

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

The Planning and Zoning Commission will hold a public hearing on Wednesday, May 4, 2022, 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 applications:

ZRC 22-002: Request to amend Zoning Regulations Sec. 7.A.3.4. to allow hanging signs in the Planned Commercial (PC) Zone, Applicant: The Ice Box (Matt & Jenn Nemeth), and

PDZ 22-001, ZRC 22-003, ZC 22-001: A proposal for a Planned Development Zone near and around the intersection of Wolf Den Road and Bush Hill Road, including 538 Wolf Den Road and totaling 13 parcels on 534 acres, Applicant/Owner: Little Dipper Farm, LLC.

Copies of these applications will be available for review on the Town of Brooklyn website and at the Land Use office.

All interested parties may attend the meeting, be heard and written correspondence received.

Dated this 11th day of April 2022.

Please publish 4/20 and 4/27

**TOWN OF BROOKLYN
PLANNING AND ZONING COMMISSION**

**REQUEST FOR CHANGE
IN
ZONING REGULATIONS**

Date 3/31/2022 Check # 1050 Application #ZRC 22-002
Application Fee: \$250 State Fee: \$60 Publication Fee: \$600 \$150
Public Hearing Date _____ Commission Action _____ Effective Date _____
Name of Applicant The Ice Box (Matt & Jenn Nemeth) Phone 860-235-5087
Mailing Address 131 Day Street

REQUEST TO AMEND ARTICLE(S) _____ SECTION(S) 7.A.3.4

If more than one Article is requested please attach separate sheet for each one Signs Permitted in the Planned Commercial Zone

PARAGRAPH TO CHANGE _____ OF THE ZONING REGULATIONS

REQUEST TO CHANGE: A Proposal to add a new Sec. 3 and renumber subsequent sections accordingly.
-See attached

REASON FOR REQUEST: The Hanging sign provision is in other zones and, if adopted, would enhance the Planned Commercial Zone to be more consistent.

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

Request to add NEW Sec. 7.A.3.4.3 and renumber subsequent sections accordingly

A proposal to allow hanging signs in the Planned Commercial Zone.

Sec. 7.A.3.4. Signs Permitted in the Planned Commercial Zone

3. **Hanging Sign** - One (1) hanging sign shall be permitted per public roadway or driveway entrance provided that:

- a. The area of any hanging sign shall not exceed four (4) square feet.
- b. Any hanging sign shall be connected to the structure and protrude perpendicularly from the structure.
- c. No portion of any such hanging sign shall interfere with pedestrian or vehicular traffic.

*Renumber subsequent sections accordingly.

APPLICATION OF THE LITTLE DIPPER FARM LLC

FOR

**THE LITTLE DIPPER FARM (LDF) PLANNED
DEVELOPMENT ZONE**

FOR CONSIDERATION AT

**THE REGULAR MEETING OF
THE BROOKLYN PLANNING & ZONING COMMISSION**

APRIL 6, 2022

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Map of the Town of Brooklyn**

5.G.1. Purpose of the LDF Planned Development Zone

THE LITTLE DIPPER FARM PLANNED DEVELOPMENT ZONE (“LDF” or “LDF Planned Development Zone”)

In accordance with Brooklyn Zoning Regulation (“BZR”) 5.G, the LDF will permit modification of the strict application of the standards and provisions of the BZR to (1) accomplish the development of specific areas in accordance with an overall Master Plan for such area and in accordance with the Plan of Conservation and Development adopted in accordance with CGS § 8-23, as amended; (2) be flexible in order to allow for innovative design techniques, accommodate unique uses and encourage creative approaches to development; (3) promote economic development in appropriate locations which will help meet community needs and be compatible with the community; and (4) result in a development that demonstrates a high regard for design and that is compatible with the historic, cultural and geographic qualities of Brooklyn.

5.G.2. The LDF Planned Development Zone is located in an Eligible Area

As detailed in Section 5.G.5-5c of this Application, the location of the LDF is consistent with the objectives and recommendations of the Brooklyn Plan of Conservation and Development (PCD) because of its historical, current, and future sites of agricultural activity. The LDF will also provide compatible agricultural and non-agricultural uses which will serve as educational and outreach programs and preserve the aesthetic beauty of the farmland, all of key importance to the PCD.

5.G.4. Basic Parameters

Submitted to the Brooklyn Planning and Zoning Commission (“the Commission”) are three (3) applications:

- 1.a. A Master Plan
- 1.b. A Text Amendment Application: the wording of the change applied for is the Master Plan documentation submitted, as approved by the Commission
- 1.c. A Zone Change Application, locating the LDF on the official Zoning Map

5.G.5 MASTER PLAN SUBMITTAL

5.G.5-1 Overview of the LDF Planned Development Zone

THE LITTLE DIPPER FARM PLANNED DEVELOPMENT ZONE (“LDF” OR “LDF PLANNED DEVELOPMENT ZONE”)

The Little Dipper Farm Planned Development Zone is intended to support permaculture and sustainable agriculture in an environment that facilitates public participation, agritourism and non-motorized outdoor recreation. It is also intended for general agricultural uses, low density residential uses, office use and agritourism uses. The LDF will incorporate all uses permitted in the RA Residential-Agricultural Zone and allow other uses governed by the Master Plan approved by the Planning and Zoning Commission in accordance with Section 5.G of the BZR.

5.G.5-2
CONCEPTUAL SITE PLANS

AND

5.G.5-4
DATA TABLE

5.G.5-4
DATA TABLE NARRATIVE

5.G.5-4 Data Table Narrative

RA Residential-Agricultural Zone

The LDF will not supersede the RA Residential-Agricultural Zone but will allow any agricultural, both commercial and non-commercial and low-density residential use permitted by right or by special permit in the RA Residential-Agricultural Zone pursuant to BZR 5.G.7.4.

Grandfathered Uses

The historic buildings and structures on site are non-conforming and their uses legal non-conforming uses under the RA Zone and BZR § 8.B.

The existing uses include both RA and legal nonconforming uses: the Farmhouse; Garage Barn; Greenhouse; Multi-Use Barn, including restaurant and retail store, also used as an Events Facility as defined in BZR § 2.B; Utility Shed, Hay Barn and Gypsy Wagon which was used for overnight stays. The grounds were also used for Events including Outdoor Music Events.

LDF Planned Development Zone Uses

The LDF will allow other uses consistent with the Master Plan and the site plan approval required by 5.G.9. It is recognized that the Master Plan may require fluidity in order to accommodate market changes during the complete development of any project. Notwithstanding this requirement, the uses are proposed to include:

Agritourism—intended for commercial enterprise uses and events which will promote the economic and environmental sustainability of agriculture. The use will attract members of the public to visit the on-site agricultural operations to increase farm income and provide recreation, entertainment and educational experiences to visitors to enhance the public’s understanding and awareness of farming, farm life and the agricultural heritage of the land. Agritourism will include passive recreation: such as walking, running, hiking, trail biking or fishing; and events for the purpose of accommodating a group of diners, patrons, guests or other attendees for functions such as banquets, wedding receptions, parties, entertainment, performances and/or similar gatherings in a farmland setting.

Agritourism Retreat—retreat activities, including overnight occupancy in tents, tent houses, cabins or cottages that will attract members of the public to visit the farmland. Agritourism Retreat will include food and beverage service, recreation and other uses customarily ancillary to outdoor retreats, and will offer programming which promotes an appreciation of the aesthetics of the operations, practices, and products of the farmland.

Office—intended for office, business and administrative use for the management, direction, planning, marketing or conducting agritourism, and may include the administrative offices of a non-profit or charitable organization.

Narrative for Uses Shown on the Data Table:

Reference should be made to the Data Table and/or Master Plan Map for the proposed sites, dimensions and impervious areas of the following uses

Proposed Master Plan Agricultural Residential Uses:

- Barns, including but not limited to Farm Core Barns and Ruminant Barns
- Loafing Sheds¹
- Silvopasture² Sheds
- Residential House
- Hoop Houses³
- Work-Yards

Proposed Master Plan Agritourism Uses:

- Farm Pavilion
- Multi-Use Barn Restaurant
- Multi-Use Barn Retail Store
- Multi-Use Barn Event
- Multi-Use Barn Office
- Star-Gazing Silos
- Boat House
- Docks
- Forest Education Structures
- Yoga Pavilion
- Stargazing Pavilion
- Outdoor Stone Pizza Oven⁴

Proposed Master Plan Uses Accessory to Agritourism:

- Trail Head Support Building
- Restrooms
- Maintenance Buildings
- Storage Buildings

¹ A loafing shed is for cattle in which they range at will on a heavy bedding of straw rather than occupy fixed stanchions.

² Silvopasture is the deliberate integration of trees and grazing livestock operations on the same land. These systems are intensively managed for both forest products and forage, employing agronomic principals, typically including native pasture grasses and rotational grazing systems that employ short grazing periods which maximize vegetative plant growth and harvest.

³ Hoop Houses are small, semi-portable structures that can be used as a small greenhouse structure for starting seedlings and for growing heat-loving vegetables. A hoop house provides frost protection, limited insect protection, and season extension.

⁴ The outdoor stone pizza oven will be used for farm produce cooking demonstrations and events that involve food service.

- Work yards
- Farm Member Parking
- Staff Parking
- Guest Parking
- 15-Minute Parking
- Handicapped Parking
- Commercial Vehicle Parking
- Trail Head Parking
- Overflow Parking

Proposed Master Plan Agritourism Retreat Uses:

- Bath Houses
- Lobby / Reception / Check-In
- Food and Beverage Service, including the service of alcoholic beverages
- Boat House
- Dock
- Lodging Sites
- Staff Housing
- Recreational Use⁵
- Retail Store

Proposed Master Plan Uses Accessory to Agritourism Retreat:

- Support Buildings
- Back of House Building⁶
- Maintenance Buildings
- Staff Housing
- Patios
- Guest Parking
- Staff Parking
- Lobby / Reception Parking
- Food Service Parking
- Commercial Vehicle Parking
- Overflow Parking

⁵ The Agritourism use will include activities such as guided nature walks, guided meditations, yoga or other exercise classes, fishing, bird watching, hiking, trail biking, wild foraging tours and craft workshops.

⁶ Back of House areas are non-public areas, within and/or surrounding a venue, for use by staff members and generally those areas of the venue designed to support the operation.

Proposed Master Plan Office Uses:

- Office, Business
- Office, Administrative

Proposed Master Plan Accessory to Office Uses:

- Office Staff Parking

5.G.5-3
ARCHITECTURAL SCHEMATICS SHOWN AS
PHOTOGRAPHIC SAMPLES

5.G.5-5c

**STATEMENT OF HOW THE PROPOSED
DEVELOPMENT COMPLIES WITH THE PLAN OF
CONSERVATION AND DEVELOPMENT**

5.G.5-5d Consistency with the Plan of Conservation and Development.

The location and uses of the LDF are consistent with the objectives and recommendations of the Plan of Conservation and Development (PCD) adopted in accordance with Con. Gen. Stat. § 8-23, as amended, because it is the site of agricultural activity that dates back many hundreds of years as a sheep farm and plans to continue farm operation. As stated in the PCD, “[s]urveyed residents consistently cited farmland preservation, the rural quality of the Town, and agricultural heritage as very important priorities.” The LDF will continue this agricultural heritage as a farm for crops such as elderberries, hay, pumpkins, shiitake mushrooms, and a variety of fruits, vegetables and eggs for community-supported agriculture (CSA).

The LDF will support the viability and preservation of Brooklyn farmland, preserving a very high priority of Brooklyn’s PCD. In addition to contributing to the farming priority of the town, the LDF will maintain the aesthetic beauty and rural landscape present on the land. The LDF will promote a viable agricultural cluster. The LDF is located near other working farms in the northwestern corner of Brooklyn. One of the largest existing agricultural draws to the area, Lapsley Orchard, is a short distance away. There are numerous agricultural operations in the immediate vicinity.

Economic and environmental sustainability of agriculture will be promoted with a creative approach to development. While innovative, the use is simultaneously a through line to the property’s history as a nationally renowned restaurant, The Golden Lamb Buttery, which brought people to enjoy the farm-fresh food, as well as the views and experience of the beautiful farm property. The Golden Lamb Buttery together with Hillandale Farm were pioneers in creating a one-of-a-kind hospitality experience featuring hayrides with cocktails, live entertainment and farm to table dining. The Golden Lamb Buttery also offered a store with value-added farm products, art and souvenirs. Similarly, the LDF will provide a restaurant and store as well as opportunities for agritourism, including educational programming, day and overnight agritourism retreats, and non-motorized outdoor recreation.

The LDF uses will draw people from surrounding metro areas to Brooklyn for day trips and weekend stays. The primary focus of the tourism is to be the sustainable farming happening on the property. Fitting right into the PCD is the concept of farm membership, bringing people for recreation, farm-fresh food, education, activities, retreats, tours and other events, which use blends agricultural and non-agricultural land uses, while safeguarding the aesthetic of the land.

In keeping with Recommendation Number 16 of the Agriculture Section of the Plan of Conservation and Development, the PCD plans to utilize silvopasture as an agroforestry practice to integrate livestock and forage production. The management of trees will be intentionally integrated into livestock grazing to improve farm production.

As an underpin to the farm education, the LDF will provide office and programming space for all ages that will serve as a Visitor Center and educational hub. The use which attracts members and provides public education and information exactly reflects Recommendation Number 4 in the PCD: “Encourage educational and outreach programs to promote the further understanding of the benefits of locally produced foods, local farm operations, and how agriculture can be continued to be supported in Brooklyn.” The combination of uses permitted in the LDF will create a farm weekend or day trip destination, providing an economic boost not only to the farm but to the Town of Brooklyn as a whole.

5.G.4-1b
TEXT AMENDMENT APPLICATION

**TOWN OF BROOKLYN
TEXT AMENDMENT APPLICATION**

Date: **April 4, 2022** Check # _____ Application # _____

Public Hearing Date: _____ Commission Action Date: _____ Effective Date: _____

Name of Applicant: **The Little Dipper Farm LLC** Phone: **860-617-5518**
Contact: **Venus Corriveau**

Applicant's interest in the subject property: **Owner**

Mailing Address: **499 Wolf Den Road Brooklyn Connecticut 06234**

Request: **According to Brooklyn Zoning Regulations (BZR) § 5.G.7 accept The Little Dipper Farm Planned Development Zone (LDF) Master Plan materials as a distinct part of the text of the BZR and to modify Section 5.G.11 to reference the approved Master Plan and any conditions of approval, to wit:**

5.G.11.A. Planned Development Zone 1, The Little Dipper Farm Planned Development Zone (LDF) approved by the Commission at a meeting on _____, effective on _____, and filed on the land records at Volume ____, Page _____ and/or Map File _____.

5.G.4.-1c
ZONE CHANGE APPLICATION

**TOWN OF BROOKLYN
ZONE CHANGE APPLICATION**

Date: **April 4, 2022** Check # _____ Application # _____

Public Hearing Date: _____ Commission Action Date: _____ Effective Date: _____

Date Abutters Notified: _____ Date Sign Posted: _____

Name of Applicant: **The Little Dipper Farm LLC** Phone: **860-617-5518**
Contact: **Venus Corriveau**

Applicant's Interest in the Property: **Owner**

Mailing Address: **499 Wolf Den Road Brooklyn Connecticut 06259**

Request For Approval of **The Little Dipper Farm Planned Development Zone (LDF)**

Currently **RA Zone**

Reason for the request: **In conjunction with the requested approval of The Little Dipper Farm LLC (LDF) Planned Development Zone; Change of Zone from RA to The Little Dipper Farm LCC (LDF) Planned Development Zone for all following lots:**

MAP 18 LOT 18

MAP 18 LOT 19B-2

MAP 18 LOT 19-7

MAP 19 LOT 19-B

MAP 20 LOT 4-B

MAP 18 LOT 19

MAP 18 LOT 19-4

MAP 19 LOT 18-A

MAP 19 LOT 19-C

MAP 18 LOT 19-B

MAP 18 LOT 19-6

MAP 19 LOT 9-B

MAP 19 LOT 18-B-2

5.G.4.-1c

**PLANNED DEVELOPMENT ZONE SHOWN ON THE
OFFICIAL ZONING MAP OF THE TOWN OF
BROOKLYN**

The Little Dipper Farm LLC
499 Wolf Den Road
Brooklyn CT 06234

April 5, 2022

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

Re: Planned Development Zone Application
The Little Dipper Farm LLC

To the Town of Brooklyn Planning and Zoning Commission:

I am the Managing Member of The Little Dipper Farm LLC. The Little Dipper Farm LLC is the owner of the parcels involved in the Planning Development Zone Application and supports the application.

I am authorized to sign the acknowledgement and support of the application on behalf of The Little Dipper Farm LLC.

Very truly yours,



Venus Corriveau, Authorized
Managing Member
The Little Dipper Farm LLC

CLA Engineers, Inc.

Civil • Structural • Survey

317 MAIN STREET • NORWICH, CT 06360 • (860) 886-1966 • (860) 886-9165 FAX

April 1, 2022

Lori Corriveau
Little Dipper Farm, LLC
499 Wolf Den Road
Brooklyn, CT 06234
Email: loricorriveau@gmail.com

RE: Little Dipper Farm Property – Utility Statement
Wolf Den / Bush Hill Road
Brooklyn, CT
CLA –7043

Dear Lori,

As requested, we have studied the existing utility infrastructure in place and estimated the utility infrastructure likely needed for the proposed Little Dipper Farm Development. We note that this study is preliminary in nature and intended to give you a general snapshot of existing infrastructure in place and anticipated infrastructure to be developed to service your proposed use.

The subject property is delineated on the plan entitled “Master Plan Sketch – Overall – Little Dipper Farm, 499 Wolf Den Rd, Brooklyn, CT, Sheet A01 prepared by Shelter Design Architecture, Dated 3-30-22. We will refer to this plan throughout our study.

The future development of the property that is subject to the more intense infrastructure needs is broken into two sections. The first section is located just east of the Wolf Den Road/Bush Hill Road (existing Golden Lamb barn area) intersection and will be called “Farm Core” to be consistent with the above referenced plan. The second section is located on the northeast side of the property pond and will be called “North East”, again to be consistent with the above referenced map.

The following existing utilities are available to the site via either Wolf Den or Bush Hill Road:

- Electricity – Eversource
- Communication – Frontier
- Cable – Spectrum
- Drainage – Town of Brooklyn/On-site

The following utilities must be handled on site as there is no public option:

- Domestic Water: Private wells
- Sewer: Private septic system

General discussions with Eversource indicate that they can support this development and will upgrade their infrastructure as needed. Due to minimal anticipated impervious surfaces in the proposed development in comparison to the amount of existing available undeveloped land, we assume stormwater management can be handled effectively on site. Our focus will therefore center on the what is needed to provide the onsite sewer and water service for this development.

Sewer:

Below are the proposed uses and respective estimated sewer/water flows for the two sections of the development (CT Public Health Code design flows were utilized):

Farm Core

Barn Restaurant: 100 seats @30 gpd/seat = 3,000 gpd

North East

Retreat Lodging: 50 Camp Sites @75 gpd/site = 3,750 gpd

Staff Lodging: 5 staff @ 150 gpd = 750 gpd

Total North East = 4,500 gpd

Total Site =7,500 gpd

Sewer flows less than or equal to 7,500 gpd will fall under the jurisdiction of the CT Public Health Department and the Northeast District Department of Health.

We have performed a review of the existing soil conditions (as mapped by NRCS) to estimate the most advantageous location to site the leaching fields. In general, we are trying to select soils with a reasonable infiltration rate and a low water table/restrictive layer. These conditions will minimize the size of the leaching field. Conversely soils with a slower infiltration rate and higher water table/restrictive layer will require a larger leaching field or may prevent siting of the leaching field. In addition, we are trying to choose areas that maintain a certain distance from what is considered “a point of concern” which could be a wetland, water course or neighboring property boundary. Also areas that have some slope will allow more flexibility in the configuration of the leaching field while level slopes may require certain leaching field configurations that a property may not support.

The existing barn restaurant in the “Farm Core” area is serviced by an existing septic system under the jurisdiction of the local health department (NDDH). According to NDDH records on file, this system is comprised of a 1,500 gallon septic tank, a 1,000 gallon grease trap and a leaching field designed to handle 1360 gpd and expanded in 2012. The actual permit states that the system will handle a “seasonal” restaurant capacity of 75 seats. It is unclear what the seasonal designation means. The permit file also references that the site has an event capacity of 150 persons.

If domestic sewer use at the Farm Core area is increased as proposed, the existing septic system would need to be expanded.

Soils in the vicinity of the Farm Core area are Woodbridge (45B & 47C) according to NRCS mapping. In general, these soils have a slow infiltration rate and a high water table/restrictive layer. Siting of the leaching field in this area will likely require a “fill system” due to the anticipated shallow groundwater/restrictive layer. Fill systems are required when there is not sufficient separation from naturally occurring soils and the seasonal high groundwater/restrictive layer. We also note that these soils, on occasion, contain pockets of inland wetlands which could potentially hinder use of these soils for leaching fields. An approximate area was sized based on an assumed soil permeability rate and the estimated flows. We estimated that potentially up to 13,000+/- SF could be required to site this system. An area is shown on the above referenced map (#43) and signifies a potential leaching field site area for the Farm Core.

Soils in the vicinity of the North East area vary from Canton and Charlton (62C) in the southern region and change to Woodbridge (47C) and then Paxton and Montauk (84B) as you move north. We recommend splitting the leaching field up and siting it in two areas utilizing the preferred soils (Canton & Charlton / Paxton & Montauk). Approximate leaching field areas were sized based on an assumed soil permeability rate and the estimated flows. We estimate this leaching field could require up to 15,000+/- SF in the Canton & Charlton soil area (#37 on referenced map) and up to 15,000+/- SF in the Paxton & Montauk soil area (#44 on referenced map). These areas signify potential leaching field site areas for the North East area.

Sewer collection would be accomplished in both sections through a combination of gravity piping or force main pumping as needed.

Water:

Permitting the proposed water system for both the Farm Core and the North East area will fall under the jurisdiction of the CT Department of Public Health. Both systems will be classified as Transient Non-Community Systems (T/NC System) which service at least 25 people throughout the year, provided they are not the same 25 people over a 6-month period.

The existing barn restaurant in the Farm Core area is currently permitted through the CT Department of Public Health (CT DPH) as a T/NC system. Based on information from the well driller (Laframboise), an existing hand dug well was replaced as part of this system in 2015. A new well was drilled to a depth of 540' (using 240' of casing) and has a yield of 10 gpm. According to the well driller, the well yield was more than 10 gpm but must be maintained at 10 gpm due to a minimum separation of 75' from the existing building septic system (a 150' separation from a pollution source is required to draw more than 10 gpm from a well).

The proposed increase in restaurant seating capacity will not change the status of the existing CT DPH water system permit. Potential upgrades to the system related to storage may be needed to support the increased water consumption.

A new separate water system for the proposed North East area would need to be installed to service this area. A new well or wells would need to be sited in this area. A potential well siting area has been shown on the above referenced map (circular blue area with "W" just below area 35). Well yield and quality will determine the need for storage and treatment. Water distribution would be accomplished through pumping the stored water via underground piping for this section.

In conclusion, we find that based on current available data providing on-site sewer and water services are feasible for the proposed development.

Please contact us with any questions.

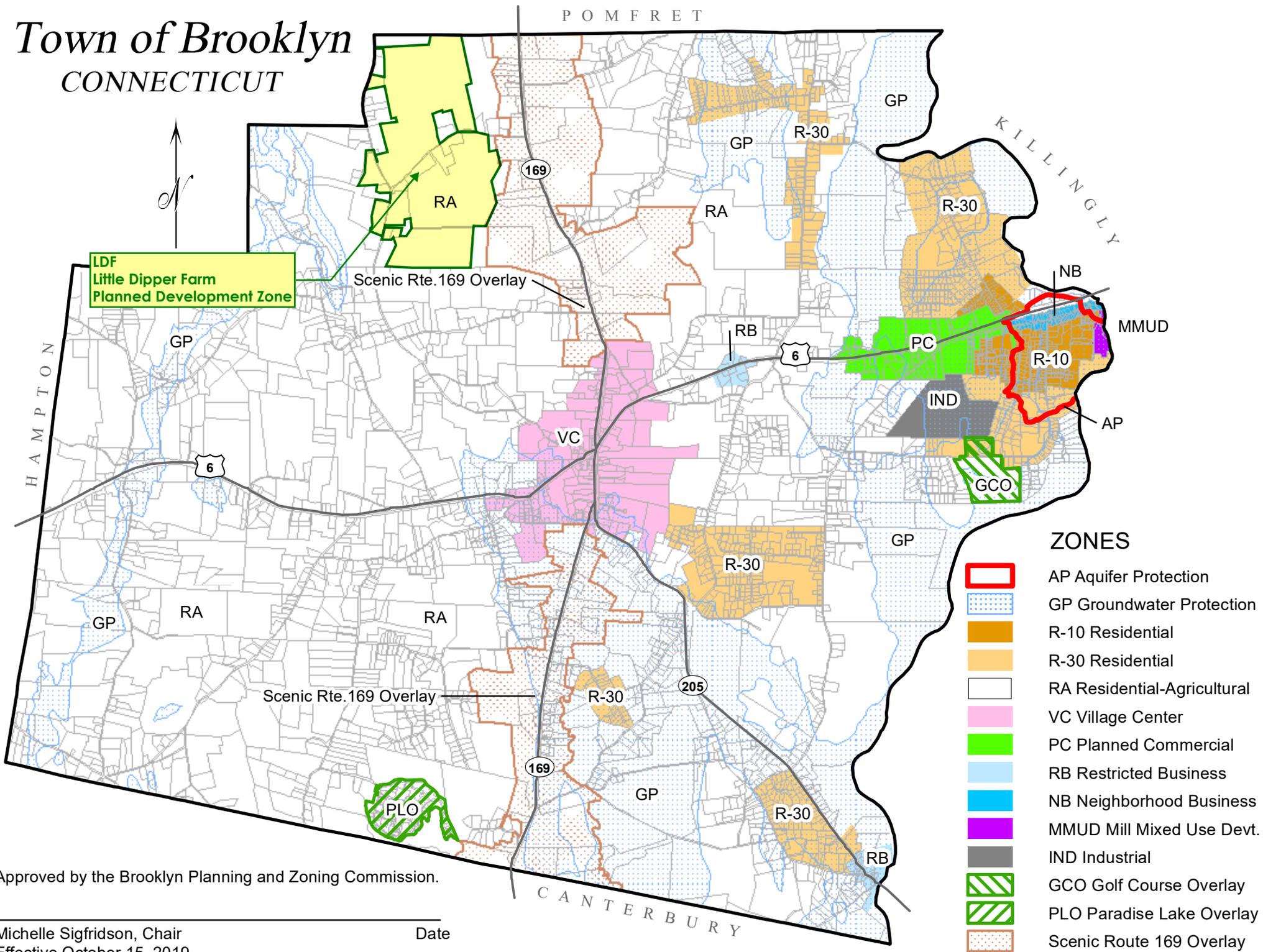
Sincerely,

A handwritten signature in blue ink, appearing to read "R. DeLuca", is written over a faint rectangular stamp or watermark.

Robert A. DeLuca, P.E.

Town of Brooklyn

CONNECTICUT



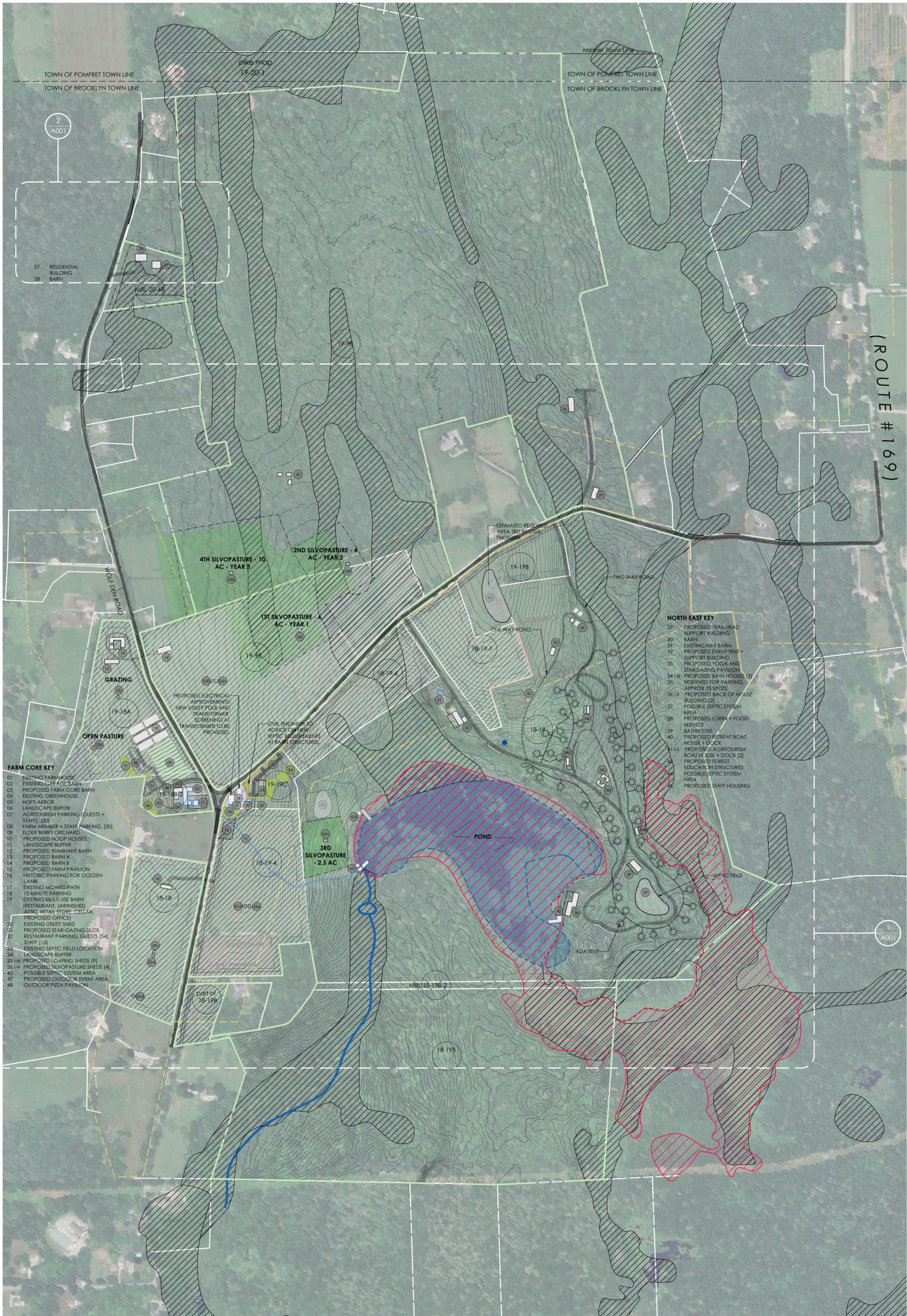
ZONES

-  AP Aquifer Protection
-  GP Groundwater Protection
-  R-10 Residential
-  R-30 Residential
-  RA Residential-Agricultural
-  VC Village Center
-  PC Planned Commercial
-  RB Restricted Business
-  NB Neighborhood Business
-  MMUD Mill Mixed Use Devt.
-  IND Industrial
-  GCO Golf Course Overlay
-  PLO Paradise Lake Overlay
-  Scenic Route 169 Overlay

Approved by the Brooklyn Planning and Zoning Commission.

Michelle Sigfridson, Chair
Effective October 15, 2019.

Date



5.G.5-2a-d.1
1 Conceptual Site Plan Overall
 1" = 350'-0"



BUSH HILL BROOK	FLOOD ZONE	WATER / POND	ATV PATH / 8FT WIDE
BUSH HILL HISTORIC DISTRICT	MAIN ROAD	WETLANDS	PEDESTRIAN PATH (+/- 5 FT WIDE)
DEED RESTRICTED AREAS	PROPERTY SETBACK	SILVOPASTURE	EXISTING MOWED PATH
EASEMENT	STONEWALLS	PARKINGS	SEPTIC FIELD
EXISTING BUILDINGS	TOWN LINE	TWO WAY VEHICULAR ROADS (±24' FT)	LDF PROPERTY LINE
PROPOSED BUILDINGS	OWNERSHIP LINES	ONE WAY VEHICULAR ROADS (±12' FT)	LANDSCAPE BUFFER
PROPOSED WELL LOCATION	UTILITY POLE	LODGING SITE SYMBOL	ADA LODGING SITE SYMBOL
	4 X4 TRANSFORMER		
	3 PHASE ELECTRICAL SERVICE AT MULTI USE BARN		

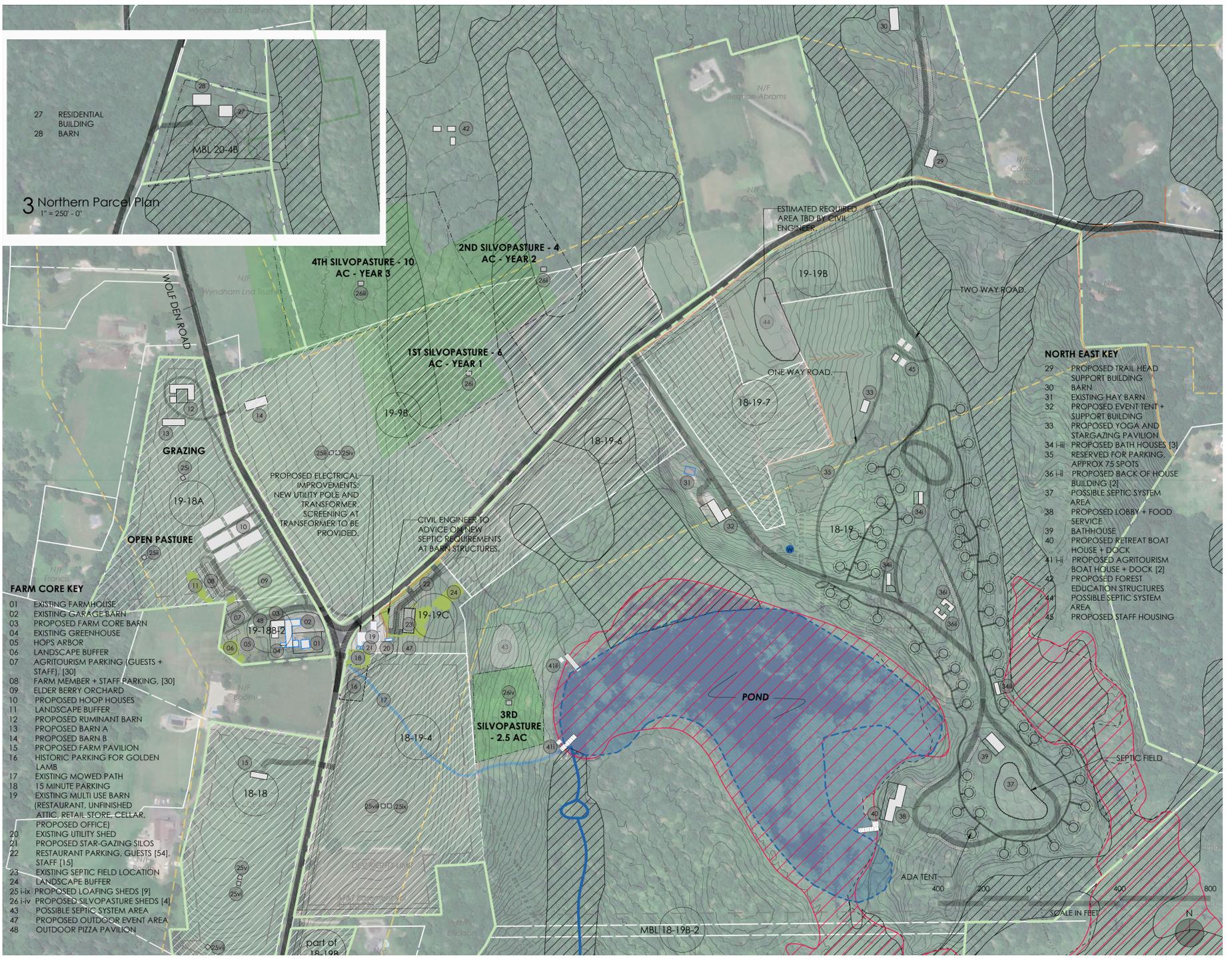
CONCEPTUAL SITE PLAN OVERALL - 1" = 350'-0"

03.30.2022

Little Dipper Farm
 499 Wolf Den Rd, Brooklyn, CT

SHELTER

A01



5.G.5-2a-d,f
1 Conceptual Master Plan Sketch
 1" = 250'-0"

5.G.5-4a-e
2 Data Table

EXISTING ZONING DISTRICT - RA
 RESIDENTIAL-AGRICULTURAL ZONE

PROPOSED ZONING DISTRICT - LDF
 SPECIAL ZONING AREA - LITTLE DIPPER FARM

EXISTING USE AGRICULTURAL RESIDENTIAL
 AGRICULTURAL, BOTH COMMERCIAL AND NON-COMMERCIAL AND LOW DENSITY RESIDENTIAL USES. NOW CHANGE TO EXISTING ZONING DIMENSIONAL STANDARDS BZR § 3.C

LEGEND:

- BUSH HILL BROOK
- BUSH HILL HISTORIC DISTRICT
- DEED RESTRICTED AREAS
- EASEMENT
- EXISTING BUILDINGS
- PROPOSED BUILDINGS
- PROPOSED WELL LOCATION
- FLOOD ZONE
- MAIN ROAD
- PROPERTY SETBACK
- STONEWALLS
- TOWN LINE
- OWNERSHIP LINES
- UTILITY POLE
- TRANSFORMER
- 3 PHASE ELECTRICAL SERVICE AT MULTI USE BARN
- WATER / POND
- WETLANDS
- SILVOPASTURE
- PARKING
- TWO WAY VEHICULAR ROADS (±24' FT)
- ONE WAY VEHICULAR ROADS (±12' FT)
- LOGGING SITE SYMBOL
- ATV PATH / 8FT WIDE
- PEDESTRIAN PATH (+/- 5 FT WIDE)
- EXISTING MOWED PATH
- SEPTIC FIELD
- LDF PROPERTY LINE
- LANDSCAPE BUFFER
- ADA LODGING SITE SYMBOL

GENERAL NOTES:

- Wetlands indicated reflect the National Wetlands Inventory as documented on Survey prepared by Archer Surveying LLC.
- Proposed locations of Buildings, Tents, Paths, and Roads are conceptual and subject to further review and development with authorities having jurisdiction.
- See Civil documents for information pertaining to provision of water, sewer, drainage, and other utilities (as per 5.G.5-2e.)

TOTAL EXISTING LOT AREA (IN BROOKLYN CT):			534.42	Ac
PARCEL(S) NO.	ACREAGE	FRONTAGE		
18-18	11.80	1,146 FT		
18-19	156.87	1,023 FT		
18-19B	77.25	500 FT		
18-19B-2	2.30	N/A		
18-19-4	16.53	1,143 FT		
18-19-6	8.93	1,213 FT		
18-19-7	8.38	409 FT		
19-9B	222.30	3,199 FT		
19-18A	12.97	1,151 FT		
19-18B-2	2.86	301 FT		
19-19B	6.48	817 FT		
19-19C	3.26	643 FT		
20-4B	4.49	513 FT		

PRINCIPLE BUILDING SETBACKS

MINIMUM REQUIRED FRONT YARD SETBACK	50 FT
MINIMUM REQUIRED SIDE YARD SETBACK	40 FT
MINIMUM REQUIRED REAR YARD SETBACK	40 FT
	35 FT

NOTE: ALL PROPOSED PRINCIPLE BUILDINGS SHALL COMPLY WITH SETBACK STANDARDS AND MAXIMUM BUILDING HEIGHT.

ACCESSORY BUILDING SETBACKS

MINIMUM REQUIRED FRONT YARD SETBACK	50 FT
MINIMUM REQUIRED SIDE YARD SETBACK	20 FT
MINIMUM REQUIRED REAR YARD SETBACK	20 FT
MAXIMUM BUILDING HEIGHT	35 FT

NOTE: ALL PROPOSED ACCESSORY BUILDINGS SHALL COMPLY WITH SETBACK STANDARDS AND MAXIMUM BUILDING HEIGHT, WITH THE EXCEPTION OF THE STAR-GAZING SILO. SEE PROPOSED BUILDING AREA.

EXISTING BUILDING FLOOR AREA 20,747 SF

PARCEL No	ID#	BLDG F.A.	COVERAGE	
19-18b	01	EXISTING FARMHOUSE	2,860 SF	1,430 SF
19-18b	02	EXISTING GARAGE BARN	4,264 SF	4,264 SF
19-18b	04	EXISTING GREENHOUSE	486 SF	486 SF
19-19C	19	EXISTING MULTI USE BARN	11,787 SF	5,650 SF
19-19C	19	RESTAURANT USE	3,500 SF	
19-19C	19	UNFINISHED ATTIC	2,200 SF	
19-19C	19	RETAIL STORE	437 SF	
19-19C	19	CELLAR	5,650 SF	
19-19C	20	EXISTING UTILITY SHED	350 SF	350 SF
18-19-6	31	EXISTING HAY BARN	1,000 SF	1,000 SF

NOTE: 1. BUILDING AREAS ARE APPROXIMATE, BASED ON APPRAISAL DOCUMENT. 2. THE CALCULATION OF FLOOR AREA SHALL NOT INCLUDE AREAS WHICH ARE LOCATED BELOW GRADE W/ TWO THIRDS OR MORE OF THE CLEAR HEIGHT BELOW THE AVERAGE GRADE.

PROPOSED BUILDING FLOOR AREA - AGRICULTURAL RESIDENTIAL 30,905 SF

PARCEL No	ID#	BLDG F.A.	COVERAGE	
19-18B	03	PROPOSED FARM CORE BARN	900 SF	900 SF
19-18A	12	PROPOSED RUMINANT BARN	5,080 SF	5,080 SF
19-18A	13	PROPOSED BARN A	3,000 SF	3,000 SF
19-9B	14	PROPOSED BARN B	3,000 SF	3,000 SF
VARIOUS	25-i-x	PROPOSED LOAFING SHEDS [9]	2,925 SF	2,925 SF
19-19B	26-i-v	PROPOSED SILVOPASTURE SHEDS [4]	4,000 SF	4,000 SF
20-4B	27	PROPOSED RESIDENTIAL HOUSE	4,000 SF	2,000 SF
20-4B	28	PROPOSED BARN C	4,000 SF	4,000 SF
19-9B	30	PROPOSED BARN D	4,000 SF	4,000 SF

PROPOSED BUILDING FLOOR AREA - AGRITOURISM 10,575 **

PARCEL No	ID#	BLDG F.A.	COVERAGE	
18-18	15	PROPOSED FARM PAVILION	1,875 SF	1,875 SF
19-19C	19	EXISTING MULTI USE BARN	(See Existing Building Area Above)	
19-19C	19	EXISTING RESTAURANT USE	3,500 SF	
19-19C	19	EXISTING RETAIL STORE	437 SF	
19-19C	19	PROPOSED EVENT USE	3,000 SF	
19-19C	19	PROPOSED OFFICE USE	2,000 SF	
19-9B	21	PROPOSED STAR-GAZING SILOS*	1,200 SF	1,200 SF
19-9B	29	PROPOSED TRAIL HEAD SUPPORT BUILDING	3,000 SF	3,000 SF
18-19	41-i-ii	PROPOSED AGRITOURISM BOAT HOUSE + DOCK [2]	1,800 SF	1,800 SF
19-9B	42	PROPOSED FOREST EDUCATION STRUCTURES	2,400 SF	2,400 SF
19-18B	48	PROPOSED OUTDOOR PIZZA PAVILION	300 SF	300 SF

* STAR-GAZING SILO WILL EXCEED 35' HEIGHT LIMIT
 ** DOES NOT TALLY EXISTING USES

PROPOSED BUILDING FLOOR AREA - AGRITOURISM RETREAT 78,650 SF

PARCEL No	ID#	BLDG F.A.	COVERAGE	
18-19	32	PROPOSED EVENT TENT + SUPPORT BLDG	5,500 SF	5,500 SF
18-19	34-i-iii	PROPOSED BATH HOUSES [3]	3,600 SF	3,600 SF
18-19	36-i-ii	PROPOSED BACK OF HOUSE BUILDING [2]	1,250 SF	1,250 SF
18-19	38	PROPOSED LOBBY + FOOD SERVICE*	5,000 SF	5,000 SF
18-19	39	PROPOSED ALT EVENT TENT + SUPPORT BLDG	5,500 SF	5,500 SF
18-19	40	PROPOSED RETREAT BOAT HOUSE + DOCK	3,600 SF	3,600 SF
18-19	45	PROPOSED STAFF HOUSING	3,200 SF	3,200 SF
18-19, 18-19B, 18-19B-2	---	PROPOSED LODGING SITES	51,000 SF	51,000 SF

*Food service is open to RETREAT guests and the public. RETREAT guests will use RETREAT parking and additional parking will serve non-RETREAT guests.

TOTAL AGRITOURISM RETREAT LOT AREA 236.42 Ac

LOCATED ON LOT(S):	ACREAGE
18-19	156.87 Ac
18-19B-2	2.30 Ac
18-19B*	77.25 Ac
*PARTIAL CT STATE DEVELOPMENT RESTRICTION ALONG WOLF DEN ROAD	-2.46 Ac
APPROX. WETLAND AREA ON PARCELS 18-19, 18-19B-2, & 18-19B	-47.62 Ac
APPROX. AREA OF POND	-22.80 Ac

PROPOSED NUMBER OF LODGING SITES 50 SITES

PARCEL No	ID#	DESCRIPTION	SPOTS
18-19		PROPOSED LODGING SITES (900 SF)	35
18-19		PROPOSED LODGING SITES (1,300 SF)	15

PROPOSED APPROX. IMPERVIOUS AREAS (SITE WIDE) 623,072 SF

ID#	DESCRIPTION	AREA
	PROPOSED BUILDING COVERAGE	184,610 SF
	PROPOSED PEDESTRIAN PATHS (+/- 5 FT WIDE)	64,020 SF
	PROPOSED TWO WAY VEHICULAR ROADS (±24' FT)	210,504 SF
	PROPOSED ONE WAY VEHICULAR ROADS (±12' FT)	17,136 SF
	PROPOSED DECKS	10,039 SF
	PROPOSED WORK-YARDS	32,771 SF
10	PROPOSED HOOP HOUSES	18,000 SF
33	PROPOSED YOGA AND STARGAZING PAVILION	1,000 SF
	PROPOSED SITE WIDE PARKING	84,992 SF

PROPOSED AGRICULTURAL PARKING 30 SPOTS

PARCEL No	ID#	DESCRIPTION	SPOTS
19-18A	08	FARM MEMBER + STAFF	30

PROPOSED AGRITOURISM PARKING 139 SPOTS

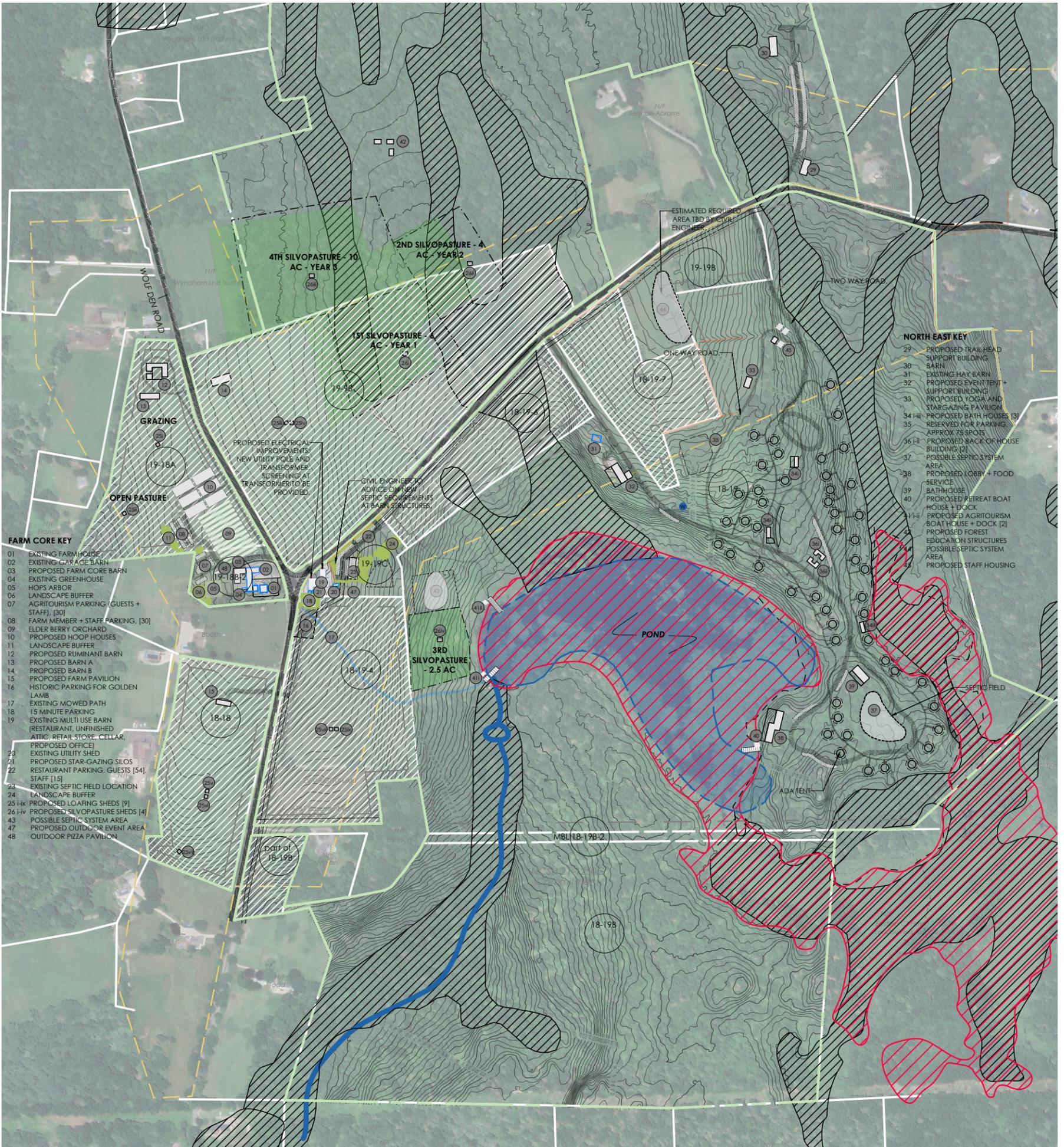
PARCEL No	ID#	DESCRIPTION	SPOTS
19-18B-2	07	AGRITOURISM GUESTS + STAFF	30
19-19C	18	15 MINUTE PARKING	12
19-19C	22	RESTAURANT GUESTS	27
19-19C	22	RESTAURANT STAFF	10
19-9B		TRAIL HEAD + OVERFLOW PARKING	60

PROPOSED AGRITOURISM RETREAT PARKING 123 SPOTS

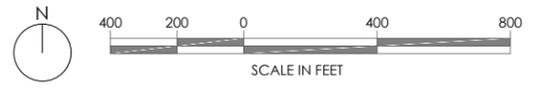
PARCEL No	ID#	DESCRIPTION	SPOTS
18-19		RETREAT GUESTS	58
18-19		RETREAT STAFF	15
18-19		LOBBY/ CHECK-IN	20
18-19		VISITOR PARKING	30

CONCEPTUAL MASTER PLAN SKETCH - 1" = 250'-0"

03.30.2022



5.G.5-2a-d,f
1 Conceptual Master Plan Sketch
 1" = 550'-0"



LEGEND:

	BUSH HILL BROOK		SILVOPASTURE
	BUSH HILL HISTORIC DISTRICT		PARKINGS
	DEED RESTRICTED AREAS		TWO WAY VEHICULAR ROADS (24 FT)
	EASEMENT		ONE WAY VEHICULAR ROADS (12 FT)
	EXISTING BUILDINGS		ATV PATH / 8FT WIDE
	PROPOSED BUILDINGS		PEDESTRIAN PATH (+/- 5 FT WIDE)
	FLOOD ZONE		EXISTING MOWED PATH
	MAIN ROAD		SEPTIC FIELD
	PROPERTY SETBACK		LDF PROPERTY LINE
	STONEWALLS		LANDSCAPE BUFFER
	TOWN LINE		PROPOSED WELL LOCATION
	OWNERSHIP LINES		3 PHASE ELECTRICAL SERVICE AT MULTI USE BARN
	WATER / POND		LODGING SITE SYMBOL
	WETLANDS		ADA LODGING SITE SYMBOL

CONCEPTUAL MASTER PLAN SKETCH - 1" = 550'-0"

03.30.2022

Little Dipper Farm
 499 Wolf Den Rd, Brooklyn, CT

SHELTER

A03a

EXISTING ZONING DISTRICT - RA

RESIDENTIAL-AGRICULTURAL ZONE

PROPOSED ZONING DISTRICT - LDF

SPECIAL ZONING AREA - LITTLE DIPPER FARM

EXISTING USE AGRICULTURAL RESIDENTIAL

AGRICULTURAL, BOTH COMMERCIAL AND NON-COMMERCIAL AND LOW DENSITY RESIDENTIAL USES. NOW CHANGE TO EXISTING ZONING DIMENSIONAL STANDARDS BZR § 3.C

TOTAL EXISTING LOT AREA (IN BROOKLYN CT):			534.42	Ac
PARCEL(S) NO.	ACREAGE	FRONTAGE		
18-18	11.80 Ac	1,146 FT		
18-19	156.87 Ac	1,023 FT		
18-19B	77.25 Ac	500 FT		
18-19B-2	2.30 Ac	N/A		
18-19-4	16.53 Ac	1,143 FT		
18-19-6	8.93 Ac	1,213 FT		
18-19-7	8.38 Ac	409 FT		
19-9B	222.30 Ac	3,199 FT		
19-18A	12.97 Ac	1,151 FT		
19-18B-2	2.86 Ac	301 FT		
19-19B	6.48 Ac	817 FT		
19-19C	3.26 Ac	643 FT		
20-4B	4.49 Ac	513 FT		

PRINCIPLE BUILDING SETBACKS

MINIMUM REQUIRED FRONT YARD SETBACK	50 FT
MINIMUM REQUIRED SIDE YARD SETBACK	40 FT
MINIMUM REQUIRED REAR YARD SETBACK	40 FT
	35 FT

NOTE: ALL PROPOSED PRINCIPLE BUILDINGS SHALL COMPLY WITH SETBACK STANDARDS AND MAXIMUM BUILDING HEIGHT.

ACCESSORY BUILDING SETBACKS

MINIMUM REQUIRED FRONT YARD SETBACK	50 FT
MINIMUM REQUIRED SIDE YARD SETBACK	20 FT
MINIMUM REQUIRED REAR YARD SETBACK	20 FT
MAXIMUM BUILDING HEIGHT	35 FT

NOTE: ALL PROPOSED ACCESSORY BUILDINGS SHALL COMPLY WITH SETBACK STANDARDS AND MAXIMUM BUILDING HEIGHT, WITH THE EXCEPTION OF THE STAR-GAZING SILO. SEE PROPOSED BUILDING AREA.

EXISTING BUILDING FLOOR AREA			20,747	SF
PARCEL No	ID#		BLDG F.A.	COVERAGE
19-18b	01	EXISTING FARMHOUSE	2,860 SF	1,430 SF
19-18b	02	EXISTING GARAGE BARN	4,264 SF	4,264 SF
19-18b	04	EXISTING GREENHOUSE	486 SF	486 SF
19-19C	19	EXISTING MULTI USE BARN	11,787 SF	5,650 SF
19-19C	19	RESTAURANT USE	3,500 SF	
19-19C	19	UNFINISHED ATTIC	2,200 SF	
19-19C	19	RETAIL STORE	437 SF	
19-19C	19	CELLAR	5,650 SF	
19-19C	20	EXISTING UTILITY SHED	350 SF	350 SF
18-19-6	31	EXISTING HAY BARN	1,000 SF	1,000 SF

NOTE: 1. BUILDING AREAS ARE APPROXIMATE, BASED ON APPRAISAL DOCUMENT. 2. THE CALCULATION OF FLOOR AREA SHALL NOT INCLUDE AREAS WHICH ARE LOCATED BELOW GRADE W/ TWO THIRDS OR MORE OF THE CLEAR HEIGHT BELOW THE AVERAGE GRADE.

PROPOSED BUILDING FLOOR AREA - AGRICULTURAL RESIDENTIAL			30,905	SF
PARCEL No	ID#		BLDG F.A.	COVERAGE
19-18B	03	PROPOSED FARM CORE BARN	900 SF	900 SF
19-18A	12	PROPOSED RUMINANT BARN	5,080 SF	5,080 SF
19-18A	13	PROPOSED BARN A	3,000 SF	3,000 SF
19-9B	14	PROPOSED BARN B	3,000 SF	3,000 SF
VARIOUS	25i-ix	PROPOSED LOAFING SHEDS [9]	2925 SF	2,925 SF
19-19B	26i-iv	PROPOSED SILVOPASTURE SHEDS [4]	4,000 SF	4,000 SF
20-4B	27	PROPOSED RESIDENTIAL HOUSE	4,000 SF	2,000 SF
20-4B	28	PROPOSED BARN C	4,000 SF	4,000 SF
19-9B	30	PROPOSED BARN D	4,000 SF	4,000 SF

PROPOSED BUILDING FLOOR AREA - AGRITOURISM			10,575	**
PARCEL No	ID#		BLDG F.A.	COVERAGE
18-18	15	PROPOSED FARM PAVILION	1,875 SF	1,875 SF
19-19C	19	EXISTING MULTI USE BARN	(See Existing Building Area Above)	
19-19C	19	EXISTING RESTAURANT USE	3,500 SF	
19-19C	19	EXISTING RETAIL STORE	437 SF	
19-19C	19	PROPOSED EVENT USE	3,000 SF	
19-19C	19	PROPOSED OFFICE USE	2,000 SF	
	21	PROPOSED STAR-GAZING SILOS*	1,200 SF	1,200 SF
19-9B	29	PROPOSED TRAIL HEAD SUPPORT BUILDING	3,000 SF	3,000 SF
18-19	41i-ii	PROPOSED AGRITOURISM BOAT HOUSE + DOCK [2]	1,800 SF	1,800 SF
19-9B	42	PROPOSED FOREST EDUCATION STRUCTURES	2,400 SF	2,400 SF
19-18B	48	PROPOSED OUTDOOR PIZZA PAVILION	300 SF	300 SF

* STAR-GAZING SILO WILL EXCEED 35' HEIGHT LIMIT

** DOES NOT TALLY EXISTING USES

PROPOSED BUILDING FLOOR AREA - AGRITOURISM RETREAT			78,650	SF
PARCEL No	ID#		BLDG F.A.	COVERAGE
18-19	32	PROPOSED EVENT TENT + SUPPORT BLDG	5,500 SF	5,500 SF
18-19	34i-iii	PROPOSED BATH HOUSES [3]	3,600 SF	3,600 SF
18-19	36i-ii	PROPOSED BACK OF HOUSE BUILDING [2]	1,250 SF	1,250 SF
18-19	38	PROPOSED LOBBY + FOOD SERVICE*	5,000 SF	5,000 SF
18-19	39	PROPOSED ALT EVENT TENT + SUPPORT BLDG	5,500 SF	5,500 SF
18-19	40	PROPOSED RETREAT BOAT HOUSE + DOCK	3,600 SF	3,600 SF
18-19	45	PROPOSED STAFF HOUSING	3,200 SF	3,200 SF
18-19, 18-19B, 18-19B-2	---	PROPOSED LODGING SITES	51,000 SF	51,000 SF

*Food service is open to RETREAT guests and the public. RETREAT guests will use RETREAT parking and additional parking will serve non-RETREAT guests.

TOTAL AGRITOURISM RETREAT LOT AREA	236.42	Ac
LOCATED ON LOT(S):		
18-19	156.87	Ac
18-19B-2	2.30	Ac
18-19B*	77.25	Ac

*PARTIAL CT STATE DEVELOPMENT RESTRICTION ALONG WOLF DEN ROAD

APPROX. WETLAND AREA ON PARCELS 18-19, 18-19B-2, & 18-19B

APPROX. AREA OF POND

PROPOSED NUMBER OF LODGING SITES		50	SITES
PARCEL No	ID#		
18-19		PROPOSED LODGING SITES (900 SF)	35
18-19		PROPOSED LODGING SITES (1,300 SF)	15

PROPOSED APPROX. IMPERVIOUS AREAS (SITE WIDE)		623,072	SF
	ID#		
		PROPOSED BUILDING COVERAGE	184,610 SF
		PROPOSED PEDESTRIAN PATHS (+/- 5 FT WIDE)	64,020 SF
		PROPOSED TWO WAY VEHICULAR ROADS (±24' FT)	210,504 SF
		PROPOSED ONE WAY VEHICULAR ROADS (±12' FT)	17,136 SF
		PROPOSED DECKS	10,039 SF
		PROPOSED WORK-YARDS	32,771 SF
	10	PROPOSED HOOP HOUSES	18,000 SF
	33	PROPOSED YOGA AND STARGAZING PAVILION	1,000 SF
		PROPOSED SITE WIDE PARKING	84,992 SF

PROPOSED AGRICULTURAL PARKING		30	SPOTS
PARCEL No	ID#		
19-18A	08	FARM MEMBER + STAFF	30

PROPOSED AGRITOURISM PARKING		139	SPOTS
PARCEL No	ID#		
19-18B-2	07	AGRITOURISM GUESTS + STAFF	30
19-19C	18	15 MINUTE PARKING	12
19-19C	22	RESTAURANT GUESTS	27
19-19C	22	RESTAURANT STAFF	10
19-9B		TRAIL HEAD + OVERFLOW PARKING	60

PROPOSED AGRITOURISM RETREAT PARKING		123	SPOTS
PARCEL No	ID#		
18-19		RETREAT GUESTS	58
18-19		RETREAT STAFF	15
18-19		LOBBY/ CHECK-IN	20
18-19		VISITOR PARKING	30

5.G.5-4a-e
2 Data Table

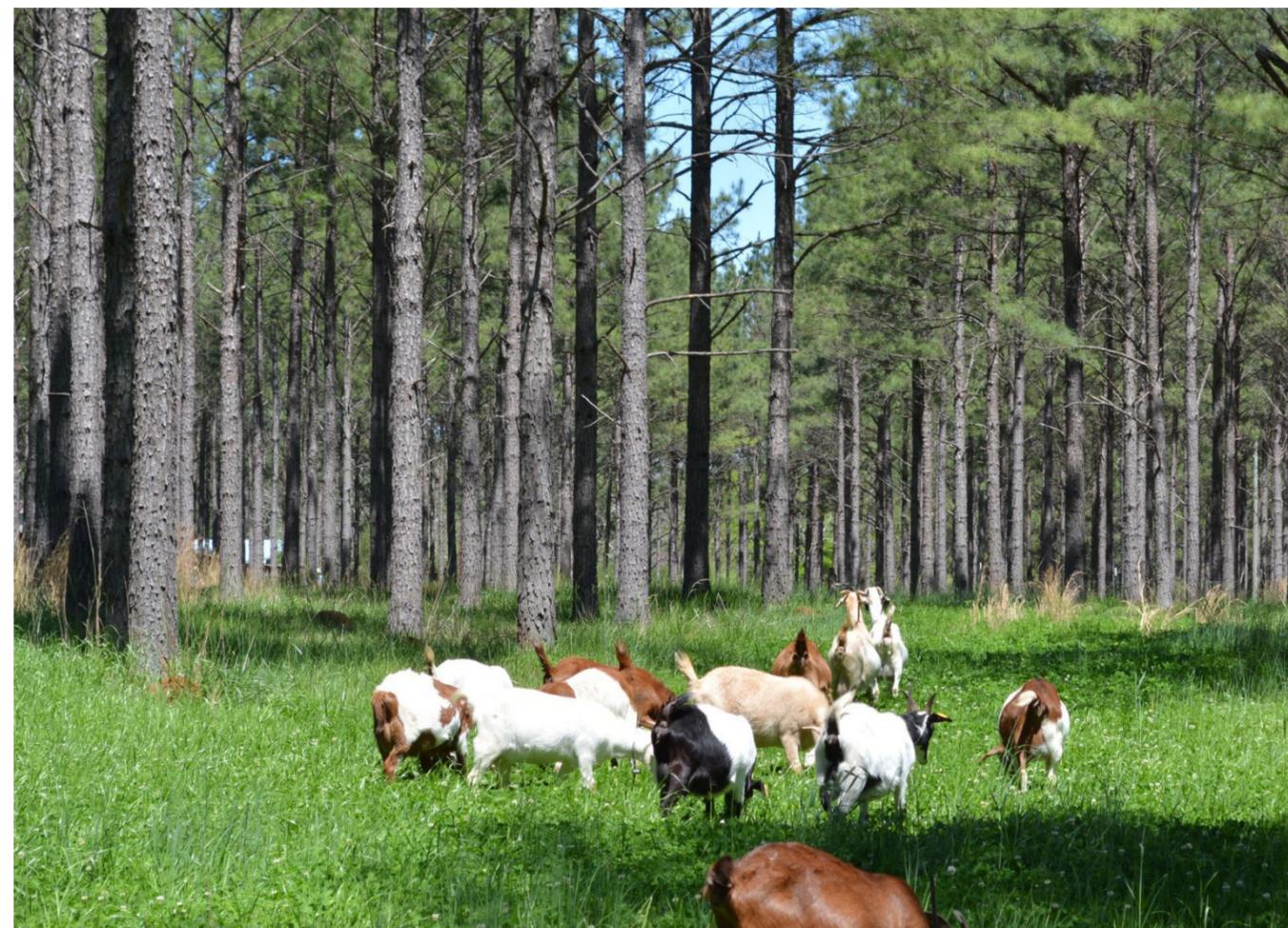


LITTLE DIPPER FARM



ARCHITECTURAL
PHOTOGRAPHIC
SAMPLES FOR PDZ

03.30.2022



EXISTING FARM CORE

FARMHOUSE, GARAGE BARN, GREENHOUSE, MULTI-USE BARN, UTILITY SHED



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

2

FARM EXPANSION

FARM CORE BARN, RUMINANT BARN, AGRICULTURAL BARNs A-D



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

3

FARM EXPANSION

FARM CORE BARN, RUMINANT BARN, AGRICULTURAL BARN A-D



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

4

FARM EXPANSION

HOOP HOUSES, HIGH TUNNELS



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

5

FARM EXPANSION

HOOP HOUSES, HIGH TUNNELS



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

6

FARM EXPANSION

STONE PIZZA OVEN



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm

Brooklyn, CT

03.30.2022

SHELTER

7

FARM EXPANSION

LOAFING SHEDS, SILVOPASTURE SHEDS



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

FARM EXPANSION

LOAFING SHEDS, SILVOPASTURE SHEDS



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

FARM EXPANSION

PORTABLE ELECTRICAL FENCE, PERMANENT FENCING



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

10

AGRITOURISM

FARM PAVILION



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm

Brooklyn, CT

03.30.2022

SHELTER

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AGRITOURISM

FARM PAVILION



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

12

AGRITOURISM

STAR GAZING SILO



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

13

AGRITOURISM

FOREST EDUCATION STRUCTURES



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

14

AGRITOURISM

YOGA AND STAR-GAZING PAVILION



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

15

AGRITOURISM / RETREAT

LODGING SITES



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

16

AGRITOURISM / RETREAT

EVENT TENT + SUPPORT BUILDING



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

17

AGRITOURISM / RETREAT

BATH HOUSES



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm

Brooklyn, CT

03.30.2022

SHELTER

18

AGRITOURISM / RETREAT

BATH HOUSES



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm

Brooklyn, CT

03.30.2022

SHELTER

19

AGRITOURISM / RETREAT

BOAT HOUSE + DOCK



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

20

AGRITOURISM / RETREAT

BOAT HOUSE + DOCK



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm

Brooklyn, CT

03.30.2022

SHELTER

21

AGRITOURISM / RETREAT

BACK OF HOUSE BUILDINGS, SUPPORT BUILDINGS



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

22

AGRITOURISM / RETREAT

BACK OF HOUSE BUILDINGS, SUPPORT BUILDINGS



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

23

AGRITOURISM / RETREAT

BACK OF HOUSE BUILDINGS, SUPPORT BUILDINGS



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

24

AGRITOURISM / RETREAT

MOBILE GUEST UNITS / STAFF HOUSING



ARCHITECTURAL PHOTOGRAPHIC SAMPLES

Little Dipper Farm
Brooklyn, CT

03.30.2022

SHELTER

25

**Traffic Impact Study
Little Dipper Farm
Brooklyn, Connecticut
April 2022**

This study examines the traffic impact of Little Dipper Farm in Brooklyn, Connecticut. Peak-hour site trips generated by improvement on the site, roadway traffic volumes, and traffic capacity at site driveways were reviewed. For the purpose of this traffic study, 2023 was assumed to be the year during which improvement is built and the facilities are occupied.

I. Summary

- The proposed improvement is estimated to generate 23, 53, and 92 trips for respective weekday morning, weekday afternoon, and Saturday midday peak hours.
- The traffic impact of the development will be limited. When the improved facilities are occupied, all traffic approaches at site driveways will operate at favorable LOS A during the three peak hours. The development will not create traffic hazards and will not block or hamper the circulation pattern of adjacent roadways.

II. Project Description

The proposed improvement will include parcels near the intersection of Wolf Den Road and Bush Hill Road. Next to the farm, Wolf Den Road and Bush Hill Road measure about 16 feet in width. The posted speed limit on Bush Hill Road is 30 mph. The posted speed limit on Wolf Den Road near the farm is 25 mph. Further north, the speed limit on Wolf Den Road changes to 30 mph.

III. Traffic Volumes

Automatic traffic count data were collected on Wolf Den Road and Bush Hill Road on weekdays and on a Saturday in January 2022. Seasonal adjustment factors based on CTDOT data and annual traffic growth rate of 0.7 percent recommended by CTDOT were applied to peak-hour traffic volumes from the counts to generate 2023 peak summer month background volumes for area roadways.

IV. Future Traffic Conditions

Site trips during the peak hours were estimated based on proposed uses (Table 1). The development will likely generate the most peak-hour trips of 92 vehicles during the Saturday midday peak hour.

Table 1 Estimated Site Trips (vph)

Driveway #	Weekday Morning Peak Hour (7:00 am-8:00 am)		Weekday Afternoon Peak Hour (4:00 pm-5:00)		Saturday Midday Peak Hour (12:00 pm-1:00 pm)		Note
	Entry	Exit	Entry	Exit	Entry	Exit	
#8	0	1	1	0	1	1	Residential building and barn
#7	0	3	3	0	1	1	Barns
#1	5	0	0	5	10	5	30 parking spaces, guests and staff
#10	1	0	0	1	1	1	Farm pavilion
#2	5	0	0	5	10	5	Existing farm road, 15-min parking
#3	1	0	3	3	10	5	Restaurant parking (37 spaces)
#4	1	0	3	3	10	5	Restaurant parking (37 spaces)
#5	2	2	5	5	5	5	Camping
#6	0	0	5	5	5	5	Camping
#9	2	0	3	3	3	3	Barn, storage, arrival, and parking
Sum	17	6	23	30	56	36	

vph Vehicles per hour

V. Traffic Capacity Analysis

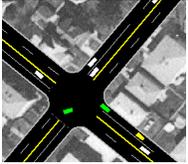
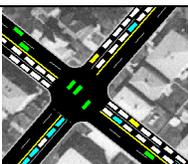
To assess the quality of traffic flow, intersection capacity analysis was conducted for the future no-build and future build traffic conditions. Capacity analysis provides an indication of how well roadway facilities serve the traffic demands placed upon them. *Synchro 10*, a software package that includes the evaluation criteria of the *2000 Highway Capacity Manual (HCM 2000)*, was used to analyze the intersections.

Level of service (LOS) is the term used to describe the different operating conditions that occur on a given roadway segment or intersection under various traffic conditions. It is a qualitative measure of the effects of a number of factors including roadway geometry, speed, travel delay, freedom to maneuver, and safety. Six levels of service can be defined for each type of facility. Each level of service (LOS) is given a letter designation from A to F, with LOS A representing the best operating conditions and LOS F representing the worst.

LOS at intersection is measured in terms of average control delay. For signalized intersections and all-way stop-controlled intersections, the analysis considers the operation of all traffic entering the intersection, and an overall condition is reported in addition to individual movements. For two-way stop-controlled (TWSC) intersections where side street traffic has to stop for main street traffic, the analysis assumes that

through traffic on the main street is not affected by traffic on side streets. Thus, LOS is calculated for the main street left-turn and side street approaches, and no overall intersection LOS is defined for TWSC intersections. Table 2 presents the LOS criteria for signalized and unsignalized intersections as defined in the HCM 2000.

Table 2 LOS Criteria for Signalized and Unsignalized Intersections

	Level-of-Service (LOS)	Signalized Delay Range (Average Control Delay, in sec/veh)	Unsignalized Delay Range (Average Control Delay in sec/veh)
	A	≤ 10	≤ 10
	B	> 10 and ≤ 20	> 10 and ≤ 15
	C	> 20 and ≤ 35	> 15 and ≤ 25
	D	> 35 and ≤ 55	> 25 and ≤ 35
	E	> 55 and ≤ 80	> 35 and ≤ 50
	F	> 80	> 50

Source: 2000 Highway Capacity Manual (Exhibits 16-2 and 17-2)

Table 3 that follows shows the capacity analysis results for the analyzed intersections under the 2023 build traffic conditions. During the three peak hours, all traffic movements at site driveways will operate at favorable LOS A with minimal traffic delays. The detailed output sheets are attached to this report.

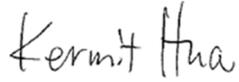
Table 3 Capacity Analyses for Build Conditions

Intersection	2023 Build Conditions		
	Weekday Morning Peak Hour of Adjacent Streets	Weekday Afternoon Peak Hour of Adjacent Streets	Saturday Midday Peak Hour of Adjacent Streets
	LOS	LOS	LOS
Bush Hill Road and Driveway #9 (Unsignalized)			
EB Bush Hill Road	A	A	A
SB Driveway #9	A	A	A
Bush Hill Road and Driveway #6 (Unsignalized)			
WB Bush Hill Road	A	A	A
NB Driveway #6	A	A	A
Bush Hill Road and Driveway #5 (Unsignalized)			
WB Bush Hill Road	A	A	A
NB Driveway #5	A	A	A
Bush Hill Road and Driveway #4 (Unsignalized)			
WB Bush Hill Road	A	A	A
NB Driveway #4	A	A	A
Bush Hill Road and Driveway #3 (Unsignalized)			
WB Bush Hill Road	A	A	A
NB Driveway #3	A	A	A
Wolf Den Road and Driveway #2 (Unsignalized)			
WB Driveway #2	A	A	A
SB Wolf Den Road	A	A	A
Wolf Den Road and Driveway #10 (Unsignalized)			
EB Driveway #10	A	A	A
NB Wolf Den Road	A	A	A
Wolf Den Road and Driveway #1 (Unsignalized)			
EB Driveway #1	A	A	A
NB Wolf Den Road	A	A	A
Wolf Den Road and Driveway #7 (Unsignalized)			
EB Driveway #7	A	A	A
NB Wolf Den Road	A	A	A
Wolf Den Road and Driveway #8 (Unsignalized)			
WB Driveway #8	A	A	A
SB Wolf Den Road	A	A	A

EB Eastbound
 WB Westbound
 NB Northbound
 SB Southbound
 LOS Level of Service

VI. Conclusions

Area traffic operation was analyzed for improvement at Little Dipper Farm under 2023 build traffic conditions. When the improvement is built and the facilities are occupied, all site driveways will operate at favorable LOS A. The traffic impact of the improvement at Little Dipper Farm will be limited and will be accommodated by existing roadways.



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CONNECTICUT DEPARTMENT OF TRANSPORTATION
 BUREAU OF POLICY & PLANNING - ROADWAY INFORMATION SYSTEMS
 TRAFFIC DATA COLLECTION & VERIFICATION SECTION

FACTORS FOR EXPANDING 24-HOUR COUNTS TO
 ANNUAL AVERAGE DAILY TRAFFIC VOLUMES
 (BASED ON 2018 CONTINUOUS COUNT STATION DATA)

GROUP - 1 ** INTERSTATE **

STATION(S): 7, 12, 24, 30, 31, 32, 53, 54

	AVG.	WEEKDAY	FRIDAY	SATURDAY	SUNDAY
JANUARY		1.08	1.03	1.21	1.41
FEBRUARY		1.04	0.96	1.13	1.45
MARCH		1.05	0.93	1.05	1.21
APRIL		0.99	0.91	1.03	1.17
MAY		0.94	0.83	0.98	1.10
JUNE		0.95	0.90	0.99	1.08
JULY		0.95	0.91	0.97	1.08
AUGUST		0.94	0.86	0.99	1.06
SEPTEMBER		0.99	0.89	0.99	1.08
OCTOBER		0.98	0.90	1.00	1.12
NOVEMBER		0.98	0.98	1.03	1.13
DECEMBER		1.00	0.96	1.04	1.22

GROUP - 2 ** RURAL **

STATION(S): 4, 10, 16, 20, 50, 51

	AVG.	WEEKDAY	FRIDAY	SATURDAY	SUNDAY
JANUARY		1.12	1.08	1.17	1.48
FEBRUARY		1.12	1.05	1.16	1.55
MARCH		1.08	1.04	1.06	1.32
APRIL		1.05	0.95	0.94	1.29
MAY		0.95	0.89	0.95	1.04
JUNE		0.91	0.80	0.87	0.95
JULY		0.93	0.84	0.87	0.98
AUGUST		0.89	0.83	0.90	0.93
SEPTEMBER		0.97	0.88	0.91	1.02
OCTOBER		0.98	0.88	0.97	1.08
NOVEMBER		1.00	1.02	1.09	1.21
DECEMBER		1.08	1.09	1.11	1.29

GROUP - 3 ** INTERSTATE **

STATION(S): 27 (I-84 FROM ROUTE 195 TO MASS. STATE LINE)

	AVG.	WEEKDAY	FRIDAY	SATURDAY	SUNDAY
JANUARY		1.02	1.10	1.25	0.99
FEBRUARY		0.86	0.81	1.02	1.22
MARCH		1.46	0.91	0.94	0.93
APRIL		1.22	0.96	1.00	1.00
MAY		1.07	0.73	0.99	0.90
JUNE		1.04	0.84	0.96	0.71
JULY		0.98	0.84	0.80	0.74
AUGUST		0.81	0.75	0.89	0.79
SEPTEMBER		1.11	1.09	1.13	0.81
OCTOBER		1.04	1.06	1.30	0.99
NOVEMBER		1.26	1.24	1.15	0.64
DECEMBER		1.14	0.33	0.43	0.79

CONNECTICUT DEPARTMENT OF TRANSPORTATION
 BUREAU OF POLICY & PLANNING - ROADWAY INFORMATION SYSTEMS
 TRAFFIC MONITORING & DATA ANALYSIS SECTION

FACTORS FOR EXPANDING 24-HOUR COUNTS TO
 ANNUAL AVERAGE DAILY TRAFFIC VOLUMES
 (BASED ON 2018 CONTINUOUS COUNT STATION DATA)

GROUP - 4 ** URBAN **

STATION(S): 8, 9, 11, 15, 17, 22, 23, 28, 47, 48, 52

	AVG.	WEEKDAY	FRIDAY	SATURDAY	SUNDAY
JANUARY		1.03	1.00	1.18	1.46
FEBRUARY		1.03	0.95	1.14	1.49
MARCH		0.97	0.94	1.07	1.30
APRIL		0.98	0.90	1.03	1.26
MAY		0.92	0.83	1.01	1.21
JUNE		0.91	0.85	1.01	1.15
JULY		0.95	0.89	1.06	1.22
AUGUST		0.95	0.89	1.09	1.23
SEPTEMBER		0.96	0.88	1.03	1.20
OCTOBER		0.95	0.86	1.05	1.16
NOVEMBER		0.97	0.97	1.08	1.27
DECEMBER		0.99	0.96	1.06	1.24

GROUP - 5 ** NORTHWEST RECREATIONAL **

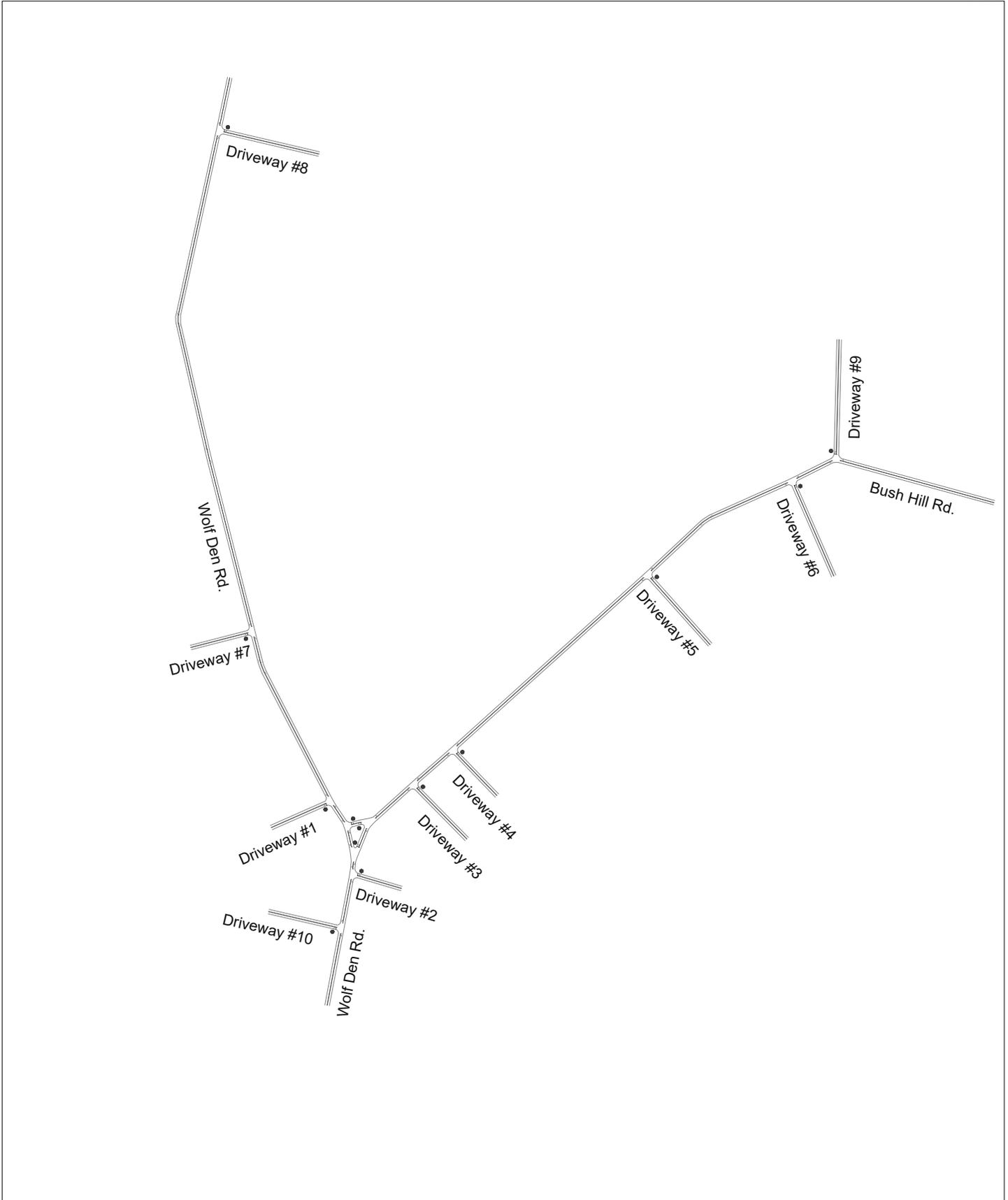
STATION(S): 1 (Station 18 not available on 2018)

	AVG.	WEEKDAY	FRIDAY	SATURDAY	SUNDAY
JANUARY		1.29	1.18	1.05	1.21
FEBRUARY		1.24	1.10	1.02	1.34
MARCH		1.28	1.06	1.14	1.24
APRIL		1.04	0.88	0.96	0.85
MAY		1.00	0.83	0.78	0.80
JUNE		0.96	0.80	0.79	0.77
JULY		0.91	0.80	0.71	0.61
AUGUST		0.94	0.75	0.76	0.71
SEPTEMBER		0.99	0.85	0.69	0.73
OCTOBER		0.95	0.71	0.69	0.68
NOVEMBER		1.15	1.05	1.08	1.06
DECEMBER		1.13	1.11	1.09	1.25

GROUP - 6 ** SOUTHEAST RECREATIONAL **

STATION(S): 5, 33, 44, 46

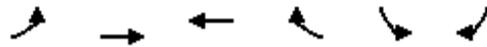
	AVG.	WEEKDAY	FRIDAY	SATURDAY	SUNDAY
JANUARY		1.24	1.08	1.05	1.22
FEBRUARY		1.17	1.00	0.98	1.21
MARCH		1.19	0.98	0.93	1.06
APRIL		1.13	0.91	0.86	1.00
MAY		1.04	0.85	0.84	0.92
JUNE		1.00	0.80	0.81	0.88
JULY		0.91	0.77	0.75	0.79
AUGUST		0.92	0.75	0.77	0.80
SEPTEMBER		1.07	0.89	0.84	0.92
OCTOBER		1.10	0.89	0.93	0.98
NOVEMBER		1.17	0.97	0.93	1.04
DECEMBER		1.16	1.00	0.97	1.15



HCM Unsignalized Intersection Capacity Analysis

1: Bush Hill Rd. & Driveway #9

04/10/2022



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↩	↩		↩	
Traffic Volume (veh/h)	1	21	12	1	0	0
Future Volume (Veh/h)	1	21	12	1	0	0
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	23	13	1	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	14				38	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	14				38	14
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1604				973	1067
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	24	14	0			
Volume Left	1	0	0			
Volume Right	0	1	0			
cSH	1604	1700	1700			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.3	0.0	0.0			
Lane LOS	A		A			
Approach Delay (s)	0.3	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			6.7%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 12: Driveway #6 & Bush Hill Rd.

04/10/2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	22	0	0	12	0	0
Future Volume (Veh/h)	22	0	0	12	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	24	0	0	13	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	246					
pX, platoon unblocked						
vC, conflicting volume			24		37	24
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			24		37	24
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1591		975	1052
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	24	13	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1591	1700			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 14: Bush Hill Rd. & Driveway #5

04/10/2022



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	1	1	21	1	1	11
Future Volume (Veh/h)	1	1	21	1	1	11
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1	23	1	1	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)						917
pX, platoon unblocked						
vC, conflicting volume	38	24			24	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	38	24			24	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	974	1053			1591	
Direction, Lane #						
	NW 1	NE 1	SW 1			
Volume Total	2	24	13			
Volume Left	1	0	1			
Volume Right	1	1	0			
cSH	1012	1700	1591			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.6	0.0	0.6			
Lane LOS	A		A			
Approach Delay (s)	8.6	0.0	0.6			
Approach LOS	A					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization		13.3%		ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 16: Bush Hill Rd. & Driveway #4

04/10/2022



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	0	22	0	1	11
Future Volume (Veh/h)	0	0	22	0	1	11
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	24	0	1	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	38	24			24	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	38	24			24	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	974	1052			1591	
Direction, Lane #						
	NW 1	NE 1	SW 1			
Volume Total	0	24	13			
Volume Left	0	0	1			
Volume Right	0	0	0			
cSH	1700	1700	1591			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.6			
Lane LOS	A		A			
Approach Delay (s)	0.0	0.0	0.6			
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			6.7%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 17: Bush Hill Rd. & Driveway #3

04/10/2022



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	0	22	0	1	10
Future Volume (Veh/h)	0	0	22	0	1	10
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	24	0	1	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)					276	
pX, platoon unblocked						
vC, conflicting volume	37	24			24	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	37	24			24	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	975	1052			1591	
Direction, Lane #						
	NW 1	NE 1	SW 1			
Volume Total	0	24	12			
Volume Left	0	0	1			
Volume Right	0	0	0			
cSH	1700	1700	1591			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.6			
Lane LOS	A		A			
Approach Delay (s)	0.0	0.0	0.6			
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			6.7%		ICU Level of Service A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

20: Wolf Den Rd. & Driveway #2

04/10/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙		↘		↕	
Traffic Volume (veh/h)	0	0	29	3	2	16
Future Volume (Veh/h)	0	0	29	3	2	16
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	32	3	2	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)						85
pX, platoon unblocked						
vC, conflicting volume	54	34			35	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	54	34			35	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	952	1040			1576	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	35	19			
Volume Left	0	0	2			
Volume Right	0	3	0			
cSH	1700	1700	1576			
Volume to Capacity	0.00	0.02	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.8			
Lane LOS	A		A			
Approach Delay (s)	0.0	0.0	0.8			
Approach LOS	A					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			6.7%	ICU Level of Service		A
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

21: Wolf Den Rd. & Driveway #10

04/10/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			L	T	
Traffic Volume (veh/h)	0	0	1	32	16	0
Future Volume (Veh/h)	0	0	1	32	16	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	1	35	17	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						303
pX, platoon unblocked						
vC, conflicting volume	54	17	17			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	54	17	17			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	954	1062	1600			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	36	17			
Volume Left	0	1	0			
Volume Right	0	0	0			
cSH	1700	1600	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.2	0.0			
Lane LOS	A	A				
Approach Delay (s)	0.0	0.2	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.1			
Intersection Capacity Utilization			6.7%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

24: Wolf Den Rd. & Driveway #1

04/10/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘			↕	↗	
Traffic Volume (veh/h)	0	0	5	8	18	0
Future Volume (Veh/h)	0	0	5	8	18	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	5	9	20	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	141					
pX, platoon unblocked						
vC, conflicting volume	39	20	20			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	39	20	20			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	970	1058	1596			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	14	20			
Volume Left	0	5	0			
Volume Right	0	0	0			
cSH	1700	1596	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	2.6	0.0			
Lane LOS	A	A				
Approach Delay (s)	0.0	2.6	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			8.2%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

25: Wolf Den Rd. & Driveway #7

04/10/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			L	T	
Traffic Volume (veh/h)	0	3	0	8	15	0
Future Volume (Veh/h)	0	3	0	8	15	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	3	0	9	16	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	985					
pX, platoon unblocked						
vC, conflicting volume	25	16	16			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	25	16	16			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	991	1063	1602			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	3	9	16			
Volume Left	0	0	0			
Volume Right	3	0	0			
cSH	1063	1602	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.4	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.4	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

29: Wolf Den Rd. & Driveway #8

04/10/2022

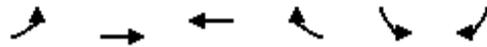


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	0	8	0	0	14
Future Volume (Veh/h)	1	0	8	0	0	14
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	9	0	0	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	24	9			9	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	24	9			9	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	992	1073			1611	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	1	9	15			
Volume Left	1	0	0			
Volume Right	0	0	0			
cSH	992	1700	1611			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.6	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.6	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization		13.3%		ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: Bush Hill Rd. & Driveway #9

04/10/2022



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↩	↩		↩	
Traffic Volume (veh/h)	1	14	9	2	1	2
Future Volume (Veh/h)	1	14	9	2	1	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	15	10	2	1	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	12				28	11
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	12				28	11
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1607				986	1070
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	16	12	3			
Volume Left	1	0	1			
Volume Right	0	2	2			
cSH	1607	1700	1041			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.5	0.0	8.5			
Lane LOS	A		A			
Approach Delay (s)	0.5	0.0	8.5			
Approach LOS			A			
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			13.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 12: Driveway #6 & Bush Hill Rd.

04/10/2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	12	3	2	9	2	3
Future Volume (Veh/h)	12	3	2	9	2	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	3	2	10	2	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	246					
pX, platoon unblocked						
vC, conflicting volume			16		28	14
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			16		28	14
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1602		985	1065
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	16	12	5			
Volume Left	0	2	2			
Volume Right	3	0	3			
cSH	1700	1602	1032			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	1.2	8.5			
Lane LOS		A	A			
Approach Delay (s)	0.0	1.2	8.5			
Approach LOS			A			
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 14: Bush Hill Rd. & Driveway #5

04/10/2022



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	2	3	12	2	2	9
Future Volume (Veh/h)	2	3	12	2	2	9
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	3	13	2	2	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)						917
pX, platoon unblocked						
vC, conflicting volume	28	14			15	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	28	14			15	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %					100	
cM capacity (veh/h)		986	1066			1603
Direction, Lane #						
	NW 1	NE 1	SW 1			
Volume Total	5	15	12			
Volume Left	2	0	2			
Volume Right	3	2	0			
cSH	1032	1700	1603			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.5	0.0	1.2			
Lane LOS	A		A			
Approach Delay (s)	8.5	0.0	1.2			
Approach LOS	A					
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			13.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 16: Bush Hill Rd. & Driveway #4

04/10/2022



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	1	2	12	2	1	10
Future Volume (Veh/h)	1	2	12	2	1	10
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	2	13	2	1	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	27	14			15	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27	14			15	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	988	1066			1603	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	3	15	12			
Volume Left	1	0	1			
Volume Right	2	2	0			
cSH	1038	1700	1603			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.5	0.0	0.6			
Lane LOS	A		A			
Approach Delay (s)	8.5	0.0	0.6			
Approach LOS	A					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			13.3%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 17: Bush Hill Rd. & Driveway #3

04/10/2022



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	1	2	12	2	1	10
Future Volume (Veh/h)	1	2	12	2	1	10
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	2	13	2	1	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)						276
pX, platoon unblocked						
vC, conflicting volume	27	14			15	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	27	14			15	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	988	1066			1603	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	3	15	12			
Volume Left	1	0	1			
Volume Right	2	2	0			
cSH	1038	1700	1603			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.5	0.0	0.6			
Lane LOS	A		A			
Approach Delay (s)	8.5	0.0	0.6			
Approach LOS	A					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			13.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

20: Wolf Den Rd. & Driveway #2

04/10/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		T			↑
Traffic Volume (veh/h)	3	2	29	0	0	33
Future Volume (Veh/h)	3	2	29	0	0	33
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	2	32	0	0	36
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						85
pX, platoon unblocked						
vC, conflicting volume	68	32			32	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	68	32			32	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	937	1042			1580	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	5	32	36			
Volume Left	3	0	0			
Volume Right	2	0	0			
cSH	976	1700	1580			
Volume to Capacity	0.01	0.02	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.7	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.7	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

21: Wolf Den Rd. & Driveway #10

04/10/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			L	T	
Traffic Volume (veh/h)	0	1	0	19	36	0
Future Volume (Veh/h)	0	1	0	19	36	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	0	21	39	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	303					
pX, platoon unblocked						
vC, conflicting volume	60	39	39			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60	39	39			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	947	1033	1571			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	1	21	39			
Volume Left	0	0	0			
Volume Right	1	0	0			
cSH	1033	1571	1700			
Volume to Capacity	0.00	0.00	0.02			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.5	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.5	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.1					
Intersection Capacity Utilization	13.3%			ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis
 24: Wolf Den Rd. & Driveway #1

04/10/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T			↑	↑	
Traffic Volume (veh/h)	0	5	0	23	22	0
Future Volume (Veh/h)	0	5	0	23	22	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	0	25	24	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	141					
pX, platoon unblocked						
vC, conflicting volume	49	24	24			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	49	24	24			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	960	1052	1591			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	5	25	24			
Volume Left	0	0	0			
Volume Right	5	0	0			
cSH	1052	1591	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.4	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.4	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.8					
Intersection Capacity Utilization	13.3%			ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

25: Wolf Den Rd. & Driveway #7

04/10/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↓	
Traffic Volume (veh/h)	0	0	3	20	22	0
Future Volume (Veh/h)	0	0	3	20	22	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	3	22	24	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	985					
pX, platoon unblocked						
vC, conflicting volume	52	24	24			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	52	24	24			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	955	1052	1591			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	25	24			
Volume Left	0	3	0			
Volume Right	0	0	0			
cSH	1700	1591	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.9	0.0			
Lane LOS	A	A				
Approach Delay (s)	0.0	0.9	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.5					
Intersection Capacity Utilization	6.9%			ICU Level of Service	A	
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

29: Wolf Den Rd. & Driveway #8

04/10/2022

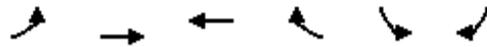


Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	0	19	1	0	22
Future Volume (Veh/h)	0	0	19	1	0	22
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	21	1	0	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	46	22			22	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	46	22			22	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	965	1056			1593	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	22	24			
Volume Left	0	0	0			
Volume Right	0	1	0			
cSH	1700	1700	1593			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			6.7%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

1: Bush Hill Rd. & Driveway #9

04/10/2022



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (veh/h)	0	30	28	3	0	3
Future Volume (Veh/h)	0	30	28	3	0	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	33	30	3	0	3
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	33				64	32
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	33				64	32
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	1579				941	1043
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	33	33	3			
Volume Left	0	0	0			
Volume Right	0	3	3			
cSH	1579	1700	1043			
Volume to Capacity	0.00	0.02	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	8.5			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	8.5			
Approach LOS			A			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			13.3%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 12: Driveway #6 & Bush Hill Rd.

04/10/2022



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻			↻	↻	
Traffic Volume (veh/h)	28	2	3	28	3	2
Future Volume (Veh/h)	28	2	3	28	3	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	2	3	30	3	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	246					
pX, platoon unblocked						
vC, conflicting volume			32		67	31
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			32		67	31
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1580		936	1043
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	32	33	5			
Volume Left	0	3	3			
Volume Right	2	0	2			
cSH	1700	1580	976			
Volume to Capacity	0.02	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.7	8.7			
Lane LOS		A	A			
Approach Delay (s)	0.0	0.7	8.7			
Approach LOS			A			
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			14.0%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

14: Bush Hill Rd. & Driveway #5

04/10/2022



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	3	2	28	2	3	28
Future Volume (Veh/h)	3	2	28	2	3	28
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	3	2	30	2	3	30
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)					917	
pX, platoon unblocked						
vC, conflicting volume	67	31			32	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	67	31			32	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %					100	
cM capacity (veh/h)		936	1043		1580	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	5	32	33			
Volume Left	3	0	3			
Volume Right	2	2	0			
cSH	976	1700	1580			
Volume to Capacity	0.01	0.02	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.7	0.0	0.7			
Lane LOS	A		A			
Approach Delay (s)	8.7	0.0	0.7			
Approach LOS	A					
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			14.0%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 16: Bush Hill Rd. & Driveway #4

04/10/2022



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	5	25	5	5	26
Future Volume (Veh/h)	0	5	25	5	5	26
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	27	5	5	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None	None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	68	30			32	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	68	30			32	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	935	1045			1580	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	5	32	33			
Volume Left	0	0	5			
Volume Right	5	5	0			
cSH	1045	1700	1580			
Volume to Capacity	0.00	0.02	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.5	0.0	1.1			
Lane LOS	A		A			
Approach Delay (s)	8.5	0.0	1.1			
Approach LOS	A					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			15.6%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 17: Bush Hill Rd. & Driveway #3

04/10/2022



Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Traffic Volume (veh/h)	0	5	25	5	5	21
Future Volume (Veh/h)	0	5	25	5	5	21
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	27	5	5	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	276					
pX, platoon unblocked						
vC, conflicting volume	62	30			32	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	62	30			32	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	941	1045			1580	
Direction, Lane #	NW 1	NE 1	SW 1			
Volume Total	5	32	28			
Volume Left	0	0	5			
Volume Right	5	5	0			
cSH	1045	1700	1580			
Volume to Capacity	0.00	0.02	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.5	0.0	1.3			
Lane LOS	A		A			
Approach Delay (s)	8.5	0.0	1.3			
Approach LOS	A					
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			15.4%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

20: Wolf Den Rd. & Driveway #2

04/10/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↔		↔	
Traffic Volume (veh/h)	5	0	27	5	5	26
Future Volume (Veh/h)	5	0	27	5	5	26
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	0	29	5	5	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						85
pX, platoon unblocked						
vC, conflicting volume	70	32			34	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	70	32			34	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	932	1043			1578	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	5	34	33			
Volume Left	5	0	5			
Volume Right	0	5	0			
cSH	932	1700	1578			
Volume to Capacity	0.01	0.02	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.9	0.0	1.1			
Lane LOS	A		A			
Approach Delay (s)	8.9	0.0	1.1			
Approach LOS	A					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			15.6%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

21: Wolf Den Rd. & Driveway #10

04/10/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↓	
Traffic Volume (veh/h)	0	1	1	32	31	0
Future Volume (Veh/h)	0	1	1	32	31	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	1	35	34	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						303
pX, platoon unblocked						
vC, conflicting volume	71	34	34			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	71	34	34			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	933	1039	1578			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	1	36	34			
Volume Left	0	1	0			
Volume Right	1	0	0			
cSH	1039	1578	1700			
Volume to Capacity	0.00	0.00	0.02			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.5	0.2	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.5	0.2	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.2			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

24: Wolf Den Rd. & Driveway #1

04/10/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↓	
Traffic Volume (veh/h)	0	5	10	10	18	0
Future Volume (Veh/h)	0	5	10	10	18	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	11	11	20	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	141					
pX, platoon unblocked						
vC, conflicting volume	53	20	20			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	53	20	20			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	99			
cM capacity (veh/h)	949	1058	1596			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	5	22	20			
Volume Left	0	11	0			
Volume Right	5	0	0			
cSH	1058	1596	1700			
Volume to Capacity	0.00	0.01	0.01			
Queue Length 95th (ft)	0	1	0			
Control Delay (s)	8.4	3.7	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.4	3.7	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.6			
Intersection Capacity Utilization			17.7%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

25: Wolf Den Rd. & Driveway #7

04/10/2022



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1	1	9	17	0
Future Volume (Veh/h)	0	1	1	9	17	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	1	10	18	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	985					
pX, platoon unblocked						
vC, conflicting volume	30	18	18			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	30	18	18			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	984	1061	1599			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	1	11	18			
Volume Left	0	1	0			
Volume Right	1	0	0			
cSH	1061	1599	1700			
Volume to Capacity	0.00	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.4	0.7	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.4	0.7	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			13.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis

29: Wolf Den Rd. & Driveway #8

04/10/2022



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	1	0	8	1	0	16
Future Volume (Veh/h)	1	0	8	1	0	16
Sign Control	Stop		Free		Free	
Grade	0%		0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	0	9	1	0	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	26	10			10	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	26	10			10	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	989	1072			1610	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	1	10	17			
Volume Left	1	0	0			
Volume Right	0	1	0			
cSH	989	1700	1610			
Volume to Capacity	0.00	0.01	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	8.6	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.6	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization		13.3%		ICU Level of Service		A
Analysis Period (min)			15			