)
Total SF of food Pantry in Niskayuna –633 (45.54%)
Total SF of food Pantry in Colonie – 757 (54.46%)
Total amount of spaced used as Food Pantry in Niskayuna township – 633sf (100%)

Total SF of basement (lower level) – 7,961 sf

Child Care occupies 4,600 sf (57.78%)
Total SF of Child Care in Niskayuna – 633 (13.76%)
Total SF of Child Care in Colonie – 3,967 (86.24%)
Total amount of spaced used as Child Care in Nisakyuna township – 633sf (100%)

Total Parking Spaces on Site – 84
Total in Niskayuna - 51
Total in Colonie - 33

Food Pantry Hours of Operation – Thursdays Only, between 6:00pm -7:30pm

Child Care Hours of Operation – M-F 7:00am – 9:15am, 2:30pm – 6:00pm
With intentions to expand hours to 7:00am - 6:00pm in the future.

NONE

PROJECT NUMBER: 04.9023

Map References

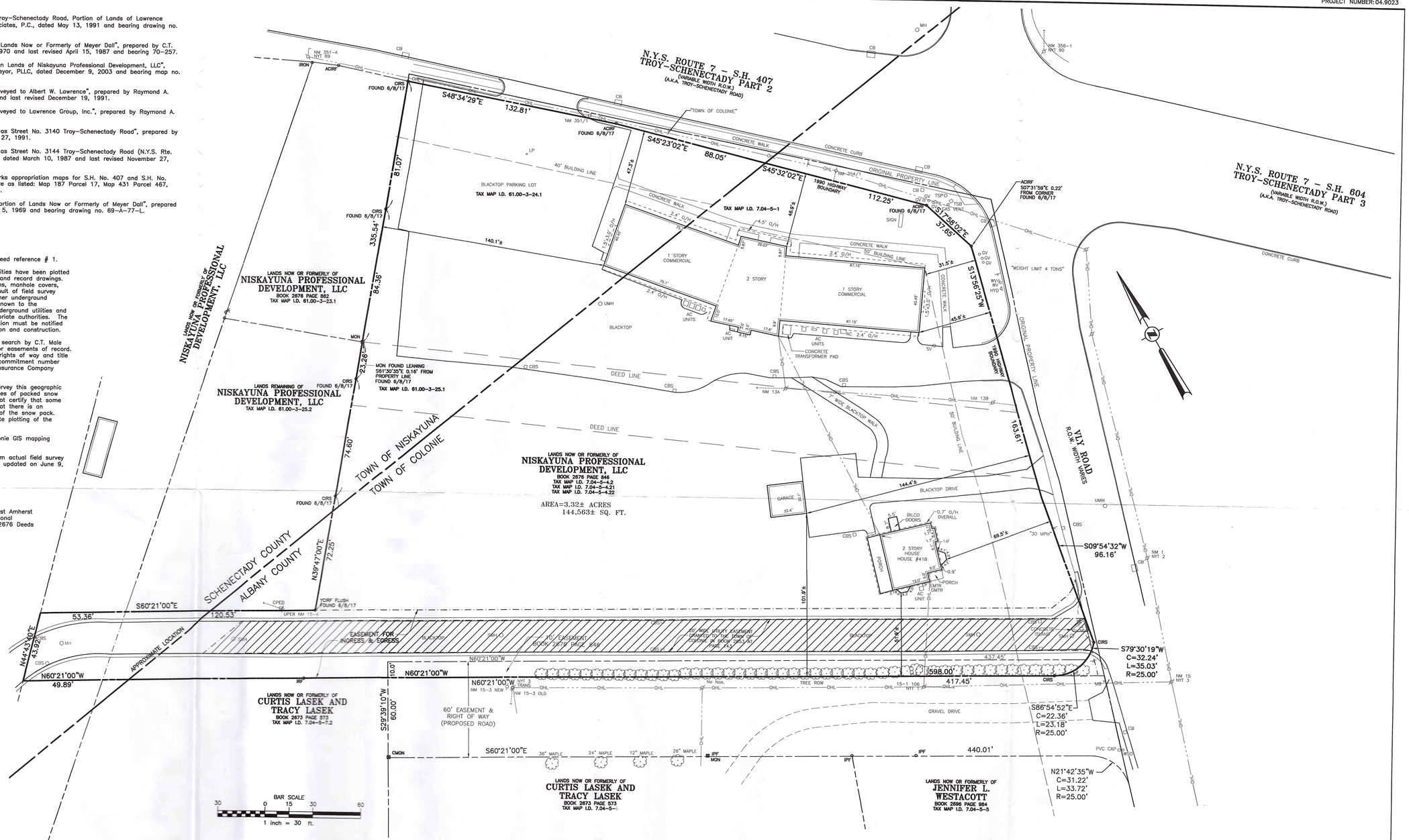
1. Map entitled "Topographic Survey 3120 Troy–Schenectady Road, Portion of Lands of Lawrence Group, Inc.", prepared by C.T. Male Associates, P.C., dated May 13, 1991 and bearing drawing no. 91–285.
2. Map entitled "As–Built Survey Portion of Lands Now or Formerly of Meyer Dall", prepared by C.T. Male Associates, P.C., dated August 7, 1970 and last revised April 15, 1987 and bearing 70–257.
3. Map entitled "Lot Line Adjustment Between Lands of Niskayuna Professional Development, LLC", prepared by Gilbert VanGuilder Land Surveyor, PLLC, dated December 9, 2003 and bearing map no. 03–22–124.
4. Map entitled "Survey of Lands to be Conveyed to Albert W. Lawrence", prepared by Raymond A. Koch, PLS, dated September 28, 1990 and last revised December 19, 1991.
5. Map entitled "Survey of Lands to be Conveyed to Lawrence Group, Inc.", prepared by Raymond A. Koch, PLS, dated September 28, 1990.
6. Map entitled "Survey of Premises Known as Street No. 3140 Troy–Schenectady Road", prepared by Raymond A. Koch, PLS, dated December 27, 1991.
7. Map entitled "Survey of Premises Known as Street No. 3144 Troy–Schenectady Road (N.Y.S. Rte. 7)", prepared by Raymond A. Koch, PLS, dated March 10, 1987 and last revised November 27, 1991.
8. New York State Department of Public Works appropriation maps for S.H. No. 407 and S.H. No. 604, Albany and Schenectady Counties are as listed: Map 187 Parcel 17, Map 431 Parcel 467, Map 429 Parcel 465 and Claim Map 494.
9. Map entitled "Foundation Location Plan Portion of Lands Now or Formerly of Meyer Dall", prepared by C.T. Male Associates, P.C. dated June 5, 1969 and bearing drawing no. 69–A–77–L.

Map Notes

1. North orientation and bearing base per deed reference # 1.
2. Underground facilities, structures, and utilities have been plotted from data obtained from previous maps and record drawings. Surface features such as catch basin rims, manhole covers, water valves, gas valves, etc. are the result of field survey unless noted otherwise. There may be other underground utilities, the existence of which are not known to the undersigned. Size and location of all underground utilities and structures must be verified by the appropriate authorities. The Underground Facilities Protective Organization must be notified prior to conducting test borings, excavation and construction.
3. This survey does not constitute a record search by C.T. Male Associates, P.C. to determine ownership or easements of record. For all information regarding easements, rights of way and title of record, the surveyor relied upon title commitment number 09–764, prepared by Old Republic Title Insurance Company dated June 8, 2009.
4. Prior to and during the course of this survey this geographic area accumulated approximately 6–8 inches of packed snow and ice. Therefore the undersigned cannot certify that some object or feature has been omitted or that there is an elevation error consistent with the depth of the snow pack. However every effort to provide a complete plotting of the conditions has been made.
5. Town Lines established from Town of Colonie GIS mapping provided by the town.
6. Boundary information shown hereon is from actual field survey conducted on January 16, 2004 and field updated on June 9, 2009.

Deed Reference

1. Deed dated January 29, 2001 between First Amherst Investment I, LLC and Niskayuna Professional Developement, LLC as described in Book 2676 Deeds at Page 846.



LEGEND

CB	CATCH BASIN
CB	CATCH BASIN CURB INLET
ACIRF	ALUMINUM CAPPED IRON ROD/NYSDOT
	DECIDUOUS TREE
WSO	WATER SHUT–OFF
GV	GAS VALVE
HYD	HYDRANT
IPF	IRON PIPE FOUND
MB	MAILBOX
MH	MANHOLE
	SIGN
MON	CONCRETE MONUMENT FOUND
TSP	TRAFFIC SIGNAL POLE
	UTILITY POLE
	UTILITY POLE WITH LIGHT
	GUY
CIRS	CAPPED IRON ROD SET

"ONLY COPIES OF THIS MAP SIGNED IN RED INK AND EMBOSSED WITH THE SEAL OF AN OFFICER OF C.T. MALE ASSOCIATES, P.C. OR A DESIGNATED REPRESENTATIVE SHALL BE CONSIDERED TO BE A VALID TRUE COPY".

CAD DWG. FILE NAME: BS_MHM.DWG

WILLIAM J. NETTLETON
P.L.S. NO. 49513

DATE		REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.
2/3/04	1	CAPPED IRON RODS SET AS SHOWN	CMD	RNS	
3/30/05	2	ADDED PARCEL TO ORIGINAL CONVEYANCE	J. WHITE	RNS	
6/9/09	3	SURVEY UPDATE	SMW	RNS	
6/8/17	4	CORNERS RECOVERED AS SHOWN/NW LINE FLAGGED	MDD	WJN	
	5				
	6				
	7				
	8				
	9				

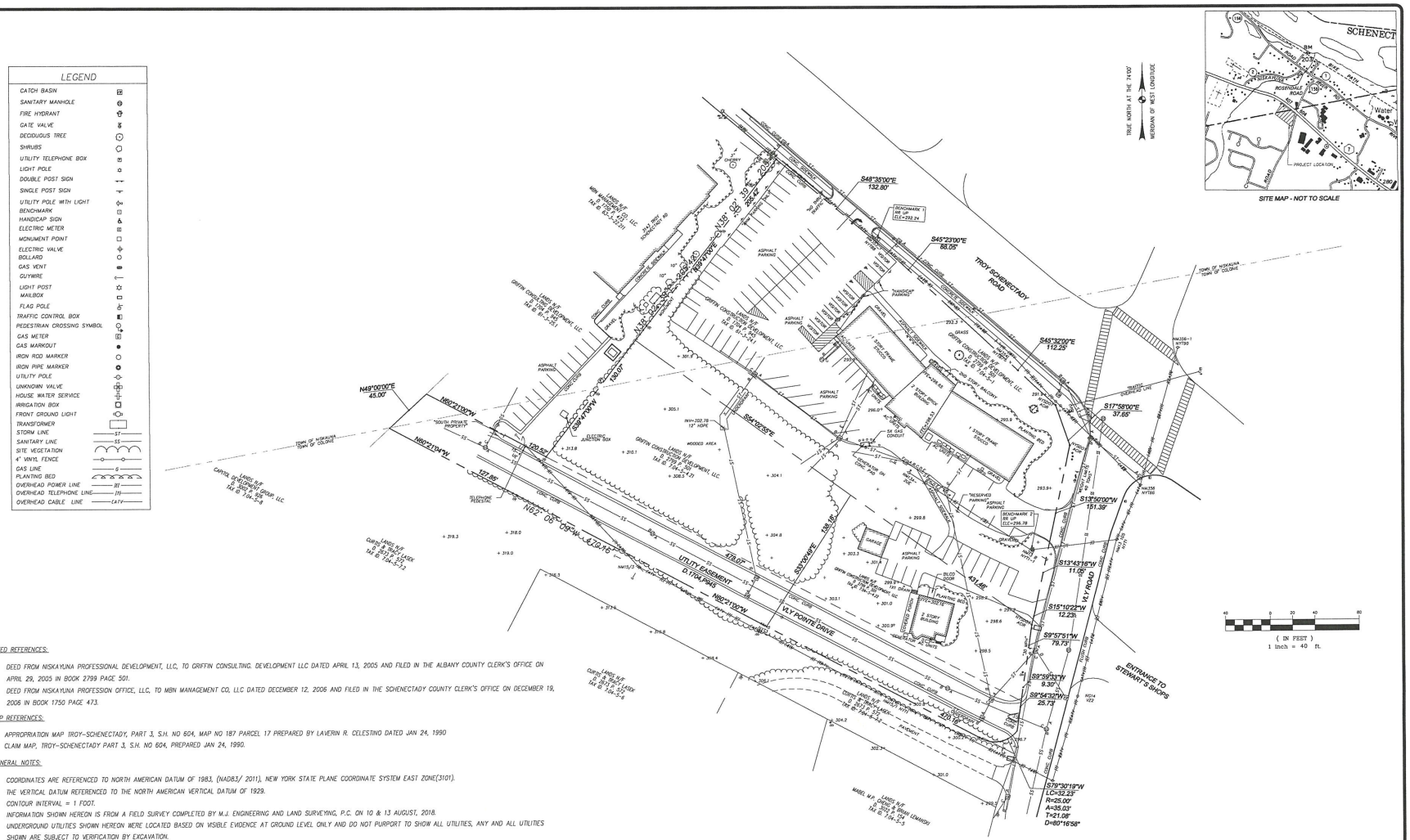
APPROVED:
DRAFTED : CMD
CHECKED : RNS
PROJ. NO: 04.9023
SCALE : 1"=30'
DATE : JAN 16, 2004

BOUNDARY SURVEY
OF
1222 TROY-SCHENECTADY ROAD
LANDS NOW OR FORMERLY OF
NISKAYUNA PROFESSIONAL DEVELOPMENT, LLC

TOWN OF NISKAYUNA/TOWN OF COLONIE — SCHENECTADY COUNTY/ALBANY COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.
50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 * FAX 518.786.7299
ARCHITECTURE & BUILDING SYSTEMS ENGINEERING * CIVIL ENGINEERING
ENVIRONMENTAL SERVICES * SURVEY & LAND INFORMATION SERVICES

SHEET 1 OF 1
DWG. NO: 04–116



DEED REFERENCES:

1. DEED FROM NISKAYUNA PROFESSIONAL DEVELOPMENT, LLC, TO GRIFFIN CONSULTING DEVELOPMENT LLC DATED APRIL 13, 2005 AND FILED IN THE ALBANY COUNTY CLERK'S OFFICE ON APRIL 29, 2005 IN BOOK 2799 PAGE 501.
2. DEED FROM NISKAYUNA PROFESSION OFFICE, LLC, TO MBN MANAGEMENT CO, LLC DATED DECEMBER 12, 2006 AND FILED IN THE SCHENECTADY COUNTY CLERK'S OFFICE ON DECEMBER 19, 2006 IN BOOK 1750 PAGE 473.

MAP REFERENCES:

1. APPROPRIATION MAP TROY-SCHENECTADY, PART 3, S.H. NO 604, MAP NO 187 PARCEL 17 PREPARED BY LAVERN R. CELESTINO DATED JAN 24, 1990
2. CLAIM MAP, TROY-SCHENECTADY PART 3, S.H. NO 604, PREPARED JAN 24, 1990.

GENERAL NOTES:

1. COORDINATES ARE REFERENCED TO NORTH AMERICAN DATUM OF 1983, (NAD83/ 2011), NEW YORK STATE PLANE COORDINATE SYSTEM EAST ZONE(3101).
2. THE VERTICAL DATUM REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1929.
3. CONTOUR INTERVAL = 1 FOOT.
4. INFORMATION SHOWN HEREON IS FROM A FIELD SURVEY COMPLETED BY M.J. ENGINEERING AND LAND SURVEYING, P.C. ON 10 & 13 AUGUST, 2018.
5. UNDERGROUND UTILITIES SHOWN HEREON WERE LOCATED BASED ON VISIBLE EVIDENCE AT GROUND LEVEL ONLY AND DO NOT PURPORT TO SHOW ALL UTILITIES, ANY AND ALL UTILITIES SHOWN ARE SUBJECT TO VERIFICATION BY EXCAVATION.
6. SURVEY FIELD WORK WAS COMPLETED ON NOVEMBER 6, 2015.
7. UNAUTHORIZED ALTERATIONS OR ADDITION TO THIS SURVEY MAP IS A VIOLATION OF SECTION 7209 OF THE NEW YORK STATE EDUCATION LAW. COPIES OF THIS SURVEY MAP NOT BEARING THE LAND SURVEYORS SEAL AND SIGNED WITH RED INK SHALL NOT BE CONSIDERED TO BE VALID COPIES.

SUBMITTAL / REVISIONS

No.	DATE	DESCRIPTION	BY	REVIEWED BY:	DATE
1					
.					
.					
.					
.					
.					
.					

PROJ. MANAGER:	JGM
CHIEF DESIGNER:	
DESIGNED BY:	
DRAWN BY:	NA
CHECKED BY:	MJF

DATE

DATE

DRAFT

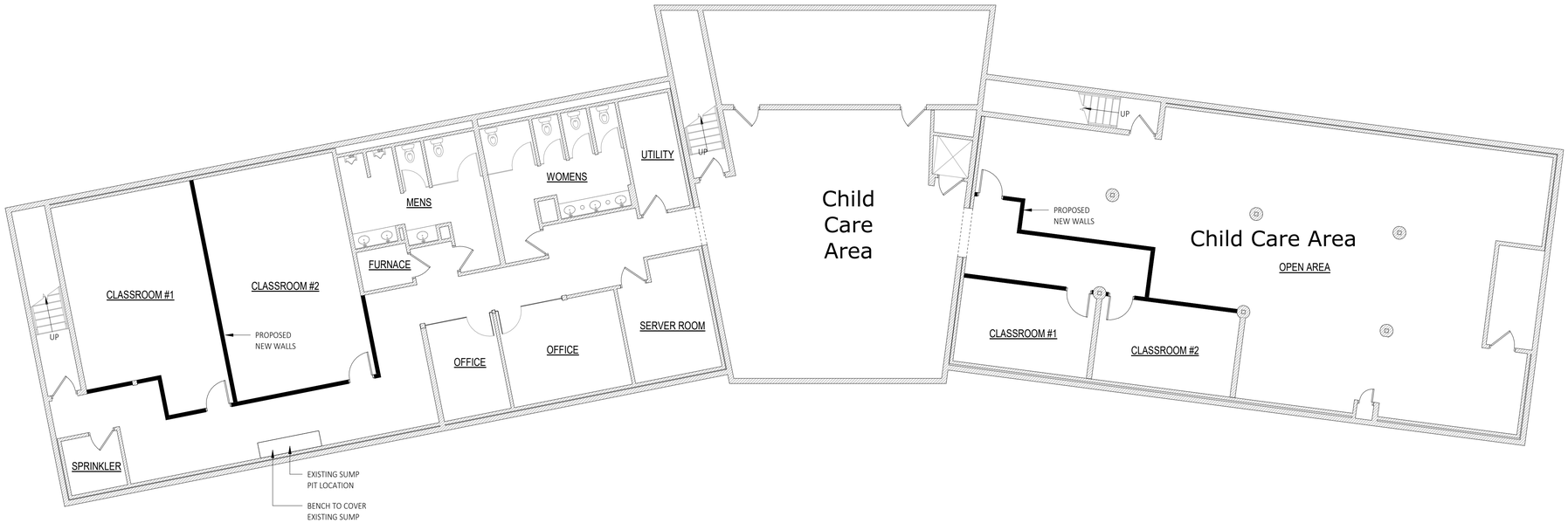
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, (I.E.) ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.

Engineering and Land Surveying, P.C.
1533 Crescent Road - Clifton Park, NY 12065

BOUNDARY AND TOPOGRAPHY SURVEY
FOR
1222 TROY SCHENECTADY ROAD
T/O COLONIE & NISKAYUNA SCHENECTADY & ALBANY COUNTY

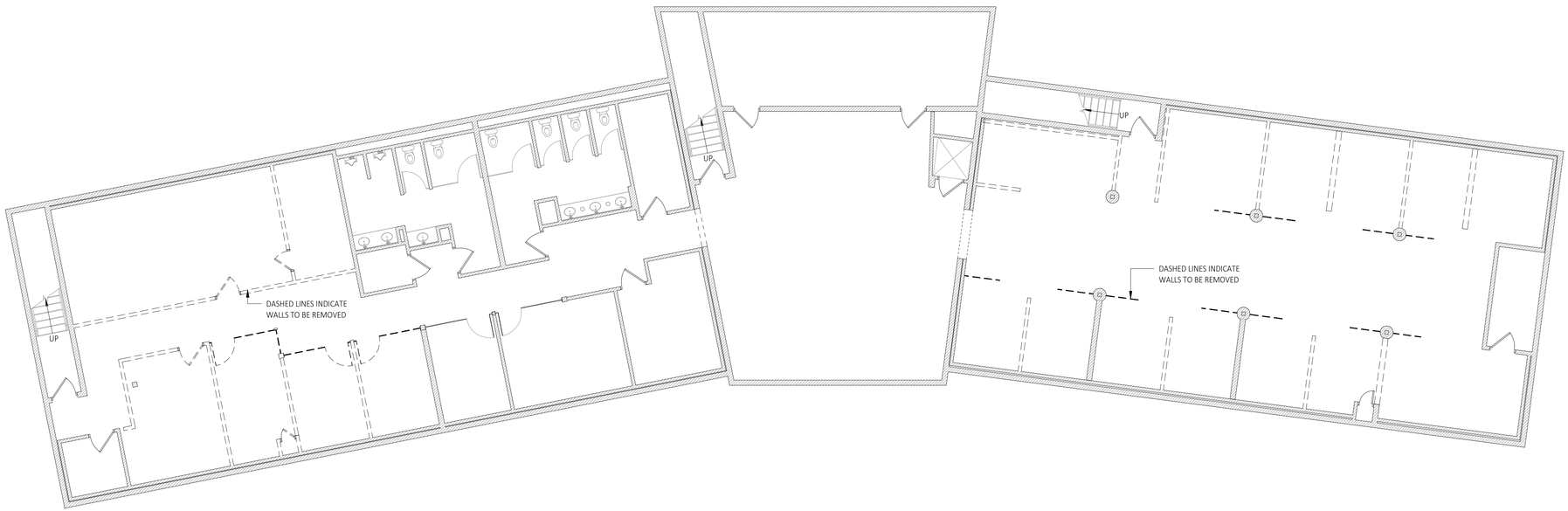
SCALE: 1" = 40'
CONTRACT No.:
MJ PROJ No: MJ972.29
DATE: 09/21/2018

File Name: G:\MJ\972.29\1222 troy Schenectady Rd\Cad\MJ972.29_XSRVY.dwg (Layout: BOUNDRY+BASEMAP)
Date: Mon, Sep 24, 2018, 3:52 PM (Name: naseemahmad)



2 A100 **Proposed Basement Floor Plan**

SCALE: 1/8" = 1'-0"



1 A100 **Basement Demolition Plan**

SCALE: 1/8" = 1'-0"

C2 ARCHITECTURE, PC
WWW.C2-DESIGNGROUP.COM
24 AIRPORT ROAD | SCHENECTADY, NY 12302 | 518.320.8250

STAMP:

Schematic Design

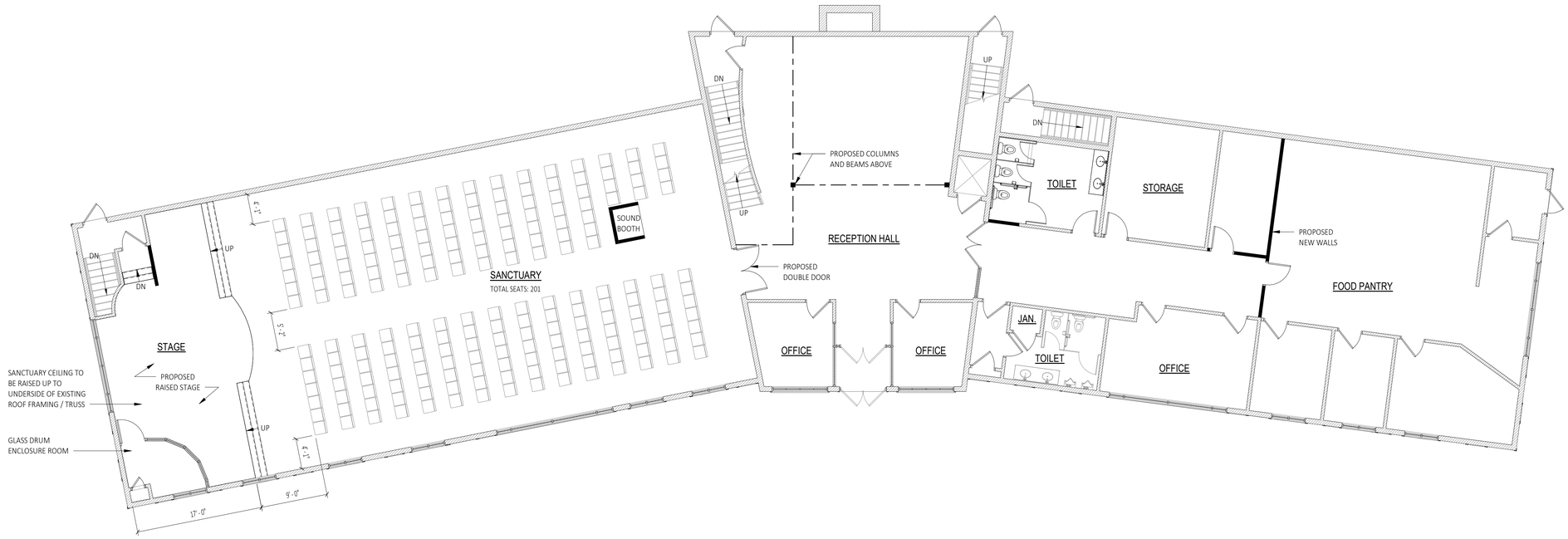
No.	SUBMITTAL / REVISION	DATE:

SHEET TITLE: Basement Floor Plans

PROJECT: Feasability Study for: Capital Church
1222 Troy-Schenectady Road Schenectady, NY 12309

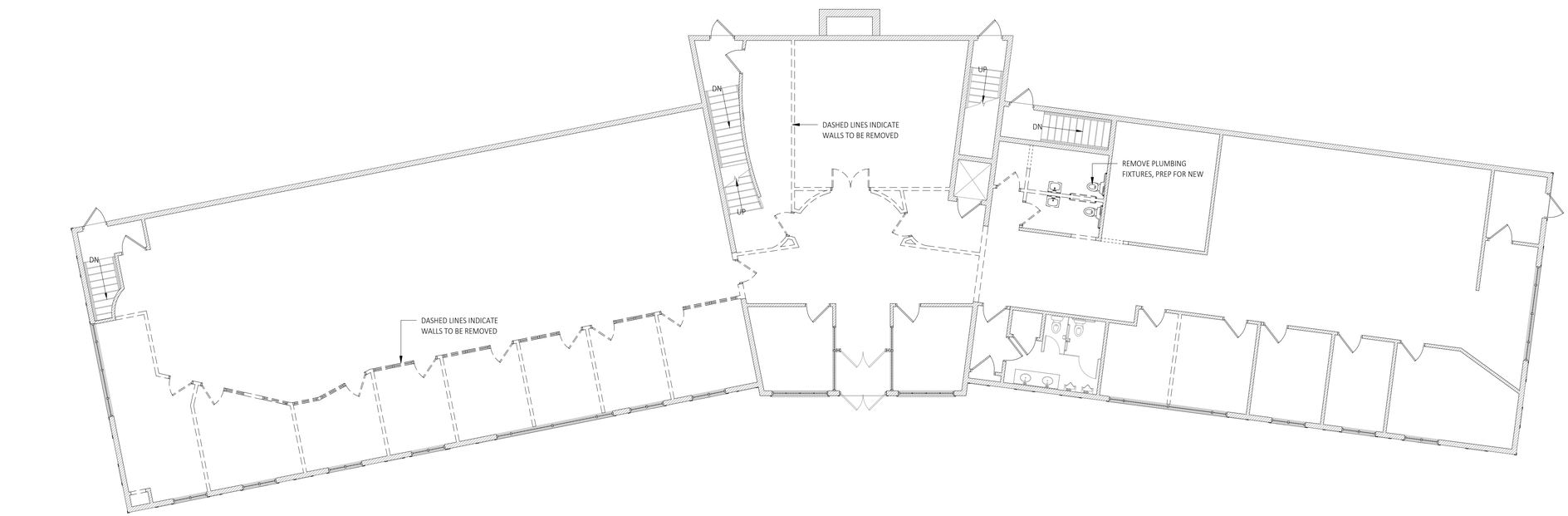
DRAWN BY:	C2 Architecture
DATE:	05/23/2023
SCALE:	AS NOTED
JOB NO:	2341
SHEET:	A100

PLOT DATE: 5/23/2023 6:10:22 PM



2 A101 Proposed First Floor Plan

SCALE: 1/8" = 1'-0"



1 A101 First Floor Demolition Plan

SCALE: 1/8" = 1'-0"

C2 ARCHITECTURE, PC
WWW.C2-DESIGNGROUP.COM
24 AIRPORT ROAD | SCHENECTADY, NY 12302 | 518.320.8250

STAMP:

Schematic Design

No.	SUBMITTAL / REVISION	DATE:

First Floor Plans

Feasability Study for:

Capital Church

1222 Troy-Schenectady Road

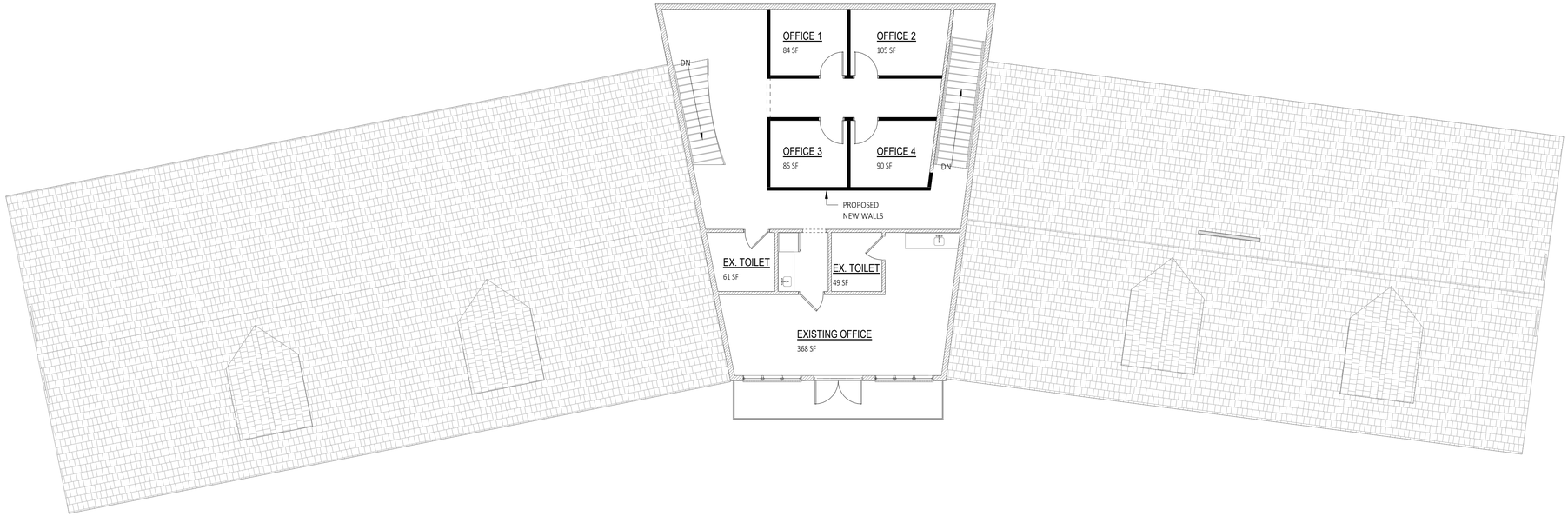
Schenectady, NY 12309

SHEET TITLE:

PROJECT:

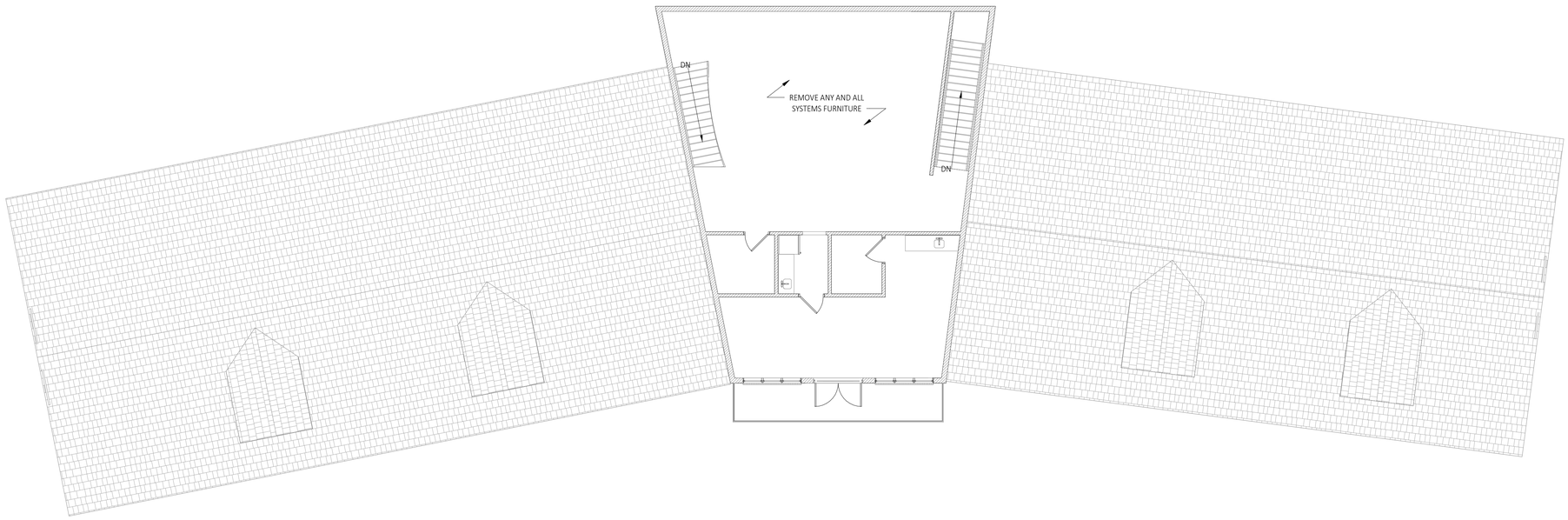
DRAWN BY:	C2 Architecture
DATE:	05/23/2023
SCALE:	AS NOTED
JOB NO:	2341
SHEET:	A101

PLOT DATE: 5/23/2023 6:10:23 PM



2 A102 Proposed Second Floor Plan

SCALE: 1/8" = 1'-0"



1 A102 Second Floor Demolition Plan

SCALE: 1/8" = 1'-0"

C2 ARCHITECTURE, PC
WWW.C2-DESIGNGROUP.COM
24 AIRPORT ROAD | SCHENECTADY, NY 12302 | 518.320.8250

STAMP:

Schematic Design

No.	SUBMITTAL / REVISION	DATE:

SHEET TITLE: Second Floor Plans

PROJECT: Feasability Study for: Capital Church
1222 Troy-Schenectady Road Schenectady, NY 12309

DRAWN BY:	C2 Architecture
DATE:	05/23/2023
SCALE:	AS NOTED
JOB NO:	2341
SHEET:	A102

PLOT DATE: 5/23/2023 6:10:23 PM

1222 Troy Schenectady Rd.
C-N Neighborhood Commercial Zoning District

TOWN OF NISKAYUNA
PLANNING BOARD AND ZONING COMMISSION

AGENDA STATEMENT

AGENDA ITEM NO. VIII. 2 MEETING DATE: 6/12/2023

ITEM TITLE: DISCUSSION: 2386 Algonquin Rd. – An application for lot line adjustment.

PROJECT LEAD: TBD

APPLICANT: William Pfeiffer

SUBMITTED BY: Laura Robertson, Town Planner

REVIEWED BY:
☐ Conservation Advisory Council (CAC) ☐ Zoning Board of Appeals (ZBA) ☐ Town Board
☐ OTHER:

ATTACHMENTS:
☐ Resolution ■ Site Plan ☐ Map ☐ Report ☐ Other:

SUMMARY STATEMENT:

William Pfeiffer, owner, has made an application for lot line adjustment with Gary Horton residing at 2383 Troy Road. The proposed lot line adjustment will result in an existing shed that is greater than 120 sq. ft. being 5.1 ft. from the new lot line.

The property is located within the R-1 Low Density Residential zoning district.

BACKGROUND INFORMATION

A 1-page survey drawing entitled “William Pfeiffer / Jean Jubic 2386 Algonquin Road Niskayuna, NY 12309” by Cynthia K. Elliott dated May 22, 2023 was provided with the application.

The applicant is before the Planning Board this evening to answer any questions they have regarding the proposed project.

TOWN OF NISKAYUNA

APPLICATION FOR LOT LINE ADJUSTMENT

Each Lot Line application shall be accompanied by:

1. Non-refundable Application Fee of $100
2. 2 Copies of a Sketch Plan.

   Sketch Plan must include: Existing lot line locations, proposed lot lines, building envelopes, location of existing structures / fences with distances to lot lines where appropriate and any additional information requested by the Zoning Enforcement Officer in order to review the proposal for compliance with the Subdivision and Zoning codes.

PLANNING BOARD REVIEW

After receiving sketch plan approval from the Zoning Enforcement Officer, a Final Map must be prepared by a licensed surveyor or engineer and submitted to the Town for Planning Board review.

1. Submit 8 copies of the Final Map to the Planning Department

   Final Map must include: A signed seal of a surveyor or engineer licensed in the State of New York, actual field survey of boundary lines of the amended parcels with bearings and distances and appropriate monumentation, and a signature block for the chairman of the Planning Board.

The complete Lot Line Adjustment regulations can be found at the Niskayuna Town Code online, at: http:llecode360.comiN110974.

APPLICATION FOR LOT LINE ADJUSTMENTS

PROPERTY INFORMATION

Physical Address(es): 2386 Algonquin Rd. _____
Section-Block-Lot(s): 51.17-01-30_____
Number of Lots Involved:2_____Current Zoning(s): _____
Approx Acreage:0.08 _____

Additional Information:the proposed adjustment will not impact character of neighborhood.
_____
_____

OWNER(S) OF RECORD (Attach additional sheets if necessary)

SECTIONBLOCKLOT:51.17-01-30 _____

Name: William Pfeiffer_____ Name:Jean Jubic_____
Address: 2386 Algonquin Rd_____ Address:same _____
City/State:Niskayuna, NY _____Zip: 12309 _____City/State:_____ Zip: _____
Phone: 518-424-1677 _____ Phone: _____
E-Mail:bill@albanyelderlaw.com _____ E-Mail: _____

SECTIONBLOCKLOT:51.17-01-7 _____

Name: Gary Horton _____ Name: _____
Address: 2383 Troy Road _____ Address:_____
City/State:Niskayuna, NY _____Zip: 12309 _____City/State:_____ Zip: _____
Phone: 518-370-8710 _____ Phone: _____
E-Mail: _____ E-Mail: _____

SURVEYOR OR ENGINEER

Company:_____
Name:Cynthia Elliott _____
Address: _____
City/State: _____Zip: _____
Phone:518-992-5927_____
E-Mail:ckelandsurveyor@aol.com _____

Surveyor or engineer must have a current professional license with the State of New York.

LICENSE #: _____

APPLICATION FOR LOT LINE ADJUSTMENTS

SUPPLEMENTARY INFORMATION (Attach separate sheet if necessary)

1. What is the purpose of this adjustment?to conform lot line to location of existing residences and external structures so that an appropriate buffer will be maintained for both owners, no structure will be relocated and no landscaping will be changed. The existing Horton shed will be approx. five feet from new line and the existing Pfeiffer shed will remain approx. five feet from an unchanged line. The value of either property should not change in a substantial amount. _

2. What is the proposed timeline for adjustment completion?2023 _____

3. Is any part of the proposed adjustment within the regulated floodplain as designated by the Federal Insurance Rate Maps (FIRMs) adopted by the Town of Niskayuna on December 1983? 0 Yes 0 NO. If yes, explain what area is in the floodplain and how this is being accounted for in the adjustment process.no _____

4. Is there additional information which may aid in the processing of this application. (e.g., proposed variances, zoning change requests, building permit applications, etc.)?ZBA variance will be required for location of existing Horton shed which is impractical to move. _____

5. Are there any potential adverse environmental impacts that could be triggered by this lot line adjustment? Include any impacts to wetlands, surface water, groundwater, flooding, plants and animals, aesthetics, Historic sites, open space, recreation, transportation, noise, odor, light, geological features, etc. (Attach separate pages as necessary). no _____

NOTARIZED OWNER'S ACKNOWLEDGMENT/ AUTHORIZATION FOR LOT LINE ADJUSTMENT

SECTION-BLOCK-LOT: _____

PHYSICAL ADDRESS: _____

ACKNOWLEDGMENTS

1. I am aware of and consent to the filing of this application.
2. I confirm that the information provided in this application is true and correct to the best of my knowledge and I assume all responsibility for the truth and validity of this application and all associated exhibits and documents submitted.
3. I agree to allow representatives of the Town of Niskayuna to go on or about the subject property for inspection purposes in connection with this application.
4. I confirm that I have uncontested legal ownership of the subject property, without any outstanding rights, reservations or encumbrances which could nullify the intended development and use of this lot line adjustment (if there is a loan or mortgage on the affected property, it is my responsibility to inform the appropriate party of the property changes and secure their consent).
5. If the owner is a corporation, partnership, limited liability company (LLC), governmental agency or other entity, I confirm that I am authorized to act on behalf of the corporation, partnership, LLC, governmental agency or other entity in processing this application.
6. I acknowledge that any potential or existing separate lots, land titles, partitions, previously subdivided lots or other such land units will be consolidated with this lot line adjustment and upon final approval only the newly created lot(s) will be recognized.

The undersigned hereby swears that the information provided on this application is true, correct and accurate.

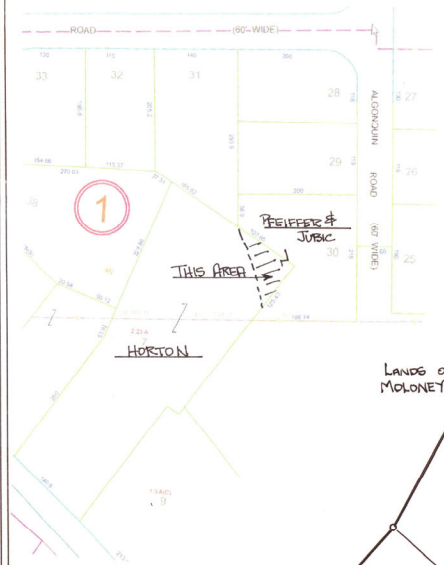
Sworn to me on this _____ day of_____

_____
Signature of Applicant

_____
Printed Name

_____ _____
Notary Public, State of New York Date

Each property owner is required to sign.
Attach additional sheets if necessary



LANDS OF GILLETT

LANDS OF DESIDERIO

ALGONQUIN ROAD

IR

S82°44'E
200.0'

N7°16'E
58.9'

236.9 (TOTAL)

IR

N50°19'W
107.65'

HSE
#2386

HYD.

LANDS OF PFEIFFER and JUBIC

N18°24'27"W
119.21'
NEW BOUNDARY

.087-
AC.

2.23+/- ACRES
- 0.08+/- AC.
2.15+/- ACRES AFTER ADJUSTMENT

0.84+/- ACRES
+ .08+/- AC.
0.92+/- ACRES
AFTER ADJUSTMENT

LANDS OF PERRELLA

S7°16'W
215.0'

N45°32'E
125.34'
(TOTAL)

HSE
#2383

62.0'

N82°44'W
186.74'

305.1'

LANDS OF MOLONEY

LANDS OF HORTON

320. (TOTAL)

LANDS OF VAN DYKE

IR

LOT LINES BEING REMOVED

N50°19'W
109.65'

S18°24'27"E*
119.21'
* NEW BOUNDARY

0.08+/-
ACRES
TO ADD TO
PFEIFFER and JUBIC
FROM
HORTON

N45°32'E
63.34'

HORTON'S
EXISTING SHED

5.1'

PFEIFFER'S
EXISTING SHED

DETAIL "A"
SCALE: 1" = 20'

LANDS OF STANCO

230.1'

50.6'

232'

60.3'

TROY SCHENECTADY ROAD

Surrounding Landowners

Tax ID#	Name	Address
51.17-01-29	Carly & Neil Desiderio	2382 Algonquin Road
51.17-01-31	Gail & Geoffrey Gillett	2376 Cayuga Road
51.17-01-25	Joseph Perrella	2389 Algonquin Road
51.17-01-38	Ainsley & Peter Moloney	2110 Cayuga Court
51.17-01-6	Jason & Maria Stanco	2375 Troy Schenectady Road
51.17-01-24.2	Kahina Rockwell Van Dyke	1051 Van Antwerp Road

All @ Niskayuna, New York 12309

Owners of Record: William Pfeiffer/Jean Jubic
2386 Algonquin Road
Niskayuna, New York 12309
Deed of Record: L. 1748 P. 977
Tax ID # 51.17-01-30

Gary V. Horton, et.al.
2383 Troy Road
Niskayuna, New York 12309
Deed of Record: L. 2044 P. 574
Tax ID # 51.17-01-7

ZONED: R-1