

**TOWN OF BROOKLYN
PLANNING AND ZONING COMMISSION
Revised Agenda
Tuesday, October 17, 2023 6:30 p.m.**

3 WAYS TO ATTEND: IN-PERSON, ONLINE, AND BY PHONE

MEETING LOCATION:	
Clifford B. Green Memorial Center, 69 South Main Street, Brooklyn, CT	
Click link below: https://us06web.zoom.us/j/84765564828	or Go to https://www.zoom.us/join Enter meeting ID: 847 6556 4828
Dial: 1-646-558-8656	
Enter meeting number: 847 6556 4828, then press #, Press # again to enter meeting	

- I. Call to Order**
- II. Roll Call**
- III. Seating of Alternates**
- IV. Adoption of Minutes:** Meeting October 4, 2023
- V. Public Commentary**
- VI. Unfinished Business:**
 - a. **Reading of Legal Notices:**
 - b. **Continued Public Hearings: None.**
 - c. **New Public Hearings:**
 - 1. **ZRC 23-006:** Modification to Appendix 10.D: Floodplain Management Regulations of the Floodplain Overlay Zone/ (FEMA/NFIP), Applicant: PZC
 - d. **Other Unfinished Business:**
 - 1. **ZRC 23-006:** Modification to Appendix 10.D: Floodplain Management Regulations of the Floodplain Overlay Zone/ (FEMA/NFIP), Applicant: PZC
- VII. New Business:**
 - a. **Applications:**
 - 1. **SPR 23-006:** Site Plan Review (pending determination) for a 25'x25' building addition at 512 Providence Road, Applicant: Vachon Brooklyn, LLC.
 - 2. **SP 22-007mod:** Special Permit for an Events Facility at 459 Wolf Den Road, Applicants: Nicole and Greg Fisher. (a modification of the previous application)
 - b. **Other New Business:**
 - 1. Discussion of potential subdivision on Old Tatnic Hill Road.
- VIII. Reports of Officers and Committees**
- IX. Public Commentary**
- X. Adjourn**

Michelle Sigfridson, Chairman

**TOWN OF BROOKLYN
PLANNING AND ZONING COMMISSION
Meeting
Wednesday, October 4, 2023, 6:30 p.m.**

3 WAYS TO ATTEND: IN-PERSON, ONLINE, AND BY PHONE

MEETING LOCATION:		
Clifford B. Green Memorial Center, 69 South Main Street, Brooklyn, CT		
Click link below: https://us06web.zoom.us/j/87925438541	or	Go to https://www.zoom.us/join Enter meeting ID: 879 2543 8541
Dial: 1-646-558-8656		
Enter meeting number: 879 2543 8541, then press #, Press # again to enter meeting		

MINUTES

- I. Call to Order** – Michelle Sigfridson, Chair, called the meeting to order at 6:33 p.m.
- II. Roll Call** – Michelle Sigfridson, Carlene Kelleher, Allen Fitzgerald, Seth Pember, Gil Maiato. (all present in person).
John Haefele (present via online, then arrived in person at 6:43 p.m.).
Lisa Herring (absent with notice).
Brian Simmons and Karl Avanecean were absent.
- Staff Present (in person):** Jana Roberson, Town Planner and Director of Community Development; Austin Tanner, First Selectman (arrived at 6:41 p.m.).
- Also Present in Person:** Julie MacCormack; Steven MacCormack; J.S. Perreault, Recording Secretary.
There were four additional people seated in the audience.
- III. Seating of Alternates** – None.
- IV. Adoption of Minutes:** Meeting September 19, 2023
- Motion was made by C. Kelleher to approve the Minutes of the Special Meeting of September 19, 2023, as presented.
Second by G. Maiato. No discussion.
Motion carried unanimously by voice vote (6-0-0).
- V. Public Commentary** – None.
- VI. Unfinished Business:**
- a. **Reading of Legal Notices:**
J. Roberson read aloud the Legal Notice for SP 23-005 which was published in the *Turnpike Buyer* on September 20 and 27, 2023.
 - b. **Continued Public Hearings: None.**
 - c. **New Public Hearings:**
 1. **SP 23-005:** Special Permit for sit-down café and restaurant (tea, beverages, ice cream, baked goods) and retail gift shop at 8 Wolf Den Road, Applicant: Creamery Tea House, Owner: Julie MacCormack.

Julie MacCormack represented herself and gave an overview:

- Eighteen Seats – Reservations Only.
- Three Café Seats – First-come, first-served.
- Elegant, relaxing, slow-paced atmosphere.
- Bakery items for sale.
- Soft music.

- Hours of Operation: Four days per week, beginning from about noon to about 8 p.m. 9 p.m.
 - No changes to the building.
 - She explained the history of uses in the building: nursing home; wine shop; cigar shop; antique shop; beauty salon. Now, she wants to do something with it to enhance the Town.
 - Parking is adequate for the amount of square footage: Retail – 219 s.f. (3 spaces required per 1,000 s.f.). Restaurant 18 seats – 681 s.f. (1 space required per 3 seats). Total parking spaces required is seven.
- Ms. Roberson explained that in 1997 a site plan (for the cigar shop) had been approved which showed a parking easement (recorded) and a shared parking agreement with the Town Hall property. The first seven spaces on the site plan are Ms. MacCormack’s proposed parking spaces which go onto the Town Hall property containing the easement. Ms. Roberson noted that the parking requirement is met completely on the western side of the building and that the site plan shows four additional spaces at the north western corner of the building (which she is not proposing to use). Ms. Roberson also noted that this brings the activity away from the residential neighbor on the other side.
- Ms. Roberson displayed Google street-view photos. Some of the parking spots have grown over and may need to be re-established/re-marked.
- Ms. MacCormack stated agreement.
- Ms. MacCormack explained that the Town Hall won’t be affected on Fridays, Saturdays and Sundays. The only day would be Thursdays. She said that there won’t be noise or traffic buildup.
- Public access is to be from the Town Hall side of the building.

COMMENTS FROM THE PUBLIC:

- **Charles E. Larkin**, 85 Costello Road, voiced concern regarding the following:
 - He found that there are two establishments in Texas of the same name. He asked if this proposed café is related to those businesses.
 - Signage.
 - Traffic patterns need to be seriously considered.
 - Parking overflow.
 - Further commercialization of the Town Center.
 - Is this property in the Historic District?
 - Are catered events to be people coming in or expanding to the business to bring food to off-site venues?
 - He does not feel that this is an appropriate commercial use in that particular location.

Ms. MacCormack explained her business is not related to the businesses in Texas with the same name and she explained that she is planning to change the name of her business, but she has not decided on a name as of this time. Ms. MacCormack explained that the traffic flow and parking were addressed and she explained that she has to follow the Regulations that are in place for the Village Center District. Ms. MacCormack noted that there were businesses in that location previously. She explained that she understands that she would need to come back before the PZC for approval should she want to expand her business at some point. Ms. MacCormack explained that there is signage to help with traffic flow. Regarding catering, she explained that she will have a limited amount of product.

COMMENTS FROM THE COMMISSION AND FROM STAFF:

- Mr. Fitzgerald suggested a sign leading out of the Town Hall parking lot, stating “Exit to Route 169 Only.” Ms. Roberson noted that, on the site plan, signage had been required at that time, but it may need to be refreshed.

- Ms. Roberson explained about the traffic circulation: Wolf Den Road is a one-way road, the entrance is off of Wolf Den Road, the exit is through the Town Hall parking lot and out to Route 169. The Town Hall parking lot is partly one-way. Customers to the tea house would need to enter from Route 6 onto Wolf Den Road, turn right into the entrance and park. When they are ready to leave, they would go through the Town Hall parking lot to Route 169. Ms. Roberson stated that the ingress/egress and parking easement has been in place since 1997. Ms. Roberson explained that we don't want people entering via the wrong way on Wolf Den Road and we don't want people exiting the wrong way on Wolf Den Road.
- Ms. Sigfridson explained that she is not too concerned about the traffic that this proposed use may add to that area. She feels that this will be a minimal additional impact on those roads in that area.
- Mr. Pember feels that the whole corner is a traffic disaster and he recommended a refresh of the signs on both sides of the driveway for the Town Hall, regardless of whether or not the café is approved. He asked that First Selectman, Austin Tanner take that into consideration.
- Ms. Roberson stated that this would be an improvement for clarity, so people will know where to go.
Discussion continued.
- Ms. Roberson commented that it is the Town Green and it is a National Register Historic District and, in our Zoning Regulations, it is also a Village Center District and we do encourage business uses in this location. She feels that the tea house is a wonderful use for our Town Green area. There was discussion regarding the history of the Town which Ms. MacCormack explained she would like to use to bring the Community together.
- Regarding the Historic District, Ms. Sigfridson stated that the house is a contributing structure. The addition dates back to 1950. There was discussion regarding the history.

ADDITIONAL COMMENTS FROM THE PUBLIC:

- **Charles E. Larkin** commented that Israel Putnam went to the tavern riding a horse, not the kinds of vehicles that now pass through that intersection. He stated that the Board seems to be inclined to alter traffic patterns in order to approve this request. He suggested that the PZC think about that quite seriously because that one-way street is already being ignored quite a bit, which he feels is dangerous.
Mr. Larkin said that once this starts, it's expansion and then, more expansion.
- **Steven MacCormack**, 8 Wolf Den Road, explained about the traffic pattern which he feels will alleviate traffic congestion as well as the hours of operation while the Town Hall is closed. He explained how some people cut through the Town Hall parking lot to avoid the traffic light.
Mr. MacCormack spoke about how there are a lot of activities in East Brooklyn and that this use of the property would be an activity that would bring people to the Town Center.
Mr. MacCormack spoke about how the servers will help to revive the history by telling stories.
Mr. MacCormack spoke of improvements he would eventually like to make, such as pave the parking lot and planting more flowers to make it more aesthetically pleasing.

Ms. MacCormack commented that she recently had an opportunity to move to another town and start her business in a Victorian mansion, but she chose to stay in Brooklyn because she feels at home in Brooklyn.

CONTINUED COMMENTS FROM THE COMMISSION:

- J. Haeferle asked Ms. MacCormack if there are any proposed changes to existing traffic patterns.

Ms. MacCormack stated that there is no change, everything is existing. She added that there is also no change to the building and that she has no plans to expand.

- Ms. Sigfridson asked about signage.
Ms. Roberson explained that it hasn't been designed yet.
Ms. MacCormack explained that she wanted to be sure that her Application would be approved and she is not sure of the name of the business yet. Once decided, she understands the procedure.

There were no further questions or comments.

Motion was made by C. Kelleher to close the public hearing for **SP 23-005**: Special Permit for sit-down café and restaurant (tea, beverages, ice cream, baked goods) and retail gift shop at 8 Wolf Den Road, Applicant: Creamery Tea House, Owner: Julie MacCormack.

Second by J. Haefele. No discussion.

Motion carried unanimously by voice vote (6-0-0).

d. Other Unfinished Business:

1. **SP 23-005**: Special Permit for sit-down café and restaurant (tea, beverages, ice cream, baked goods) and retail gift shop at 8 Wolf Den Road, Applicant: Creamery Tea House, Owner: Julie MacCormack.

Motion was made by S. Pember to approve the Special Permit application for a sit-down café and restaurant, retail gift shop and catering at 8 Wolf Den Road in the Village Center Zone, identified in the files of the Brooklyn Land Use Office as **SP 23-005**, in accordance with all final documents and testimony submitted with the application with the finding that the proposal is consistent with Sec. 4.A (Village Center Zone), and Sec. 9.D.5 (Special Permit Criteria) of the Zoning Regulations. Such approval includes the following conditions and modifications:

1. The new Record of Special Permit shall be recorded in the office of the Town Clerk. The approved Site Plan is already recorded as Map Volume 12, Page 28.
2. Prior to conducting any site work or installing any signage, the applicant shall apply for a Zoning Permit from the Zoning Enforcement Officer.

Second by G. Maiato.

Discussion:

- A. Fitzgerald suggested that there be a third condition regarding refreshing the on-site signage to clarify the flow of traffic, prior to a Certificate of Zoning Compliance being issued.

Mr. Pember amended his motion to include the following condition:

3. On-site directional signage shall be refreshed prior to the issuance of a Certificate of Zoning Compliance.

Amendment to the original motion was seconded by C. Kelleher.

Discussion:

- C. Kelleher questioned whether there is a need for additional clarifying directional signage not already at the site. Ms. Roberson stated that it would be needed on Town Property.
Ms. Kelleher requested this of Mr. Tanner who stated that he would speak with the Road Foreman about it.

Motion, as amended, carried unanimously by voice vote (6-0-0).

2. **ZRC 23-006**: Modification to Appendix 10.D: Floodplain Management Regulations of the Floodplain Overlay Zone/ (FEMA/NFIP), Applicant: PZC. ***awaiting Oct. 17 public hearing***

Ms. Roberson explained that it is very important to have a quorum of the Commission for the October 17th meeting, so that the Town's participation in the National Flood Insurance Program is not jeopardized.

VII. New Business:

a. Applications:

1. **SPR 23-006:** Site Plan Review (pending determination) for a 25'x25' building addition at 512 Providence Road, Applicant: Vachon Brooklyn, LLC.

Ms. Roberson explained that the Applicant's Representative from Killingly Engineering was unable to attend this meeting.

Ms. Roberson explained the following:

- They have already started construction without obtaining any permits, this is a retroactive Application.
- The addition is to be used for detailing cars.
- Ms. Roberson explained there are three instances where the PZC could approve a waiver of special permit requirements, one of them being that the building addition for a commercial building is 500 feet or less. This addition (625 square feet) is just above the Special Permit criteria for a waiver.
- Ms. Roberson explained that, to grant the waiver, the Commission would need to find that it is thought to be minor or have no more than negligible impact on traffic, character of the neighborhood or the environment. Ms. Roberson explained that she had spoken with Norm Thibeault of Killingly Engineering, who has officially (verbally over the phone) requested that determination.
- Mr. Roberson stated that it is already an impervious surface, so they are not changing that. They are satisfied with how it impacts their circulation. It cuts off two of their parking spaces (which she said she is not concerned about), but they are starting to do work on their rear parking lot, where they will have many parking spaces.

There was discussion. Mr. Fitzgerald stated that he was opposed to granting the waiver. S. Pember, G. Maiato, and C. Kelleher expressed agreement with Mr. Fitzgerald. Mr. Tanner asked if they obtained a Building Permit. Ms. Roberson stated that she does not believe that they were issued a Building Permit. Mr. Tanner stated that we are coordinating Zoning and Building so that this would not happen.

Ms. Roberson read aloud from Section 4.D.6.4 – Waiver of Special Permit Requirements for the Planned Commercial Zone. Mr. Pember stated that the Commission is choosing not to waive the special permit requirements – it is over 500 s.f., and they don't know what the impact would be because there is nobody present to discuss it.

No action was taken. There was a consensus that the Applicant should come before the PZC to make the request for the waiver at the next meeting. Mr. Fitzgerald would like them to explain why work was started and then, he said that the Commission may possibly be inclined to grant the waiver. Mr. Fitzgerald suggested that a Cease & Desist Order be issued because they do not have a Building Permit.

There was discussion regarding whether it would need to go before the IWWC. Mr. Pember noted that the cars need to be washed before they are detailed. Ms. Roberson said that the water would be going into the sewer. Water can be discussed when they come before the PZC to request the waiver.

b. Other New Business:

1. Discussion of potential subdivision on Old Tatnic Hill Road.

Ms. Roberson explained that this Agenda Item is also postponed as Killingly Engineering is the Representative and they are unable to attend this evening.

Ms. Roberson explained that she believes that this was to be Phase One of a previous 78-lot subdivision application.

VIII. Reports of Officers and Committees

a. Staff Reports

Margaret Washburn's Report (dated 9/28/2023) was included in packets to Commission Members.

Ms. Roberson explained about a slight design change to the 8 Wauregan Road self-storage facility (fka the Regional Building). She does not feel that it is the level of any kind of modification. The Applicant is asking for feedback from the Commission.

Ms. Roberson displayed and explained drawings. They are asking if would be okay to install a smaller cargo door than the one that had been approved with a passage door next to it. This would be at the south elevation (side facing Vina Lane).

There was discussion and consensus was that it is okay with the Commission Members.

b. Budget Update

Ms. Sigfridson stated that everything looks to be in order.

c. Correspondence

Ms. Roberson stated that she forwarded training information to Commission Members and she encouraged them to go to the Advanced Land Use Academy tab which is free and can be accessed at any time. There was discussion regarding required training. Ms. Sigfridson suggested a new policy, for next year, allowing Commission Members to miss a meeting in order to complete training requirements (this would need to be coordinated to ensure a quorum).

d. Chairman's Report – None.

IX. Public Commentary

Mr. Tanner explained that he met with Jana Roberson and Margaret Washburn regarding the situation with the Regional Building and the trailers. Mr. Tanner suggested that the Regulations be changed to allow trailers in other areas in Town, other than the Industrial Zone which you can't get to. He, personally, does not have a problem with trailers in Town,

Ms. Sigfridson stated that it could be put on an agenda to discuss. She suggested that Ms. Roberson and Ms. Washburn may have ideas based on their discussion with Mr. Tanner. Ms. Roberson will research and prepare information to provide at the next meeting to start the discussion. Mr. Fitzgerald doesn't feel that trailers should be allowed in R-30 because some streets are close together. Discussion continued.

X. Adjourn

M. Sigfridson adjourned the meeting at 7:52 p.m.

Respectfully submitted,

J.S. Perreault
Recording Secretary

**TOWN OF BROOKLYN
PLANNING AND ZONING COMMISSION
NOTICE OF PUBLIC HEARING**

The Planning and Zoning Commission will hold a public hearing on October 17, 2023, starting at 6:30 p.m. via Zoom and in-person at the Clifford B. Green Memorial Center, 69 South Main Street Brooklyn, CT on the following:

- **ZRC 23-006:** Modification to Appendix 10.D: Floodplain Management Regulations of the Floodplain Overlay Zone/ (FEMA/NFIP), Applicant: PZC.

Please publish Oct. 4 and Oct. 11

**TOWN OF BROOKLYN
PLANNING AND ZONING COMMISSION**

**REQUEST FOR CHANGE
IN
ZONING REGULATIONS**

Date 9/18/23 Check # N/A Application #ZRC 23-006

Application Fee: \$250 State Fee: \$60 Publication Fee: \$60

Public Hearing Date 10/17/23 Commission Action _____ Effective Date _____

Name of Applicant BROOKLYN PZC Phone _____

Mailing Address _____

REQUEST TO AMEND ARTICLE(S) APPENDIX 10.D SECTION(S) 3.2

If more than one Article is requested please attach separate sheet for each one

PARAGRAPH TO CHANGE SEE ATTACHED OF THE ZONING REGULATIONS

REQUEST TO CHANGE:

APPENDIX 10.D FLOODPLAIN MANAGEMENT REGULATIONS
SECTION 3.2 BASIS FOR ESTABLISHING THE SPECIAL
FLOOD HAZARD AREAS

REASON FOR REQUEST:

→ CORRECTION OF LANGUAGE FOR COMPLIANCE
WITH NATIONAL FLOOD INSURANCE PROGRAM

Note: A petition may be filed at the Hearing by 20% or more of the area lots included in such a change within 500 ft of the property under Section 16.5 of the Zoning Regulations

3.0 GENERAL PROVISIONS

3.1 AREAS TO WHICH THIS REGULATION APPLIES

This regulation shall apply to all Special Flood Hazard Areas (SFHA) within the Town of Brooklyn.

3.2 BASIS FOR ESTABLISHING THE SPECIAL FLOOD HAZARD AREAS (SFHA)

~~The Special Flood Hazard Areas (SFHA) identified by the Federal Emergency Management~~

The Special Flood Hazard Areas (SFHA) identified by the Federal Emergency Management Agency (FEMA) in its Flood Insurance Study (FIS) for Windham County, Connecticut, dated September 7, 2023, and accompanying Flood Insurance Rate Maps (FIRM), dated September 7, 2023, and other supporting data, applicable to the Town of Brooklyn, and any subsequent revisions thereto, are adopted by reference and declared to be a part of this regulation. Since mapping is legally adopted by reference into this regulation it must take precedence when more restrictive until such time as a map amendment or map revision is obtained from FEMA.

The SFHA includes any area shown on the FIRM as Zones A, AE, AO, and AH, including areas designated as a floodway on a FIRM. SFHAs are determined utilizing the base flood elevations (BFE) provided on the flood profiles in the FIS for a community. BFEs provided on a FIRM are only approximate (rounded up or down) and should be verified with the BFEs published in the FIS for a specific location. Also included in the SFHA are areas of potential, demonstrable or historical flooding, including any area contiguous with, but outside the SFHA identified by FEMA, and where the land surface elevation is lower than the BFE as shown on the FIRM or in the FIS, and where the area is not protected from flooding by a natural or man-made feature. The FIRM and FIS are on file in the Office of the Brooklyn Town Clerk, 4 Wolf Den Road, Town of Brooklyn.

3.3 STRUCTURES ALREADY IN COMPLIANCE

A structure or development already in compliance with this regulation shall not be made non-compliant by any alteration, modification, repair, reconstruction or improvement and must also comply with other applicable local, state, and federal regulations. No structure or land shall hereafter be located, extended, converted, modified or structurally altered without full compliance with the terms of this regulation and other applicable regulations.

3.4 ABROGATION AND GREATER RESTRICTIONS

This regulation is not intended to repeal, abrogate or impair any existing easements, covenants, or deed restrictions. However, where this regulation and another ordinance, regulation easement, covenant or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

3.5 INTERPRETATION

In the interpretation and application of this regulation, all provisions shall be: 1) considered as minimum requirements; 2) liberally construed in favor of the governing body, and; 3) deemed neither to limit nor repeal any other powers granted under State statutes.

3.6 WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by this regulation is considered the minimum reasonable for regulatory purposes and is based on scientific and engineering consideration and research. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This regulation does not imply nor guarantee that land outside the Special Flood Hazard Area or uses permitted in such areas will be free from flooding and flood damages. This regulation shall not create liability on the part of the Town of Brooklyn or by any officer or employee thereof for any flood damages that result from reliance on this regulation or any administrative decision lawfully made thereunder.

The Town of Brooklyn, its officers and employees shall assume no liability for another person's reliance on any maps, data or information provided by the Town of Brooklyn.

SPR - \$300.00
State - \$60.00
Publ - \$50.00
\$410.00

PLANNING AND ZONING COMMISSION
TOWN OF BROOKLYN
CONNECTICUT

RECEIVED

SEP 19 2023

Received Date _____
Action Date _____

Application #SPR 23-006
Check# 2083

APPLICATION FOR SITE PLAN REVIEW

Name of Applicant Vachon Brooklyn, LLC Phone _____
Mailing Address 957 Washington St. Attleboro, Ma. Phone _____

Name of Owner same Phone _____
Mailing Address _____ Phone _____

Name of Engineer/Surveyor Killingly Engineering Associates
Address Po Box 421
Contact Person Norman Thibault Jr Phone 607-79-7349 Fax _____

Property location/address 512 Providence Road
Map # 41 Lot # 14 Zone Planned Commercial Total Acres 5.942

Proposed Activity Proposed building addition

Change of Use: Yes _____ No If Yes, Previous Use _____
Area of Proposed Structure(s) or Expansion _____

Utilities - Septic: On Site _____ Municipal Existing Proposed _____
Water: Private _____ Public Existing Proposed _____

Compliance with Article 4, Site Plan Requirements

The following shall accompany the application when required:

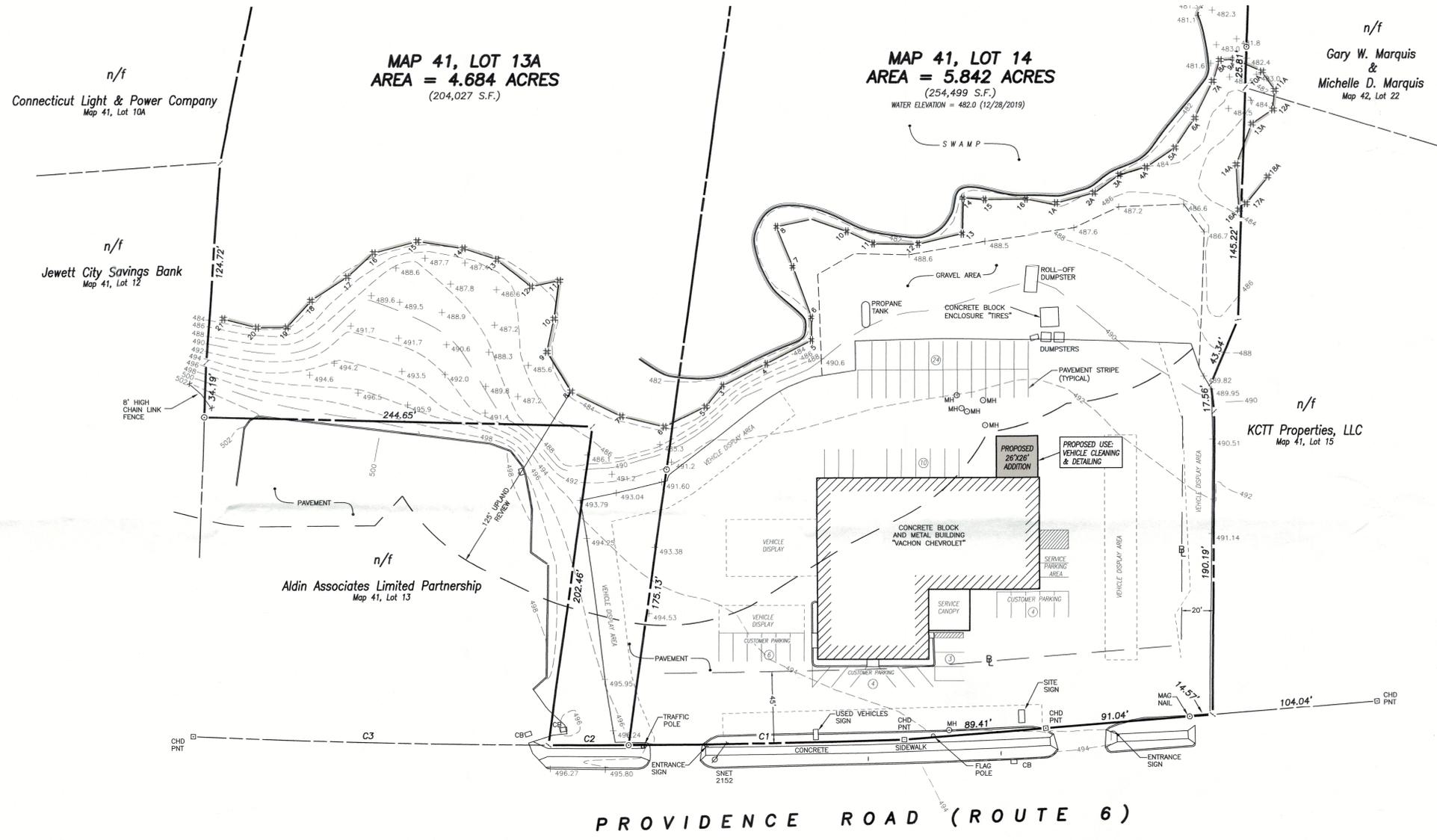
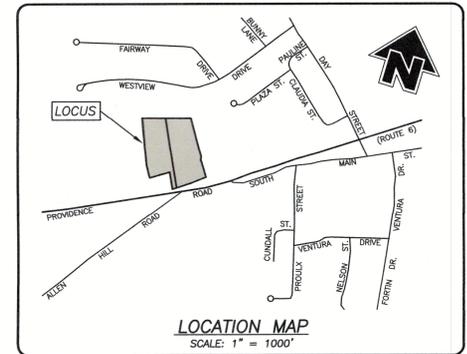
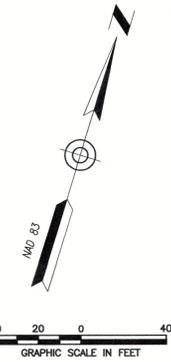
- Fee\$ _____ State Fee (\$60.00) _____ 3 copies of plans _____ Sanitary Report _____
- 4.5.5 Application/ Report of Decision from the Inland Wetlands Commission
- 4.5.5 Applications filed with other Agencies
- 12.1 Erosion and Sediment Control Plans
- See also Site Plan Review Worksheet

Variances obtained _____ Date _____

The owner and applicant hereby grant the Brooklyn Planning and Zoning Commission, the Board of Selectman, Authorized Agents of the Planning and Zoning Commission or Board of Selectman, permission to enter the property to which the application is requested for the purpose of inspection and enforcement of the Zoning regulations and the Subdivision regulations of the Town of Brooklyn

Applicant:  Date 8/8/23
Owner:  Date 9/8/23

* Note: Any consulting fees will be paid by the applicant



CURVE DATA		
C1	C2	C3
R = 5680.00'	R = 5680.00'	R = 5680.00'
D = 1°45'30"	D = 0°30'33"	D = 2°15'41"
L = 174.32'	L = 50.48'	L = 224.18'
CH = S 71°56'28" W 174.32'	CH = S 73°04'30" W 50.48'	CH = S 74°27'37" W 224.16'

- NOTES:**
- This survey has been prepared pursuant to the Regulations of Connecticut State Agencies Sections 20-300b-1 through 20-300b-20 and the "Standards for Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. on September 26, 1996; Amended October 26, 2018.
 - This survey conforms to a Class "A-2" horizontal accuracy.
 - Topographic features conform to a Class "T-2", "V-2" vertical accuracy.
 - Survey Type: Improvement Location Survey.
 - Boundary Determination Category: Resurvey
 - Zone = PC.
 - Owner of record:
 - Map 41, Lot 14 = Vachon Brooklyn, LLC, 957 Washington St., Attleboro, MA 02703, Volume 620, Page 163
 - Map 41, Lot 13A = Vachon Brooklyn, LLC, 957 Washington St., Attleboro, MA 02703, Volume 632, Page 114
 - Wetlands shown were delineated in the field by Joseph Theroux, Certified Soil Scientist, in September 2019.
 - North orientation, bearings and coordinate values shown are based on North American Datum of 1983 (NAD 83) and are taken from actual field measurements of CGS Random Points B9262 and B9264.
 - Elevations shown are based on an assumed datum. Contours shown are taken from actual field survey. Contour interval = 2'.
 - Before any construction is to commence contact "CALL BEFORE YOU DIG" at 1-800-922-4455 or 811.

DATE	DESCRIPTION

PROVIDENCE ROAD (ROUTE 6)

ALLEN HILL ROAD

TABLE OF ZONING REQUIREMENTS		
ZONE = PLANNED COMMERCIAL		
	REQUIRED	PROVIDED
Lot Area	30,000 S.F.	254,499 S.F.
Front Yard Setback	45'	49.2'
Side Yard Setback	20'	109.6'
Rear Yard Setback	20'	554.9'
Building Height	40' Max.	20'
Impervious Coverage	65% Max.	31.6%

- LEGEND**
- ⊙ IRON PIN FOUND
 - ⊠ CHD MONUMENT FOUND
 - ⊡ CHD MONUMENT POINT
 - 4 SIGN
 - ⊕ UTILITY POLE
 - ⊞ CATCH BASIN
 - ⊙ MH MANHOLE
 - ⊙ SMH SANITARY SEWER MANHOLE
 - - - 100 - - - EXISTING CONTOURS
 - ⊥ INLAND WETLANDS FLAG
 - ⊥ BUILDING SETBACK LINE

APPROVED BY THE BROOKLYN PLANNING AND ZONING COMMISSION

CHAIRMAN _____ DATE _____



Norman Thibault, Jr. 9/19/2023
 NORMAN THIBAUT, JR., P.E. No. 22834 DATE

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

Greg A. Glaude, L.S. 9/18/2023
 GREG A. GLAUDE, L.S. LIC. NO. 70191 DATE

NO CERTIFICATION IS EXPRESSED OR IMPLIED UNLESS THIS MAP BEARS THE ORIGINAL SEAL AND SIGNATURE OF THE LAND SURVEYOR.



IMPROVEMENT LOCATION SURVEY
 SHOWING PROPOSED BUILDING ADDITION
 PREPARED FOR
VACHON BROOKLYN, LLC
 512 PROVIDENCE ROAD (ROUTE 6)
 BROOKLYN, CONNECTICUT

Killingly Engineering Associates
 Civil Engineering & Surveying
 114 Westcott Road
 P.O. Box 421
 Killingly, Connecticut 06241
 (860) 779-7299
 www.killinglyengineering.com

DATE: 9/06/2023	DRAWN: RGS
SCALE: 1" = 40'	DESIGN: NET
SHEET: 1 OF 1	CHK BY: GG
DWG. No: CLIENT FILE	JOB No: 19129

K:\19129\Drawings\2023 - Building Addition\19129 2023 Building Addition.dwg Sep 18, 2023 - 6:02 PM

RECEIVED
 SEP 19 2023

PLANNING AND ZONING COMMISSION
RECEIVED TOWN OF BROOKLYN
CONNECTICUT

Received Date OCT 13 2023

Application #SP 22-007MOD

Check # 1902

APPLICATION FOR SPECIAL PERMIT

Name of Applicant Nicole and Greg Fisher Phone 617-955-7734
Mailing Address 53 Barnard Ave, Watertown MA 02472 Phone _____

Name of Engineer/Surveyor J&D Civil Engineers
Address 401 Ravenelle Road, North Grosvenordale CT 06255
Contact Person Daniel Blanchette Phone 860-923-2920 Fax _____

Name of Attorney n/a
Address _____
Phone _____ Fax _____

Property location/address 459 Wolf Den Road
Map# 18 Lot# 18A & 18B Zone RA Total Acres 97+
Sewage Disposal: Private Public _____ Existing Proposed _____
Water: Private Public _____ Existing Proposed _____

Proposed Activity Wedding/Event Venue. Special Permit has already been approved for the use. The current application is for a redesign of the parking lot. All other aspects of the project are not being modified

Compliance with Article 4, Site Plan Requirements

Is parcel located within 500 feet of an adjoining Town? no

The following shall accompany the application when required:

- Fee \$ \$610 State Fee (\$60.00) _____ 3 copies of plans Sanitary Report _____
- 4.5.5 Application/ Report of Decision from the Inland Wetlands Commission
- 4.5.5 Applications filed with other Agencies
- 12.1 Erosion and Sediment Control Plans

The owner and applicant hereby grant the Brooklyn Planning and Zoning Commission, the Board of Selectman, Authorized Agents of the Planning and Zoning Commission or Board of Selectman, permission to enter the property to which the application is requested for the purpose of inspection and enforcement of the Zoning regulations and the Subdivision regulations of the Town of Brooklyn

Applicant: _____ Date 10/5/23

Owner: _____ Date 10/5/23

*Note: All consulting fees shall be paid by the applicant

J & D CIVIL
ENGINEERS, LLC

401 Ravenelle Road
N. Grosvenordale, CT 06255
www.jdcivilengineers.com
(860) 923-2920

RECEIVED

October 5, 2023

OCT 13 2023

Town of Brooklyn
Planning and Zoning Commission
4 Wolf Den Road (PO Box 356)
Brooklyn, CT 06234

RE: Job #22172
Project Summary for
Proposed Special Events Venue
At 459 Wolf Den Road

Dear Commissioners:

J&D Civil Engineers is pleased to submit this project summary for the above referenced project. The applicant Willow Hill LLC received a Special Permit approval last year to hold Special Events such as weddings at 459 Wolf Den Road. J&D has been retained by Willow Hill LLC to assist with revising the site plans for this project. After some consideration, the applicant would like to redesign the proposed parking lot such that it is located behind the existing barn.

The approved parking lot was located roughly 100 feet from the road. The new parking lot will be located roughly 700 feet from the road. This will decrease the potential for noise and light pollution to the community. The new parking lot will not be visible from the road, which will help to maintain the rural and agricultural character of the neighborhood. Additionally, it will not require any large retaining walls, which could potentially pose a safety risk to their clients. We feel the new parking lot design is a substantial improvement over the previously approved design.

With the exception of the parking lot and a longer driveway, most other aspects of the project are not being modified. The location of the proposed driveway, and all work within the town's Right of Way are not being changed. The total number of guests, the number of parking spaces, and the overall use of the site will remain the same. The drainage system for the proposed parking lot has also been revised, and we are submitting new drainage calculations for that. We look forward to working with the commissions to get this project approved. Please let me know if you have questions or require additional information.

Sincerely,



Daniel Blanchette, PE
J&D Civil Engineers LLC

Willow Hill Events Wedding/Event Venue Stormwater Management Report

459 Wolf Den Road
Brooklyn, CT

September 29, 2023

Prepared by:

**J & D Civil
Engineers, LLC**

401 Ravenelle Road
N. Grosvenordale, CT 06255

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A. Project Narrative

The project consists of a wedding/event venue on a historic agricultural property. A special permit was granted for the project in March 2023. At this time the project's parking lot is being re-located to another portion of the property where it will be less visible in a wooded area and will require less grading. The surfaces of the proposed access driveway and parking lot will consist of pervious gravel.

Several LID features were incorporated into the design of the stormwater system. This included minimizing impervious area and drainage structures. The following LID elements were incorporated into the design of the project:

- Grass swale uphill of driveway
- Grass swale uphill of parking lot
- Upper stormwater basin
- Stormwater basin within parking lot
- Lower stormwater basin

These elements will trap sediment, reduce velocity of flow, promote infiltration, and capture clean runoff and direct it around graveled areas to reduce the chance of erosion.

B. Existing Site and Hydrologic Soil Group Description

The existing land cover includes woodland, pasture or lawn, and a small amount of impervious area associated with the existing buildings. The site is relatively steep, most of the property is between a 10% and 20% slope. The site drains from north to south primarily via sheet flow. Under both existing and proposed conditions, runoff from the site will enter Blackwell Brook located approximately 1000' downhill of site activities.

The soils in the area as Woodbridge fine sandy loam or Paxton/Montauk fine sandy loam. These soils belong to hydrologic group C, and have low permeability and below average capacity to absorb stormwater.

The Natural Resource Conservation Service (NRCS) groups soils into four categories according to their runoff producing characteristics. Hydrologic Soil Group A consists of soils that have a high infiltrative capacity and a low runoff potential even when saturated. Hydrologic Soil Group D soils have a very low infiltration rate and high runoff potential. The soils on the site fall with hydrologic soil group C which is on the lower end of the infiltration spectrum.

C. Methodology

The HydroCAD computer program was utilized for the drainage design of this project. This program models the hydrology and hydraulics of stormwater runoff based largely upon the methods developed by the Soil Conservation Service (now known as the Natural Resources Conservation Service). Required input data includes the size of the

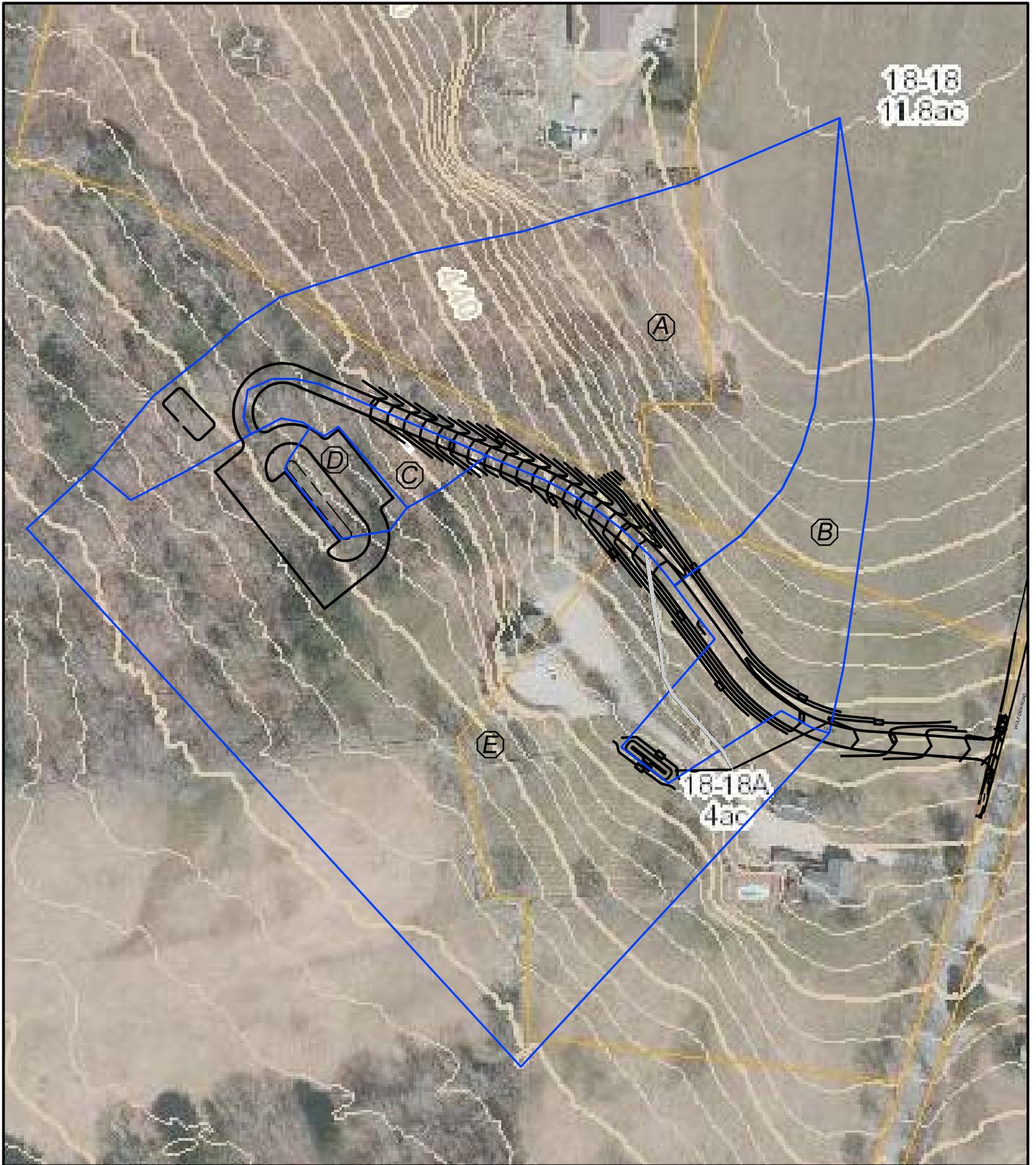
contributing drainage area, curve numbers which are based upon land use and soil types, and times of concentration.

Hydrographs with peak flows determined are calculated for each drainage area based upon the SCS synthetic unit hydrograph method. The rainfall distribution used in the program was the SCS Type III storm recommended for Connecticut. Precipitation amounts were obtained for the location from NOAA.

E. Results and Comparison of Existing and Proposed Flows

Peak Flow Comparison

	Existing	Proposed
10 Year Storm	21.9 CFS	22.7 CFS
25 Year Storm	30.2 CFS	31.0 CFS
100 Year Storm	43.1 CFS	44.2 CFS



DRAINAGE AREA MAP
SCALE 1" = 150'

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	CT 10-year	Type III 24-hr		Default	24.00	1	5.19	2
2	CT 100-year	Type III 24-hr		Default	24.00	1	8.04	2
3	CT 25-year	Type III 24-hr		Default	24.00	1	6.31	2

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Drainage Model for BH Trailers

Type III 24-hr CT 10-year Rainfall=5.19"

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Summary for Subcatchment 1S: Existing

Runoff = 21.93 cfs @ 12.46 hrs, Volume= 2.863 af, Depth= 2.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr CT 10-year Rainfall=5.19"

Area (ac)	CN	Description
0.090	98	Roofs, HSG C
0.890	96	Gravel surface, HSG C
8.160	74	Pasture/grassland/range, Good, HSG C
4.510	70	Woods, Good, HSG C
13.650	74	Weighted Average
13.560		99.34% Pervious Area
0.090		0.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.3	300	0.0400	0.20		Sheet Flow, Grass: Dense n= 0.240 P2= 3.40"
7.0	800	0.0750	1.92		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
32.3	1,100	Total			

Summary for Subcatchment A: NorthernRunoff = 6.10 cfs @ 12.53 hrs, Volume= 0.861 af, Depth= 2.43"
Routed to Pond 3P : lower basinRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr CT 10-year Rainfall=5.19"

Area (ac)	CN	Description
2.530	74	Pasture/grassland/range, Good, HSG C
1.540	70	Woods, Good, HSG C
0.180	96	Gravel surface, HSG C
4.250	73	Weighted Average
4.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.3	300	0.0200	0.15		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
1.5	200	0.1000	2.21		Shallow Concentrated Flow, Pasture - Flatter Short Grass Pasture Kv= 7.0 fps
2.8	750	0.0880	4.45		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
37.6	1,250	Total			

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Drainage Model for BH Trailers

Type III 24-hr CT 10-year Rainfall=5.19"

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Summary for Subcatchment B: northeast

Runoff = 2.76 cfs @ 12.47 hrs, Volume= 0.364 af, Depth= 2.69"
 Routed to Reach 1R :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 10-year Rainfall=5.19"

Area (ac)	CN	Description
1.500	74	Pasture/grassland/range, Good, HSG C
0.120	96	Gravel surface, HSG C
1.620	76	Weighted Average
1.620		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.7	300	0.0290	0.17		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
2.5	250	0.0560	1.66		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.9	240	0.0200	2.12		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
33.1	790	Total			

Summary for Subcatchment C: above lot

Runoff = 1.78 cfs @ 12.20 hrs, Volume= 0.166 af, Depth= 2.52"
 Routed to Reach 3R : (new Reach)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 10-year Rainfall=5.19"

Area (sf)	CN	Description
8,712	74	Pasture/grassland/range, Good, HSG C
21,344	70	Woods, Good, HSG C
4,356	96	Gravel surface, HSG C
34,412	74	Weighted Average
34,412		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	180	0.0800	0.24		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
1.7	210	0.0190	2.07		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
14.4	390	Total			

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Drainage Model for BH Trailers

Type III 24-hr CT 10-year Rainfall=5.19"

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Summary for Subcatchment D: upper lot

Runoff = 1.03 cfs @ 12.07 hrs, Volume= 0.072 af, Depth= 3.75"
 Routed to Pond 1P : mid lot basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 10-year Rainfall=5.19"

Area (ac)	CN	Description
0.090	74	Pasture/grassland/range, Good, HSG C
0.140	96	Gravel surface, HSG C
0.230	87	Weighted Average
0.230		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment E: Southern

Runoff = 13.71 cfs @ 12.32 hrs, Volume= 1.517 af, Depth= 2.69"
 Routed to Reach 5R : (new Reach)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 10-year Rainfall=5.19"

Area (ac)	CN	Description
4.660	74	Pasture/grassland/range, Good, HSG C
1.250	70	Woods, Good, HSG C
0.760	96	Gravel surface, HSG C
0.090	98	Roofs, HSG C
6.760	76	Weighted Average
6.670		98.67% Pervious Area
0.090		1.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	300	0.0670	0.24		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
1.8	200	0.0700	1.85		Shallow Concentrated Flow, Pasture - Flatter Short Grass Pasture Kv= 7.0 fps
22.4	500	Total			

Summary for Reach 1R:

Inflow Area = 1.620 ac, 0.00% Impervious, Inflow Depth = 2.69" for CT 10-year event
 Inflow = 2.76 cfs @ 12.47 hrs, Volume= 0.364 af
 Outflow = 2.76 cfs @ 12.47 hrs, Volume= 0.364 af, Atten= 0%, Lag= 0.1 min
 Routed to Reach 2R : (new Reach)

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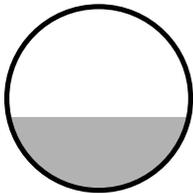
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Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 9.47 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 3.93 fps, Avg. Travel Time= 0.5 min

Peak Storage= 36 cf @ 12.47 hrs
Average Depth at Peak Storage= 0.40' , Surface Width= 0.98'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.27 cfs

12.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 124.0' Slope= 0.1274 '/'
Inlet Invert= 450.30', Outlet Invert= 434.50'



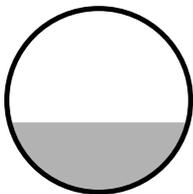
Summary for Reach 2R: (new Reach)

Inflow Area = 1.620 ac, 0.00% Impervious, Inflow Depth = 2.69" for CT 10-year event
Inflow = 2.76 cfs @ 12.47 hrs, Volume= 0.364 af
Outflow = 2.76 cfs @ 12.47 hrs, Volume= 0.364 af, Atten= 0%, Lag= 0.1 min
Routed to Pond B1 : Upper Basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.13 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.20 fps, Avg. Travel Time= 0.2 min

Peak Storage= 17 cf @ 12.47 hrs
Average Depth at Peak Storage= 0.38' , Surface Width= 0.97'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.07 cfs

12.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 62.0' Slope= 0.1532 '/'
Inlet Invert= 434.50', Outlet Invert= 425.00'



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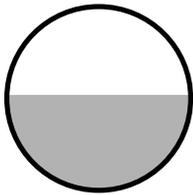
Summary for Reach 3R: (new Reach)

Inflow Area = 0.790 ac, 0.00% Impervious, Inflow Depth = 2.52" for CT 10-year event
Inflow = 1.78 cfs @ 12.20 hrs, Volume= 0.166 af
Outflow = 1.78 cfs @ 12.21 hrs, Volume= 0.166 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 4R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.32 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.71 fps, Avg. Travel Time= 0.7 min

Peak Storage= 30 cf @ 12.21 hrs
Average Depth at Peak Storage= 0.52' , Surface Width= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.34 cfs

12.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 72.0' Slope= 0.0208 '/'
Inlet Invert= 400.00', Outlet Invert= 398.50'



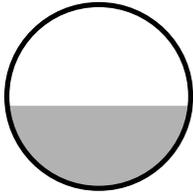
Summary for Reach 4R: (new Reach)

Inflow Area = 1.020 ac, 0.00% Impervious, Inflow Depth = 2.40" for CT 10-year event
Inflow = 2.13 cfs @ 12.23 hrs, Volume= 0.204 af
Outflow = 2.13 cfs @ 12.24 hrs, Volume= 0.204 af, Atten= 0%, Lag= 0.3 min
Routed to Pond 3P : lower basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.99 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.58 fps, Avg. Travel Time= 1.1 min

Peak Storage= 53 cf @ 12.24 hrs
Average Depth at Peak Storage= 0.56' , Surface Width= 1.24'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 5.14 cfs

15.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 100.0' Slope= 0.0150 '/'
Inlet Invert= 398.50', Outlet Invert= 397.00'



Summary for Reach 5R: (new Reach)

Inflow Area = 13.650 ac, 0.66% Impervious, Inflow Depth = 2.52" for CT 10-year event
 Inflow = 22.67 cfs @ 12.36 hrs, Volume= 2.868 af
 Outflow = 22.67 cfs @ 12.36 hrs, Volume= 2.868 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: mid lot basin

Inflow Area = 0.230 ac, 0.00% Impervious, Inflow Depth = 3.75" for CT 10-year event
 Inflow = 1.03 cfs @ 12.07 hrs, Volume= 0.072 af
 Outflow = 0.42 cfs @ 12.27 hrs, Volume= 0.039 af, Atten= 59%, Lag= 12.0 min
 Primary = 0.42 cfs @ 12.27 hrs, Volume= 0.039 af
 Routed to Reach 4R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 401.86' @ 12.27 hrs Surf.Area= 1,229 sf Storage= 1,517 cf

Plug-Flow detention time= 212.8 min calculated for 0.039 af (54% of inflow)
 Center-of-Mass det. time= 104.0 min (902.9 - 798.9)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	2,610 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
400.00	400	0	0
402.00	1,290	1,690	1,690
402.50	2,390	920	2,610

Device	Routing	Invert	Outlet Devices
#1	Primary	401.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.41 cfs @ 12.27 hrs HW=401.86' (Free Discharge)
 ↑1=Orifice/Grate (Weir Controls 0.41 cfs @ 0.82 fps)

Summary for Pond 3P: lower basin

Inflow Area = 5.270 ac, 0.00% Impervious, Inflow Depth = 2.43" for CT 10-year event
 Inflow = 7.27 cfs @ 12.49 hrs, Volume= 1.065 af
 Outflow = 7.26 cfs @ 12.49 hrs, Volume= 1.008 af, Atten= 0%, Lag= 0.3 min
 Primary = 7.26 cfs @ 12.49 hrs, Volume= 1.008 af
 Routed to Reach 5R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 398.14' @ 12.49 hrs Surf.Area= 2,144 sf Storage= 2,734 cf

Plug-Flow detention time= 40.4 min calculated for 1.008 af (95% of inflow)
 Center-of-Mass det. time= 11.6 min (876.8 - 865.2)

Volume	Invert	Avail.Storage	Storage Description
#1	396.00'	5,816 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.00	781	0	0
398.00	1,690	2,471	2,471
399.00	5,000	3,345	5,816

Device	Routing	Invert	Outlet Devices
#1	Primary	398.00'	60.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=7.23 cfs @ 12.49 hrs HW=398.14' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 7.23 cfs @ 0.88 fps)

Summary for Pond B1: Upper Basin

Inflow Area = 1.620 ac, 0.00% Impervious, Inflow Depth = 2.69" for CT 10-year event
 Inflow = 2.76 cfs @ 12.47 hrs, Volume= 0.364 af
 Outflow = 2.76 cfs @ 12.48 hrs, Volume= 0.343 af, Atten= 0%, Lag= 0.3 min
 Primary = 2.76 cfs @ 12.48 hrs, Volume= 0.343 af
 Routed to Reach 5R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 424.07' @ 12.48 hrs Surf.Area= 990 sf Storage= 981 cf

Plug-Flow detention time= 43.7 min calculated for 0.343 af (94% of inflow)
 Center-of-Mass det. time= 12.7 min (868.9 - 856.2)

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Drainage Model for BH Trailers
Type III 24-hr CT 10-year Rainfall=5.19"

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Volume	Invert	Avail.Storage	Storage Description
#1	422.00'	1,621 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
422.00	96	0	0
424.00	820	916	916
424.50	2,000	705	1,621

Device	Routing	Invert	Outlet Devices
#1	Primary	424.00'	60.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=2.75 cfs @ 12.48 hrs HW=424.07' (Free Discharge)
 ↑1=**Broad-Crested Rectangular Weir** (Weir Controls 2.75 cfs @ 0.64 fps)

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Drainage Model for BH Trailers

Type III 24-hr CT 100-year Rainfall=8.04"

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Summary for Subcatchment 1S: Existing

Runoff = 43.41 cfs @ 12.45 hrs, Volume= 5.644 af, Depth= 4.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr CT 100-year Rainfall=8.04"

Area (ac)	CN	Description
0.090	98	Roofs, HSG C
0.890	96	Gravel surface, HSG C
8.160	74	Pasture/grassland/range, Good, HSG C
4.510	70	Woods, Good, HSG C
13.650	74	Weighted Average
13.560		99.34% Pervious Area
0.090		0.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.3	300	0.0400	0.20		Sheet Flow, Grass: Dense n= 0.240 P2= 3.40"
7.0	800	0.0750	1.92		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
32.3	1,100	Total			

Summary for Subcatchment A: NorthernRunoff = 12.25 cfs @ 12.50 hrs, Volume= 1.716 af, Depth= 4.85"
Routed to Pond 3P : lower basinRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr CT 100-year Rainfall=8.04"

Area (ac)	CN	Description
2.530	74	Pasture/grassland/range, Good, HSG C
1.540	70	Woods, Good, HSG C
0.180	96	Gravel surface, HSG C
4.250	73	Weighted Average
4.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.3	300	0.0200	0.15		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
1.5	200	0.1000	2.21		Shallow Concentrated Flow, Pasture - Flatter Short Grass Pasture Kv= 7.0 fps
2.8	750	0.0880	4.45		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
37.6	1,250	Total			

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Type III 24-hr CT 100-year Rainfall=8.04"

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Summary for Subcatchment B: northeast

Runoff = 5.31 cfs @ 12.46 hrs, Volume= 0.701 af, Depth= 5.19"
 Routed to Reach 1R :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 100-year Rainfall=8.04"

Area (ac)	CN	Description
1.500	74	Pasture/grassland/range, Good, HSG C
0.120	96	Gravel surface, HSG C
1.620	76	Weighted Average
1.620		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.7	300	0.0290	0.17		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
2.5	250	0.0560	1.66		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.9	240	0.0200	2.12		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
33.1	790	Total			

Summary for Subcatchment C: above lot

Runoff = 3.53 cfs @ 12.20 hrs, Volume= 0.327 af, Depth= 4.96"
 Routed to Reach 3R : (new Reach)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 100-year Rainfall=8.04"

Area (sf)	CN	Description
8,712	74	Pasture/grassland/range, Good, HSG C
21,344	70	Woods, Good, HSG C
4,356	96	Gravel surface, HSG C
34,412	74	Weighted Average
34,412		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	180	0.0800	0.24		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
1.7	210	0.0190	2.07		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
14.4	390	Total			

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Type III 24-hr CT 100-year Rainfall=8.04"

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Summary for Subcatchment D: upper lot

Runoff = 1.73 cfs @ 12.07 hrs, Volume= 0.124 af, Depth= 6.49"
 Routed to Pond 1P : mid lot basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 100-year Rainfall=8.04"

Area (ac)	CN	Description
0.090	74	Pasture/grassland/range, Good, HSG C
0.140	96	Gravel surface, HSG C
0.230	87	Weighted Average
0.230		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment E: Southern

Runoff = 26.36 cfs @ 12.31 hrs, Volume= 2.926 af, Depth= 5.19"
 Routed to Reach 5R : (new Reach)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 100-year Rainfall=8.04"

Area (ac)	CN	Description
4.660	74	Pasture/grassland/range, Good, HSG C
1.250	70	Woods, Good, HSG C
0.760	96	Gravel surface, HSG C
0.090	98	Roofs, HSG C
6.760	76	Weighted Average
6.670		98.67% Pervious Area
0.090		1.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	300	0.0670	0.24		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
1.8	200	0.0700	1.85		Shallow Concentrated Flow, Pasture - Flatter Short Grass Pasture Kv= 7.0 fps
22.4	500	Total			

Summary for Reach 1R:

Inflow Area = 1.620 ac, 0.00% Impervious, Inflow Depth = 5.19" for CT 100-year event
 Inflow = 5.31 cfs @ 12.46 hrs, Volume= 0.701 af
 Outflow = 5.32 cfs @ 12.47 hrs, Volume= 0.701 af, Atten= 0%, Lag= 0.1 min
 Routed to Reach 2R : (new Reach)

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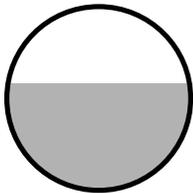
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Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.18 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 4.55 fps, Avg. Travel Time= 0.5 min

Peak Storage= 59 cf @ 12.47 hrs
Average Depth at Peak Storage= 0.58' , Surface Width= 0.99'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.27 cfs

12.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 124.0' Slope= 0.1274 '/'
Inlet Invert= 450.30', Outlet Invert= 434.50'



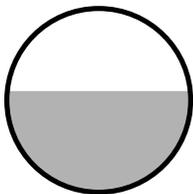
Summary for Reach 2R: (new Reach)

Inflow Area = 1.620 ac, 0.00% Impervious, Inflow Depth = 5.19" for CT 100-year event
Inflow = 5.32 cfs @ 12.47 hrs, Volume= 0.701 af
Outflow = 5.31 cfs @ 12.47 hrs, Volume= 0.701 af, Atten= 0%, Lag= 0.0 min
Routed to Pond B1 : Upper Basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 12.00 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.86 fps, Avg. Travel Time= 0.2 min

Peak Storage= 27 cf @ 12.47 hrs
Average Depth at Peak Storage= 0.55' , Surface Width= 0.99'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.07 cfs

12.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 62.0' Slope= 0.1532 '/'
Inlet Invert= 434.50', Outlet Invert= 425.00'



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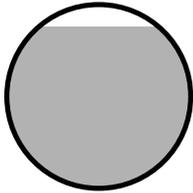
Summary for Reach 3R: (new Reach)

Inflow Area = 0.790 ac, 0.00% Impervious, Inflow Depth = 4.96" for CT 100-year event
Inflow = 3.53 cfs @ 12.20 hrs, Volume= 0.327 af
Outflow = 3.52 cfs @ 12.20 hrs, Volume= 0.327 af, Atten= 0%, Lag= 0.3 min
Routed to Reach 4R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.85 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 1.98 fps, Avg. Travel Time= 0.6 min

Peak Storage= 53 cf @ 12.20 hrs
Average Depth at Peak Storage= 0.88' , Surface Width= 0.65'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.34 cfs

12.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 72.0' Slope= 0.0208 '/'
Inlet Invert= 400.00', Outlet Invert= 398.50'



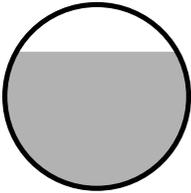
Summary for Reach 4R: (new Reach)

Inflow Area = 1.020 ac, 0.00% Impervious, Inflow Depth = 4.92" for CT 100-year event
Inflow = 4.64 cfs @ 12.16 hrs, Volume= 0.418 af
Outflow = 4.64 cfs @ 12.16 hrs, Volume= 0.418 af, Atten= 0%, Lag= 0.3 min
Routed to Pond 3P : lower basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.74 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.82 fps, Avg. Travel Time= 0.9 min

Peak Storage= 98 cf @ 12.16 hrs
Average Depth at Peak Storage= 0.93' , Surface Width= 1.09'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 5.14 cfs

15.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 100.0' Slope= 0.0150 '/'
Inlet Invert= 398.50', Outlet Invert= 397.00'



Summary for Reach 5R: (new Reach)

Inflow Area = 13.650 ac, 0.66% Impervious, Inflow Depth = 5.00" for CT 100-year event
 Inflow = 44.24 cfs @ 12.34 hrs, Volume= 5.684 af
 Outflow = 44.24 cfs @ 12.34 hrs, Volume= 5.684 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: mid lot basin

Inflow Area = 0.230 ac, 0.00% Impervious, Inflow Depth = 6.49" for CT 100-year event
 Inflow = 1.73 cfs @ 12.07 hrs, Volume= 0.124 af
 Outflow = 1.66 cfs @ 12.09 hrs, Volume= 0.091 af, Atten= 4%, Lag= 1.3 min
 Primary = 1.66 cfs @ 12.09 hrs, Volume= 0.091 af
 Routed to Reach 4R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 401.96' @ 12.09 hrs Surf.Area= 1,272 sf Storage= 1,637 cf

Plug-Flow detention time= 148.9 min calculated for 0.091 af (73% of inflow)
 Center-of-Mass det. time= 61.9 min (845.8 - 783.9)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	2,610 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
400.00	400	0	0
402.00	1,290	1,690	1,690
402.50	2,390	920	2,610

Device	Routing	Invert	Outlet Devices
#1	Primary	401.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.65 cfs @ 12.09 hrs HW=401.96' (Free Discharge)
 ↑1=Orifice/Grate (Weir Controls 1.65 cfs @ 1.30 fps)

Summary for Pond 3P: lower basin

Inflow Area = 5.270 ac, 0.00% Impervious, Inflow Depth = 4.86" for CT 100-year event
 Inflow = 14.43 cfs @ 12.48 hrs, Volume= 2.134 af
 Outflow = 14.42 cfs @ 12.49 hrs, Volume= 2.077 af, Atten= 0%, Lag= 0.6 min
 Primary = 14.42 cfs @ 12.49 hrs, Volume= 2.077 af
 Routed to Reach 5R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 398.22' @ 12.49 hrs Surf.Area= 2,407 sf Storage= 2,915 cf

Plug-Flow detention time= 23.6 min calculated for 2.077 af (97% of inflow)
 Center-of-Mass det. time= 8.0 min (852.0 - 844.0)

Volume	Invert	Avail.Storage	Storage Description
#1	396.00'	5,816 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.00	781	0	0
398.00	1,690	2,471	2,471
399.00	5,000	3,345	5,816

Device	Routing	Invert	Outlet Devices
#1	Primary	398.00'	60.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=14.41 cfs @ 12.49 hrs HW=398.22' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 14.41 cfs @ 1.11 fps)

Summary for Pond B1: Upper Basin

Inflow Area = 1.620 ac, 0.00% Impervious, Inflow Depth = 5.19" for CT 100-year event
 Inflow = 5.31 cfs @ 12.47 hrs, Volume= 0.701 af
 Outflow = 5.31 cfs @ 12.47 hrs, Volume= 0.680 af, Atten= 0%, Lag= 0.1 min
 Primary = 5.31 cfs @ 12.47 hrs, Volume= 0.680 af
 Routed to Reach 5R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 424.11' @ 12.47 hrs Surf.Area= 1,083 sf Storage= 1,022 cf

Plug-Flow detention time= 26.6 min calculated for 0.680 af (97% of inflow)
 Center-of-Mass det. time= 9.1 min (846.4 - 837.3)

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Volume	Invert	Avail.Storage	Storage Description
#1	422.00'	1,621 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
422.00	96	0	0
424.00	820	916	916
424.50	2,000	705	1,621

Device	Routing	Invert	Outlet Devices
#1	Primary	424.00'	60.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=5.29 cfs @ 12.47 hrs HW=424.11' (Free Discharge)
 ↑1=**Broad-Crested Rectangular Weir** (Weir Controls 5.29 cfs @ 0.79 fps)

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Drainage Model for BH Trailers

Type III 24-hr CT 25-year Rainfall=6.31"

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Summary for Subcatchment 1S: Existing

Runoff = 30.20 cfs @ 12.45 hrs, Volume= 3.921 af, Depth= 3.45"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr CT 25-year Rainfall=6.31"

Area (ac)	CN	Description
0.090	98	Roofs, HSG C
0.890	96	Gravel surface, HSG C
8.160	74	Pasture/grassland/range, Good, HSG C
4.510	70	Woods, Good, HSG C
13.650	74	Weighted Average
13.560		99.34% Pervious Area
0.090		0.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.3	300	0.0400	0.20		Sheet Flow, Grass: Dense n= 0.240 P2= 3.40"
7.0	800	0.0750	1.92		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
32.3	1,100	Total			

Summary for Subcatchment A: NorthernRunoff = 8.46 cfs @ 12.53 hrs, Volume= 1.186 af, Depth= 3.35"
Routed to Pond 3P : lower basinRunoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr CT 25-year Rainfall=6.31"

Area (ac)	CN	Description
2.530	74	Pasture/grassland/range, Good, HSG C
1.540	70	Woods, Good, HSG C
0.180	96	Gravel surface, HSG C
4.250	73	Weighted Average
4.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.3	300	0.0200	0.15		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
1.5	200	0.1000	2.21		Shallow Concentrated Flow, Pasture - Flatter Short Grass Pasture Kv= 7.0 fps
2.8	750	0.0880	4.45		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
37.6	1,250	Total			

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Type III 24-hr CT 25-year Rainfall=6.31"

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Summary for Subcatchment B: northeast

Runoff = 3.75 cfs @ 12.47 hrs, Volume= 0.493 af, Depth= 3.65"
 Routed to Reach 1R :

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 25-year Rainfall=6.31"

Area (ac)	CN	Description
1.500	74	Pasture/grassland/range, Good, HSG C
0.120	96	Gravel surface, HSG C
1.620	76	Weighted Average
1.620		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.7	300	0.0290	0.17		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
2.5	250	0.0560	1.66		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.9	240	0.0200	2.12		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
33.1	790	Total			

Summary for Subcatchment C: above lot

Runoff = 2.45 cfs @ 12.20 hrs, Volume= 0.227 af, Depth= 3.45"
 Routed to Reach 3R : (new Reach)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 25-year Rainfall=6.31"

Area (sf)	CN	Description
8,712	74	Pasture/grassland/range, Good, HSG C
21,344	70	Woods, Good, HSG C
4,356	96	Gravel surface, HSG C
34,412	74	Weighted Average
34,412		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	180	0.0800	0.24		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
1.7	210	0.0190	2.07		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
14.4	390	Total			

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Type III 24-hr CT 25-year Rainfall=6.31"

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Summary for Subcatchment D: upper lot

Runoff = 1.30 cfs @ 12.07 hrs, Volume= 0.092 af, Depth= 4.81"
 Routed to Pond 1P : mid lot basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 25-year Rainfall=6.31"

Area (ac)	CN	Description
0.090	74	Pasture/grassland/range, Good, HSG C
0.140	96	Gravel surface, HSG C
0.230	87	Weighted Average
0.230		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.0					Direct Entry,

Summary for Subcatchment E: Southern

Runoff = 18.61 cfs @ 12.32 hrs, Volume= 2.056 af, Depth= 3.65"
 Routed to Reach 5R : (new Reach)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Type III 24-hr CT 25-year Rainfall=6.31"

Area (ac)	CN	Description
4.660	74	Pasture/grassland/range, Good, HSG C
1.250	70	Woods, Good, HSG C
0.760	96	Gravel surface, HSG C
0.090	98	Roofs, HSG C
6.760	76	Weighted Average
6.670		98.67% Pervious Area
0.090		1.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	300	0.0670	0.24		Sheet Flow, lawn Grass: Dense n= 0.240 P2= 3.40"
1.8	200	0.0700	1.85		Shallow Concentrated Flow, Pasture - Flatter Short Grass Pasture Kv= 7.0 fps
22.4	500	Total			

Summary for Reach 1R:

Inflow Area = 1.620 ac, 0.00% Impervious, Inflow Depth = 3.65" for CT 25-year event
 Inflow = 3.75 cfs @ 12.47 hrs, Volume= 0.493 af
 Outflow = 3.75 cfs @ 12.47 hrs, Volume= 0.493 af, Atten= 0%, Lag= 0.1 min
 Routed to Reach 2R : (new Reach)

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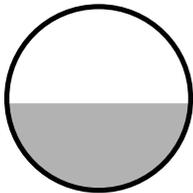
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Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 10.27 fps, Min. Travel Time= 0.2 min
Avg. Velocity = 4.21 fps, Avg. Travel Time= 0.5 min

Peak Storage= 45 cf @ 12.47 hrs
Average Depth at Peak Storage= 0.47' , Surface Width= 1.00'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 8.27 cfs

12.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 124.0' Slope= 0.1274 '/'
Inlet Invert= 450.30', Outlet Invert= 434.50'



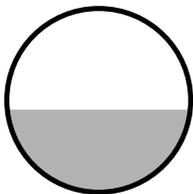
Summary for Reach 2R: (new Reach)

Inflow Area = 1.620 ac, 0.00% Impervious, Inflow Depth = 3.65" for CT 25-year event
Inflow = 3.75 cfs @ 12.47 hrs, Volume= 0.493 af
Outflow = 3.75 cfs @ 12.47 hrs, Volume= 0.493 af, Atten= 0%, Lag= 0.1 min
Routed to Pond B1 : Upper Basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 11.00 fps, Min. Travel Time= 0.1 min
Avg. Velocity = 4.49 fps, Avg. Travel Time= 0.2 min

Peak Storage= 21 cf @ 12.47 hrs
Average Depth at Peak Storage= 0.45' , Surface Width= 0.99'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 9.07 cfs

12.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 62.0' Slope= 0.1532 '/'
Inlet Invert= 434.50', Outlet Invert= 425.00'



22172 Wineland - 2023-09-29

Prepared by J&D Civil Engineers LLC

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Drainage Model for BH Trailers
Type III 24-hr CT 25-year Rainfall=6.31"

Printed 10/2/2023

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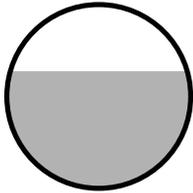
Summary for Reach 3R: (new Reach)

Inflow Area = 0.790 ac, 0.00% Impervious, Inflow Depth = 3.45" for CT 25-year event
Inflow = 2.45 cfs @ 12.20 hrs, Volume= 0.227 af
Outflow = 2.45 cfs @ 12.20 hrs, Volume= 0.227 af, Atten= 0%, Lag= 0.2 min
Routed to Reach 4R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.65 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 1.83 fps, Avg. Travel Time= 0.7 min

Peak Storage= 38 cf @ 12.20 hrs
Average Depth at Peak Storage= 0.64' , Surface Width= 0.96'
Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 3.34 cfs

12.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 72.0' Slope= 0.0208 '/'
Inlet Invert= 400.00', Outlet Invert= 398.50'



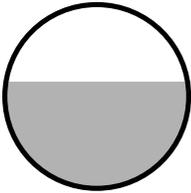
Summary for Reach 4R: (new Reach)

Inflow Area = 1.020 ac, 0.00% Impervious, Inflow Depth = 3.37" for CT 25-year event
Inflow = 3.29 cfs @ 12.17 hrs, Volume= 0.286 af
Outflow = 3.28 cfs @ 12.17 hrs, Volume= 0.286 af, Atten= 0%, Lag= 0.3 min
Routed to Pond 3P : lower basin

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.44 fps, Min. Travel Time= 0.4 min
Avg. Velocity = 1.69 fps, Avg. Travel Time= 1.0 min

Peak Storage= 74 cf @ 12.17 hrs
Average Depth at Peak Storage= 0.73' , Surface Width= 1.23'
Bank-Full Depth= 1.25' Flow Area= 1.2 sf, Capacity= 5.14 cfs

15.0" Round Pipe
n= 0.020 Corrugated PE, corrugated interior
Length= 100.0' Slope= 0.0150 '/'
Inlet Invert= 398.50', Outlet Invert= 397.00'



Summary for Reach 5R: (new Reach)

Inflow Area = 13.650 ac, 0.66% Impervious, Inflow Depth = 3.47" for CT 25-year event
 Inflow = 30.98 cfs @ 12.35 hrs, Volume= 3.942 af
 Outflow = 30.98 cfs @ 12.35 hrs, Volume= 3.942 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Summary for Pond 1P: mid lot basin

Inflow Area = 0.230 ac, 0.00% Impervious, Inflow Depth = 4.81" for CT 25-year event
 Inflow = 1.30 cfs @ 12.07 hrs, Volume= 0.092 af
 Outflow = 1.08 cfs @ 12.12 hrs, Volume= 0.059 af, Atten= 17%, Lag= 3.1 min
 Primary = 1.08 cfs @ 12.12 hrs, Volume= 0.059 af
 Routed to Reach 4R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 401.92' @ 12.12 hrs Surf.Area= 1,254 sf Storage= 1,587 cf

Plug-Flow detention time= 176.8 min calculated for 0.059 af (64% of inflow)
 Center-of-Mass det. time= 77.8 min (869.7 - 792.0)

Volume	Invert	Avail.Storage	Storage Description
#1	400.00'	2,610 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
400.00	400	0	0
402.00	1,290	1,690	1,690
402.50	2,390	920	2,610

Device	Routing	Invert	Outlet Devices
#1	Primary	401.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.07 cfs @ 12.12 hrs HW=401.92' (Free Discharge)
 ↑1=Orifice/Grate (Weir Controls 1.07 cfs @ 1.13 fps)

Summary for Pond 3P: lower basin

Inflow Area = 5.270 ac, 0.00% Impervious, Inflow Depth = 3.35" for CT 25-year event
 Inflow = 10.02 cfs @ 12.49 hrs, Volume= 1.472 af
 Outflow = 10.01 cfs @ 12.49 hrs, Volume= 1.415 af, Atten= 0%, Lag= 0.2 min
 Primary = 10.01 cfs @ 12.49 hrs, Volume= 1.415 af
 Routed to Reach 5R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 398.17' @ 12.49 hrs Surf.Area= 2,253 sf Storage= 2,807 cf

Plug-Flow detention time= 31.3 min calculated for 1.415 af (96% of inflow)
 Center-of-Mass det. time= 9.7 min (864.9 - 855.1)

Volume	Invert	Avail.Storage	Storage Description
#1	396.00'	5,816 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
396.00	781	0	0
398.00	1,690	2,471	2,471
399.00	5,000	3,345	5,816

Device	Routing	Invert	Outlet Devices
#1	Primary	398.00'	60.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=9.98 cfs @ 12.49 hrs HW=398.17' (Free Discharge)
 ↳1=Broad-Crested Rectangular Weir (Weir Controls 9.98 cfs @ 0.98 fps)

Summary for Pond B1: Upper Basin

Inflow Area = 1.620 ac, 0.00% Impervious, Inflow Depth = 3.65" for CT 25-year event
 Inflow = 3.75 cfs @ 12.47 hrs, Volume= 0.493 af
 Outflow = 3.75 cfs @ 12.47 hrs, Volume= 0.472 af, Atten= 0%, Lag= 0.2 min
 Primary = 3.75 cfs @ 12.47 hrs, Volume= 0.472 af
 Routed to Reach 5R : (new Reach)

Routing by Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
 Peak Elev= 424.09' @ 12.47 hrs Surf.Area= 1,028 sf Storage= 997 cf

Plug-Flow detention time= 34.7 min calculated for 0.472 af (96% of inflow)
 Center-of-Mass det. time= 10.9 min (858.3 - 847.5)

22172 Wineland - 2023-09-29

Prepared by J&D Civil Engineers LLC

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Drainage Model for BH Trailers
Type III 24-hr CT 25-year Rainfall=6.31"

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Volume	Invert	Avail.Storage	Storage Description
#1	422.00'	1,621 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
422.00	96	0	0
424.00	820	916	916
424.50	2,000	705	1,621

Device	Routing	Invert	Outlet Devices
#1	Primary	424.00'	60.0' long x 6.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.37 2.51 2.70 2.68 2.68 2.67 2.65 2.65 2.65 2.65 2.66 2.66 2.67 2.69 2.72 2.76 2.83

Primary OutFlow Max=3.72 cfs @ 12.47 hrs HW=424.09' (Free Discharge)
 ↑1=**Broad-Crested Rectangular Weir** (Weir Controls 3.72 cfs @ 0.70 fps)

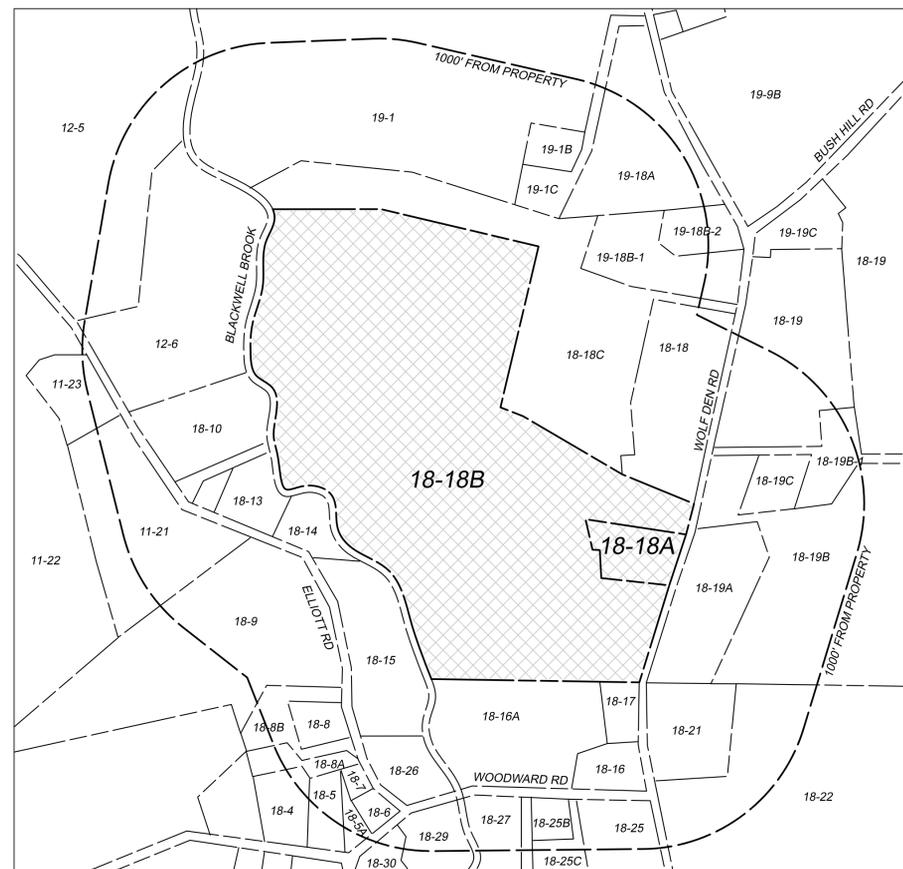
SITE PLAN MODIFICATION FOR SPECIAL PERMIT # 22-007 FOR WEDDING/EVENT VENUE FOR **WILLOW HILL LLC** 459 WOLF DEN ROAD BROOKLYN, CONNECTICUT DATED: SEPTEMBER 29, 2023

PREPARED FOR:

WILLOW HILL LLC, CARE OF
NICOLE WINELAND-THOMSON FISHER
AND GREGORY FISHER
53 BARNARD AVENUE
WATERTOWN, MA 02472

INDEX OF DRAWINGS

- 1 COVER
- 2 ACCESS DRIVEWAY AND PARKING LOT PLAN
- 3 EVENT AREA PLAN
- 4 NOTES AND DETAILS
- 5 DRIVEWAY AND PARKING LOT DETAILS



LOCATION MAP
1" = 500'

ZONE: RESIDENTIAL AGRICULTURAL (RA)
USE: SPECIAL EVENTS

ITEM	REQUIRED	EXISTING	PROPOSED
FRONTAGE	150'	>336'	> 336'
FRONT SETBACK	50'	115'	115'
SIDE SETBACK	40'	5'	5'
REAR SETBACK	50'	293'	293'
LOT SIZE	2 ACRES	4+ ACRES	4+ ACRES
EVENT SETBACK*	200'	77.6'	77.6'
PARKING SPACES	57	15	59

*A VARIANCE WAS OBTAINED TO REDUCE THIS SETBACK REQUIREMENT

SPECIAL PERMIT APPROVAL BY THE BROOKLYN
PLANNING AND ZONING COMMISSION

TOWN OF BROOKLYN
RECEIVED FOR RECORDING

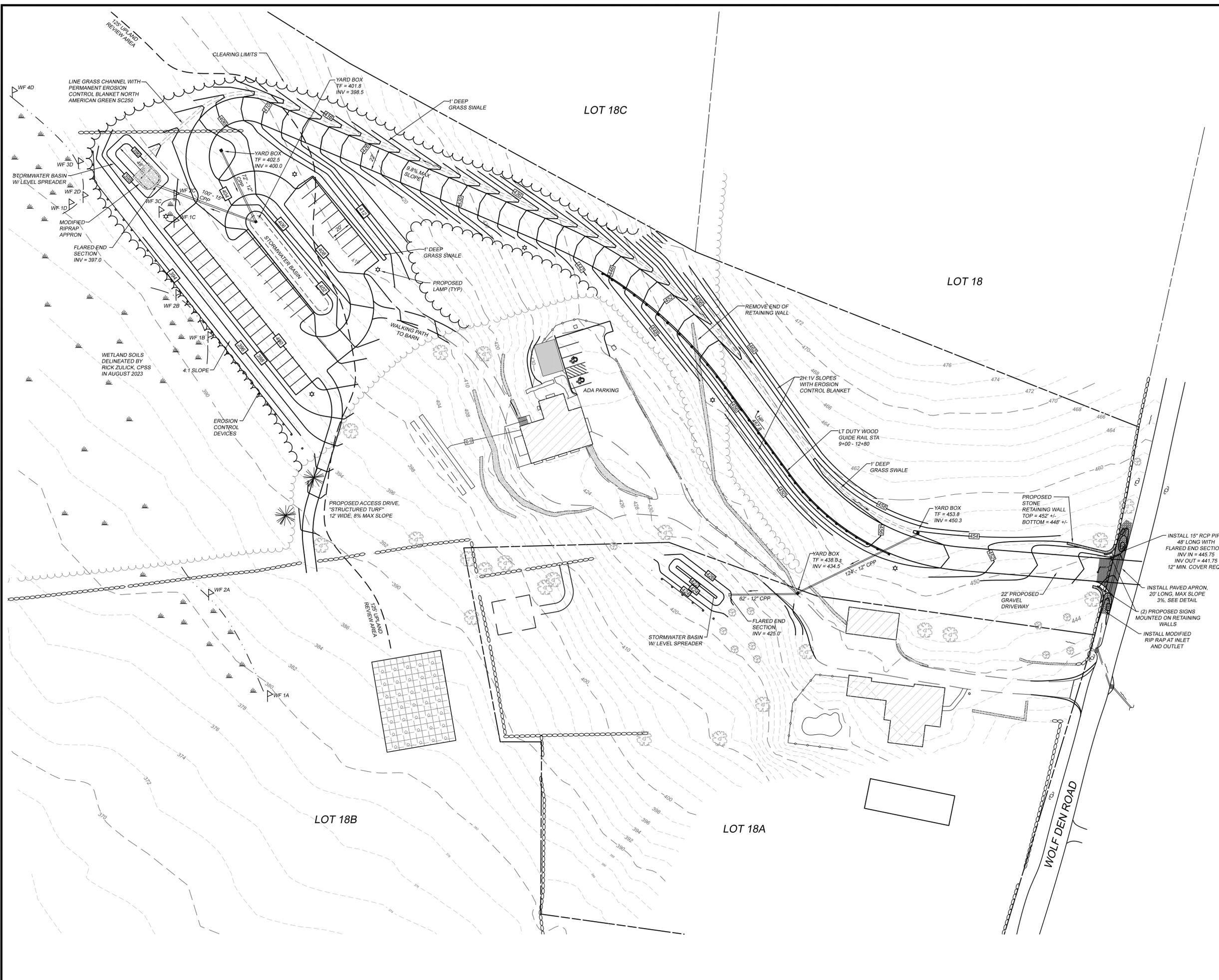
CHAIRMAN _____ DATE _____

TOWN CLERK _____ DATE _____ TIME _____ MAP # _____

J & D CIVIL ENGINEERS, LLC

**401 RAVENELLE ROAD
THOMPSON, CT 06255**

JDCIVILENGINEERS.COM
860-923-2920



SURVEY NOTES

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARD FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 26, 1996.

SURVEY TYPE: GENERAL LOCATION

PURPOSE: SITE DEVELOPMENT

BOUNDARY DETERMINATION CATEGORY: NONE

HORIZONTAL ACCURACY: CLASS B

VERTICAL ACCURACY: CLASS T-2

PROPERTY LINES DO NOT EXPRESS A BOUNDARY OPINION.

THIS MAP WAS PREPARED FROM RECORD RESEARCH, OTHER MAPS, LIMITED FIELD MEASUREMENTS AND OTHER SOURCES. IT IS NOT TO BE CONSTRUED AS A PROPERTY/BOUNDARY OR LIMITED PROPERTY/BOUNDARY SURVEY AND IS SUBJECT TO SUCH FACTS AS SAID SURVEYS MAY DISCLOSE.

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

DENNIS R. BLANCHETTE DATE 12/07/23 LICENSE NUMBER

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE © 2023 J&D CIVIL ENGINEERS, LLC

LEGEND

	BUILDING SETBACK LINE
	PROPERTY LINE
	EXISTING MAJOR CONTOUR LINE
	EXISTING MINOR CONTOUR LINE
	PROPOSED CONTOUR LINE
	STONEWALL
	UTILITIES
	TREELINE
	FENCE
	SILT FENCE OR SILT SOCK

ACCESS DRIVEWAY AND PARKING LOT PLAN
 PREPARED FOR
WILLOW HILL LLC
 459 WOLF DEN ROAD, BROOKLYN, CT
 MAP 15 - LOTS 15 & 18A

J&D CIVIL ENGINEERS, LLC
 401 RAVENELLE ROAD
 N. GROSVENORDALE, CT 06255
 860-923-2920

DESIGNED: **DDB** REVISIONS:
 CHECKED: **DRB**

JOB NO: **22172** DATE: **SEPTEMBER 29, 2023**
 SCALE: **1" = 40'** SHEET: **2 OF 6**

SURVEY NOTES

1. THIS MAP HAS BEEN PREPARED PURSUANT TO THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH 20-300b-20 AND THE "STANDARD FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPTEMBER 28, 1996.

SURVEY TYPE: GENERAL LOCATION

PURPOSE: TO DEPICT EXISTING CONDITIONS

BOUNDARY DETERMINATION CATEGORY: NONE

HORIZONTAL ACCURACY: CLASS B

VERTICAL ACCURACY: CLASS T-2

PROPERTY LINES DO NOT EXPRESS A BOUNDARY OPINION.

THIS MAP WAS PREPARED FROM RECORD RESEARCH, OTHER MAPS, LIMITED FIELD MEASUREMENTS AND OTHER SOURCES. IT IS NOT TO BE CONSTRUED AS A PROPERTY/BOUNDARY OR LIMITED PROPERTY/BOUNDARY SURVEY AND IS SUBJECT TO SUCH FACTS AS SAID SURVEYS MAY DISCLOSE.

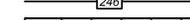
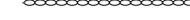
TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

DENNIS R. BLANCHETTE DATE 12/10/23 LICENSE NUMBER

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE © 2023 J&D CIVIL ENGINEERS, LLC

SEE ACCESS DRIVE SHEET FOR DETAILS IN THIS AREA

LEGEND

-  BUILDING SETBACK LINE
-  PROPERTY LINE
-  EXISTING MAJOR CONTOUR LINE
-  EXISTING MINOR CONTOUR LINE
-  PROPOSED CONTOUR LINE
-  LEACHING TRENCH
-  STONEWALL
-  UTILITIES
-  TREELINE
-  FENCE

EVENT AREA PLAN

PREPARED FOR
WILLOW HILL LLC

459 WOLF DEN ROAD, BROOKLYN, CT
MAP 18 - LOTS 18 & 18A

J&D CIVIL ENGINEERS, LLC
401 RAVENELLE ROAD
N. GROSVENORDALE, CT 06255
860-923-2920

DESIGNED: **DBB**
CHECKED: **DRB**

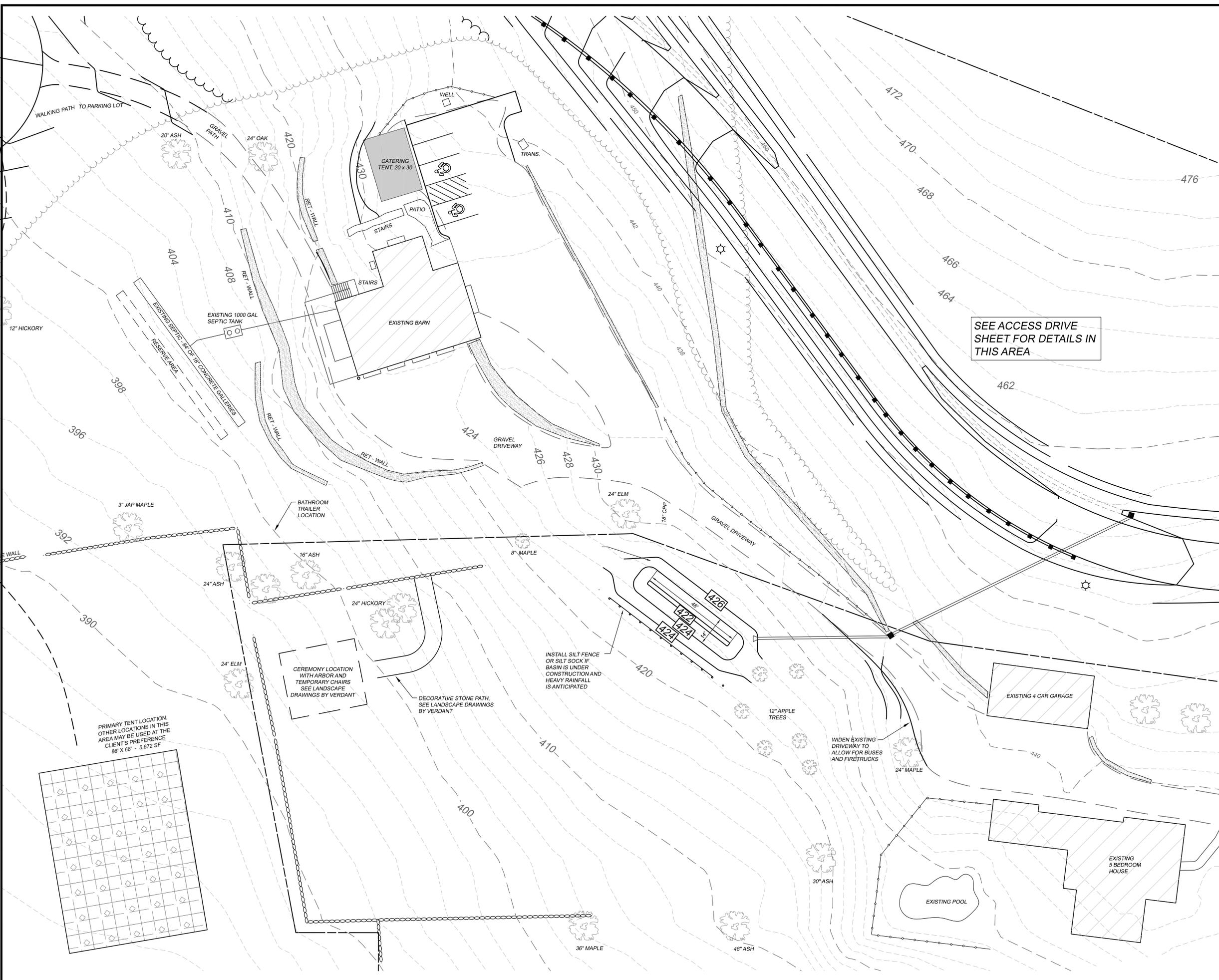
REVISIONS:

JOB NO: 22172

DATE: SEPTEMBER 29, 2023

SCALE: 1" = 20'

SHEET: 3 OF 5



PROJECT DESCRIPTION:

1. THE APPLICANT IS PROPOSING TO HOLD WEDDINGS, BANQUETS, AND OTHER SIMILAR EVENTS AT THE PROPERTY. THE MAXIMUM NUMBER OF GUESTS SHALL BE LIMITED TO 225 PERSONS.
2. THE EXISTING FIVE BEDROOM HOUSE SHALL BE USED AS A PRIVATE RESIDENCE BY THE OWNER AND APPLICANT.
3. THE EXISTING BARN MAY BE USED TO HOLD SMALLER EVENTS. ADDITIONALLY, A TEMPORARY TENT OR TENTS MAY BE INSTALLED TO HOLD LARGER EVENTS.
4. GUESTS SHALL NOT BE ALLOWED TO USE THE RESTROOMS INSIDE THE BARN. A PORTABLE RESTROOM TRAILER SHALL BE DELIVERED TO THE SITE FOR ALL EVENTS.
5. NO FOOD SHALL BE PREPARED ON SITE. ALL FOOD SHALL BE PROFESSIONALLY CATERED AND DELIVERED TO THE SITE.
6. NO NEW BUILDINGS ARE PROPOSED WITH THIS APPLICATION. THE ONLY CONSTRUCTION SHALL CONSIST OF DRIVEWAYS, PARKING LOTS, DRAINAGE STRUCTURES, UTILITIES, AND LANDSCAPING.
7. THE MAXIMUM NUMBER OF EVENTS TO BE HELD IN A TWELVE MONTH PERIOD IS ESTIMATED AT 70 EVENTS WITH AMPLIFIED MUSIC, AND 30 EVENTS WITHOUT AMPLIFIED MUSIC.
8. NO SINGLE EVENT SHALL LAST FOR MORE THAN 3 CONSECUTIVE DAYS.
9. AMPLIFIED MUSIC, BOTH INDOOR AND OUTDOOR, SHALL BE TURNED OFF AT 10:00 PM.
10. THE MAXIMUM OCCUPANCY OF THE BARN SHALL BE 110 PERSONS. THE MAXIMUM OCCUPANCY OF A TEMPORARY TENT SHALL BE 225 PERSONS.

SIGN NOTES

1. THE APPLICANT IS PROPOSING TO INSTALL TWO SIGNS AT THE NEW ENTRANCE TO THE SITE.
2. EACH SIGN SHALL BE LESS THAN 3 FEET LONG AND LESS THAN 1 FOOT HIGH.
3. SIGNS SHALL BE MOUNTED ON RETAINING WALLS, AT A HEIGHT OF 2-3 FEET.
4. NO LIGHTING IS PROPOSED FOR THE SIGNS.
5. SIGNAGE SHALL COMPLY WITH ALL REQUIREMENTS IN 7.A.3.1 OF THE BROOKLYN ZONING REGULATIONS.

NEIGHBORHOOD AGREEMENT:

THE APPLICANTS HAVE MET WITH THEIR ABUTTERS AND AGREED TO THE FOLLOWING TERMS FOR THIS PROJECT:

1. LIMIT WEEKEND EVENTS TO ONE OUTDOOR EVENT WITH AMPLIFIED ENTERTAINMENT PER WEEKEND, WHERE WEEKEND IS DEFINED AS FRIDAY-SATURDAY-SUNDAY.
2. NOISE LEVELS SHALL NOT EXCEED 55 dB DURING THE DAY AND 45 dB AFTER 10:00 PM, AS MEASURED AT THE PROPERTY LINES THAT ABUT NEIGHBORS AND RUN ALONG WOLF DEN ROAD. SEE CT GENERAL STATUTES 22A-69.
3. ON STREET PARKING BY GUESTS AND VENDORS SHALL BE PROHIBITED.
4. THERE SHALL BE NO MORE THAN 2 FIREWORKS DISPLAYS DURING THE CALENDAR YEAR. FIREWORKS DISPLAYS MUST BE RUN BY LICENSED PROFESSIONALS. FIREWORKS SHALL OTHERWISE NOT BE ALLOWED BY GUESTS.
5. RESIDENTS WITHIN 2,500 FEET OF THE PROPERTY IN ALL DIRECTIONS SHALL BE NOTIFIED AT LEAST 10 DAYS PRIOR TO UPCOMING FIREWORKS DISPLAYS.
6. FIREARMS SHALL BE PROHIBITED ON THE PROPERTY DURING ALL EVENTS.
7. OUTDOOR FIRES SHALL ONLY BE ALLOWED IN THE FIREPIT, WHICH WILL BE STARTED AND MAINTAINED BY THE OWNERS OR THEIR EMPLOYEES, AND OUTDOOR GRILL WILL BE AVAILABLE FOR USE ON THE PROPERTY.
8. RENTERS ARE RESPONSIBLE FOR REMOVING ALL EVIDENCE OF THE EVENT UPON CONCLUSION OF THE EVENT OR AS SOON AS REASONABLY FEASIBLE AFTER THE CONCLUSION OF THE EVENT. THIS INCLUDES TRASH, TENTS, FURNITURE, EQUIPMENT, PORTABLE TOILETS, AND ANYTHING ELSE WHICH IS VISIBLE FROM THE ROAD THAT HAS BEEN BROUGHT TO THE VENUE.
9. ALL RENTERS OF THE PROPERTY WILL AGREE TO AND SIGN A CONTRACT FOR USAGE OF THE PREMISES, WHICH WILL INCLUDE BUT NOT BE LIMITED TO THE RESTRICTIONS ABOVE. IT WILL ASK THEM TO COMMIT TO RESPECTING THE LOCAL RESIDENTS AND SURROUNDING NEIGHBORHOODS WITH RESPECT TO NOISE, TRASH, AND DRIVING SPEED.
10. OUTDOOR LIGHTING SHALL ONLY BE TURNED ON DURING EVENTS WHEN NECESSARY.
11. ALL OUTDOOR LIGHTING SHALL BE DARK SKY COMPLIANT (IDA SEAL OF APPROVAL), AND MUST COMPLY WITH TOWN AND STATE SAFETY REQUIREMENTS, TO THE GREATEST EXTENT FEASIBLE, OUTDOOR LIGHTING SHALL BE DOWNCAST AND DIRECTED AWAY FROM THE ROAD AND ADJUTING PROPERTIES.
12. THERE SHALL BE AN ANNUAL MEETING WITH NEIGHBORS TO REVIEW THE SPECIAL PERMIT AND TO ENSURE THAT THE ABOVE CONDITIONS AS WELL AS THE INTERESTS OF PUBLIC HEALTH, SAFETY, AND GENERAL WELFARE OF THE NEIGHBORING RESIDENTS ARE BEING MET. ANY DISPUTE THAT CANNOT BE RESOLVED THROUGH DIRECT DIALOGUE SHALL BE BROUGHT TO THE COMMISSION FOR RESOLUTION.

GENERAL CONSTRUCTION NOTES:

LOCATIONS OF UNDERGROUND UTILITIES HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. THE CONTRACTOR SHALL NOTIFY CALL BEFORE YOU DIG AND FIELD VERIFY THE LOCATION, DEPTH AND ALIGNMENT OF ALL EXISTING PIPES, CABLES, ETC.

CONSTRUCTION SHALL BE IN CONFORMANCE WITH CONDDOT FORM 818 UNLESS OTHERWISE NOTED ON THE PLANS. UTILITY INSTALLATION SHALL BE IN CONFORMANCE WITH THE APPROPRIATE UTILITY COMPANY.

THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION WITH EACH UTILITY AND ALL COSTS ASSOCIATED WITH THE PROTECTION OF EXISTING FACILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN IN SERVICE ALL EXISTING PIPING UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

TYPICAL DETAILS SHOWN ARE TO ILLUSTRATE THE ENGINEER'S INTENT AND ARE NOT PRESENTED AS A SOLUTION TO ALL CONSTRUCTION PROBLEMS ENCOUNTERED IN THE FIELD. THE CONTRACTOR MAY SUBMIT PROPOSALS FOR ALTERNATE METHODS TO SUIT FIELD CONDITIONS.

ALL PIPING SHALL HAVE WARNING TAPE INSTALLED. IN ADDITION, ALL NONMETALLIC PIPE MUST BE PARALLELED BY A METALLIC WIRE OR METALLIC DETECTION TAPE FOR EASE OF LOCATING.

ALL PIPING SHALL BE CLEANED AND TESTED IN ACCORDANCE WITH THE APPLICABLE UTILITY'S REQUIREMENTS. COPIES OF ALL TESTS SHALL BE PROVIDED TO THE OWNER PRIOR TO ACCEPTANCE. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY TESTING EQUIPMENT.

ALL TRENCHING SHALL BE DONE IN COMPLIANCE WITH OSHA REGULATIONS AND THE INSTALLATION REQUIREMENTS OF THE PIPE MANUFACTURER. IF SHORING IS REQUIRED, IT MUST BE DESIGNED BY A LICENSED CT PROFESSIONAL ENGINEER.

BENCHMARKS WILL BE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR IN LAYING OUT THE PROJECT. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

THE CONTRACTOR SHALL PROTECT BENCHMARKS, PROPERTY CORNERS AND SURVEY MONUMENTS FROM DAMAGE OR DISPLACEMENT. ANY SUCH ITEMS WHICH NEED TO BE REPLACED SHALL BE AT THE CONTRACTOR'S EXPENSE.

SOIL EROSION AND SEDIMENT CONTROL

THE PURPOSE OF THIS PROJECT IS TO CONSTRUCT A VENUE FOR WEDDINGS AND OTHER SIMILAR EVENTS. SITE WORK WILL INCLUDE CONSTRUCTION OF ACCESS DRIVEWAYS, PARKING AREAS, DRAINAGE STRUCTURES, AND NECESSARY UTILITIES.

ATTENTION SHALL BE GIVEN TO THE INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES. NO ERODED SEDIMENTS SHALL BE PERMITTED TO FLOW OFF THE SITE. IF FIELD CONDITIONS WARRANT IT OR THE TOWN REQUESTS IT, ADDITIONAL E & S CONTROL MEASURES, BEYOND WHAT IS SHOWN ON THE PLAN, SHALL BE INSTALLED.

THE SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES WILL BE APPROXIMATELY AS FOLLOWS:

1. INSTALLATION OF EROSION CONTROL DEVICES
2. CLEARING & GRUBBING
3. ROUGH SITE GRADING
4. INSTALLATION OF UTILITIES INCLUDING DRAINAGE PIPES AND CB'S
5. PREPARATION OF ACCESS DRIVEWAYS AND PARKING LOT BASE
6. AFTER SITE IS STABILIZED, CONSTRUCT DRAINAGE BASIN
7. PERMANENT STABILIZATION INCLUDING LANDSCAPING
8. REMOVAL OF EROSION CONTROL MEASURES

SEDIMENT AND EROSION CONTROL DEVICES WILL BE INSTALLED AS DETAILED ON THIS SHEET AND CHECKED REGULARLY FOR REPLACEMENT AND AFTER EVERY RAIN FOR REMOVAL OF DEPOSITED MATERIALS. RESPONSIBILITY FOR COMPLIANCE WITH THIS PLAN SHALL BELONG TO THE CONTRACTOR. THE CONTRACTOR SHALL BE THE DESIGNATED ON-SITE AGENT RESPONSIBLE FOR ENSURING TO THE TOWN THAT E & S CONTROL MEASURES ARE STRICTLY ENFORCED.

CATCH BASINS SHALL BE PROTECTED WITH FILTER FABRIC AND/OR SURROUNDED BY SILT SOCKS DURING CONSTRUCTION, WHEN DISTURBED AREAS ARE NOT STABILIZED.

OPERATIONS AND MAINTENANCE

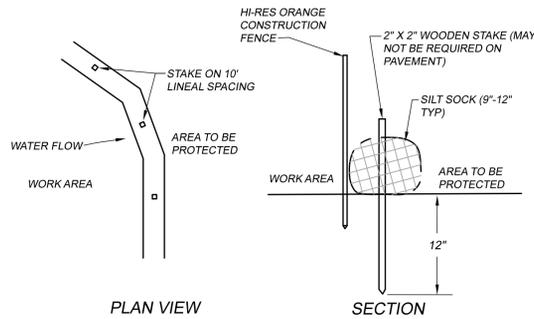
1. ALL PROPOSED WORK SHALL CONFORM TO "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" BY THE CONNECTICUT COUNCIL OF SOIL AND WATER CONSERVATION AND TOWN REGULATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE GOALS OF THIS EROSION CONTROL PLAN ARE MET BY WHATEVER MEANS ARE NECESSARY. THE CONTRACTOR SHALL PLAN ALL LAND DISTURBING ACTIVITIES IN A MANNER AS TO MINIMIZE THE EXTENT OF DISTURBED AREAS.
3. PRIOR TO CONSTRUCTION OR EXCAVATION, SEDIMENT BARRIERS SHALL BE INSTALLED IN LOCATIONS AS SHOWN ON THE PLAN OR AS REQUIRED BY THE TOWN AND MAINTAINED THROUGHOUT CONSTRUCTION.
4. UPON FINAL GRADING, DISTURBED AREAS SHALL COVERED WITH A MINIMUM OF 6" LOAM AND SEEDED WITH PERENNIAL GRASSES AS SPECIFIED FOR THE PROJECT. IMMEDIATELY AFTER SEEDING, MULCH THE SEEDED AREA WITH HAY OR STRAW AT THE RATE OF 2 TONS PER ACRE. SEEDING DATES ARE TO BE BETWEEN APRIL 1 THRU JUNE 15 AND AUGUST 15 THRU OCTOBER 15.
5. DAILY INSPECTIONS SHALL BE MADE OF EROSION AND SEDIMENT CONTROL MEASURES TO INSURE EFFECTIVENESS AND IMMEDIATE CORRECTIVE ACTION SHALL BE TAKEN IF FAILURE OCCURS. ADDITIONAL EROSION CONTROL MEASURES BEYOND WHAT IS SHOWN ON THE PLAN MAY BE NECESSARY.
6. EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL DISTURBED AREAS HAVE BEEN STABILIZED AND VEGETATIVE COVER HAS BEEN ESTABLISHED, AT WHICH TIME THEY SHALL BE REMOVED.
7. SITE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION AND MAINTENANCE OF THIS EROSION AND SEDIMENT CONTROL PLAN.

LIGHTING NOTES

1. LAMP POSTS SHALL BE INSTALLED SOUTH OF THE PROPOSED 40 CAR PARKING LOT, AS INDICATED ON THE SITE PLANS.
2. THE SPECIFIC MANUFACTURER AND MODEL OF LIGHT IS TO BE DETERMINED.
3. LAMP POSTS SHALL BE OF A RURAL OR RUSTIC STYLE.
4. LAMPS SHALL BE INSTALLED ON POLES 10-12 FEET TALL.
5. LAMPS SHALL BE FULL CUTOFF, WITH LED BULBS.
6. LAMP INTENSITY SHALL BE IN THE RANGE OF 8,000 - 12,000 LUMENS, OR 80-120 WATTS.
7. LAMP TEMPERATURE SHALL BE APPROXIMATELY 5,000 K.
8. ALL LAMPS SHALL CONFORM WITH THE REQUIREMENTS IN SECTION 7.G OF THE BROOKLYN ZONING REGULATIONS.
9. SUFFICIENT EXTERIOR LIGHTING EXISTS ON ALL OTHER PORTIONS OF THE SITE, SUCH AS THE BUILDINGS AND DRIVEWAY.
10. THE PROPOSED LIGHTING IS EXPECTED TO PROVIDE LESS THAN 1 FOOT-CANDLE AT THE PROPERTY LINES.

LANDSCAPING NOTES:

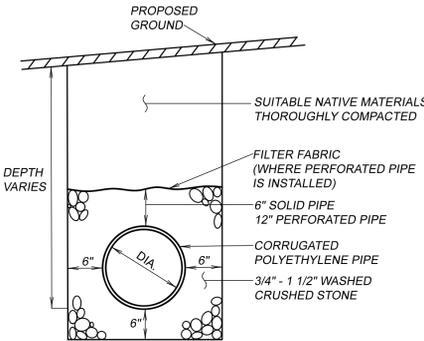
ALL LANDSCAPING ON SITE SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST APPROVED LANDSCAPING PLANS BY "VERDANT LANDSCAPE ARCHITECTURE." THESE PLANS HAVE BEEN INCLUDED WITH THE APPLICATION PACKAGE.



NOTES

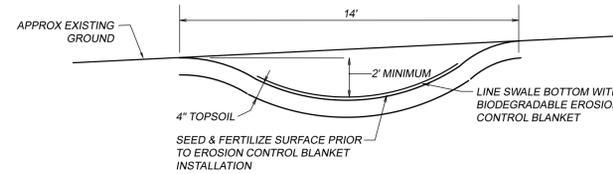
1. SILT SOCK MANUFACTURER SHALL BE SILT SOXX OR ENGINEER APPROVED EQUAL
2. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS
3. SEDIMENT SILT SOCK TO BE FILLED WITH LEAF COMPOST AND/OR WOODY MULCH PER MANUFACTURER'S REQUIREMENTS.
4. FOLLOWING CONSTRUCTION AND SITE STABILIZATION, COMPOST MATERIAL SHALL BE REMOVED OR DISPERSED ON SITE, AS APPROVED BY THE ENGINEER.

SILT SOCK DETAIL
NOT TO SCALE

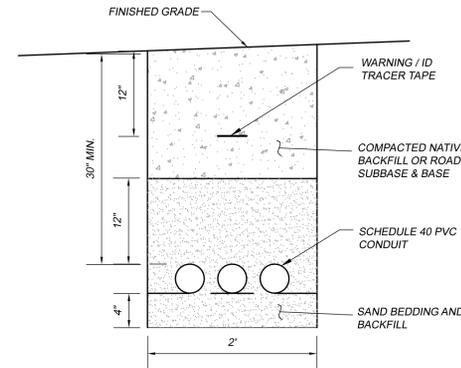


DRAINAGE PIPE INSTALLATION
DETAIL

N.T.S.

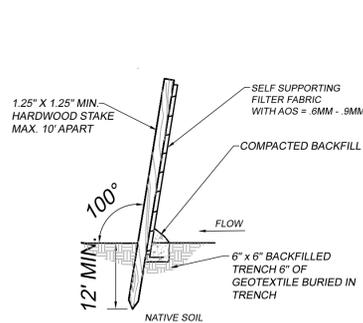


STORMWATER BASIN DETAIL
NOT TO SCALE

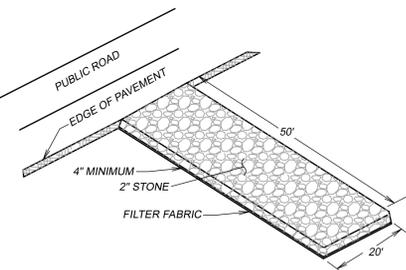


- 1) NUMBER AND SIZE OF CONDUITS SHALL BE AS REQUIRED BY OWNER & UTILITY COMPANY
- 2) CONSTRUCTION METHODS, MATERIALS & DIMENSIONS SHALL CONFORM TO THE SPECIFICATIONS OF THE APPLICABLE UTILITY COMPANIES

TYPICAL UTILITY TRENCH DETAIL
NOT TO SCALE



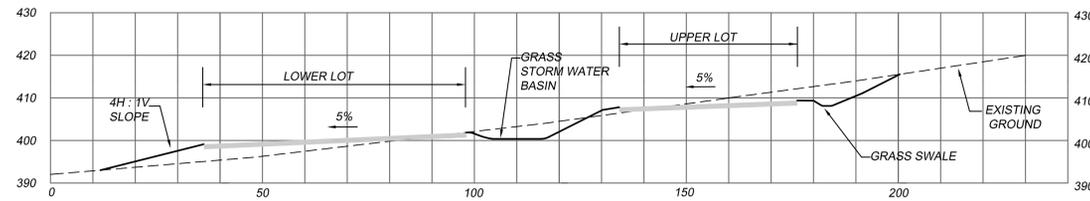
SILT FENCE INSTALLATION
NOT TO SCALE



TEMPORARY CONSTRUCTION ENTRANCE

NOT TO SCALE

<p>NOTES AND DETAILS PREPARED FOR WILLOW HILL EVENTS 459 WOLF DEN ROAD, BROOKLYN, CT MAP 15 - LOTS 15 & 15A</p>	
<p>J&D CIVIL ENGINEERS, LLC 401 RAVENELLE ROAD N. GROSVENORDALE, CT 06255 860-923-2920</p>	
<p>DESIGNED: DDB CHECKED: DRB</p>	<p>REVISIONS:</p>
<p>JOB NO: 22172 SCALE: 1" = 20'</p>	<p>DATE: SEPTEMBER 29, 2023 SHEET: 4 OF 5</p>



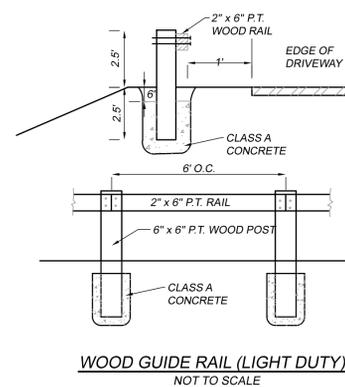
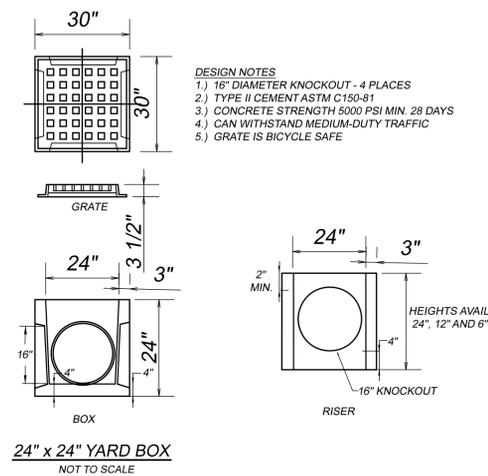
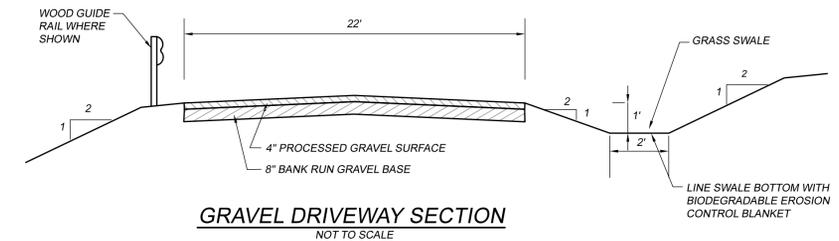
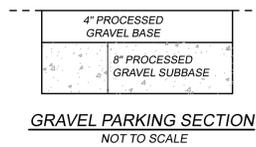
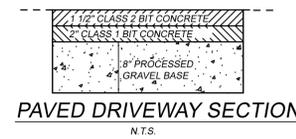
PARKING LOT CROSS SECTION
1" = 20'

PARKING NOTES:

1. THE SITE CURRENTLY CONTAINS PARKING FOR APPROXIMATELY 15 CARS.
2. THE APPLICANT IS PROPOSING TO CONSTRUCT AN UPPER PARKING LOT FOR AN ADDITIONAL 40 CARS.
3. GUESTS WILL BE ENCOURAGED TO PARK OFF SITE AT LOCAL HOTELS, AND SHALL BE TRANSPORTED TO THE SITE BY BUS OR SHUTTLE.
4. A LARGE 96' DIAMETER CIRCLE IS PROPOSED NEAR THE BARN, TO ALLOW FOR LARGE BUSES AND FIRETRUCKS TO TURN AROUND.
5. TWO ADDITIONAL PARKING SPACES ARE PROPOSED NEAR THE BARN, FOR DELIVERIES AND DROP-OFFS.
6. TWO HANDICAP ACCESSIBLE SPACES ARE PROPOSED NEAR THE BARN, FOR DISABLED GUESTS.
7. THE TOTAL NUMBER OF PROPOSED PARKING SPACES IS 59.

STRUCTURED TURF NOTES:

1. THE PROPOSED ACCESS DRIVE BELOW THE BARN SHALL BE CONSTRUCTED FOR THE PURPOSE OF DELIVERING A BATHROOM TRAILER TO THE CEREMONY AND TENT AREA.
2. NO OTHER VEHICLES ARE ANTICIPATED TO USE THIS DRIVEWAY.
3. THE DRIVEWAY SHALL BE CONSTRUCTED WITH A 50-50 MIXTURE OF PROCESSED GRAVEL AND LOAM, COMPACTED, WITH A MINIMUM THICKNESS OF 12".
4. THE DRIVEWAY SHALL BE SEEDED AS SOON AS POSSIBLE UPON COMPLETION.



NOTES AND DETAILS PREPARED FOR WILLOW HILL EVENTS 459 WOLF DEN ROAD, BROOKLYN, CT MAP 15 - LOTS 15 & 15A	
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