TOWN OF EAST LYME
ZONING COMMISSION
November 5th, 2020
PUBLIC HEARING & REGULAR MEETING MINUTES

Join Zoom Meeting
https://us02web.zoom.us/j/89063824657?pwd=bHQwTmVpUFhLM3FMMnN6QkthUTlkUT09

Meeting ID: 890 6382 4657 Passcode: 903592
One tap mobile +13126266799,,82995050759#,,,,,,0#,,586123# US (Chicago)
+16465588656,,82995050759#,,,,,,0#,,586123# US (New York) Dial by your location +1 646 558 8656 US (New York)
Meeting ID: 829 9505 0759 Passcode: 586123
Find your local number: https://us02web.zoom.us/u/kbdMerOPIw

Members Present:
Norm Peck
Terence Donovan, Secretary (Acting Chairman for the evening)
Bill Dwyer
Anne Thurlow
Kimberly Kalajainen
George McPherson, Alternate (Sat as a Regular Member)
Denise Markovitz, Alternate (Sat as Regular Member for item 1 only)

Also Present:
Bill Mulholland, Zoning Official
Jennifer Lindo, Zoom Moderator
Mark Zamarka, Town Attorney

Present for Applications:
Harry Heller, Attorney
Jason Pazzaglia, Applicant
Brandon Handfield, Civil Engineer
James Bubaris, Traffic Engineer
Peter Springsteel, Architect

FILED IN EAST LYME
CONNECTICUT
Nov 12, 2020 AT 8 AM/PM
EAST LYME TOWN CLERK

Absent:
Matthew Walker, Chairman
Rose Ann Hardy, Ex-Officio
James Liska, Alternate

The Regular Meeting of the East Lyme Zoning Commission was held on Thursday, November 5th, 2020, at 7:30 p.m., via Zoom; this teleconference was

recorded in its entirety and in accordance with the requirements of executive order 7B, issued by Governor Lamont, which allows for public meetings to be held over teleconference.

Acting Chairman Donovan called the Zoning Commission meeting to order at 7:33 p.m. and sat Mr. McPherson as a Regular Member for the evening.

Public Delegations-
Time set aside for the public to address the Commission on subject matters not on the Agenda.

There were none.

Public Hearings-

1. **Petition of Pazz & Construction LLC, to rezone 20.24 acres from RU-80/RU-40, its existing zoning designation, to Affordable Housing District and for approval of a Preliminary Site Plan which proposes an eighty (80) unit multi-family affordable residential housing development designated as "Brookside Apartments" for property identified on the westerly side of North Bride Brook Road in East Lfme, East Lyme Assessor's Map 09.0, Lot37-2, pursuant to Connecticut General Statutes 98-309.**

Mr. Peck recused himself from this item and the Commission sat Ms. Markovitz in his stead. Mr. Donovan noted for the exhibits for the record which are available on the Town (www.eltownhall.com) website at the following link:
https://eltownhall.com/government/boards-commissions/zoning-commission/zoning-commission-2020-materials/zoning-commission-2020-materials-november-5/

Attorney Harry Heller of 736 Route 32 in Uncasville said he is representing Pazz & Construction, the applicant, and he introduced Brandon Hanfield, the Project Engineer from Yantic River Consultants, Peter Springsteel, the Project Architect, and Jim Bubaris, the Traffic Engineer. Mr. Heller shared the following:

- The application is pursuant to 8-30g of the Connecticut General Statutes which is the Affordable Housing Act.
- Any municipality that doesn't have 10% of its housing stock as affordable under the perimeters that 8-30g sets forth, is required to receive and administer an affordable housing application.
- The Act under 8-30g supersedes the requirements of the underlying zoning regulations.
- 30% of the total number of units in the application must be affordable, the same size with the same characteristics and amenities as the market rate units.
- 15% of the total units in the project must be available to tenants at or below 60% of the lower of the municipality or State of Connecticut median income.
- Another 15% must be available to potential tenants who are between the 60% to 80% of the lower of the municipality or State of Connecticut median income.

- Their application has 3 distinct unit types- 3 bedroom, expanded 2 bedroom and standard 2 bedroom.
- These will not be for sale on the open market at this time; all our apartment rentals.
- Their design for the project has (6) 3 bedroom units, (20) expanded 2 bedroom units, and (40) standard two bedroom units.
- It's an 80 unit project and 24 units will be affordable.
- The Commission is required to approve the affordable housing application unless it fails a 4 prong test-
    1. There must be sufficient evidence in the record to justify denial.
    2. The decision denying the application must be necessary to protect a substantial public interest in health, safety or other matters related to zoning the Commission may legally consider.
    3. The public interest (justifying a denial) must clearly outweigh the strong preference in the State of Connecticut to promote affordable housing.
    4. The public interest can't be protected by reasonable changes to the affordability act.
- Their proposal is a site plan application.
- No separate application for a zone change or text amendment has been submitted.

Mr. Heller detailed how these procedural steps are not required for an affordable housing application as the zoning commission's permitted scope of review is to determine that the project does not create any public health, safety and welfare issues- and if so created, to determine that those identified issues does not clearly outweigh the strong public policy of providing affordable housing. He explained how East Lyme's practice of incorporating a zone change with an affordable housing application has been held by the Connecticut Appellate Court to be inapplicable and cited *Wisniowski v Planning Commission of the Town of Berlin (37 Conn App 303.)*

Mr. Heller gave a brief overview of the overall site plan with the Commission and further explained that their application is a scaled down version of the previous 108 unit application which is under appeal. He noted they're 50 feet outside of the upland review area and it's their strong opinion that this application doesn't involve any activities that are regulated under their municipal inland wetland watercourse regulations and therefore no wetland application has been filed.

Mr. Heller added that this application has been revised since submitted in July in order to address comments made by the Fire Marshal, the Town Engineer and other consulting agencies; as a result of comments they've added emergency access on the south side of the property resulting in two ways of entering and exiting the complex.

Mr. Heller further shared the following:

- The buildings range from 6 to 10 units in order to accommodate the 3 different styles available.

- No units are located outside the sewer service area and the complex will be served by municipal water and sewer.
- They have received an allocation of capacity for sewer service from the Water & Sewer Commission, for the originally requested 108 unit application.
- They have 2 proposed rain gardens in the northerly portion of the site to capture runoff and infiltrate it back into the ground.

Brandon Hanfield, P.E. and owner of Yantic River Consultants reviewed the design perimeters of the proposed drainage system. He explained how their goal was to use the easterly drainage area only and he added the following:

- In general this site drains from northwest to southeast.
- The buildings are built into the grade which minimizes disturbance as well as cuts and fills on the site, and drainage follows suite.
- 3.3 acres of impervious surfaces which include roadways are collected by an internal catch basin and pipe network.
- The volume the infiltration system and detention basin combined equal the volume of runoff you would see from all the impervious surfaces that you would see from a 50 year storm event.
- They did 2 rounds of soil testing to determine the best system.

Mr. McPherson said there is a very large sewer pipe that comes out of the ground and asked if that is near their property, and Mr. Pazzaglia of 21 Darrows Ridge Road responded that the pipe is north of their property and not located on it.

Peter Springsteel Licensed Architect from Mystic reviewed the design of the complex (attached) for the Commission and noted some of the following:

- The buildings are 3-stories tall and designed like townhouses, so there is a vertical break between each one.
- Some of the buildings are built into the grade so you will have a retaining wall instead of windows and doors out the basement at the back of the building.
- The decks for these buildings will be at grade and then slope down on each side to the garage level.
- The appearance will be new england with gable roofs, clapboard siding and shutters.
- The buildings will have double hung windows with simulated divided lights and architectural shingles will be utilized for the roofs.
- Each unit will have a two car garage below the unit.

Mr. Springsteel showed the Commission renderings of the floorplans available as well as the facade and front, side and rear elevation.

Mr. McPherson asked how many handicapped accessible units will be available and Mr. Heller said 3 of the type A units and 6 of the type B will be handicapped accessible.

Ms. Thurlow asked if there is any landscaping between the project and the house to the north on Bridebrook road. Mr. Handfield showed the plan which details 20 arborvitae trees used to screen the project which will be 10 feet apart; the same will go for the southerly boundary as well.

Mr. Mulholland said staff is still reviewing this application and he asks that the Public Hearing remain open once they finish this evening so additional information can be submitted into the record. He noted that he will also want to discuss the landscape and lighting plan in more detail. Mr. Heller asked Mr. Handfield to give a brief review of the illumination plan which he detailed (attached.)

Mr. Mulholland asked if they took into consideration the front door lights, wall packs that will be used on the buildings, the number of spotlights and so forth.

Mr. Handfield said they don't anticipate the need for any wall packs nor do they have areas that warrant that; wall mounted lights will be as the base of each unit and wall scones typical to a residential door. He said it will be a downlight that only casts a significant amount of light for their entrance and driveway area or deck and is a very isolated area of light.

Mr. Springsteel said typically at building entrances he has overhang and will do recessed lighting directed down for minimal impact and said he can supply a cutsheet for that as well.

James Bubaris, Traffic Engineer detailed the supplemental traffic study done for this project (attached) and noted some of the following:

- There are 700 to 1,300 vehicles traveling on a weekday and 1,000 on a weekend day which is a relatively low volume.
- The road is posted at 25 mph and they measured that the average speed is between 32 mph and 36 mph which are pretty reasonable for the quality of the road.
- The road is sufficiently wide for the amount of traffic it carries.
- They reviewed the crash depository history and there were only 8 accidents in a 5 year time period but none of them were in range of their site.
- They estimate 37 to 45 trips for each hour generated by this site.
- They would be adding 18 to 23 vehicles each hour in each direction which is very minimal.
- They have 400 feet of siteline to the south and 500 feet to the north.
- There should not be adverse impacts from this project, from a traffic perspective.
- It will be a low traffic generator- 37 to 45 trips during the peak hours.

Ms. Thurlow said right now during rush hour it can take up to 15 minutes to turn from Bridebrook onto Main Street and asked if there is any talk of adding a left turn lane or traffic light. Mr. Bubaris explained that it is a State road and under their jurisdiction and that this development would not be adding much to that.

Mr. Mulholland asked if there is any requirement to speak with the DOT about added traffic given this development and Mr. Bubaris said there is not; if this development were 100 residential units or more than it would require review. Mr. Donovan asked if the other units under litigation are approved if they would need State review and Mr. Bubaris said yes but they have to have Town review first.

Mr. Dwyer said he uses that road numerous types during the day and it's practically empty.

Mr. Heller briefly discussed the affordability plan as it relates to their specific application and their calculations for rental prices. He noted this is better described as workforce housing.

Mr. Heller agreed to continue the Public Hearing until November 19th, 2020 for staff input.

Mr. Donovan thanked Ms. Markovitz and welcomed back Mr. Peck.

Regular Meeting-

1. **Application of Landmark Development Group, LLC and Jarvis of Cheshire, LLC c/o Timothy Hollister, Shipman & Goodwin, LLP for a text amendment revision of Section 32 to replace Preliminary Site Plan/Final Site Plan with "Master Plan" procedure as used in Gateway Development.**

This item has been continued until November 19th, 2020.

2. **Approval of Minutes of October 15th, 2020**

Mr. Donovan said he has one correction for page 9; it says the Landmark meeting will continue on November 5th, 2020 when it should say November 19th, 2020.

MOTION (1)
Mr. McPherson moved to approve the meeting minutes of October 15th, 2020 as amended.
Ms. Kalajainen seconded the motion.
Motion carried, 6-0-0.

Old Business-

There was none.

New Business-

1. **Any business on the floor, if any by the majority vote of the Commission.**

Mr. Peck discussed enforcement in regards to the cutting of trees between Stop & Shop Supermarket and the highway. He reminded the Commission how this has been a continual problem and the written response they received that this would never happen again yet it looks like they just trimmed them again. He recommended enforcing this to the maximum the law will allow and Mr. Mulholland stated he sent him a cease and desist order and requested the cut

trees be replaced at full size. Mr. Mulholland detailed the process and how the owner has 10 days to comply. He said he will also address this with Town Council as well.

Ms. Thurlow asked about limiting political signs to one month before the election and Mr. Donovan said he personally doesn't have an issue with them and noted this year was not characteristic of usual practices.

2 Zoning Official

Mr. Mulholland said they are extremely busy and everyone is making home improvements given they're home because of the pandemic. He noted there is interest for a couple of businesses including restaurants downtown.

3 Comments from Ex-Officio

Ms. Hardy was not in attendance.

4 Comments from Zoning board liaison to the Planning Commission

Ms. Thurlow is scheduled for November 10th, 2020 and Mr. Walker is scheduled for December 1st, 2020.

5 Comments from Chairman

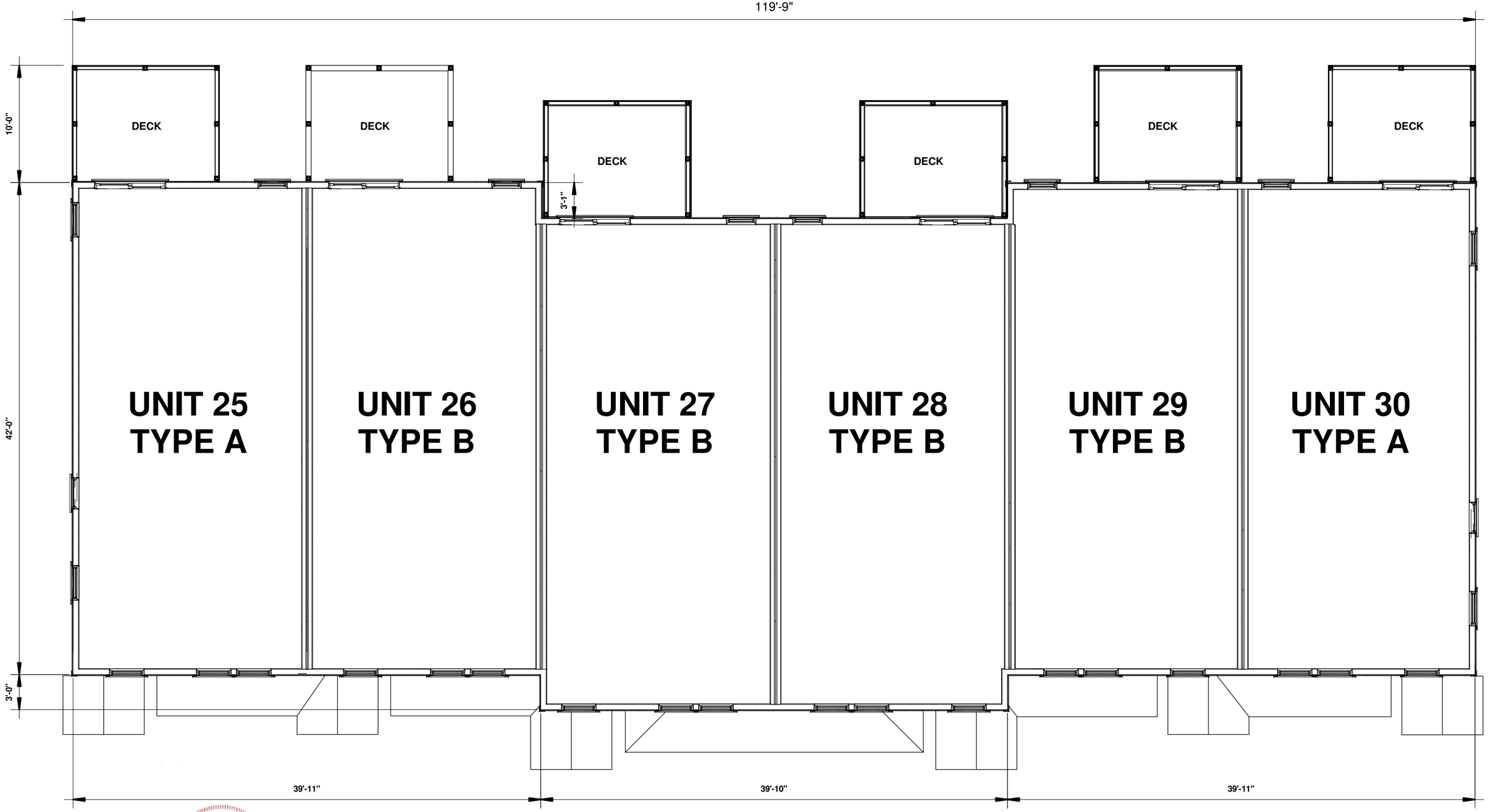
Mr. Donovan thanked everyone and wished Mr. Walker a speedy recovery.

Adjournment

MOTION (2)
Mr. Dwyer moved to adjourn the Zoning Commission Meeting at 9:15 p.m.
Ms. Thurlow seconded the motion.
Motion passed 6-0-0.

Respectfully Submitted,

Brooke Stevens
Recording Secretary



P J SPRINGSTEEL
105 STARR ST.
MYSTIC, CT 06355
860 572 7306
A R C H I T E C T

STATE OF CONNECTICUT
PETER JAMES SPRINGSTEEL
LICENSED ARCHITECT
NO. 5887

BUILDING 6

NORTH BRIDE BROOK
MULTI-FAMILY DEVELOPMENT
N. BRIDE BROOK RD - EAST LYME, CONNECTICUT

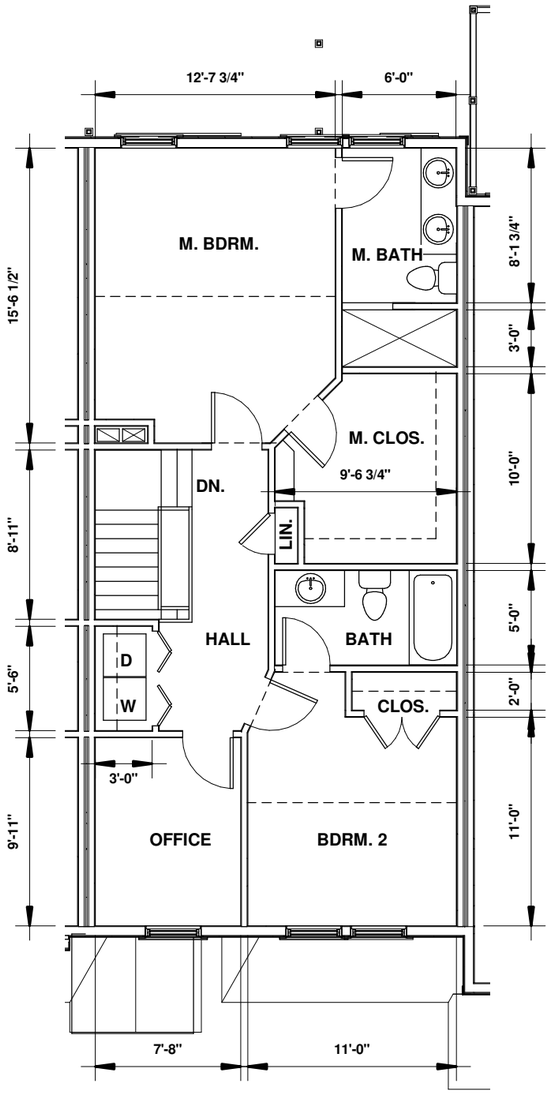
No.	Description	Date

BUILDING PLAN

Project number	N.A.
Date	11-05-2020
Drawn by	P.S.
Checked by	P.S.

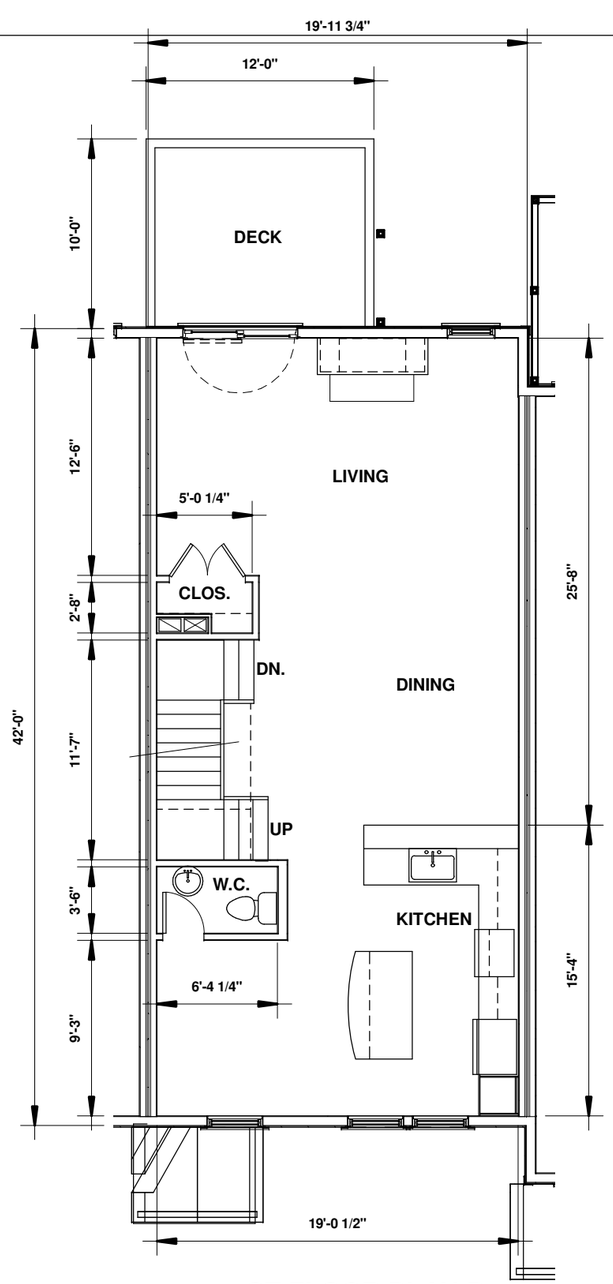
A-1

Scale 1/8" = 1'-0"



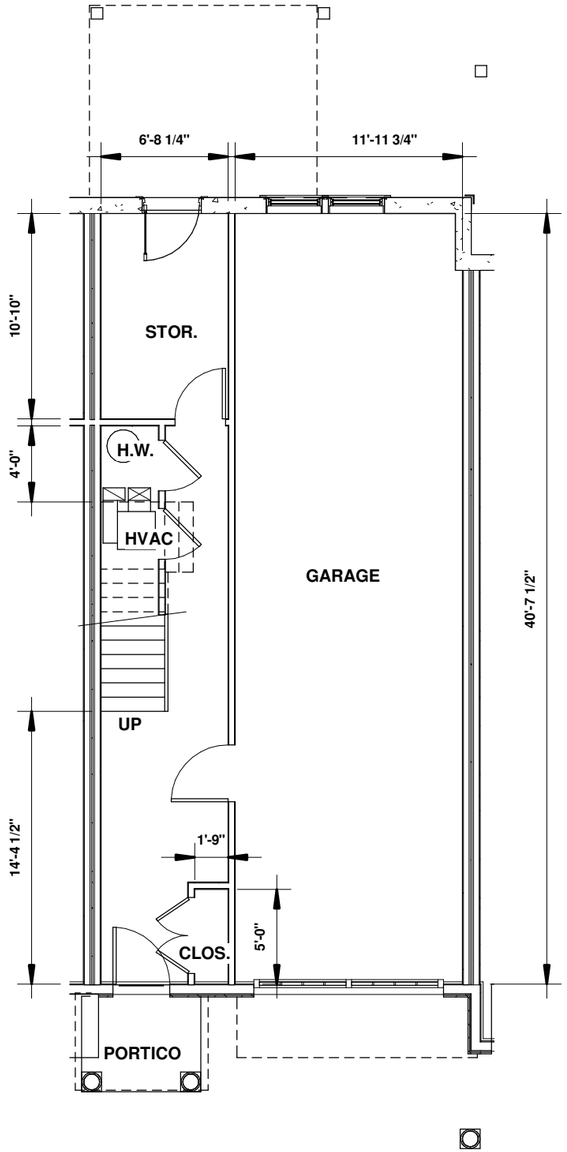
2ND FLOOR PLAN B

UNIT 26 & 27
UNIT 28 & 29 ARE REVERSED



1ST FLOOR PLAN B

UNIT 26 & 27
UNIT 28 & 29 ARE REVERSED



BASEMENT PLAN B

UNIT 26 & 27
UNIT 28 & 29 ARE REVERSED

P J SPRINGSTEEL
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ARCHITECT

STATE OF CONNECTICUT · PETER JAMES SPRINGSTEEL · NO. 15887 · LICENSED ARCHITECT

BUILDING 6

NORTH BRIDE BROOK
MULTI-FAMILY DEVELOPMENT

N. BRIDE BROOK RD - EAST LYME, CONNECTICUT

No.	Description	Date

UNIT B PLANS

Project number	N.A.	A-2
Date	11-05-2020	
Drawn by	P.S.	
Checked by	P.S.	Scale 1/8" = 1'-0"

P J SPRINGSTEEL
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ARCHITECT

STATE OF CONNECTICUT
PETER JAMES SPRINGSTEEL
LICENSED ARCHITECT
No. 6887

BUILDING F

NORTH BRIDE BROOK

MULTI-FAMILY DEVELOPMENT

N. BRIDE BROOK RD - EAST LYME, CONNECTICUT

No.	Description	Date

FRONT ELEVATION

Project number	N.A.	A-3
Date	11-05-2020	
Drawn by	P.S.	
Checked by	P.S.	Scale 1/8" = 1'-0"

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105 STARR ST.
MYSTIC, CT 06355
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ARCHITECT

STATE OF CONNECTICUT
PETER JAMES SPRINGSTEEL
LICENSED ARCHITECT
NO. 8887

BUILDING F

NORTH BRIDE BROOK
MULTI-FAMILY DEVELOPMENT

N. BRIDE BROOK RD - EAST LYME, CONNECTICUT

No.	Description	Date

LEFT & RIGHT SIDE ELEVS.

Project number	N.A.
Date	11-05-2020
Drawn by	P.S.
Checked by	P.S.

A-4

Scale 1/8" = 1'-0"

P J SPRINGSTEEL
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ARCHITECT

STATE OF CONNECTICUT
PETER JAMES SPRINGSTEEL
No. 15887
LICENSED ARCHITECT

BUILDING F

NORTH BRIDE BROOK

MULTI-FAMILY DEVELOPMENT

N. BRIDE BROOK RD - EAST LYME, CONNECTICUT

No.	Description	Date

REAR ELEVATION

Project number	N.A.	A-5
Date	11-05-2020	
Drawn by	P.S.	
Checked by	P.S.	Scale 1/8" = 1'-0"

3D_VIEW - FRONT

SCALE:

NORTH BRIDE BROOK
MULTI-FAMILY DEVELOPMENT

NORTH BRIDE BROOK ROAD - EAST LYME, CONNECTICUT

NOTES:

THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL DIMENSIONS IN THE FIELD. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ARCHITECT WITH ANY DISCREPANCIES FROM THE DRAWINGS.

DO NOT SCALE THE DRAWINGS. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS OR SAFETY PRECAUTIONS.

E - Mail:
peter.springsteel@snet.net

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No. 8887

ARCHITECT
PETER J. SPRINGSTEEL
ARCHITECT LLC

105 STARR STREET
MYSTIC, CT 06355
T:(860)572-7306

DATE: 5 NOVEMBER 2020

A-101

3D_VIEW_-_REAR

SCALE:

NORTH BRIDE BROOK
MULTI-FAMILY DEVELOPMENT
NORTH BRIDE BROOK ROAD - EAST LYME, CONNECTICUT

NOTES:

THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING ALL DIMENSIONS IN THE FIELD. THE CONTRACTOR SHALL IMMEDIATELY CONTACT THE ARCHITECT WITH ANY DISCREPANCIES FROM THE DRAWINGS.

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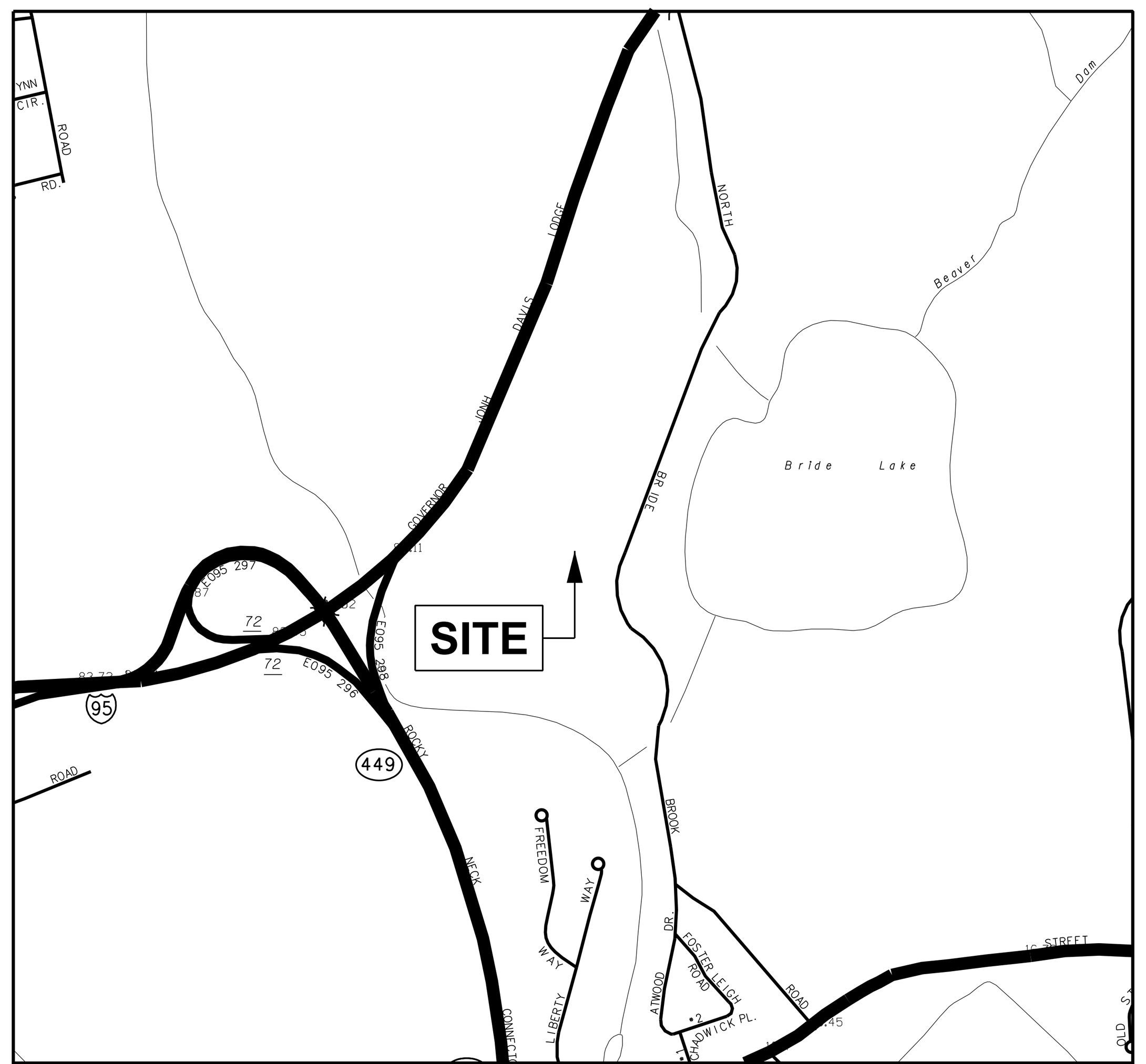
DATE: 5 NOVEMBER 2020

A-102



SITE LOCATION MAP

SCALE: 1" = 1000'

REGULATED AREA TABLE

DESCRIPTION	TOTAL AREA	DISTURBANCE
INLAND WETLAND / WATERCOURSE	48,970 SF (1.12 AC.)	0 SF
100' UPLAND REVIEW AREA	198,730 SF (4.56 AC)	0 SF

NRCS SOILS

MAP UNIT SYMBOL	MAP UNIT NAME
34B	MERRIMAC FINE SANDY LOAM, 3-8%
38C	HINCKLEY LOAMY SAND, 3-15%
38E	HINCKLEY LOAMY SAND, 15-45%
73C	CHARLTON-CHATFIELD COMPLEX, 0-15%
73E	CHARLTON-CHATFIELD COMPLEX, 15-45%
703A	HAVEN SILT LOAM, 0-3%

GENERAL NOTES

1. REFERENCE IS MADE TO THE FOLLOWING MAPS AND PLANS

   A. "PROPERTY SURVEY LAND OF PAZZ & CONSTRUCTION LLC, LOCATION: NORTH BRIDE BROOK ROAD, EAST LYME, CONNECTICUT", SHEET NUMBER 1 OF 1, SCALE 1" = 60', DATED JANUARY 31, 2019 AS REVISED THROUGH 6-8-20, PREPARED BY ROBERT C. SIMONI LICENSED LAND SURVEYOR.

   B. "SEWER SHED DISTRICT: 2014 UPDATE SELECTED EXTENT" TOWN OF EAST LYME DEPARTMENT OF PLANNING, DATED MARCH 2014.

   C. NATURAL RESOURCES CONSERVATION SERVICE WEB SOIL SURVEY AREA: STATE OF CONNECTICUT, SURVEY AREA DATA: VERSION 18, DEC. 6, 2018.

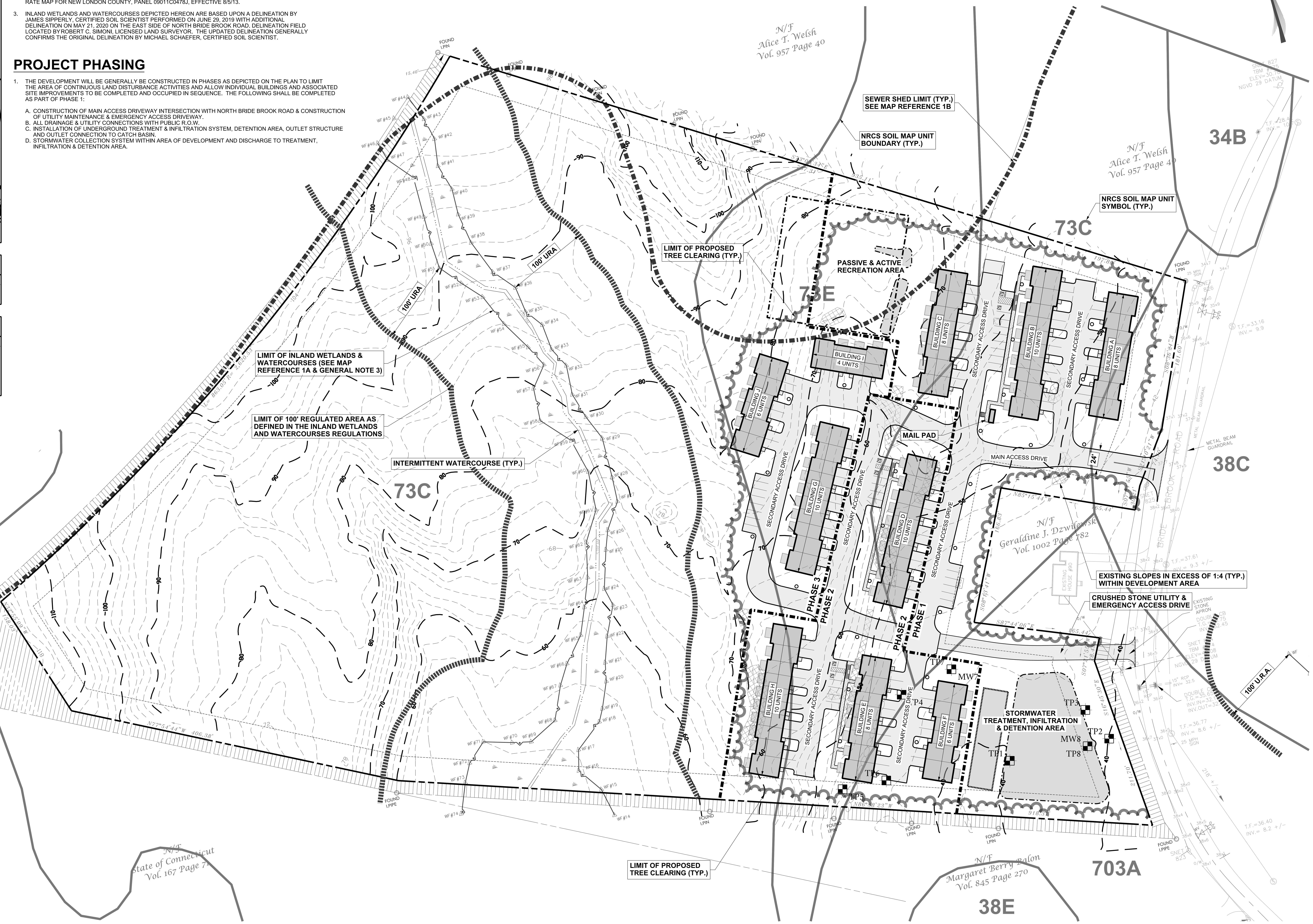
2. THE SUBJECT PROPERTY IS LOCATED ENTIRELY WITHIN FLOOD ZONE X (AREAS OF MINIMAL FLOOD HAZARD) AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP FOR NEW LONDON COUNTY, PANEL 09011C0478J, EFFECTIVE 8/5/13.

3. INLAND WETLANDS AND WATERCOURSES DEPICTED HEREON ARE BASED UPON A DELINEATION BY JAMES SIPPERLY, CERTIFIED SOIL SCIENTIST PERFORMED ON JUNE 29, 2019 WITH ADDITIONAL DELINEATION ON MAY 21, 2020 ON THE EAST SIDE OF NORTH BRIDE BROOK ROAD. DELINEATION FIELD LOCATED BY ROBERT C. SIMONI, LICENSED LAND SURVEYOR. THE UPDATED DELINEATION GENERALLY CONFIRMS THE ORIGINAL DELINEATION BY MICHAEL SCHAEFER, CERTIFIED SOIL SCIENTIST.

PROJECT PHASING

1. THE DEVELOPMENT WILL BE GENERALLY BE CONSTRUCTED IN PHASES AS DEPICTED ON THE PLAN TO LIMIT THE AREA OF CONTINUOUS LAND DISTURBANCE ACTIVITIES AND ALLOW INDIVIDUAL BUILDINGS AND ASSOCIATED SITE IMPROVEMENTS TO BE COMPLETED AND OCCUPIED IN SEQUENCE. THE FOLLOWING SHALL BE COMPLETED AS PART OF PHASE 1:

   A. CONSTRUCTION OF MAIN ACCESS DRIVEWAY INTERSECTION WITH NORTH BRIDE BROOK ROAD & CONSTRUCTION OF UTILITY MAINTENANCE & EMERGENCY ACCESS DRIVEWAY.
   B. ALL DRAINAGE & UTILITY CONNECTIONS WITH PUBLIC R.O.W.
   C. INSTALLATION OF UNDERGROUND TREATMENT & INFILTRATION SYSTEM, DETENTION AREA, OUTLET STRUCTURE AND OUTLET CONNECTION TO CATCH BASIN.
   D. STORMWATER COLLECTION SYSTEM WITHIN AREA OF DEVELOPMENT AND DISCHARGE TO TREATMENT, INFILTRATION & DETENTION AREA.



SCALE: 1" = 60'

0 60 120 180

PROJECT NUMBER: 00057 - 00001

YRC YANTIC RIVER CONSULTANTS, LLC

CONTACT INFORMATION
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LEBANON, CONN 06249
Phone: (860) 367-7264
Email: yanticriver@gmail.com
Web: www.yanticriverconsultants.com

PROFESSIONAL SEAL: STATE OF CONNECTICUT, BRANDON J. HANDFIELD, No. 24564, LICENSED PROFESSIONAL ENGINEER

NORTH BRIDE BROOK MULTI-FAMILY DEVELOPMENT

PREPARED FOR PAZZ & CONSTRUCTION, LLC

OVERALL LAYOUT PLAN

N. BRIDE BROOK ROAD (ASSESSOR'S MAP 9, LOT 37-2) EAST LYME, CT

REVISION SUMMARY

DATE	DESCRIPTION
1/15/20	PER TOWN COMMENTS & UPDATED SURVEY MAPPING
7/10/20	REVISED DEVELOPMENT LAYOUT

SHEET 1 OF 8

DATE 9/25/19

REVISED 7/10/20

GENERAL SITE NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDSPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION FORM 817 AS APPLICABLE.
2. ALL DIMENSIONS ARE TO THE EDGE OF PAVEMENT, FACE OF CURBS, OUTSIDE FACE OF THE BUILDING OR OTHER LIMITS AS DEPICTED ON THE PLAN.
3. THE PROPOSED PARKING FACILITIES ARE GENERALLY PERPENDICULAR TO OR PARALLEL WITH THE PROPOSED BUILDING(S), DRIVEWAYS, OR AS DEPICTED ON THE PLAN.
4. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FIELD DIMENSIONS AND SHALL REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS TO THE OWNER.
5. CONTRACTOR SHALL PROVIDE SMOOTH TRANSITIONS FROM PROPOSED FEATURES TO EXISTING FEATURES AS NECESSARY.
6. ALL DISTURBED AREAS SHALL BE SEEDED OR SODDED AFTER FINISH GRADING IS COMPLETED UNLESS OTHERWISE NOTED, ALL NEW SEEDED OR SODDED AREAS SHALL HAVE A TOPSOIL LAYER OF 4" MINIMUM OR AS DIRECTED BY THE PROJECT LANDSCAPE ARCHITECT. TOP OF TOPSOIL LAYER SHALL BE PLACED 1" BELOW TOPS OF CURBS, WALKS, OR PAVEMENT ELEVATIONS WHERE TOPSOIL ABUTS THOSE AREAS.
7. CONTRACTOR SHALL SUPPLY AND PLACE STRAW MULCH WHEREVER GRASS SEED HAS BEEN PLACED. SEED SHALL BE APPLIED AT THE MINIMUM RATE RECOMMENDED BY THE MANUFACTURER OR THE PROJECT LANDSCAPE ARCHITECT.
8. CONTRACTOR SHALL SEAL THE EDGE OF EXISTING ASPHALT PAVEMENT WITH TACK COAT IN ACCORDANCE WITH FORM 817 OR THE TOWN OF EAST LYME STANDARDS WHERE NEW ASPHALT JOINS EXISTING ASPHALT.
9. CONTRACTOR SHALL REPAIR, RESURFACE, RECONSTRUCT OR REFURBISH ANY AREAS DAMAGED DURING CONSTRUCTION BY THE CONTRACTOR, HIS SUBCONTRACTORS OR SUPPLIERS AT NO ADDITIONAL COST TO THE OWNER.
10. CONTRACTOR SHALL COMPLETELY FILL ALL TRENCHES WITHIN 5 FEET OF PAVEMENT EDGES WITH GRANULAR BACKFILL. REFER TO GEOTECHNICAL REPORT FOR TYPE OF FILL TO ACHIEVE DESIRED COMPACTION.
11. ALL PAINT STRIPING SHALL BE 4" TRAFFIC PAINT IN ACCORDANCE WITH FORM 817 AND SHALL BE WHITE OR YELLOW AS DEPICTED ON THE PLANS.
12. CONTRACTOR TO CONFIRM WITH LOCAL CODES AND BUILDING INSPECTOR FOR SPECIFIC HANDICAPPED ACCESSIBLE PARKING SPACE DIMENSIONS, STRIPING AND SIGNAGE REQUIREMENTS.

UTILITY STATEMENT

UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTED UTILITY COMPANIES OR GOVERNMENT AGENCIES, PAROLE TESTIMONY, FIELD SURVEY AND OTHER SOURCES. THE SURVEYOR AND THIS PLAN SET MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922 -4455, IN ACCORDANCE WITH CBYD NOTIFICATION PROCEDURES PRIOR TO COMMENCING WORK.

LANDSCAPE PLANTING NOTES

1. PROPOSED LANDSCAPING WILL GENERALLY CONFORM TO THE PLAN AND CONSIST OF THE FOLLOWING. THE DESIGN IS AN APPROXIMATE DEPICTION BASED ON SPECIES AND CULTIVARS AVAILABLE AT TIME OF INSTALLATION. ADDITIONAL PLANTINGS, PERENNIAL GRASSES, AND SHRUBS WILL BE LOCATED TO SCREEN UTILITY STRUCTURES AND FOUNDATIONS AS NECESSARY.

   A. MIXTURE OF SHADE AND FLOWERING TREES ALONG THE MAIN & SECONDARY ACCESS DRIVEWAYS
   B. CEDAR PLANTING BEDS ADJACENT TO PARKING AREAS
   C. CEDAR PLANTING BEDS AROUND FOUNDATION PERIMETER
   D. SCREENING TREES AROUND PERIMETER OF DEVELOPMENT AS SHOWN
2. PLANT GROUPINGS WILL BE ADDED TO REDUCE VEHICLE LIGHTS THAT SHINE IN THE DIRECTION OF RESIDENTIAL UNITS.
3. ALL PLANT MATERIALS TO BE APPROVED BY THE OWNER BEFORE THEY ARE INSTALLED. ANY SUBSTITUTIONS MUST BE APPROVED PRIOR TO PLANTING. ALL PLANT MATERIAL SHALL CARRY A WARRANTY FOR A PERIOD OF NOT LESS THAN 1-YEAR AFTER ACCEPTANCE OF THE PROJECT BY THE OWNER. WARRANTY SHALL BE A ONE-TIME REPLACEMENT INCLUDING MATERIAL AND LABOR.
4. ALL PLANTING AND LAWN AREAS TO HAVE 4" MINIMUM TOPSOIL. SUPPLY AND SPREAD TOPSOIL, AS NEEDED, TO MAKE A 4" DEPTH. TOPSOIL SHALL CONFORM TO STATE OF CONNECTICUT D.O.T. FORM 817, SECTION M13.01.
5. ALL TREES, SHRUBS AND GROUNDCOVER PLANTS SHALL BE FERTILIZED WITH LOW-NITROGEN ORGANIC FERTILIZER. ADD PEAT MOSS TO PLANTING SOIL, SO THAT 1/4 OF PLANTING SOIL IS PEAT MOSS.
6. ALL PLANTINGS TO BE MULCHED WITH 3" DEPTH OF CEDAR MULCH. SUBMIT SAMPLES FOR APPROVAL BY OWNER PRIOR TO INSTALLATION.
7. PROTECT EXISTING TREES DURING CONSTRUCTION BY ERECTING A BARRIER AT THE TREE'S DRIPLINE. DO NOT FILL OR EXCAVATE BENEATH THE DRIPLINE OF EXISTING TREES, UNLESS SHOWN ON THE GRADING PLAN.
8. SEED ALL DISTURBED AREAS OF SITE. WATER DAILY DURING FIRST SEASON OF ESTABLISHMENT FROM APRIL 1 TO NOVEMBER 1.
9. ALL PLANTINGS IN THE VICINITY OF DRIVEWAYS AND PARKING AREAS ARE SALT-TOLERANT.

CEDAR MULCH BED PLANTING NOTES

1. FOR CLARITY, BUILDING AND FOUNDATION CEDAR MULCH BEDS & PLANTINGS ARE NOT DEPICTED. THESE AREAS SHALL BE LANDSCAPED WITH ANNUAL & PERENNIAL FLOWERS, BULBS/TUBERS, AND GRASSES SUCH AS THE FOLLOWING:

   ANNUALS: MARIGOLDS, GERANIUMS, IMPATIENS, ZINNIAS, PETUNIAS, SUNFLOWERS, BEGONIAS, CLEOME, COSMOS & GAZANIA.

   PERENNIALS: ASTER, DAYLILY, HOSTAS, ROSES, PURPLE BEAUTYBERRY, SEDUM, BUTTERFLY BUSH, WILD GERANIUM, PHLOX, YELLOW & RED BARBERRY, ASTILBES, GOAT'S BLEND, ANDROMEDA, SOLOMON SEAL, SAGE IRIS, BEE-BALM, ORIENTAL POPPY & TICKSEED.

   BULBS/TUBERS: DAFFODILS & TULIPS

   GRASSES: DWARF FOUNTAIN GRASS, MISCANTHUS VAR,

LIGHTING NOTES

1. THIS PLAN DEPICTS THE GENERAL LOCATION AND TYPE OF POLE-MOUNTED AREA LIGHTS FOR THE DEVELOPMENT. A LIGHTING PLAN PREPARED BY A LIGHT DESIGN PROFESSIONAL WITH PHOTOMETRIC INFORMATION SHALL BE SUBMITTED TO THE TOWN FOR REVIEW AND APPROVAL PRIOR TO FILING.
2. ALL SITE LIGHTING SHALL BE FULL SHIELDED TYPE TO PREVENT UPWARD DISTRIBUTION OF LIGHT AND GLARE ON ADJACENT PROPERTIES.
2. POLE MOUNTED FIXTURES TO BE VISIONAIRE SRL-1 SANTA ROSA HID WITH VISIONAIRE DECORATIVE BASE DCB AND 14' VISIONAIRE POLE OR APPROVED EQUAL.

PLANTING SCHEDULE

LABEL	QUAN.	COMMON NAME	BOTANICAL NAME	SIZE	ROOT
DECIDIOUS TREES					
CER CAN	8	HEARTS OF GOLD REDBUD	CERCIS CANADENSIS 'HEARTS OF GOLD'	6-7'	B&B
COR KOU	6	KOUSA DOGWOOD	CORNUS KOUSA	6-7'	B&B
ACE RUB	3	RED SUNSET MAPLE	ACER RUBRUM RED SUNSET	2"-3" CAL	B&B
ACE SAC	3	FALL FIESTA SUGAR MAPLE	ACER SACCHARUM 'FALL FIESTA'	2"-3" CAL	B&B
BET NIG	3	RIVER BRICH	BETULA NIGRA	6-7'	B&B
PYR CAL	3	CLEVELAND SELECT CALLERY PEAR	PYRUS CALLERYANA 'CHANTICLEER'	2"-3" CAL	B&B
EVERGREEN TREES & SHRUBS					
THU X	44	GREEN GIANT ARBORVITAE	THUJA X GREEN GIANT	5-6'	B&B
PIN STR	4	WHITE PINE	PINUS STROBUS	6-7'	B&B

LEGEND

EDGE OF PAVEMENT W/ CURB	(A) BITUMINOUS CONCRETE DRIVE
SAWCUT PAVEMENT	(B) PARKING PAINT STRIPING (4" WHITE)
CONCRETE WALK	(C) DOUBLE CENTERLINE (4" YELLOW)
DRAINAGE PIPE	(D) STOP BAR (12" WHITE)
RD — ROOF LEADER	(E) CROSS-WALK (12" WHITE)
CD — CURTAIN/SLOPE/WALL DRAIN	(F) CONCRETE CURB & WALK MONOLITHIC
S — SANITARY SEWER	(G) CONCRETE SIDEWALK
W — WATER	(H) HANDICAP RAMP (12'H:1'V MAX.)
G — GAS SERVICE	(I) EXTRUDED CONCRETE CURB (ECLC)
E — ELECTRIC	(J) BITUMINOUS CONCRETE LIP CURB (BCLC)
T — TELECOMMUNICATIONS	(K) MAIL PAD
SILT FENCE	(L) STOP SIGN
HAYBALE	(M) DECK
LP POLE MOUNTED LIGHT FIXTURE	
BOLLARD LIGHT FIXTURE	
HANDICAP PARKING MARKING	

RAIN GARDENS TO BE PLANTED WITH NEWP 'EROSION CONTROL/RESTORATION MIX FOR MOIST SITES' (TYP.)

ACTIVE & PASSIVE RECREATION AREA = 0.5 ACRES

SELECTIVE CLEARING WITHIN WESTERLY RECREATION AREA TO PRESERVE EXISTING SPECIMEN TREES

LIMIT OF PROPOSED TREE CLEARING (TYP.)

SELECTIVE CLEARING WITHIN FRONT YARD TO PRESERVE EXISTING SPECIMEN TREES

SAWCUT EXISTING ROAD PAVEMENT TO PROVIDE STRAIGHT EDGE

CRUSHED STONE UTILITY & EMERGENCY ACCESS DRIVE

LIMIT OF PROPOSED TREE CLEARING (TYP.)

BOTTOM OF STORMWATER SECONDARY TREATMENT & DETENTION AREA TO BE PLANTED WITH NEW ENGLAND WETLAND PLANTS 'EROSION CONTROL/ RESTORATION MIX FOR MOIST SITES' (TYP.) AREA = 0.35 ACRES (APPROX.)

STORMWATER SECONDARY TREATMENT & DETENTION AREA

PRIMARY TREATMENT & INFILTRATION AREA

LIMIT OF 100' REGULATED AREA AS DEFINED IN THE INLAND WETLANDS AND WATERCOURSES REGULATIONS

LIMIT OF INLAND WETLANDS & WATERCOURSES

INTERMITTENT WATERCOURSE (TYP.)

N/F Geraldine J. Dzwilewski Vol. 1002 Page 782

N/F Margaret Berry Balon Vol. 845 Page 270

SCALE: 1" = 40'

40 0 40 80 120

PROJECT NUMBER:

00057 - 00001

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PROFESSIONAL SEAL

NORTH BRIDE BROOK MULTI-FAMILY DEVELOPMENT

PREPARED FOR
PAZZ & CONSTRUCTION, LLC

DETAILED LAYOUT PLAN

N. BRIDE BROOK ROAD (ASSESSOR'S MAP 9, LOT 37-2) EAST LYME, CT

REVISION SUMMARY	
DATE	DESCRIPTION
1/15/20	PER TOWN COMMENTS & UPDATED SURVEY MAPPING
7/10/20	REVISED DEVELOPMENT LAYOUT

SHEET 2 OF 8

DATE 9/25/19

REVISED 7/10/20

UTILITY STATEMENT

UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTED UTILITY COMPANIES OR GOVERNMENT AGENCIES. PAROLE TESTIMONY, FIELD SURVEY AND OTHER SOURCES. THE SURVEYOR AND THIS PLAN SET MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CONTRACTOR TO NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455, IN ACCORDANCE WITH CBYD NOTIFICATION PROCEDURES PRIOR TO COMMENCING WORK.

GENERAL GRADING NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CTDOT STANDARD SPECIFICATIONS FOR ROADS, BRIDGES, FACILITIES AND INCIDENTAL CONSTRUCTION FORM 817 AS APPLICABLE. WORK WITHIN THE ROAD RIGHT-OF-WAYS SHALL BE PERFORMED IN ACCORDANCE WITH THE TOWN OF EAST LYME STANDARDS.
2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO THE START OF CONSTRUCTION AND REPORT ANY DISCREPANCIES BETWEEN THE PLANS & FIELD CONDITIONS TO THE OWNER OR OWNER'S REPRESENTATIVE IMMEDIATELY.
3. THE EXCAVATING CONTRACTOR SHALL TAKE PARTICULAR CARE WHEN EXCAVATING IN AND AROUND EXISTING UTILITY LINES AND EQUIPMENT. VERIFY COVER REQUIREMENTS BY UTILITY COMPANIES SO AS NOT TO CAUSE DAMAGE.
4. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS BEFORE CONSTRUCTION IS TO START, OR AS REQUIRED BY GOVERNING UTILITY COMPANY, TO VERIFY IF ANY UTILITIES ARE PRESENT ON SITE. ALL VERIFICATIONS SHALL BE MADE BY THE APPROPRIATE UTILITY COMPANIES. WHEN EXCAVATING IN, AROUND OR OVER UTILITIES, THE CONTRACTOR MUST NOTIFY THE UTILITY COMPANY SO A REPRESENTATIVE IS PRESENT TO INSTRUCT AND OBSERVE.
5. TRENCHES FOR ALL STORM DRAIN LINES SHALL BE BACKFILLED COMPLETELY WITH ENGINEERED GRANULAR MATERIAL IF WITHIN 5 FEET OF PAVEMENT.
6. AFTER STRIPPING TOPSOIL MATERIAL, PROOFROLL WITH A MEDIUM WEIGHT ROLLER TO DETERMINE LOCATIONS OF UNSUITABLE MATERIAL. THE NECESSITY FOR DRAINS AND/OR REMOVAL OF ANY UNSUITABLE MATERIAL WITHIN THE PROPOSED BUILDING OR PARKING AREAS WILL BE DETERMINED AT THE TIME OF CONSTRUCTION.
7. PROVIDE POSITIVE DRAINAGE WITHOUT PONDING. CONTRACTOR TO TEST FOR, AND CORRECT IF ANY, "BIRD BATH" CONDITIONS.
8. ALL PROPOSED SPOT ELEVATIONS ARE THE FINAL PAVEMENT AND FINAL GRADE.
9. SEE APPROPRIATE DETAILS TO DETERMINE SUBGRADE ELEVATIONS BELOW FINISH GRADE INDICATED ON THE PLANS.
10. EXTRACTION, GRADING, FILLING AND/OR PROCESSING SHALL NOT INVOLVE THE REMOVAL OR DEPOSITION OF MORE MATERIAL(S) THAN NECESSARY TO ACHIEVE THE PROPOSED DEVELOPMENT WHILE MAINTAINING STABILITY WITH NO ADVERSE IMPACT ON ABUTTING PROPERTIES, THE PUBLIC RIGHT OF WAY, PUBLIC SAFETY, OR NATURAL RESOURCES.

STORMWATER O & M NOTES

THE FOLLOWING OPERATION & MAINTENANCE PLAN SHALL BE IMPLEMENTED TO ENSURE THAT STORMWATER MANAGEMENT SYSTEMS FUNCTION AS DESIGNED.

1. PARTY RESPONSIBLE FOR OPERATION AND MAINTENANCE: PAZZ & CONSTRUCTION LLC
2. THE FOLLOWING MAINTENANCE SHALL BE PERFORMED.
   - A. INSPECT EACH CATCH BASIN ANNUALLY IN THE SPRING FOLLOWING THE WINTER SEASON. REMOVE ALL COLLECTED SEDIMENT AND DEBRIS AND DISPOSE OF IN AN APPROVED MANNER.
   - B. INSPECT EACH VEGETATED/LANDSCAPED AREA TWICE ANNUALLY, ONCE IN THE FALL AS PART OF FOLIAGE CLEANUP AND A SECOND TIME DURING SPRING CLEANUP. ALL DEBRIS THAT OBSTRUCTS OR DIVERTS FLOW SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.
   - C. INSPECT THE STORMTECH MC-3500 SUBSURFACE STORMWATER DETENTION & TREATMENT SYSTEM AS REQUIRED PER THE MANUFACTURER'S RECOMMENDATIONS. SEE BELOW.
   - D. INSPECT THE DETENTION POND TWICE ANNUALLY IN THE SPRING AND FALL TO ENSURE THE INLET AND OUTLETS ARE FUNCTIONING PROPERLY. VEGETATION SHOULD BE MOWED AT LEAST ONCE EVERY TWO YEARS DURING A DRY PERIOD TO MINIMIZE OVERGROWTH.
   - E. ACCESS DRIVES, PARKING AREAS AND SIDEWALKS SHALL BE SWEPT ANNUALLY EACH SPRING TO REMOVE SAND, SALT AND OTHER DEBRIS FROM THE WINTER MAINTENANCE SEASON.

ISOLATOR ROW INSPECTION & MAINTENANCE

THE STORMTECH MC3500 ISOLATOR ROW SHALL BE INSPECTED AS FOLLOWS EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. INSPECTION INTERVALS SHALL BE ADJUSTED BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT AND DEBRIS ACCUMULATIONS AND HIGH WATER ELEVATIONS. JETTING AND VACTORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE FOLLOWING STEPS ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
- A. INSPECTION PORTS (CATCH BASIN GRATES OR MANHOLE COVERS)
  - A.1. REMOVE/OPEN GRATE/LID ON DRAINAGE STRUCTURE
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED (NOT APPLICABLE)
  - A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)
  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- B. ALL ISOLATOR ROWS
  - B.1. REMOVE GRATE/LID FROM STRUCTURE AT UPSTREAM EACH END OF ISOLATOR ROW
  - B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
    - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
    - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE
  - B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.

STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
- A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45° (1.1 m) OR MORE IS PREFERRED
- B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED

STEP 3) REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

STEP 4) INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

DRAINAGE NOTES

1. STORMWATER RUNOFF FROM THE PROPOSED DEVELOPMENT WILL BE COLLECTED THROUGH A SERIES OF ROOF LEADERS, SWALES, YARD DRAINS, CATCH BASINS & DRAINAGE PIPING AND DISCHARGED TO THE PROPOSED STORMWATER TREATMENT & DETENTION SYSTEM PRIOR TO DISCHARGING TO THE TOWN ROW.
2. THE INFILTRATION & DETENTION SYSTEM CONSISTS OF A SUBSURFACE SYSTEM BACKFILLED WITH WASHED STONE AND A GRADED DEPRESSION SIZED TO ATTENUATE PEAK FLOW RATES AS COMPARED TO PRE- DEVELOPMENT (EXISTING) CONDITIONS FOR THE 2, 5, 10, 25, 50 AND 100-YEAR STORM EVENTS. THERE WILL BE NO INCREASE IN PEAK FLOW RATES DISCHARGING TO THE NORTH BRIDE BROOK ROAD ROW, INLAND WETLANDS ON SITE, OR ADJACENT PROPERTIES.
3. STORMWATER RUNOFF FROM IMPERVIOUS SURFACES WILL BE TREATED AS FOLLOWS. FINAL TREATMENT DESIGN IN ACCORDANCE WITH THE 2004 DEEP WATER QUALITY MANUAL SHALL BE SUBMITTED TO THE TOWN FOR APPROVAL.
   - A. ALL CATCH BASINS SHALL HAVE 2' DEEP SUMPS.
   - B. FLOWS FROM THE COLLECTION SYSTEM WILL BE DIVERTED THROUGH AN ISOLATOR ROW WITHIN THE STORMTECH SYSTEM. THE ISOLATOR ROW WILL CAPTURE TOTAL SUSPENDED SOLIDS (TSS) AND DEBRIS WITHIN AN ACCESSIBLE ROW OF LINED MC-3500 CHAMBERS TO ALLOW FOR INSPECTION AND MAINTENANCE BEFORE FLOWING INTO ADJACENT UNITS. THE SYSTEM WILL FULLY RETAIN AND INFILTRATE THE WATER QUALITY VOLUME AND TREAT WATER QUALITY FLOW.
   - C. STORMWATER WATER THAT IS NOT INFILTRATED WILL DISCHARGE TO THE DETENTION BASIN WHICH HAS BEEN GRADED WITH A FLAT BOTTOM AND THE INITIAL 4"Ø DISCHARGE ORIFICE IS 6" ABOVE THE BOTTOM GRADE TO PROMOTE INFILTRATION INTO THE WITNESSED SAND & GRAVEL SUBSOILS.
4. THE DESIGN ENGINEER SHALL OVERSEE THE INSTALLATION OF THE PROPOSED SUBSURFACE STORMWATER TREATMENT & INFILTRATION SYSTEM AND CERTIFY THAT IT WAS CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH THE PLAN. CONTRACTOR SHALL PROVIDE MATERIAL SUBMITTALS TO THE DESIGN ENGINEER PRIOR TO INSTALLATION AND SHALL SEQUENCE CONSTRUCTION TO ENSURE THE FOLLOWING COMPONENTS ARE INSPECTED BY THE DESIGN ENGINEER PRIOR TO BACKFILL OR CONCEALMENT:
   - A. EXCAVATION LIMITS AND SURROUNDING UNDISTURBED SOILS
   - B. PLACEMENT OF GEOTEXTILE WRAP AND BASE STONE
   - C. PLACEMENT OF GEOTEXTILE BASE LATER FOR ISOLATOR ROW
   - D. PLACEMENT OF MC-3500 UNITS AND MANIFOLDS
   - E. INSTALLATION OF OUTLET STRUCTURES AND PIPE CONNECTIONS
   - F. PLACEMENT OF GEOTEXTILE WRAP FOR ISOLATOR ROW
   - G. PLACEMENT OF STONE BACKFILL
   - H. CLOSURE OF GEOTEXTILE WRAP AND PLACEMENT OF BACKFILL
5. THE DESIGN ENGINEER SHALL OVERSEE THE INSTALLATION OF THE PROPOSED STORMWATER DETENTION & TREATMENT SYSTEM AND CONFIRM THAT IT WAS CONSTRUCTED SUBSTANTIALLY IN ACCORDANCE WITH THE PLAN. CONTRACTOR SHALL PROVIDE MATERIAL SUBMITTALS TO THE DESIGN ENGINEER PRIOR TO INSTALLATION AND SHALL SEQUENCE CONSTRUCTION TO ENSURE THE FOLLOWING COMPONENTS ARE INSPECTED PRIOR TO CONCEALMENT:
   - A. EXCAVATION LIMITS AND SURROUNDING UNDISTURBED SOILS
   - B. INSTALLATION OUTLET STRUCTURE AND PIPE CONNECTIONS

TEST PIT DATA

TEST PIT	1	TEST PIT	2	TEST PIT	3	TEST PIT	4
DATE	7/25/19	DATE	7/25/19	DATE	7/25/19	DATE	7/25/19
PERF. BY	BJH	PERF. BY	BJH	PERF. BY	BJH	PERF. BY	BJH
DEPTH	CHARACTERISTICS	DEPTH	CHARACTERISTICS	DEPTH	CHARACTERISTICS	DEPTH	CHARACTERISTICS
0 - 10	Topsoil	0 - 12	Topsoil	0 - 12	Topsoil	0 - 14	Topsoil
10 - 36	Brown FSL	12 - 27	Brown FSL Trace Silt	12 - 36	Red/Brown FSL Trace Silt	14 - 32	Brown Fine Silty Loam
36 - 56	Coarse Sand & Gravel	27 - 56	Coarse S&G Loose to Mod.	36 - 62	Coarse Sand & Gravel	32 - 84	Medium Sand
56 - 68	Med-Coarse Sand	56 - 62	Coarse Sand & Gravel Compact	62 - 72	Med-Coarse Sand	84 - 88	Damp Medium Sand
68 - 84	Coarse Sand & Gravel	62 - 70	Gray/Tan Medium Sand	72 - 80	Sand & Gravel Compact		
		70 - 80	Sand & Gravel Compact				
ROOTS	32"	ROOTS	27"	ROOTS	36"	ROOTS	32"
WATER	None	WATER	None	WATER	None	WATER	None
LEDGE	None	LEDGE	None	LEDGE	Ledge or Boulder @ 80"	LEDGE	None
MOTT. / REST.	Possible @ 68" (monitoring req'd)	MOTT. / REST.	Possible @ 62" (monitoring req'd)	MOTT. / REST.	None	MOTT. / REST.	Possible @ 84" (monitoring req'd)
TEST PIT	5	TEST PIT	6	TEST PIT	7 (MW7)	TEST PIT	8 (MW8)
DATE	7/25/19	DATE	7/25/19	DATE	1/14/20	DATE	1/14/20
PERF. BY	BJH	PERF. BY	BJH	PERF. BY	BJH	PERF. BY	BJH
DEPTH	CHARACTERISTICS	DEPTH	CHARACTERISTICS	DEPTH	CHARACTERISTICS	DEPTH	CHARACTERISTICS
- -	Performed to delineate change in	- -	Performed to delineate change in	- -	Performed to witness groundwater	- -	Performed to witness groundwater
- -	soil characteristics. Not suitable	- -	soil characteristics. Similar to	- -	and install monitoring pipe. Pit	- -	and install monitoring pipe. Pit
- -	for Subsurface Drainage	- -	TP 4 (sandy).	- -	similar to TP 4 (sandy).	- -	similar to TP 2 (sands & gravels).
ROOTS		ROOTS		ROOTS	Not recorded	ROOTS	Not recorded
WATER		WATER		WATER	114" (Pipe installed)	WATER	None (Pipe installed @ 108")
LEDGE		LEDGE		LEDGE	None	LEDGE	None
MOTT. / REST.		MOTT. / REST.		MOTT. / REST.	Possible @ 102" (monitoring req'd)	MOTT. / REST.	None (monitoring req'd)

SCALE: 1" = 40'

40 0 40 80 120

PROJECT NUMBER:

00057 - 00001

YRC YANTIC RIVER CONSULTANTS, LLC

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PROFESSIONAL SEAL

NORTH BRIDE BROOK MULTI-FAMILY DEVELOPMENT

PREPARED FOR PAZZ & CONSTRUCTION, LLC

GRADING & DRAINAGE PLAN

N. BRIDE BROOK ROAD (ASSESSOR'S MAP 9, LOT 37-2) EAST LYME, CT

REVISION SUMMARY

DATE	DESCRIPTION
1/15/20	PER TOWN COMMENTS & UPDATED SURVEY MAPPING
7/10/20	REVISED DEVELOPMENT LAYOUT

SHEET 3 OF 8

DATE 9/25/19

REVISED 7/10/20

UTILITY STATEMENT

UNDERGROUND UTILITY, STRUCTURE AND FACILITY LOCATIONS DEPICTED AND NOTED HEREON HAVE BEEN COMPILED, IN PART, FROM RECORD MAPPING SUPPLIED BY THE RESPECTED UTILITY COMPANIES OR GOVERNMENT AGENCIES, PAROLE TESTIMONY, FIELD SURVEY AND OTHER SOURCES. THE SURVEYOR AND THIS PLAN SET MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE, ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE. THE SIZE, LOCATION AND EXISTENCE OF ALL SUCH FEATURES MUST BE FIELD DETERMINED AND VERIFIED BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CONSTRUCTION, CONTRACTOR TO NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455, IN ACCORDANCE WITH CBYD NOTIFICATION PROCEDURES PRIOR TO COMMENCING WORK.

GENERAL UTILITY NOTES

1. THE PURPOSE OF THIS PLAN IS TO SHOW THE GENERAL SYSTEM OF UTILITIES TO SERVE THE PROPOSED RESIDENTIAL MULTI-FAMILY DEVELOPMENT ONLY. DETAILED DESIGN PLANS AND DETAILS SHALL BE PREPARED FOR REVIEW AND APPROVAL BY THE APPROPRIATE UTILITY COMPANY PRIOR TO CONSTRUCTION.
2. ALL UNDERGROUND UTILITIES MUST BE INSTALLED IN ACCORDANCE WITH THE STANDARDS, SPECIFICATIONS AND DETAILS OF THE APPROPRIATE PUBLIC UTILITY COMPANY
2. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE AND ORDER ALL NEW SERVICES, LOCATE AND MAINTAIN IN SERVICE ALL EXISTING UTILITIES ENCOUNTERED DURING CONSTRUCTION UNLESS OTHERWISE INDICATED ON THE DRAWINGS. ANY PIPING WHICH CAN BE REMOVED DURING CONSTRUCTION WITH-OUT UNDUE INTERRUPTION OF SERVICE MAY BE REMOVED AND REPLACED BY THE CONTRACTOR, AT HIS EXPENSE WITH THE PERMISSION OF THE OWNER.
3. BEFORE WORKING WITH OR AROUND EXISTING UTILITIES, THE APPROPRIATE UTILITY COMPANY SHALL BE CONTACTED BY THE CONTRACTOR.
4. WHEN CONNECTIONS ARE TO BE MADE TO EXISTING PIPING AND STRUCTURE OR WHERE CONSTRUCTION IS IN THE VICINITY OF EXISTING PIPING, THE LOCATION AND ELEVATION OF THE EXISTING PIPING SHALL BE FIELD VERIFIED. NOTIFICATION SHALL BE GIVEN TO THE OWNER IF THE FIELD VERIFICATION DIFFERS FROM THE INFORMATION ON THE DRAWINGS.
5. FOR CLARITY PIPES MAY NOT BE DRAWN TO SCALE OR EXACTLY LOCATED.

WATER

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS OF THE EAST LYME WATER AND SEWER COMMISSION.
2. AN 8"Ø CLDIP (CLASS 54) PRIVATE WATER MAIN SHALL BE INSTALLED FROM THE EXISTING WATER MAIN IN NORTH BRIDE BROOK ROAD TO PROVIDE DOMESTIC AND FIRE SUPPRESSION WATER SUPPLY TO SITE. EACH BUILDING, NEW FIRE HYDRANTS AS SHOWN ON THE PLAN. INSTALLATION, OPERATION, MAINTENANCE, AND REPAIR OF THE PRIVATE WATER MAIN IS THE SOLE RESPONSIBILITY OF THE DEVELOPER AND/OR PROPERTY OWNER.
3. COPPER (TYPE K) DOMESTIC WATER SERVICE PIPES SHALL BE INSTALLED FROM THE NEW PRIVATE MAIN TO A METER WITHIN EACH INDIVIDUAL UNIT. THE SERVICE AND METER SIZES SHALL BE CONFIRMED BY THE PROJECT ARCHITECT OR MEP FOLLOWING A HYDRANT FLOW TEST.

SANITARY

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS OF THE EAST LYME WATER AND SEWER COMMISSION.
2. AN 8" PVC (SDR-35) PRIVATE SEWER COLLECTION MAIN SHALL BE INSTALLED AS SHOWN ON THE PLANS AND SHALL CONNECT TO THE EXISTING SANITARY MANHOLE TO THE SOUTH OF NORTH BRIDE BROOK ROAD WITH AN INSIDE DROP INLET.
3. A MINIMUM CLEARANCE OF 10' HORIZONTAL AND 18" VERTICAL SHALL BE PROVIDED BETWEEN WATER AND SANITARY SEWER LINES. IF THE MINIMUM CLEARANCE IS NOT PROVIDED, THEN THE SEWER LINE SHALL BE CONSTRUCTED OF C-900 PVC OR DUCTILE IRON PIPE.
4. EACH INDIVIDUAL UNIT SHALL BE SERVED BY A SEPARATE 6" SANITARY LATERAL AS SHOWN ON THE PLAN WITH A CLEANOUT. LATERALS SHALL BE PVC (SDR-35) OR OTHER MATERIAL ON THE APPROVED MATERIALS LIST AND SHALL HAVE A MINIMUM SLOPE OF 2% AND MAXIMUM SLOPE OF 10%.

ELECTRIC & TELECOMMUNICATIONS

1. ELECTRIC SERVICE SHALL BE PROVIDED TO THE DEVELOPMENT IN ACCORDANCE WITH THE STANDARDS OF NORTHEAST UTILITIES SERVICE COMPANY (EVERSOURCE ENERGY). LAYOUT AND DETAILS NOT SHOWN AT THIS TIME.
2. FINAL CONNECTION LOCATION, SIZE & TYPE OF CONDUIT, TRANSFORMERS, METERS & OTHER ELEMENTS TO SERVE THE BUILDINGS SHALL BE COORDINATED BETWEEN EVERSOURCE ENERGY, OWNER, MEP AND ENGINEER PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. SITE AREA LIGHTING NOT SHOWN. POLE MOUNTED AREA LIGHTS, BUILDING MOUNTED LIGHTS AND SIGN SPOT LIGHTS SHALL BE SERVED BY A COMMON OWNER'S PANEL WITH APPROPRIATE CONTROLS TO ENSURE PARKING AREAS, SIDEWALKS AND DRIVEWAYS ARE ADEQUATELY LIGHTED WILL BE PROVIDED PRIOR TO CONSTRUCTION. PANEL & CONDUIT SIZE AND LOCATION TO BE DETERMINED BY OWNER.

SCALE: 1" = 40'

40 0 40 80 120

PROJECT NUMBER:

00057 - 00001

YANTIC RIVER CONSULTANTS, LLC

CONTACT INFORMATION

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PROFESSIONAL SEAL

NORTH BRIDE BROOK
MULTI-FAMILY DEVELOPMENT

PREPARED FOR
PAZZ & CONSTRUCTION, LLC

UTILITY PLAN

N. BRIDE BROOK ROAD (ASSESSOR'S MAP 9, LOT 37-2) EAST LYME, CT

REVISION SUMMARY

DATE	DESCRIPTION
1/15/20	PER TOWN COMMENTS & UPDATED SURVEY MAPPING
7/10/20	REVISED DEVELOPMENT LAYOUT

SHEET 4 OF 8

DATE 9/25/19

REVISED 7/10/20

GENERAL CONSTRUCTION NOTES:

1. THE CONTRACTOR IS REQUIRED TO OBTAIN ALL NECESSARY PERMITS FOR THE WORK TO BE PERFORMED.
2. THE CONTRACTOR SHALL CONFORM TO ALL REQUIREMENTS OF ALL LOCAL AGENCIES OF THE TOWN OF EAST LYME AND THE STATE OF CONNECTICUT.

SEQUENCE OF CONSTRUCTION:

1. COORDINATE AND COMPLETE A MEETING WITH TOWN AND OWNER, RESPONSIBLE PARTIES TO BE IDENTIFIED AND EMERGENCY PHONE NUMBERS PROVIDED.
2. INSTALL EROSION CONTROL MEASURES AT THE LOCATIONS SHOWN ON THE PLANS OR AS REQUIRED FOR FIELD CONDITIONS.

PHASE 1:
3. CLEAR AND GRUB AREAS AS REQUIRED.
4. EXCAVATE / PLACE FILL AND ROUGH GRADE SITE.
5. INSTALL FOUNDATIONS & ERECT BUILDINGS.
6. INSTALL UTILITIES AND STORM DRAINAGE.
7. CONSTRUCT ACCESS DRIVES AND PARKING AREAS.
8. INSTALL CONCRETE SIDEWALKS AND PADS.
9. INSTALL BITUMINOUS CONCRETE BINDER COURSE.
10. INSTALL CURBING AND BITUMINOUS CONCRETE FINISH COURSE
11. FINISH GRADE, SPREAD TOPSOIL, SEED, AND COMPLETE PLANTING.
12. REMOVE EROSION AND SEDIMENTATION CONTROLS WHEN PERMANENT VEGETATIVE COVER IS ESTABLISHED. CONTACT TOWN PRIOR TO REMOVAL.

PHASE 2 THROUGH 5:
13. SEE 3 THROUGH 12 ABOVE.

E & S CONTROL NARRATIVE:

THE PROPOSED PROJECT CONSISTS OF A MULTI-FAMILY RESIDENTIAL APARTMENT DEVELOPMENT, CONSISTING OF 108 TOWNHOUSE UNITS WITHIN 13 SEPARATE BUILDINGS. THE GENERAL SCOPE OF SITE WORK IS DESCRIBED ABOVE IN THE CONSTRUCTION SEQUENCE.

APPROXIMATELY 6.75 ACRES OF THE 20.24-ACRE SITE (33%) WILL BE DISTURBED AS PART OF THE DEVELOPMENT. TO MINIMIZE THE AREA AND LIMIT THE TIME SOILS ARE EXPOSED TO RAIN AND WIND AND SUBJECT TO EROSION & SEDIMENTATION, THE PROJECT WILL BE COMPLETED IN MULTIPLE PHASES AS DESCRIBED BELOW:

PHASE 1: MAIN ACCESS ROAD, BUILDINGS A, B & C, MAIL PAD, INFILTRATION & DETENTION
PHASE 2: SECONDARY ACCESS ROAD, BUILDINGS D, E, F & H
PHASE 3: SECONDARY ACCESS ROAD, BUILDING G, I, J

THE EROSION & SEDIMENTATION CONTROL NOTES, INSPECTION REQUIREMENTS, PLANS & DETAILS DEPICTED ON THIS SHEET SHALL BE FOLLOWED. IN ADDITION THE FOLLOWING SITE SPECIFIC E&S CONTROL CONCERNS & ISSUES SHALL BE NOTED:

1. PER USDA NRCS SOIL MAPPING, THE SITE MAINLY CONSISTS OF CHARLTON-CHATFIELD ROCKY SOILS, WHICH HAVE A MODERATE SUSCEPTIBILITY TO SHEET AND RILL EROSION AND A MODERATE TO HIGH SUSCEPTIBILITY TO WIND-BLOWN EROSION. LONG-TERM EXPOSURE OF THESE SOILS SHALL BE AVOIDED. DUST-CONTROL MEASURES SHALL BE EMPLOYED AS REQUIRED, SUCH AS COVERING STOCKPILES OR APPLYING WATER.
2. THE TOPOGRAPHY CONSISTS OF MODERATE TO STEEP TERRAIN, WITH SLOPES RANGING FROM 5% TO 20% WITHIN THE DEVELOPMENT AREA. THE CONTRACTOR SHALL TAKE CARE TO PRESERVE NATURAL VEGETATION ALONG THE TOP OF CUT SLOPES AND BOTTOM OF FILL SLOPES, MINIMIZE SOIL DISTURBANCE, AND MAINTAIN E&S CONTROLS FOR THE DURATION OF CONSTRUCTION UNTIL DISTURBED AREAS ARE STABILIZED.

E & S CONTROL PLAN:

1. OWNER & PARTY RESPONSIBLE FOR E&S CONTROL PLAN: PAZZ & CONSTRUCTION LLC EMERGENCY CONTACT: TO BE PROVIDED PRIOR TO ISSUANCE OF BUILDING PERMIT.
2. ALL EROSION AND CONTROL MEASURES SHALL BE INSTALLED AT THE PROJECT SITE PRIOR TO CONSTRUCTION WHERE POSSIBLE. E&S MEASURES SHALL BE MOVED AND/OR ADDED TO ACCOMODATE THE PROGRESSION OF PHASES.
3. AN ANTI-TRACKING APRON SHALL BE INSTALLED AT ALL ENTRANCES TO THE SITE IN ORDER TO PREVENT THE TRANSPORT OF SEDIMENTS OFF THE CONSTRUCTION SITE BY TRUCK AND CONSTRUCTION EQUIPMENT TRAFFIC. THE SURROUNDING ROAD SURFACES SHALL BE SWEPT AS REQUIRED.
4. ALL CATCH BASINS WITHIN THE PROJECT AREA, INCLUDING WITHIN NORTH BRIDE BROOK ROAD, WILL BE PROTECTED WITH INLET CONTROL FILTER/SILT SACKS AS SHOWN ON THE PLAN THROUGHOUT THE CONSTRUCTION PERIOD. IF REQUIRED, NEW CATCH BASINS ON SITE SHALL BE PROTECTED WITH STRAW WADDLES OR BALES.
5. AN EROSION CONTROL SYSTEM SHALL BE INSTALLED AROUND STOCKPILES OF SOIL.
6. DUST CONTROL MEASURES SHALL BE APPLIED DURING CONSTRUCTION AS REQUIRED.
7. TEMPORARY SILTATION TRAPS (TST) AND DIVERSION SWALES SHALL BE INSTALLED AS NECESSARY DURING SITE CONSTRUCTION. ALL DEWATERING DISCHARGE AND CONSTRUCTION RUNOFF SHALL BE DIRECTED TO THE TST'S. CONSTRUCTION WASTE-WATERS SHALL NOT BE DIRECTLY DISCHARGED TO STORM DRAINAGE, THE ROAD, OR WETLANDS AND WATERCOURSES. AT ALL TIMES DURING CONSTRUCTION, THE TST'S AND SWALES SHALL BE MAINTAINED TO CONTROL RUNOFF AND PREVENT SEDIMENT DISCHARGE TO ADJACENT WETLANDS.

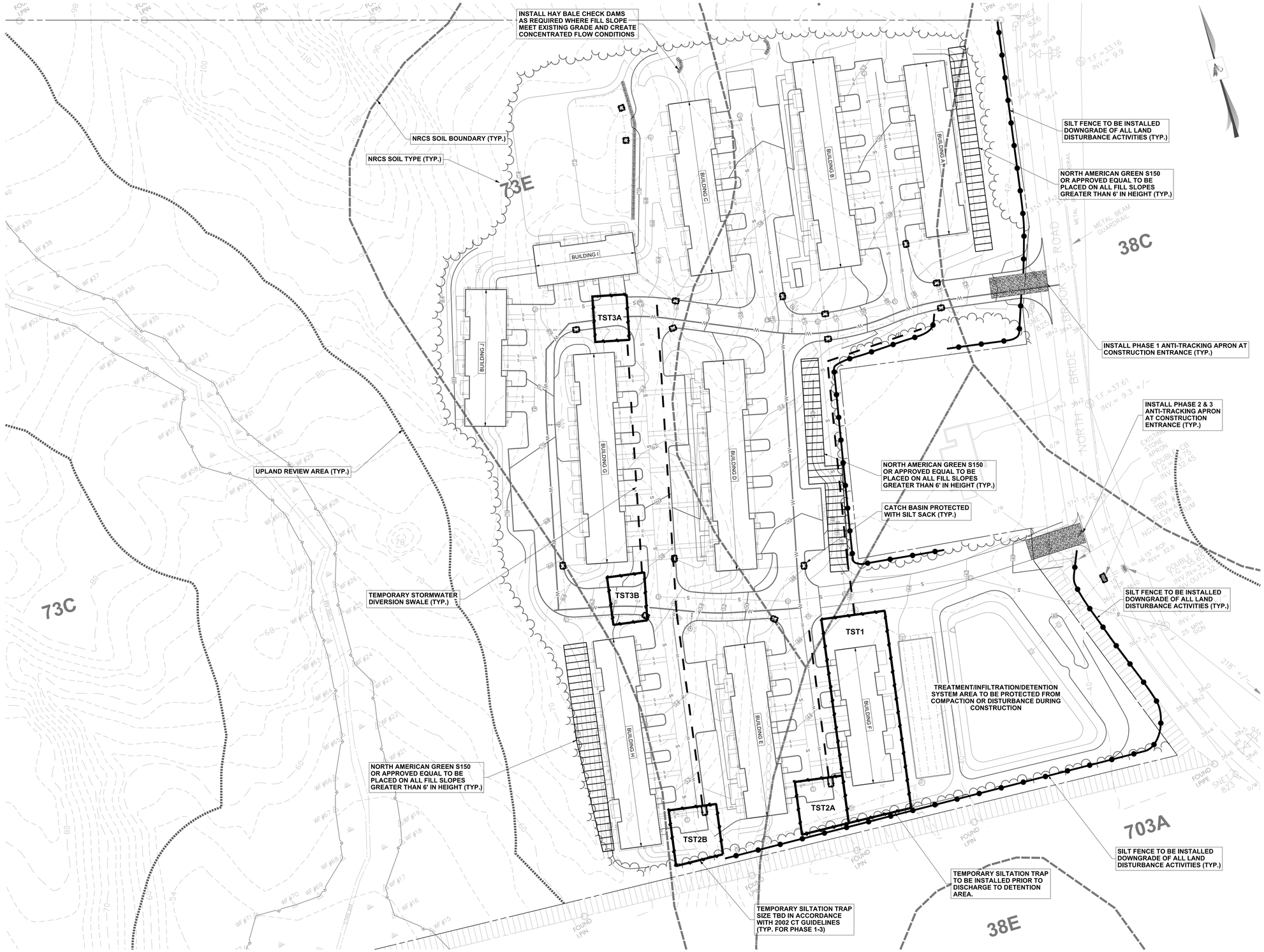
E & S CONTROL NOTES:

1. CONSTRUCTION WILL COMMENCE IN THE FALL 2020 AND BE COMPLETED IN 2025, WEATHER PERMITTING.
2. E&S CONTROL MEASURES SHALL BE INSTALLED AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE TOWN.
3. ALL E&S CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL", DATED 2002, AS AMENDED AND THE TOWN OF EAST LYME REGULATIONS.
4. EROSION CONTROL DEVICES SHALL BE MAINTAINED, REPLACED AND/OR ADDED BY THE CONTRACTOR DURING THE CONSTRUCTION PERIOD AS NECESSARY OR AS REQUIRED BY THE ENGINEER OR THE TOWN.
5. SEDIMENT REMOVED FROM ANY CONTROL STRUCTURES SHALL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN.
6. THE CONTRACTOR WILL BE RESPONSIBLE FOR IMPLEMENTING ALL E&S CONTROL DEVICES AS SHOWN ON THESE PLANS OR AS DIRECTED BY THE ENGINEER OR TOWN.
7. ALL DISTURBED AREAS ARE TO BE RAKED, SEEDED AND FERTILIZED PER "TURF ESTABLISHMENT" SPEC. IN CTDOT FORM 817.
8. AREAS OUTSIDE OF IMPERVIOUS AREAS TO RECEIVE A MINIMUM 4" OF TOPSOIL.
9. THE FOLLOWING DATES FOR SEEDING SHALL BE USED:
   SPRING: APRIL 15 TO JUNE 15, FALL: AUGUST 15 TO SEPTEMBER 15
10. GRASS SEED MIXTURES SHALL BE APPLIED AT A RATE NO LESS THAN 100LBS PER ACRE OR AS RECOMMENDED BY MANUFACTURER.
11. TEMPORARY GRASS SEEDING, IF NECESSARY, SHALL BE PERENNIAL RYE GRASS APPLIED AT A RATE OF 100 LBS. PER ACRE.

INSPECTION AND MAINTENANCE:

REGULAR INSPECTION AND MAINTENANCE IS CRITICAL FOR THE EFFECTIVENESS OF E&S CONTROLS. THE RESPONSIBLE PARTY SHALL IMPLEMENT THE FOLLOWING THROUGHOUT THE CONSTRUCTION PERIOD UNTIL THE SITE IS STABILIZED.

1. PRIOR TO A MAJOR STORM IN WHICH THE NOAA ISSUES WARNINGS OF FLOODING, SEVERE WEATHER CONDITIONS OR EFFECTS, ALL E&S CONTROLS SHALL BE INSPECTED, MAINTAINED, REPAIRED AND/OR CLEANED TO ENSURE THEY ARE IN PROPER WORKING ORDER.
2. ALL E&S CONTROLS SHALL BE INSPECTED, REPAIRED, AND CLEANED WITHIN 24 HOURS AFTER RAINFALL EVENTS GREATER THAN 0.1 INCHES
3. ALL STORMWATER STRUCTURES SHALL BE INSPECTED WITHIN 24 HOURS AFTER RAINFALL EVENTS GREATER THAN 0.1 INCHES AND CLEANED AS FOLLOWS:
   A. CATCH BASINS - REMOVE COLLECTED SEDIMENT @ ½ DEPTH OF SUMP
   B. SWALES - REMOVE COLLECTED SEDIMENT @ ¼ DEPTH
   C. DEWATERING BASINS - REMOVE COLLECTED SEDIMENT @ ½ CAPACITY
4. ROUTINE INSPECTION AND MAINTENANCE SCHEDULE:
   A. INSPECT ROAD DAILY AND SWEEP/REMOVE TRACKED MATERIALS AS REQUIRED
   B. TEMPORARY CONTROLS SHALL BE INSPECTED WEEKLY AND CLEANED:
      i. ANTI-TRACKING APRON - REPLENISH OR REPLACE STONE SA REQUIRED
      ii. SILT FENCE - REMOVE COLLECTED SEDIMENT @ ½ THE HEIGHT (MAX.)
      iii. SILT SACKS - CLEAN PER MANUFACTURER'S RECOMMENDATIONS
      iv. STRAW BALES - REMOVE COLLECTED SEDIMENT @ ½ THE HEIGHT (MAX.)
5. ALL STORMWATER STRUCTURES SHALL BE CLEANED AFTER REMOVAL OF E&S CONTROLS.



SCALE: 1" = 40'
40 0 40 80 120

PROJECT NUMBER:
00057 - 00001

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PROFESSIONAL SEAL

NORTH BRIDE BROOK MULTI-FAMILY DEVELOPMENT

PREPARED FOR
PAZZ & CONSTRUCTION, LLC

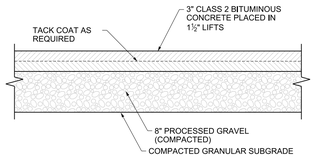
EROSION & SEDIMENTATION CONTROL PLAN

N. BRIDE BROOK ROAD (ASSESSOR'S MAP 9, LOT 37-2) EAST LYME, CT

REVISION SUMMARY

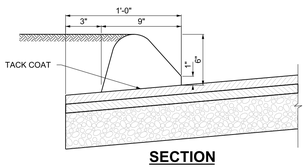
DATE	DESCRIPTION
1/15/20	PER TOWN COMMENTS & UPDATED SURVEY MAPPING
7/10/20	REVISED DEVELOPMENT LAYOUT

SHEET 5 OF 8
DATE 9/25/19
REVISED 7/10/20



BITUMINOUS PAVEMENT

NOT TO SCALE



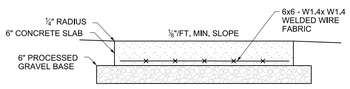
SECTION

NOTES:

1. CURBING SHALL BE MACHINE EXTRUDED.

BITUMINOUS CONCRETE CURB (BCLC)

NOT TO SCALE

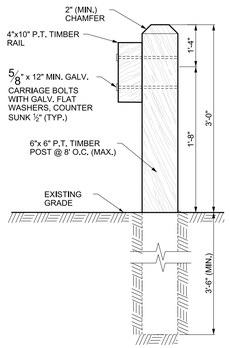


(TYP.)

1. ALL CONCRETE TO BE 4,000 PSI MIN.
2. CONCRETE SURFACE SHALL BE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE PAD.

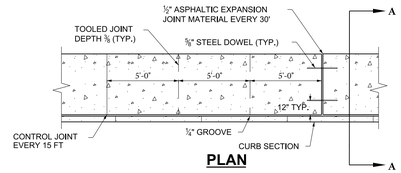
CONCRETE DUMPSTER & MAIL PAD

NOT TO SCALE

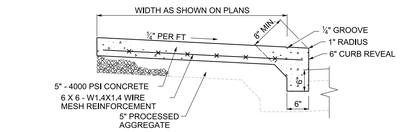


TIMBER GUIDE RAIL

NOT TO SCALE



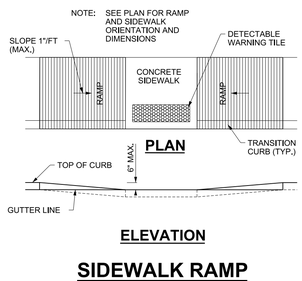
PLAN



SECTION A-A

CONCRETE SIDEWALK AND CURB MONOLITHIC

NOT TO SCALE

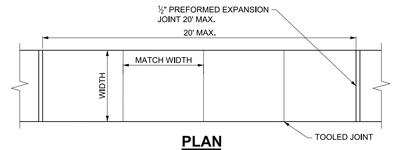


PLAN

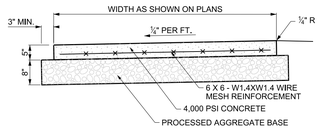
ELEVATION

SIDEWALK RAMP

NOT TO SCALE



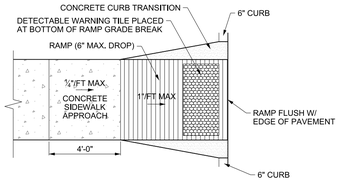
PLAN



PROFILE

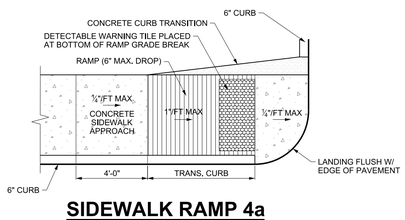
CONCRETE SIDEWALK

NOT TO SCALE



SIDEWALK RAMP 4e

NOT TO SCALE



SIDEWALK RAMP 4a

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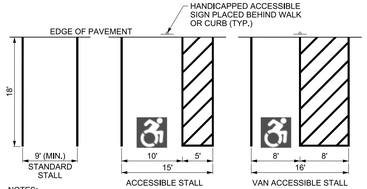
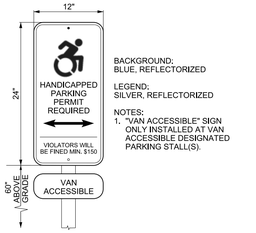


NOTES:
1. ALL STRIPING TO BE 4" WHITE
2. PAINTED SUMBOL TO BE INTERNATIONAL SIGN OF ACCESSIBILITY

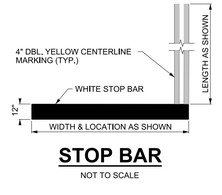
PARKING STALL DETAILS

NOT TO SCALE



HANDICAPPED PARKING

NOT TO SCALE



STOP BAR

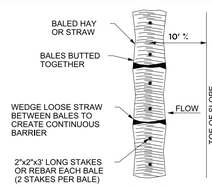
NOT TO SCALE

NOTES:

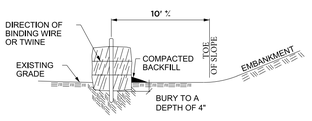
1. 30" SIGN TO BE INSTALLED PER CONNDOT STANDARDS SIGN #31-0552
2. SECURE TO (1) TYPE A GALVANIZED STEEL POST WITH BREAKAWAY

STOP SIGN

NOT TO SCALE



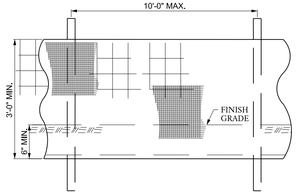
PLAN



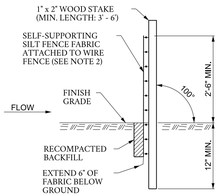
SECTION

HAY BALES AT TOE OF SLOPE

NOT TO SCALE



ELEVATION



SECTION

NOTES:

1. INSTALL SILT FENCE & WOOD STAKES AS RECOMMENDED BY MANUFACTURER.
2. SILT FENCE SUBJECT TO HEAVY LOADS SHALL BE REINFORCED WITH FARM FENCING & STEEL POSTS (0.5 # STEEL/L.F.). THE MINIMUM POST LENGTH SHALL BE 5'-0".
3. SILT FENCE FABRIC SHALL BE A PERVIOUS SHEET OF WOVEN PROPYLENE, NYLON, POLYESTER OR POLYETHYLENE FILAMENTS AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER.

SILT FENCE

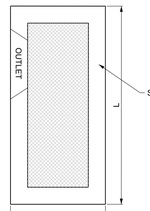
NOT TO SCALE

MAINTENANCE:

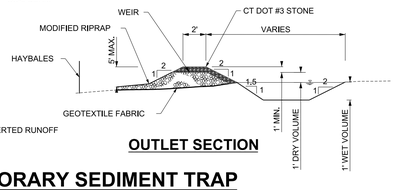
1. INSPECT THE TEMPORARY SEDIMENT TRAP AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM WITH A RAINFALL AMOUNT OF 0.5 INCH OR GREATER.
2. DEWATER, REMOVE SEDIMENTS AND RESTORE BASIN TO ORIGINAL DIMENSIONS WHEN SEDIMENTS ACCUMULATED TO ½ WET STORAGE VOLUME.
3. THE TEMPORARY SEDIMENT TRAPS SHALL BE REMOVED AFTER THE CONTRIBUTING DRAINAGE AREA IS STABILIZED.
4. ALL PROPOSED SEDIMENT TRAPS SHALL BE CONSTRUCTED ACCORDING TO THE 2002 CT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL REQUIREMENTS.

TEMPORARY SEDIMENT TRAP (TST) SIZING

TST	AREA (AC) (ACRE)	REQUIRED VOL. (CY)	WET VOL. (CY)	DRY VOL. (CY)
1	2.7	365	183	183
2A/B	1.7	230	115	115
3A/B	1.2	162	81	81



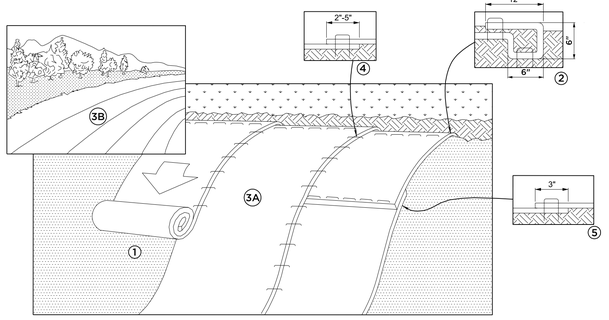
PLAN



OUTLET SECTION

TEMPORARY SEDIMENT TRAP

NOT TO SCALE

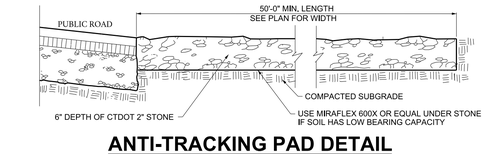


NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING AND NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECO'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKED SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2'-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROX. 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.

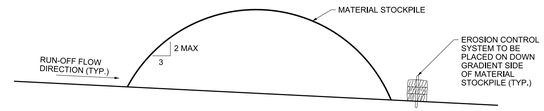
EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE



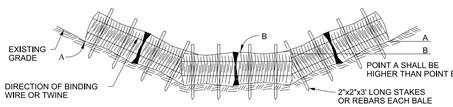
ANTI-TRACKING PAD DETAIL

NOT TO SCALE

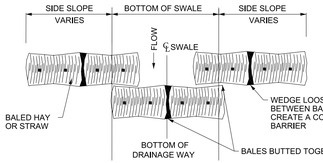


SOIL STOCKPILE DETAIL

NOT TO SCALE



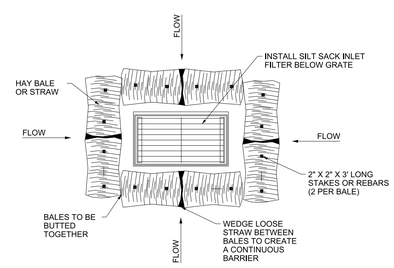
SECTION AT SWALE



PLAN

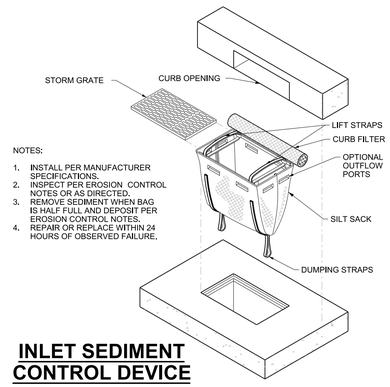
HAY BALES AT SWALE

NOT TO SCALE



HAY BALES AROUND CATCH BASIN

NOT TO SCALE



NOTES:

1. INSTALL PER MANUFACTURER SPECIFICATIONS.
2. INSPECT PER EROSION CONTROL NOTES OR AS DIRECTED.
3. REMOVE SEDIMENT WHEN BAG IS HALF FULL AND DEPOSIT PER EROSION CONTROL NOTES.
4. REPAIR OR REPLACE WITHIN 24 HOURS OF OBSERVED FAILURE.

INLET SEDIMENT CONTROL DEVICE

NOT TO SCALE

SCALE: AS SHOWN

0

PROJECT NUMBER:

00057 - 00001

YRC YANTIC RIVER CONSULTANTS, LLC

CONTACT INFORMATION

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LEBANON, CONN 06249

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Web: www.yanticriverconsultants.com

PROFESSIONAL SEAL

NORTH BRIDE BROOK ROAD MULTI-FAMILY DEVELOPMENT

PREPARED FOR
PAZZ & CONSTRUCTION LLC

SITE / E&S DETAILS

N. BRIDE BROOK ROAD (ASSESSOR'S MAP 9, LOT 37-2) EAST LYME, CT

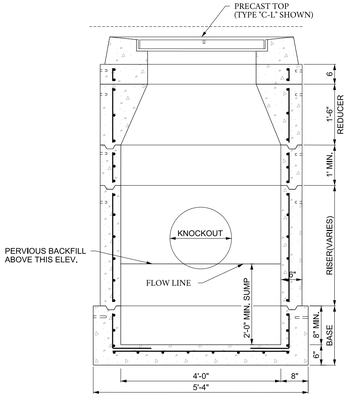
REVISION SUMMARY

DATE	DESCRIPTION
1/15/20	PER TOWN COMMENTS & UPDATED SURVEY MAPPING
7/10/20	REVISED DEVELOPMENT LAYOUT

SHEET 6 OF 8

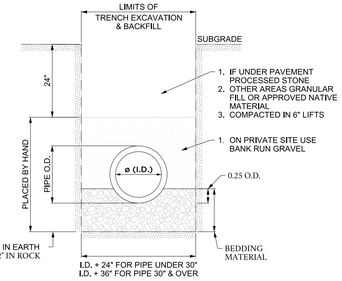
DATE 9/25/19

REVISED 7/10/20



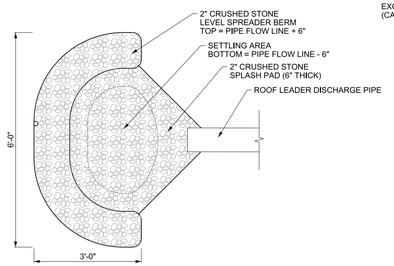
TYPE "C", "CL" OR "CG" STANDARD CATCH BASIN

NOT TO SCALE



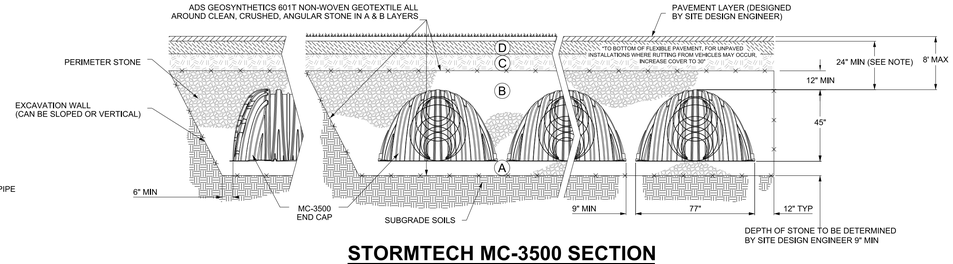
TRENCHING & BACKFILLING

NOT TO SCALE



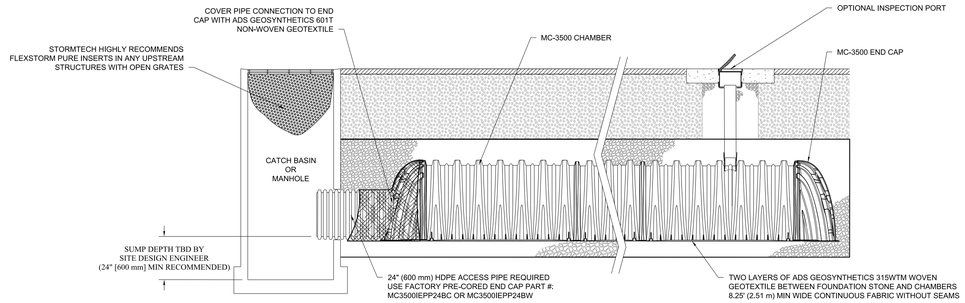
ROOF LEADER SPLASH PAD

NOT TO SCALE



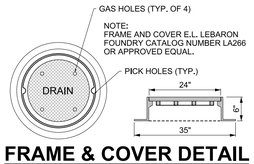
STORMTECH MC-3500 SECTION

NOT TO SCALE



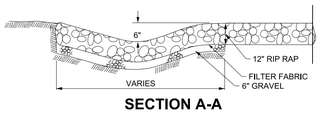
STORMTECH MC-3500 ISOLATOR ROW DETAIL

NOT TO SCALE

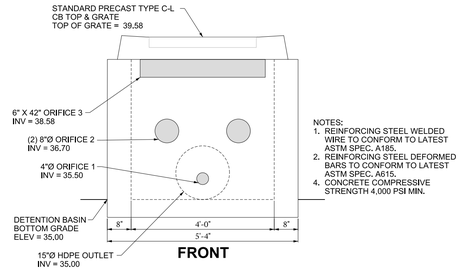


FRAME & COVER DETAIL

NOT TO SCALE



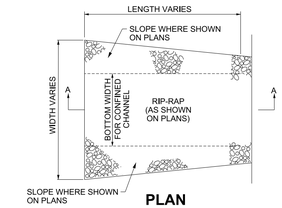
SECTION A-A



FRONT

OUTLET STRUCTURE

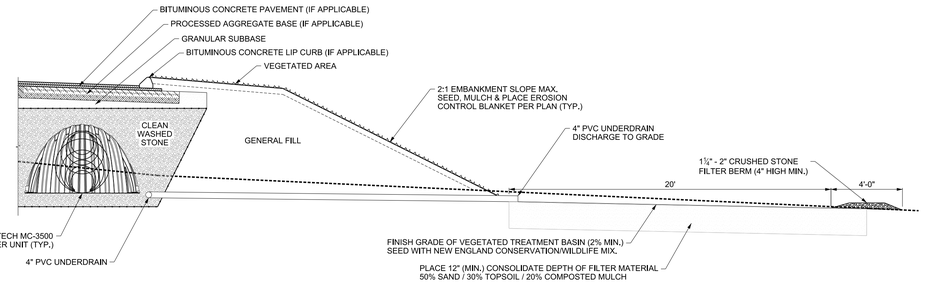
NOT TO SCALE



PLAN

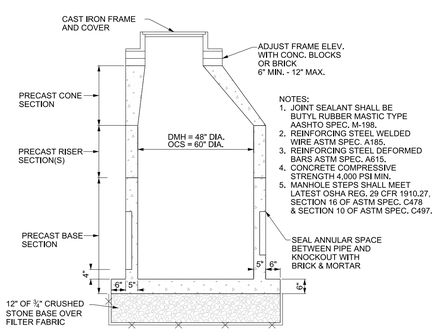
RIPRAP SPLASH PAD

NOT TO SCALE



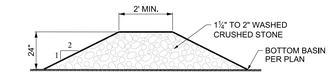
VEGETATED BASIN (SECONDARY TREATMENT) SECTION

NOT TO SCALE



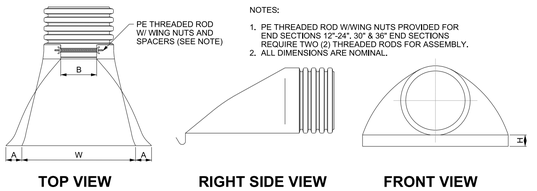
PRECAST STORM DRAIN MANHOLE

NOT TO SCALE



DETENTION FILTER BERM

NOT TO SCALE



TOP VIEW

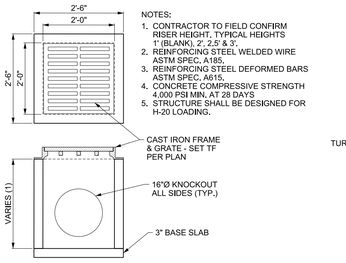
RIGHT SIDE VIEW

FRONT VIEW

PART #	PIPE SIZE	A	B (MAX.)	H	L	W
1210NP	12" (300 mm)	6.5" (165 mm)	10.00" (254 mm)	6.5" (165 mm)	25.00" (635 mm)	29.00" (737 mm)
1510NP	15" (375 mm)	6.5" (165 mm)	10.00" (254 mm)	6.5" (165 mm)	25.00" (635 mm)	29.00" (737 mm)
1810NP	18" (450 mm)	7.5" (191 mm)	15.00" (381 mm)	6.5" (165 mm)	32.00" (813 mm)	35.00" (889 mm)
2410NP	24" (600 mm)	7.5" (191 mm)	18.00" (450 mm)	6.5" (165 mm)	36.00" (914 mm)	45.00" (1143 mm)
3015NP	30" (750 mm)	7.5" (191 mm)	12.00" (305 mm)	8.6" (218 mm)	58.00" (1473 mm)	63.00" (1600 mm)
3615NP	36" (900 mm)	7.5" (191 mm)	25.00" (635 mm)	8.6" (218 mm)	58.00" (1473 mm)	63.00" (1600 mm)

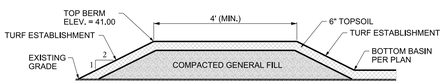
FLARED END DETAIL

NOT TO SCALE



YARD DRAIN

NOT TO SCALE



DETENTION BASIN BERM

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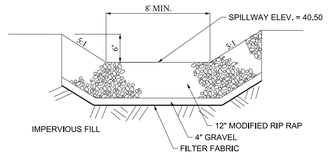

EMERGENCY SPILLWAY DETAIL

NOT TO SCALE

SCALE: AS SHOWN

0

PROJECT NUMBER:

00057 - 00001

YRC
YANTIC RIVER
CONSULTANTS, LLC

CONTACT INFORMATION

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Email:yanticriver@gmail.com
Web: www.yanticriverconsultants.com

PROFESSIONAL SEAL

NORTH BRIDE BROOK ROAD MULTI-FAMILY DEVELOPMENT

PREPARED FOR
PAZZ & CONSTRUCTION LLC

DRAINAGE DETAILS

N. BRIDE BROOK ROAD (ASSESSOR'S MAP 9, LOT 37-2) EAST LYME, CT

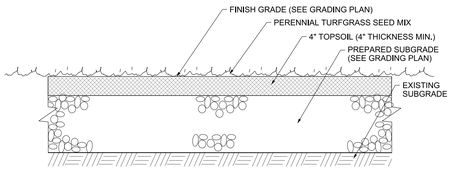
REVISION SUMMARY

DATE	DESCRIPTION
1/15/20	PER TOWN COMMENTS & UPDATED SURVEY MAPPING
7/10/20	REVISED DEVELOPMENT LAYOUT

SHEET 7 OF 8

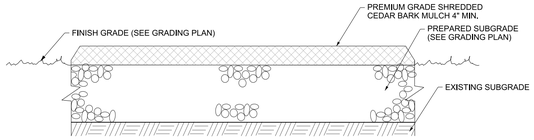
DATE 9/25/19

REVISED 7/10/20



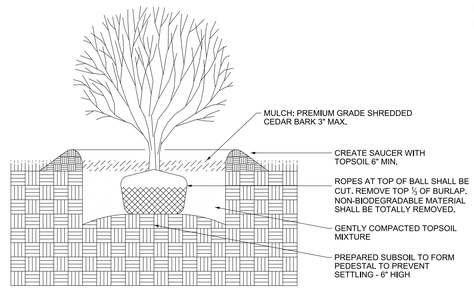
TURF ESTABLISHMENT

NOT TO SCALE



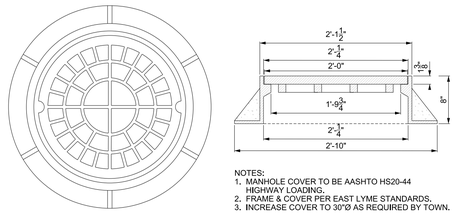
MULCH SURFACE TREATMENT

NOT TO SCALE



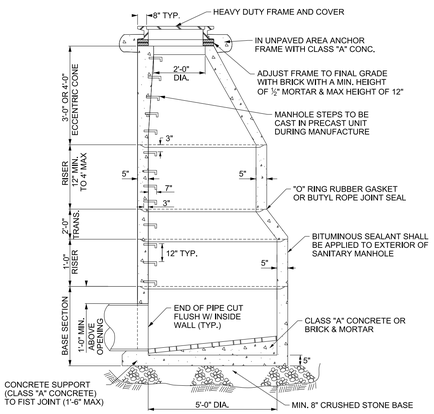
SHRUB PLANTING

NOT TO SCALE



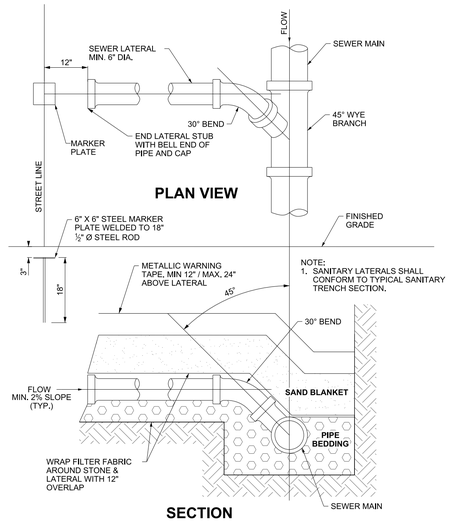
SEWER FRAME & COVER DETAIL

NOT TO SCALE



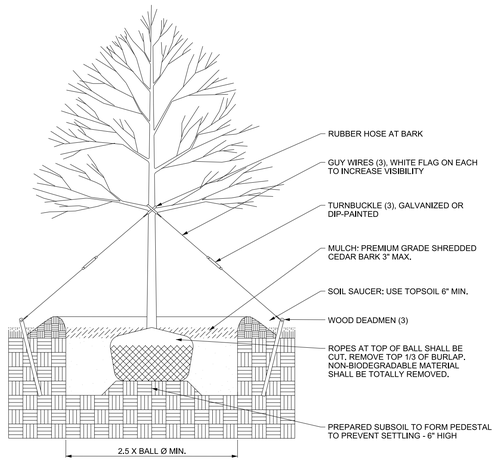
PRECAST SANITARY MANHOLE

NOT TO SCALE



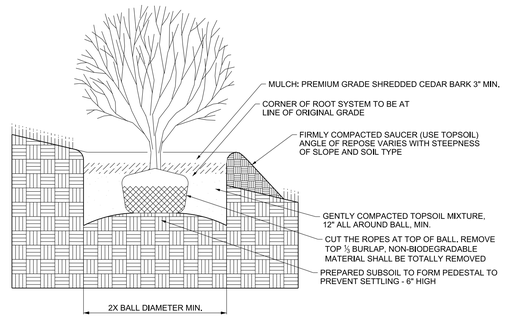
LATERAL CONNECTION

NOT TO SCALE



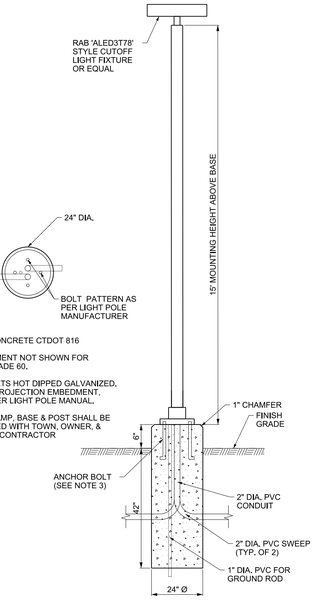
TREE PLANTING

NOT TO SCALE



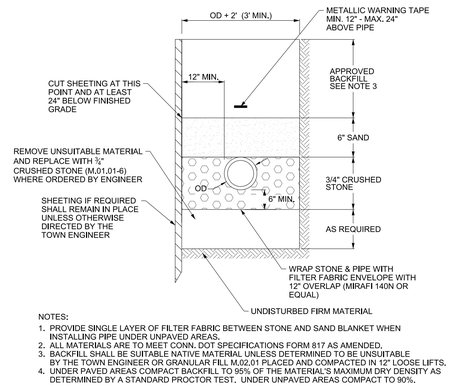
SHRUB PLANTED ON SLOPE

NOT TO SCALE



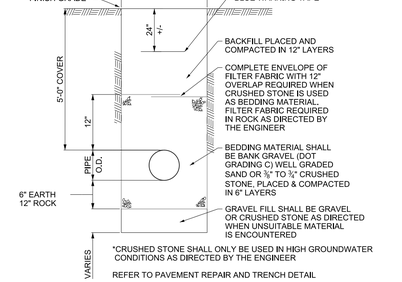
LIGHT POLE & BASE

NOT TO SCALE



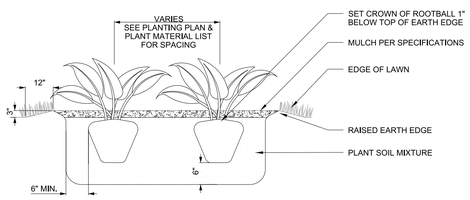
SANITARY TRENCH SECTION (PRIVATE)

NOT TO SCALE



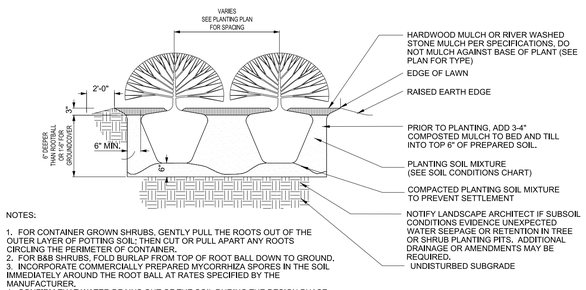
TYPICAL TRENCH DETAIL (WATER)

NOT TO SCALE



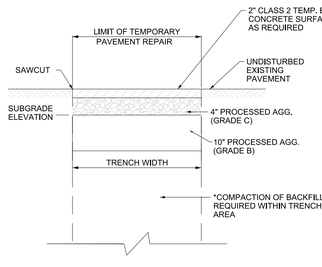
PERENNIAL PLANTING

NOT TO SCALE

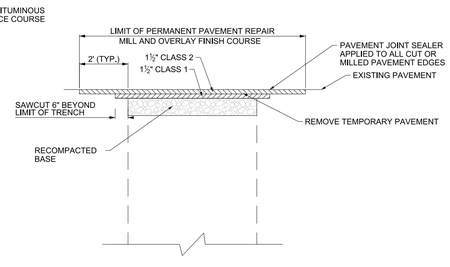


SHRUB PLANTING BED

NOT TO SCALE



TEMPORARY REPAIR



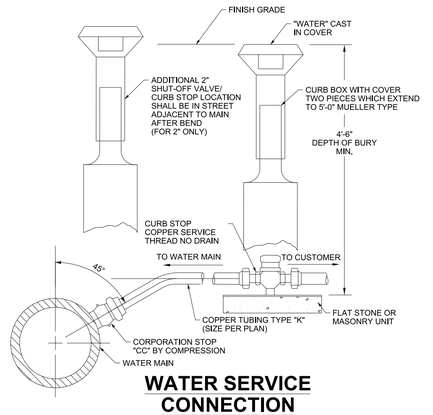
PERMANENT REPAIR

NOTES:

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH TOWN OF WATERFORD STANDARDS OR AS OTHERWISE DETERMINED IN THE FIELD BY THE ENGINEER.

PAVEMENT RESTORATION OVER TRENCH

NOT TO SCALE



WATER SERVICE CONNECTION

NOT TO SCALE

SCALE: AS SHOWN

0

PROJECT NUMBER:

00057 - 00001

YANTIC RIVER CONSULTANTS, LLC

CONTACT INFORMATION

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Email:yanticriver@gmail.com
Web: www.yanticriverconsultants.com

PROFESSIONAL SEAL

NORTH BRIDE BROOK ROAD
MULTI-FAMILY DEVELOPMENT

PREPARED FOR
PAZZ & CONSTRUCTION LLC

LANDSCAPE & UTILITY DETAILS

N. BRIDE BROOK ROAD (ASSESSOR'S MAP 9, LOT 37-2) EAST LYME, CT

REVISION SUMMARY

DATE	DESCRIPTION

SHEET 8 OF 8

DATE 7/10/20

REVISED

File Copy

Bubaris Traffic
ASSOCIATES
Planning • Engineering • Design

December 22, 2018

Mr. Jason Pazzaglia
Pazz Construction, LLC
P.O. Box 817
East Lyme, CT 06333

Re: Site Traffic Assessment
Proposed Multifamily Residential Development
90 North Bride Brook Road
East Lyme, Connecticut

Dear Mr. Pazzaglia:

Reference is made to the proposal to construct a 250-unit, low rise, multifamily residential development on the parcel of land located on the west side of North Bride Brook Road, in the Town of East Lyme, Connecticut. This parcel abuts I-95 on its west (rear) side, but without direct access/egress to and from I-95. North Bride Brook Road is a two-way town road running north-south in the vicinity of the proposed site drive. Its northern terminus ends at Route 1 (Boston Post Road). Its southern terminus ends at CT Route 156 (West Main Street).

Please refer to Exhibit 1 of the Appendix which locates this site with respect to the surrounding roadway network.

Please refer to Exhibit 2 of the Appendix which provides a conceptual site plan for the proposed development.

Introduction

The development will be served by one, two-way site drive intersecting the west side of North Bride Brook Road. The site drive will be located to optimize available sight line distances to and from the north and south of the site drive. At this point in time, it is estimated that this residential development will consist of 208 apartment units and 42 condominium units, for a total of 250 units. It has been assumed that full occupancy of the development will occur by 2023, or 5 years hence from now.

P.O. Box 4250 • Yalesville, CT 06492 • Telephone: (203) 265-8086 • Cell: (203) 606-4742
• JimBubaris@hotmail.com •

Traffic Volume and Traffic Speed Parameters

For purposes of the traffic operations analyses that follow, automatic traffic recorder measurements were conducted over a one-week period in late-May 2017 when we were first retained, to measure approaching traffic volumes and traffic speeds on a typical week which included weekdays and a weekend. These measurements were conducted on North Bride Brook Road in the vicinity of the proposed site drive.

The actual traffic volume measurements are included in Exhibit 3 of the Appendix.

The actual traffic speed measurements are included in Exhibit 4 of the Appendix.

A review of Exhibit 3 show that North Bride Brook Road in the vicinity of the subject site carries from about 700 to 1,300 two-way vehicles per day, and about 1,000 two-way vehicles per day on a Saturday and Sunday, which are considered relatively low traffic volumes. The two-way count shows about a 50-50 split for the two directions of travel.

Please refer to Exhibits 5 and 6 of the Appendix which graphically summarize the existing, and to Exhibits 7 and 8 of the Appendix which graphically summarize the projected background (no-build) weekday am and pm peak hour traffic volumes for North Bride Brook Road in the vicinity of the proposed site drive. In the case of the projected 2023 background (no-build), these were derived by expanding the 2017 existing traffic volumes by two percent per year for each of six years, where it has been assumed that this development will be fully occupied by 2023, where the typical growth factor for traffic in this area of two percent per year is applicable.

A review of Exhibit 4 shows that North Bride Brook Road in the vicinity of the proposed site drive location carries traffic with average and 85th-percentile speeds of about 32 and 36 miles per hour, respectively, which are considered reasonable given the good condition of North Bride Brook Road in this area. The posted speed limit for the entire length of North Bride Brook Road is 25 miles per hour in both directions.

Site-Generated Traffic Volumes

For the purpose of estimating site-generated traffic volumes associated with the proposed residential development, we utilized the trip generation data made available for this purpose, by land use, in Trip Generation Report, by the Institute of Transportation Engineers (ITE), tenth edition, 2017.

Please refer to Exhibits 9 of the Appendix that summarizes the trip generation calculations that were made for the proposed development assuming the full development of 250 units consisting of apartments and/or condominiums.

Please refer to Table A on the next page which summarizes the results of the trip generation calculations from Exhibit 9 of the Appendix.

A review of Table A show that the subject 250-unit low rise, multifamily residential development can be expected to generate from 98 to 130 trips per hour during the weekday am and pm commuter peak periods. A trip is defined as a one-way vehicular trip traveling either to or from the site. Note that there are typically two such peaks during both the am and pm peaks depending on how far residents live from their place of employment (i.e., the farther away the point of employment, the earlier they leave in the am and the later they return in the pm).

Finally, given that the existing peak hour traffic volumes on the abutting road to the site are distributed about 50 percent to and from the north and 50 percent to and from the south, it was assumed that site-generated traffic traveling to and from the subject residential subdivision will follow the same traffic distribution patterns.

Please refer to the right columns of Table A which show the estimated site-generated peak hour traffic volumes that will travel to and from the subject subdivision assuming a 50-50 split, north versus south, similar to existing traffic distributions.

Background and Combined Traffic Volumes

Please refer to Exhibits 10 and 11 of the Appendix which graphically show the estimated combined peak hour traffic volumes associated with the weekday am and pm commuter peak periods as derived from the foregoing. Exhibits 10 and 11 were derived by combining the background volumes from Exhibits 7 and 8 with the estimated site-generated volumes from the two right-most columns from Table A.

A review of Exhibits 10 and 11 shows that the combined (build) condition for the road immediately serving the subject residential subdivision will remain at very low traffic volume levels.

Table A
Trip Generation and Trip Distribution
Residential Subdivision
90 North Bride Brook Road
East Lyme, Connecticut

Trip Generation 250 low-rise multifamily residential units		Trip Distribution To/From NORTH via North Bride Brook Road 50%	Trip Distribution To/From SOUTH via North Bride Brook Road 50%
Weekday AM Peak Hour			
Inbound	20	10	10
Outbound	78	39	39
Total	98	49	49
Weekday PM Peak Hour			
Inbound	85	43	43
Outbound	45	22	22
Total	130	65	65

Bubaris Traffic Associates
December 2018

Operations Analysis

Intersection operational analyses were performed for the proposed site drive intersection on North Bride Brook Road utilizing the methodology described in the latest edition of Highway Capacity Manual, Special Report 209, Transportation Research Board, 1985, updated to 2016. Application of this methodology was facilitated by use of Synchro Analysis Software, developed by the Trafficware Corporation, Version 9. Operational analyses are utilized to determine a Level of Service (LOS) for a given intersection operating under either signalized or unsignalized control.

In the case of unsignalized intersections similar to the proposed site drive intersection, Level of Service (LOS) is defined in terms of the average control delay for the approach or movement evaluated. Control delay involves movements at slower speeds and stops on intersection approaches as vehicles move up in the queue or slow down upstream of an intersection. The delay experienced by a motorist is comprised of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference time that would result during base conditions in the absence of incident, control, traffic, or geometric delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. At two-way stop-controlled and all-way stop-controlled intersections, control delay is the total elapsed time from a vehicle joining the queue until its departure from the stopped position at the head of the queue. The control delay also includes the time required to decelerate to a stop and to accelerate to the free-flow speed. Level of Service for a one-way or two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a one-way or two-way stop-controlled intersection is **not defined** for the intersection as a whole. In today's environment, Levels of Service D to F are common and are often experienced on minor street approaches to major streets carrying relatively high traffic volumes.

Please refer to Exhibit 12 in the Appendix, which provides details on the definitions of Levels of Service for unsignalized intersections.

Please refer to Table B on the next page which summarizes the results of the traffic operational analyses that were conducted.

The computer-generated worksheets for these operational analyses are included as Exhibits 13 and 14 of the Appendix for the combined (build) weekday am and pm commuter peak periods.

A review of Table B shows that the levels of service for the proposed site drive intersection at North Bride Brook Road will operate at level of service A, considered excellent, for all the inbound, outbound, and through movements at this intersection.

Table B
Summary of Traffic Operations Analysis
Levels of Service
Residential Subdivision
90 North Bride Brook Road
East Lyme, Connecticut

	2019 Combined (Build)	
	AM Peak	PM Peak
North Bride Brook Road at Proposed Site Drive		
North Bride Brook Road northbound approach	A	A
North Bride brook Road southbound approach	A	A
Proposed Site Drive eastbound (outbound) approach	A	A
Outbound Delay per vehicle (sec.)	9.3	9.9
Average delay per vehicle for entire intersection (sec.)	4.2	2.6

Bubaris Traffic Associates

December 2018

Therefore, the proposed development should not have an adverse impact on traffic operations that would otherwise exist without this development.

Traffic Crash Experience

A review was made of the most recent five-year traffic crash experience summary for the subject study area which included the entire length of North Bride Brook Road as compiled and made available by the Connecticut Department of Transportation (2012-2014) and the UConn Traffic Crash Depository (2015-2017) for the five-year period from January 2012 through December 2017.

The actual traffic crash data are included in Exhibit 15 of the Appendix.

A review of Exhibit 15 shows an excellent traffic crash experience for this road, and NONE in the vicinity of the proposed site drive intersection. This excellent traffic crash experience shows no reason to expect that the proposed residential development with its relatively low site-generated traffic volumes would exacerbate this favorable condition.

Sight Line Evaluation

In the absence of an actual site plan to review, a field view of actual conditions indicated that available sight lines from a site drive location on North Bride Brook Road can be located and designed to provide satisfactory sight line distances of 450 to 500 feet to accommodate prevailing approaching traffic speeds as recently measured.

Conclusions

It is the professional opinion of Bubaris Traffic Associates that the proposed residential development at 90 North Bride Brook Road, consisting of about 250 low rise multifamily residential units, should not adversely impact traffic operations on the surrounding roadway network when it is completed and occupied.

The proposed residential development is expected to generate from 98 to 130 `trips per hour during the weekday am and pm commuter peak periods.

Operational analyses indicate that the proposed development will experience excellent levels of service at the proposed site drive intersection given the relatively low traffic volumes on North Bride Brook Road.

It appears that the required sight lines to and from the proposed site drive intersection can be provided given our preliminary field view.

The traffic crash experience for the immediate study area is excellent with no reason to expect that the subject development will exacerbate this excellent condition.

Very truly yours,
Bubaris Traffic Associates, Inc.

James G. Bubaris

James G. Bubaris, P.E.
Conn. Reg. No. 9203
Principal

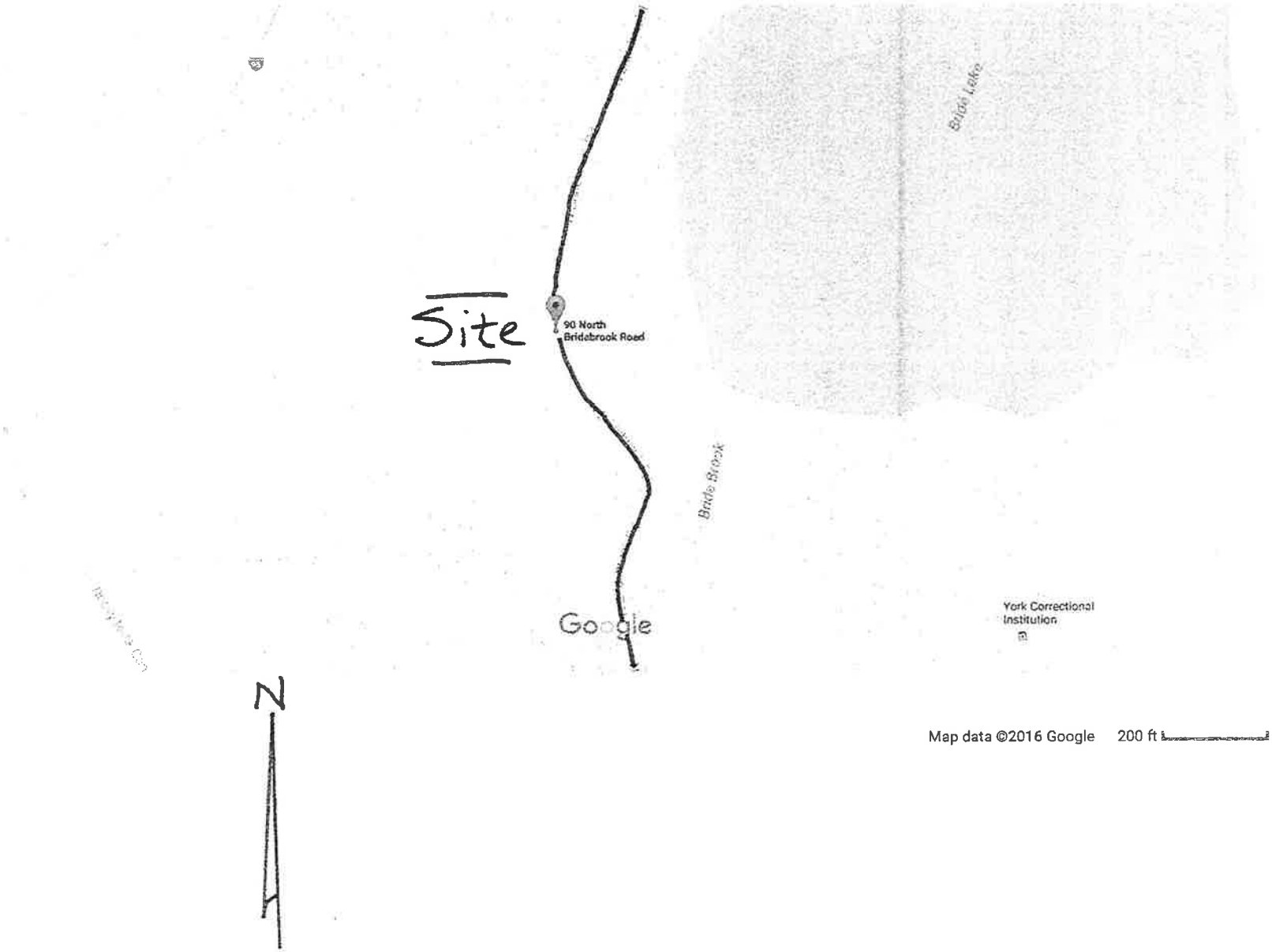
Site Traffic Assessment
Proposed Residential Subdivision
90 North Bride Brook Road
East Lyme, Connecticut

Appendix

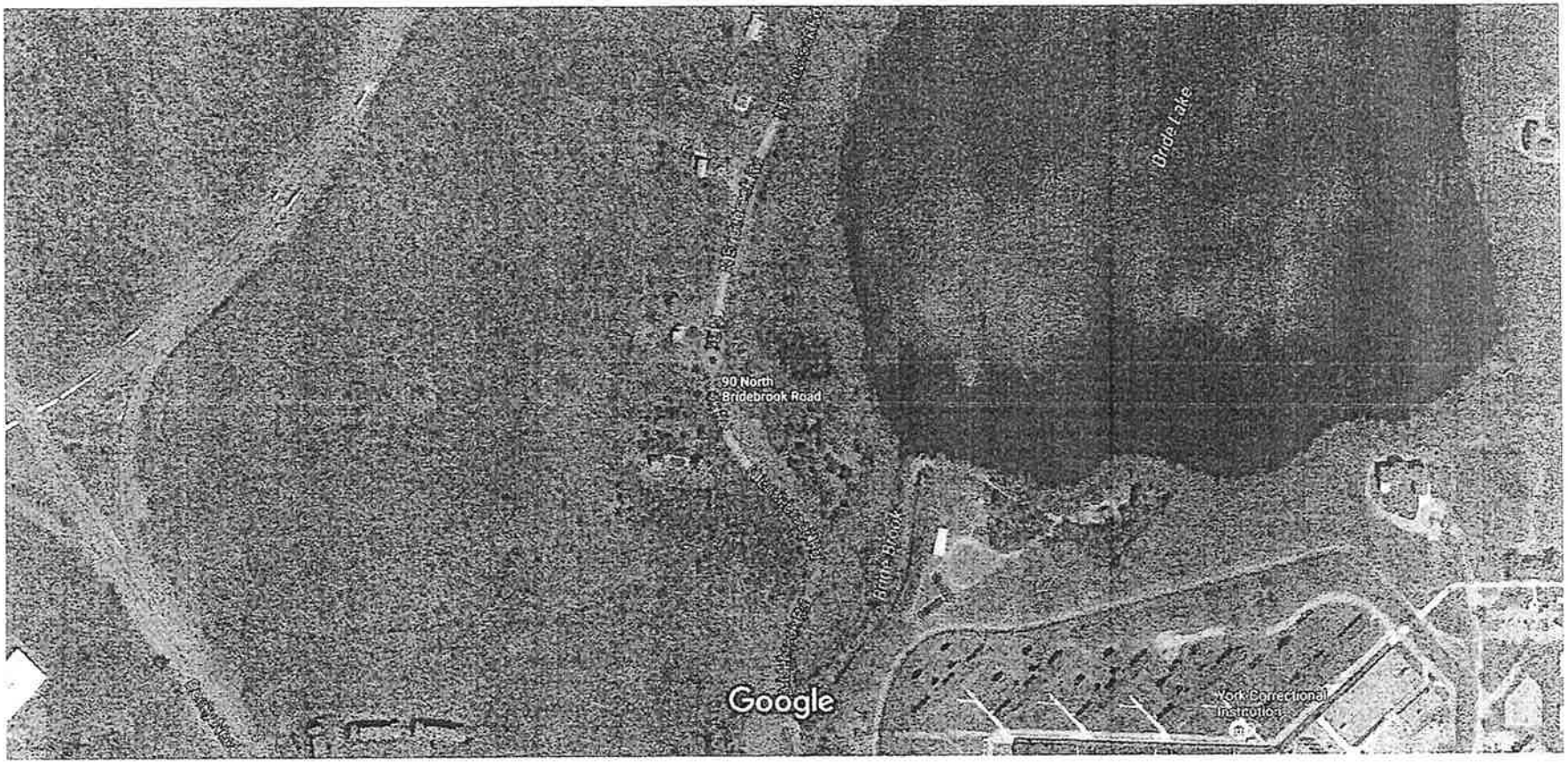
Table of Contents

Exhibit 1
Location Maps
Proposed Residential Subdivision
90 North Bride Brook Road
East Lyme, Connecticut

Google Maps 90 N Bridebrook Rd



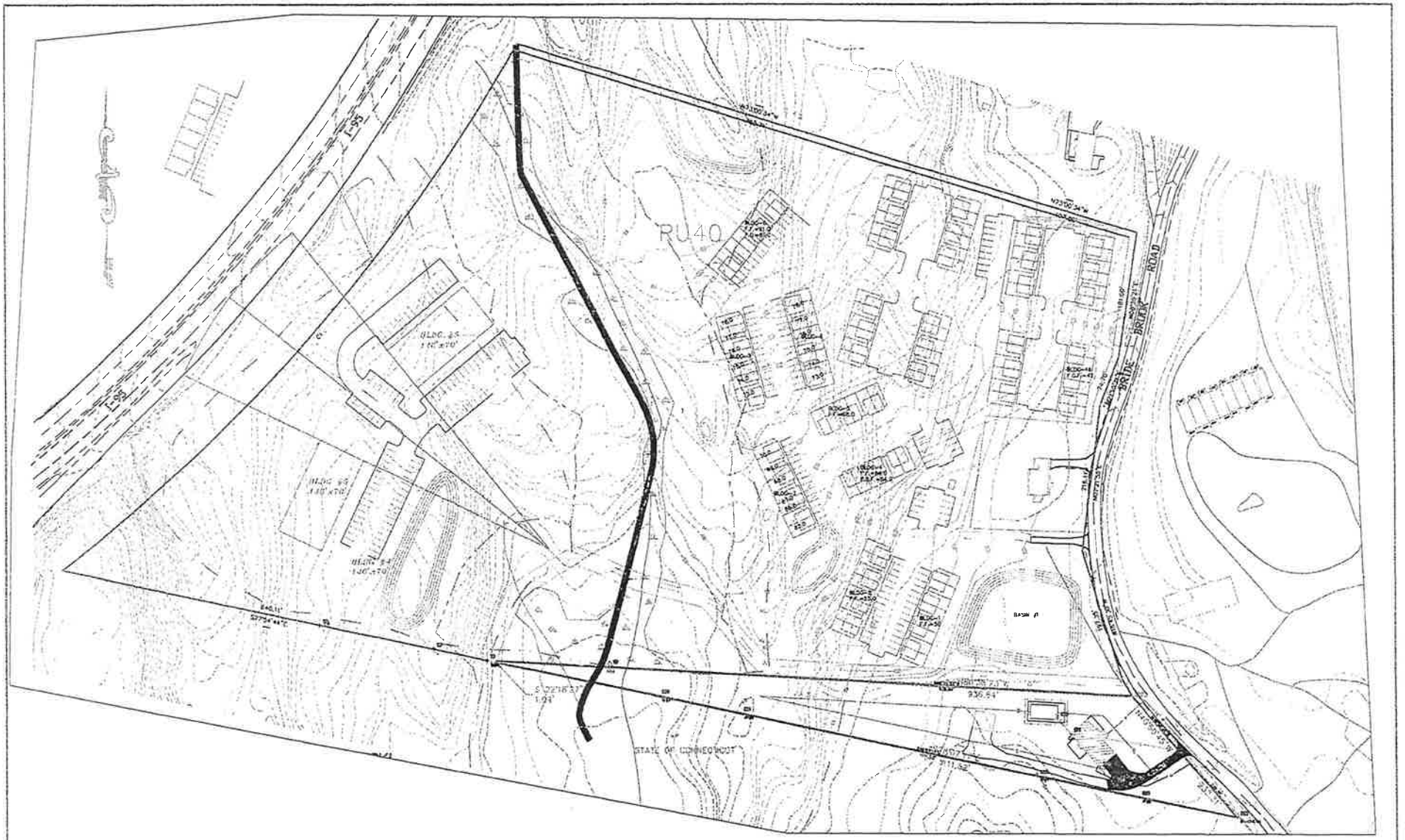
Google Maps 90 N Bridebrook Rd



N

Imagery ©2016 Google, Map data ©2016 Google 200 ft

Exhibit 2
Site Plan
Proposed Residential Subdivision
90 North Bride Brook Road
East Lyme, Connecticut



DRAWN BY: RDP DATE: AUGUST 26, 2014

NO	DATE	DESCRIPTION	BY

REVISIONS

J. ROBERT PFANNER & ASSOCIATES, P.C.
CIVIL ENGINEERS & LAND SURVEYORS
37 GRAND STREET NIANTIC, CONNECTICUT 06357
TEL. 860-739-6216 FAX 860-739-0693

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

TITLE: PRELIMINARY MAPPING FOR A
CONSTRUCTION
PLAN
OF
DEVELOPMENT

LOCATION: 90 North Bride Brook Road - Niantic, Connecticut

SHEET NUMBER 1 OF 1

Exhibit 3
Automatic Traffic Volume Measurements
North Bride Brook Road vicinity of No. 90
East Lyme, Connecticut

Connecticut Counts LLC

Kensington, Connecticut 06037

(860) 828-1693

90 North Bridebrook Road
East Lyme, Connecticut

Site Code: 4321
Station ID:

Latitude: 0' 0.0000 Undefined

Start	15-May-17		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	Nonrthbou	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo
12:00 AM	*	*	*	*	*	*	3	3	6	0	4	2	8	6	5	3
01:00	*	*	*	*	*	*	2	1	2	2	5	2	4	1	3	2
02:00	*	*	*	*	*	*	2	1	0	1	3	1	2	3	2	2
03:00	*	*	*	*	*	*	1	1	2	1	1	0	0	0	1	0
04:00	*	*	*	*	*	*	1	0	2	0	3	2	2	2	2	1
05:00	*	*	*	*	*	*	7	8	2	6	2	1	5	3	4	4
06:00	*	*	*	*	*	*	10	14	17	18	3	5	5	13	9	12
07:00	*	*	*	*	*	*	18	24	13	30	20	18	15	10	16	20
08:00	*	*	*	*	*	*	24	19	24	25	15	32	22	24	21	25
09:00	*	*	*	*	*	*	**36**	**31**	19	23	**42**	**41**	29	29	32	31
10:00	*	*	*	*	*	*	18	28	**30**	26	41	36	21	35	28	31
11:00	*	*	*	*	*	*	31	31	28	**32**	42	30	**32**	**36**	33	**32**
12:00 PM	*	*	*	*	*	*	24	25	26	24	39	24	**50**	35	35	27
01:00	*	*	*	*	*	*	23	31	44	37	40	38	38	**60**	36	42
02:00	*	*	*	*	*	*	33	39	31	41	43	**52**	33	39	35	43
03:00	*	*	*	*	*	*	52	24	57	51	**49**	41	47	36	**51**	38
04:00	*	*	*	*	38	38	40	47	**72**	66	39	48	33	**44**	44	**49**
05:00	*	*	*	*	50	**51**	45	**50**	60	62	44	32	39	45	48	48
06:00	*	*	*	*	**57**	40	33	48	46	38	29	30	36	34	40	38
07:00	*	*	*	*	47	38	**61**	37	41	39	23	16	19	24	38	31
08:00	*	*	*	*	30	27	38	24	32	31	15	20	17	14	26	23
09:00	*	*	*	*	18	14	19	16	30	**77**	20	9	5	5	18	24
10:00	*	*	*	*	11	6	5	9	13	27	11	14	12	9	10	13
11:00	*	*	*	*	5	4	7	4	7	11	10	3	7	2	7	5
Lane	0	0	0	0	256	218	533	515	604	668	543	497	481	509	544	544
Day	0		0		474		1048		1272		1040		990		1088	
AM Peak	-	-	-	-	-	-	09:00	09:00	10:00	11:00	09:00	09:00	11:00	11:00	11:00	11:00
Vol.	-	-	-	-	-	-	36	31	30	32	42	41	32	36	33	32
PM Peak	-	-	-	-	18:00	17:00	19:00	17:00	16:00	21:00	15:00	14:00	12:00	13:00	15:00	16:00
Vol.	-	-	-	-	57	51	61	50	72	77	49	52	50	60	51	49

Connecticut Counts LLC
Kensington, Connecticut 06037
(860) 828-1693

90 North Bridebrook Road
East Lyme, Connecticut

Site Code: 4321
Station ID:

Latitude: 0' 0.0000 Undefined

Start	22-May-17		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
Time	Nonrthbou	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo	Nonrthbo	Southbo
12:00 AM	3	3	2	0	1	4	*	*	*	*	*	*	*	*	2	2
01:00	1	3	1	1	1	0	*	*	*	*	*	*	*	*	1	1
02:00	0	1	3	2	3	0	*	*	*	*	*	*	*	*	2	1
03:00	1	1	3	1	0	2	*	*	*	*	*	*	*	*	1	1
04:00	2	0	3	1	1	1	*	*	*	*	*	*	*	*	2	1
05:00	1	4	1	5	2	4	*	*	*	*	*	*	*	*	1	4
06:00	6	14	8	14	6	14	*	*	*	*	*	*	*	*	7	14
07:00	21	26	21	28	25	23	*	*	*	*	*	*	*	*	22	**26**
08:00	15	20	**24**	27	23	**26**	*	*	*	*	*	*	*	*	21	24
09:00	17	**28**	12	23	18	25	*	*	*	*	*	*	*	*	16	25
10:00	**24**	20	24	**30**	**28**	20	*	*	*	*	*	*	*	*	**25**	23
11:00	14	12	21	23	27	24	*	*	*	*	*	*	*	*	21	20
12:00 PM	22	19	20	22	25	31	*	*	*	*	*	*	*	*	22	24
01:00	24	21	30	19	35	23	*	*	*	*	*	*	*	*	30	21
02:00	25	**33**	27	53	40	**75**	*	*	*	*	*	*	*	*	31	**54**
03:00	35	29	61	36	**44**	34	*	*	*	*	*	*	*	*	47	33
04:00	**38**	29	63	**56**	27	35	*	*	*	*	*	*	*	*	43	40
05:00	34	23	**68**	47	*	*	*	*	*	*	*	*	*	*	**51**	35
06:00	11	23	45	39	*	*	*	*	*	*	*	*	*	*	28	31
07:00	13	13	37	25	*	*	*	*	*	*	*	*	*	*	25	19
08:00	19	8	14	20	*	*	*	*	*	*	*	*	*	*	16	14
09:00	11	9	6	14	*	*	*	*	*	*	*	*	*	*	8	12
10:00	0	5	5	4	*	*	*	*	*	*	*	*	*	*	2	4
11:00	4	2	5	11	*	*	*	*	*	*	*	*	*	*	4	6
Lane	341	346	504	501	306	341	0	0	0	0	0	0	0	0	428	435
Day	687		1005		647		0		0		0		0		863	
AM Peak	10:00	09:00	08:00	10:00	10:00	08:00	-	-	-	-	-	-	-	-	10:00	07:00
Vol.	24	28	24	30	28	26	-	-	-	-	-	-	-	-	25	26
PM Peak	16:00	14:00	17:00	16:00	15:00	14:00	-	-	-	-	-	-	-	-	17:00	14:00
Vol.	38	33	68	56	44	75	-	-	-	-	-	-	-	-	51	54

Comb. Total	687	1005	1121	1048	1272	1040	990	1951

ADT ADT 1,003 AADT 1,003

Exhibit 4
Automatic Traffic Speed Measurements
North Bride Brook Road vicinity of No. 90
East Lyme, Connecticut

Connecticut Counts LLC
Kensington, Connecticut 06037
(860) 828-1693

90 North Bridebrook Road
East Lyme, Connecticut

Site Code: 4321
Station ID:

Latitude: 0' 0.0000 Undefined

Northbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
05/24/17	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	29-38	1
01:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	34-43	1
02:00	0	0	0	0	1	2	0	0	0	0	0	0	0	0	3	30-39	3
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
04:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	29-38	1
05:00	0	0	0	1	1	0	0	0	0	0	0	0	0	0	2	24-33	2
06:00	0	0	1	1	4	0	0	0	0	0	0	0	0	0	6	26-35	5
07:00	0	0	2	8	12	2	1	0	0	0	0	0	0	0	25	26-35	20
08:00	0	0	3	6	10	3	1	0	0	0	0	0	0	0	23	26-35	16
09:00	0	0	0	8	10	0	0	0	0	0	0	0	0	0	18	26-35	18
10:00	0	0	0	6	16	5	1	0	0	0	0	0	0	0	28	26-35	22
11:00	0	0	2	4	14	6	1	0	0	0	0	0	0	0	27	30-39	20
12 PM	0	0	1	4	15	5	0	0	0	0	0	0	0	0	25	29-38	20
13:00	1	2	2	10	17	3	0	0	0	0	0	0	0	0	35	26-35	27
14:00	1	1	0	13	19	5	1	0	0	0	0	0	0	0	40	26-35	32
15:00	1	0	2	10	25	5	0	1	0	0	0	0	0	0	44	26-35	35
16:00	0	1	1	10	13	2	0	0	0	0	0	0	0	0	27	26-35	23
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	3	4	14	81	157	40	6	1	0	0	0	0	0	0	306		
Percent	1.0%	1.3%	4.6%	26.5%	51.3%	13.1%	2.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak			08:00	07:00	10:00	11:00	01:00								10:00		
Vol.			3	8	16	6	1								28		
PM Peak	13:00	13:00	13:00	14:00	15:00	12:00	14:00	15:00							15:00		
Vol.	1	2	2	13	25	5	1	1							44		
Total	44	72	139	918	1674	606	91	16	3	4	1	0	0	0	3568		
Percent	1.2%	2.0%	3.9%	25.7%	46.9%	17.0%	2.6%	0.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%			

15th Percentile :	26 MPH
50th Percentile :	31 MPH
85th Percentile :	36 MPH ← NB
95th Percentile :	39 MPH

Stats

10 MPH Pace Speed :	26-35 MPH
Number in Pace :	2592
Percent in Pace :	72.6%
Number of Vehicles > 25 MPH :	3313
Percent of Vehicles > 25 MPH :	92.9%
Mean Speed(Average) :	32 MPH

Connecticut Counts LLC
Kensington, Connecticut 06037
(860) 828-1693

90 North Bridebrook Road
East Lyme, Connecticut

Site Code: 4321
Station ID:

Latitude: 0' 0.0000 Undefined

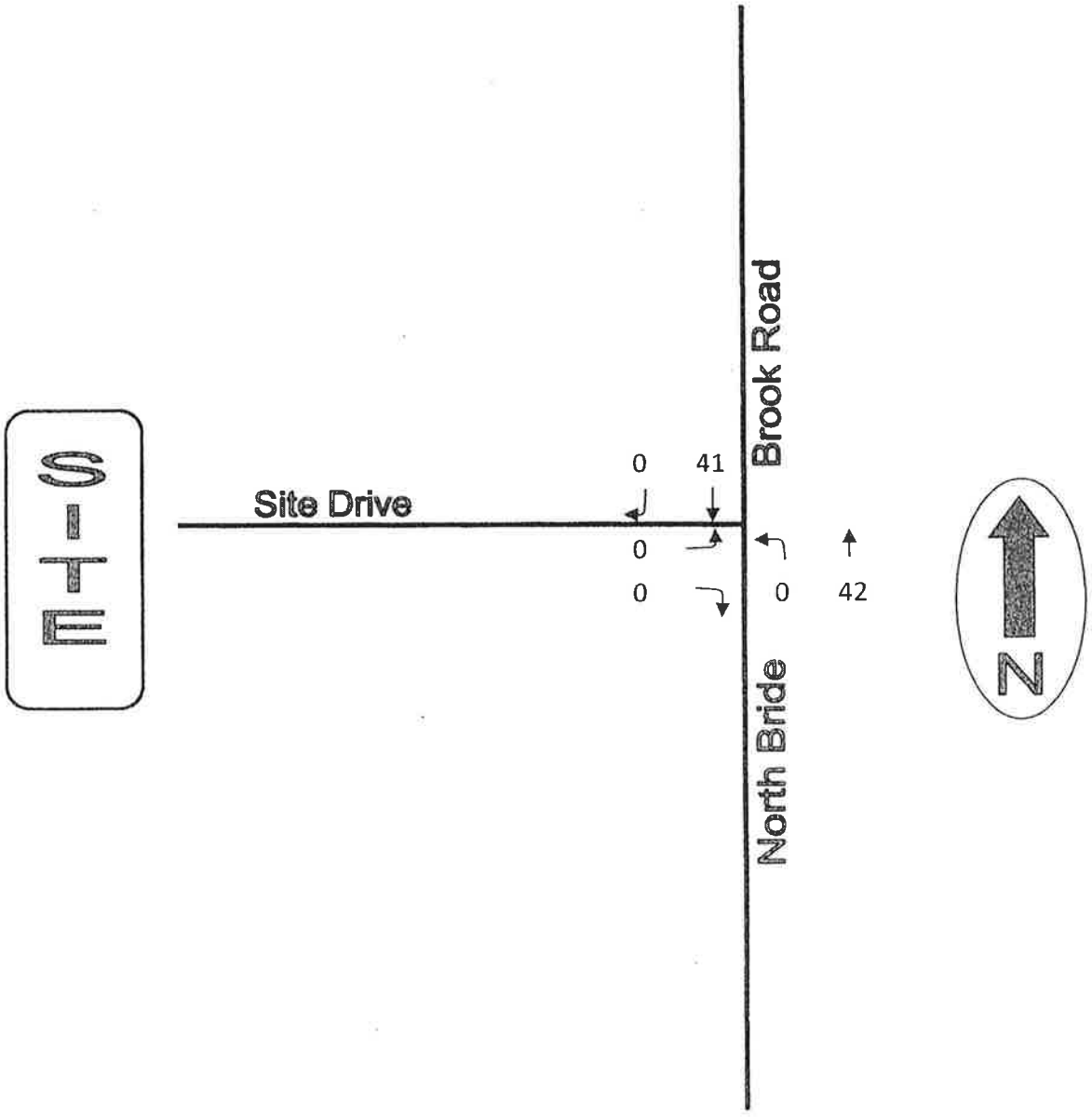
Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total	Pace Speed	Number in Pace
05/24/17	0	1	0	0	1	1	1	0	0	0	0	0	0	0	4	29-38	2
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	*	*
03:00	0	0	0	0	1	1	0	0	0	0	0	0	0	0	2	29-38	2
04:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	19-28	1
05:00	0	0	0	1	0	3	0	0	0	0	0	0	0	0	4	30-39	3
06:00	0	0	0	4	6	4	0	0	0	0	0	0	0	0	14	31-40	10
07:00	0	0	0	7	12	3	1	0	0	0	0	0	0	0	23	26-35	19
08:00	0	0	1	9	12	3	0	1	0	0	0	0	0	0	26	26-35	21
09:00	0	1	1	6	12	4	1	0	0	0	0	0	0	0	25	26-35	18
10:00	0	1	4	3	10	1	1	0	0	0	0	0	0	0	20	26-35	13
11:00	0	0	1	7	15	1	0	0	0	0	0	0	0	0	24	26-35	22
12 PM	0	0	2	8	11	10	0	0	0	0	0	0	0	0	31	30-39	21
13:00	0	2	0	11	8	1	1	0	0	0	0	0	0	0	23	26-35	19
14:00	0	0	4	22	33	15	1	0	0	0	0	0	0	0	75	26-35	55
15:00	0	0	2	10	17	4	1	0	0	0	0	0	0	0	34	26-35	27
16:00	0	0	0	8	23	3	1	0	0	0	0	0	0	0	35	26-35	31
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	5	15	97	161	54	8	1	0	0	0	0	0	0	341		
Percent	0.0%	1.5%	4.4%	28.4%	47.2%	15.8%	2.3%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			
AM Peak		00:00	10:00	08:00	11:00	06:00	00:00	08:00							08:00		
Vol.		1	4	9	15	4	1	1							26		
PM Peak		13:00	14:00	14:00	14:00	14:00	13:00								14:00		
Vol.		2	4	22	33	15	1								75		
Total	16	49	207	1188	1609	474	46	5	0	1	0	0	0	0	3595		
Percent	0.4%	1.4%	5.8%	33.0%	44.8%	13.2%	1.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%			

15th Percentile :	26 MPH
50th Percentile :	31 MPH
85th Percentile :	34 MPH ← SB
95th Percentile :	38 MPH

Stats

10 MPH Pace Speed :	26-35 MPH
Number in Pace :	2797
Percent in Pace :	77.8%
Number of Vehicles > 25 MPH :	3323
Percent of Vehicles > 25 MPH :	92.4%
Mean Speed(Average) :	31 MPH


SITE
Site Drive
0
41
0
0
0
42
Brook Road
North Bride
N

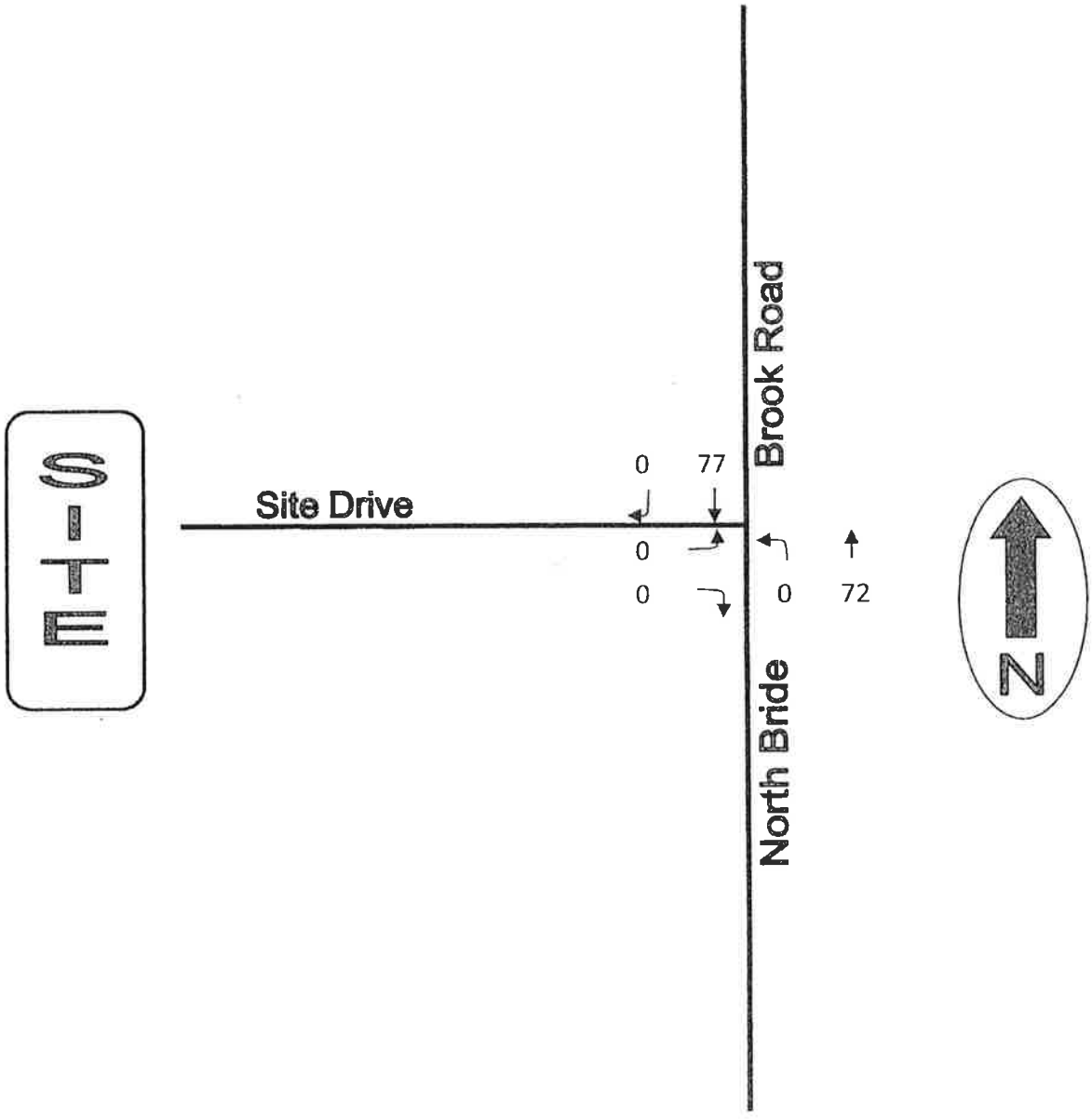


Exhibit 6
2017 Existing PM
Peak Hour Traffic Volumes

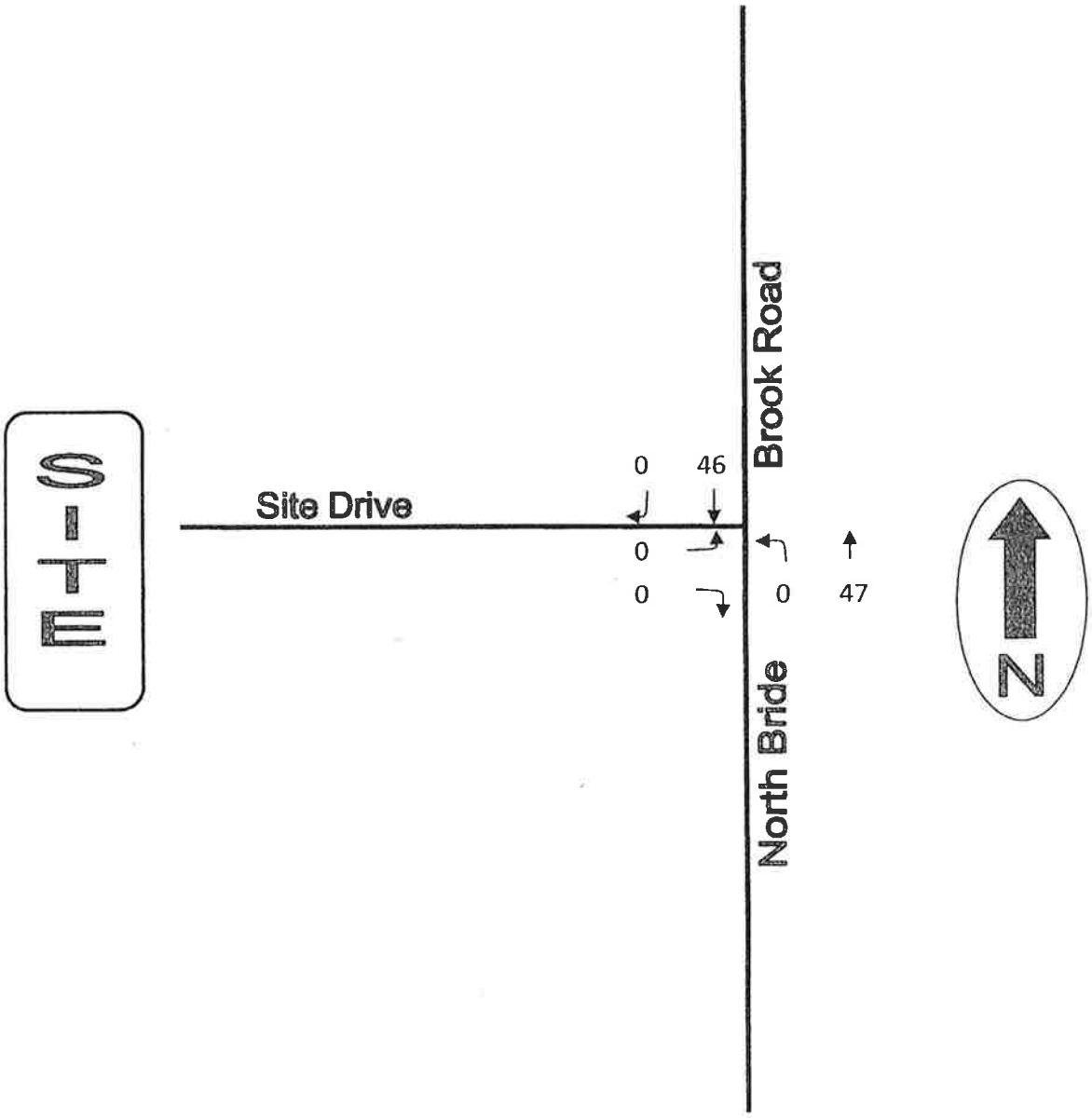


Exhibit 7
2023 Background AM
Peak Hour Traffic Volumes

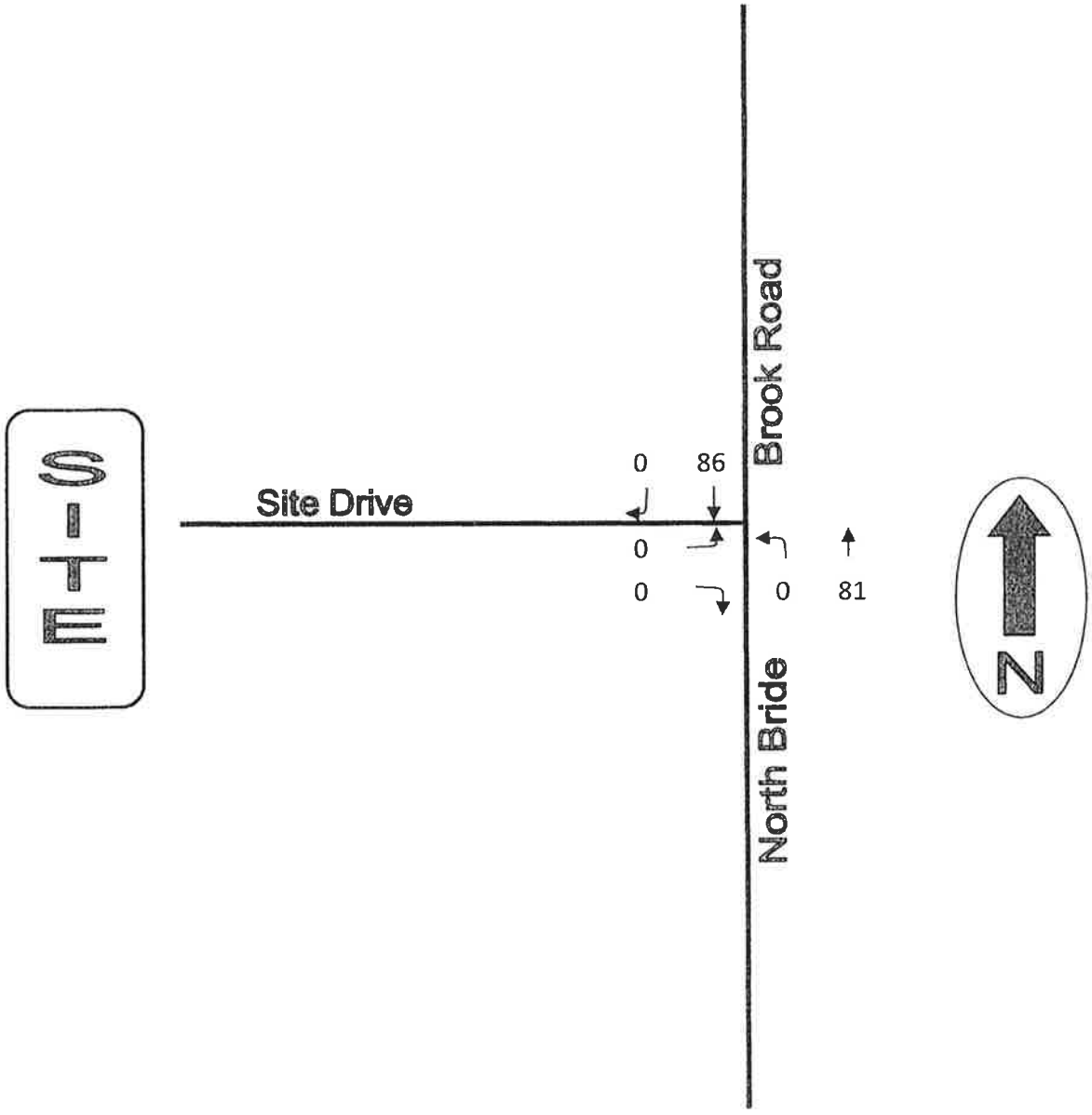


Exhibit 8
2023 Background PM
Peak Hour Traffic Volumes

Exhibit 9
Trip Generation Calculations
Low Rise Multifamily Residential Development
ITE Land Use Code #220

Trip Generation Summary

Alternative: Alternative 1
Phase:
Project: Pazzaglia Subdivision

Open Date: 12/16/2018
Analysis Date: 12/16/2018

ITE	Land Use	Weekday Average Daily Trips *	Enter	Exit	Total	Weekday AM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total	Weekday PM Peak Hour of Adjacent Street Traffic *	Enter	Exit	Total
220	LOW-RISE 1		789	789	1578		20	78	98		85	45	130
	250 Occupied Dwelling Units												
Unadjusted Volume			789	789	1578		20	78	98		85	45	130
Internal Capture Trips			0	0	0		0	0	0		0	0	0
Pass-By Trips			0	0	0		0	0	0		0	0	0
Volume Added to Adjacent Streets			789	789	1578		20	78	98		85	45	130

Total Weekday Average Daily Trips Internal Capture = 0 Percent
Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent
Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition

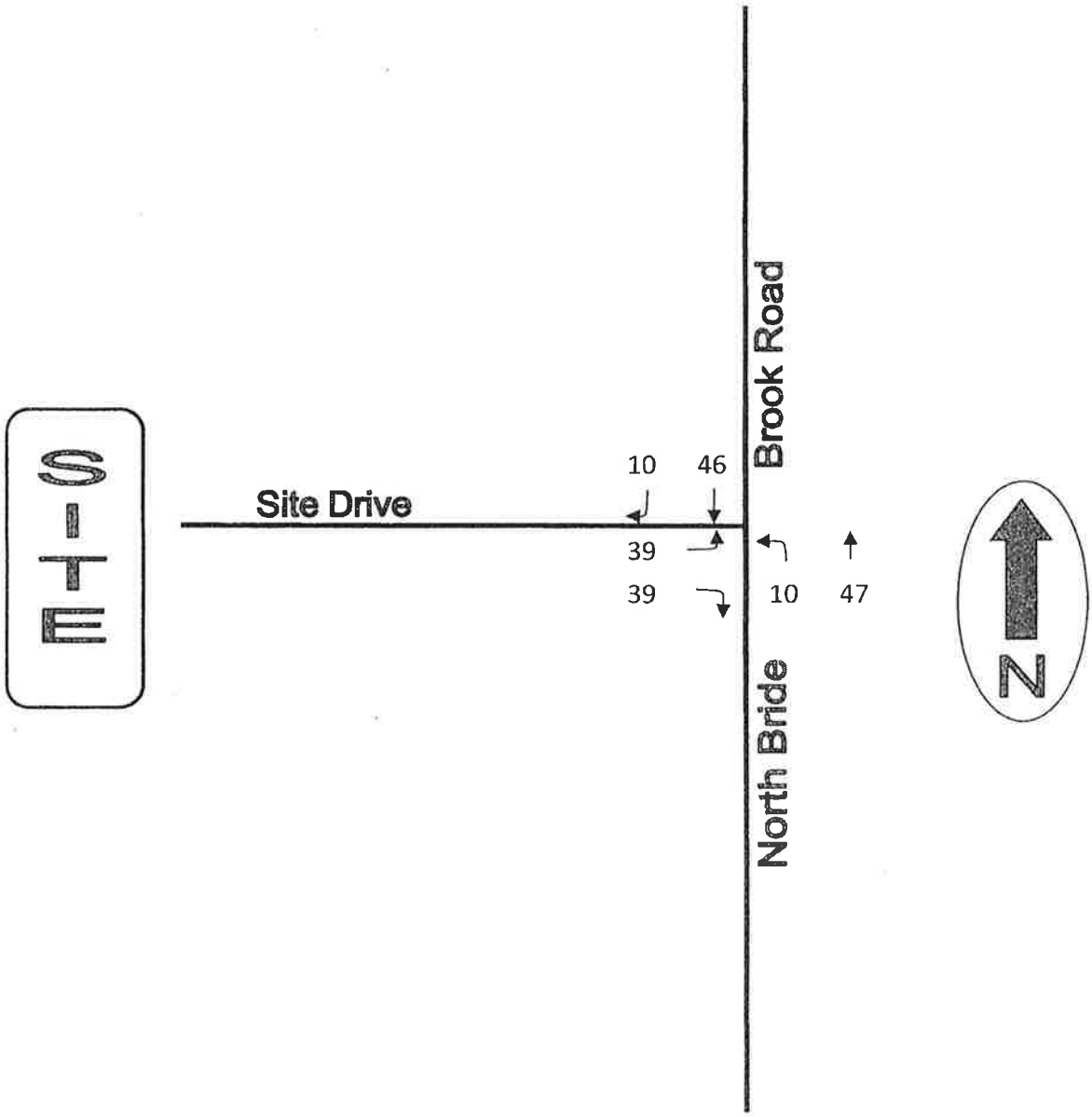


Exhibit 10
2023 Combined AM
Peak Hour Traffic Volumes

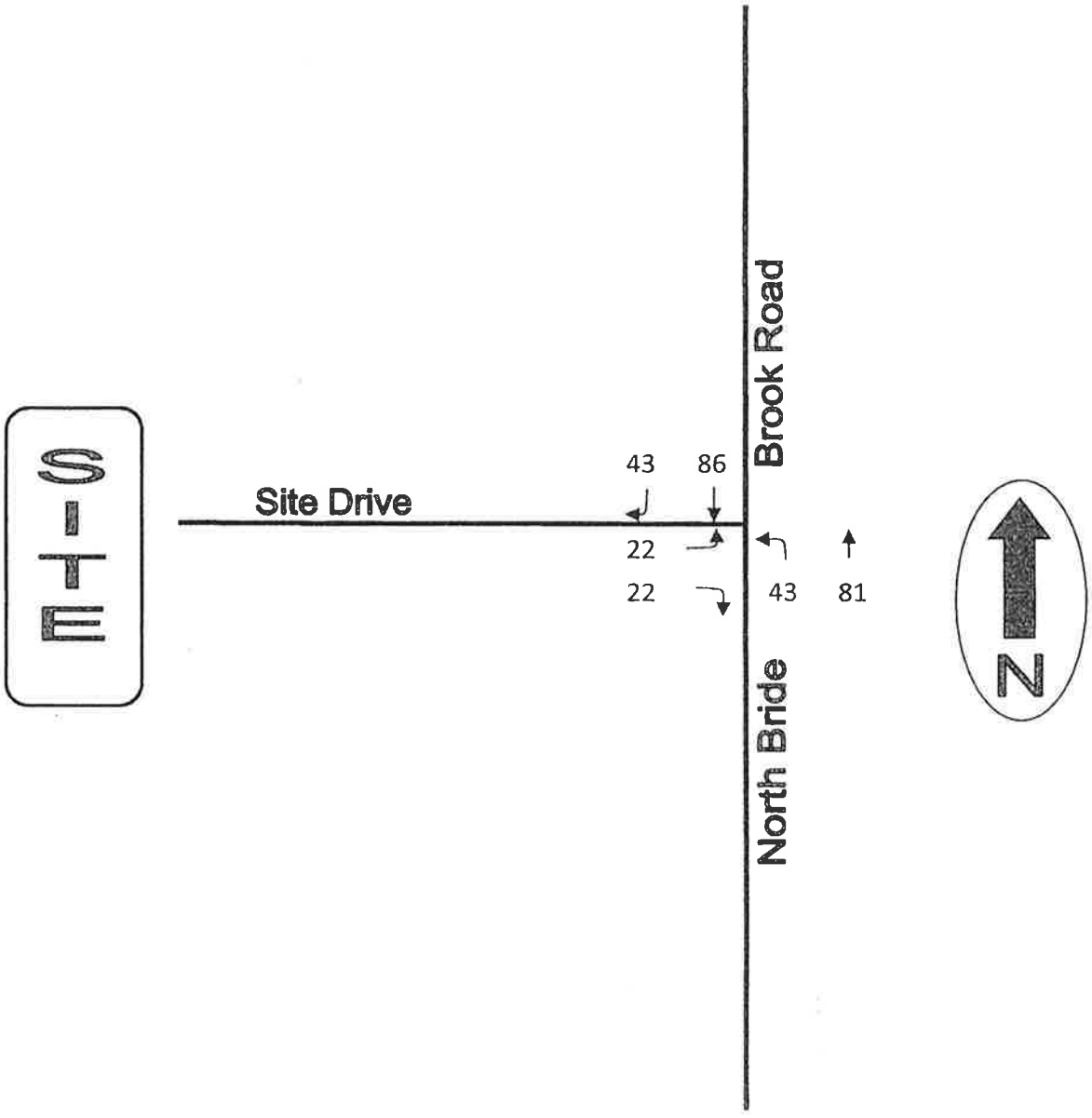


Exhibit 11
2023 Combined PM
Peak Hour Traffic Volumes

EXHIBIT 12
LEVEL OF SERVICE CRITERIA
UNSIGNALIZED INTERSECTIONS

SOURCE: HIGHWAY CAPACITY MANUAL (HCM), 2010
TRANSPORTATION RESEARCH BOARD (1)

Level of Service for **unsignalized intersections** similar to the study intersections is defined in terms of the average control delay for the approach or movement evaluated. Control delay involves movements at slower speeds and stops on intersection approaches as vehicles move up in the queue or slow down upstream of an intersection.

The delay experienced by a motorist is comprised of factors that relate to control, geometrics, traffic, and incidents. Total delay is the difference between the travel time actually experienced and the reference time that would result during base conditions in the absence of incident, control, traffic, or geometric delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

At two-way stop-controlled and all-way stop-controlled intersections, control delay is the total elapsed time from a vehicle joining the queue until its departure from the stopped position at the head of the queue. The control delay also includes the time required to decelerate to a stop and to accelerate to the free-flow speed.

Level of Service (LOS) for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS is **not defined** for the intersection as a whole.

Level of Service (LOS) for an all-way stop-controlled intersection is determined by the computed or measured control delay and is defined for all movements. A LOS **is then defined** for the intersection as a whole.

Levels of Service (LOS) for **unsignalized intersections** are defined as follows:

LEVEL OF SERVICE	AVERAGE CONTROL DELAY PER VEHICLE (SECONDS)	CONDITION
LOS A	0 TO 10	LITTLE OR NO DELAY
LOS B	> 10 TO 15	SHORT DELAY
LOS C	> 15 TO 25	AVERAGE DELAY
LOS D	> 25 TO 35	LONG DELAY
LOS E	> 35 TO 50	VERY LONG DELAY
LOS F	> 50	EXTREME DELAY

In today's environment, Levels of Service D to F are common and are often experienced on minor street approaches to major streets carrying relatively high traffic volumes.

(1) **HCM**, Exhibits 17-2 and 17-22.

Exhibit 13
Traffic Operations Analysis Worksheets
Combined Weekday AM Peak

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	39	10	47	46	10
Future Vol, veh/h	39	39	10	47	46	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	42	42	11	51	50	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	129	56	61	0	-	0
Stage 1	56	-	-	-	-	-
Stage 2	73	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	865	1011	1542	-	-	-
Stage 1	967	-	-	-	-	-
Stage 2	950	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	859	1011	1542	-	-	-
Mov Cap-2 Maneuver	859	-	-	-	-	-
Stage 1	960	-	-	-	-	-
Stage 2	950	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.3	1.3	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1542	-	929	-	-
HCM Lane V/C Ratio	0.007	-	0.091	-	-
HCM Control Delay (s)	7.4	0	9.3	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.3	-	-

Exhibit 14
Traffic Operations Analysis Worksheets
Combined Weekday PM Peak

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	22	43	81	86	43
Future Vol, veh/h	22	22	43	81	86	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	24	47	88	93	47

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	299	117	140	0	-	0
Stage 1	117	-	-	-	-	-
Stage 2	182	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	692	935	1443	-	-	-
Stage 1	908	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	668	935	1443	-	-	-
Mov Cap-2 Maneuver	668	-	-	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	849	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	9.9	2.6	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1443	-	779	-	-
HCM Lane V/C Ratio	0.032	-	0.061	-	-
HCM Control Delay (s)	7.6	0	9.9	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-

Exhibit 15
Summary of Traffic Crash Experience
Immediate Study Area
East Lyme, Connecticut
Three Years: 2012 through 2014

North Bride Brook Road

Town of East Lyme Route/Road Mile Marker 0.00 to 2.84 2012 To 2014 East Lyme North Bride Brook Road MM 0.00 To MM 2.84 Total of 8 accidents

1/1/2012 to 12/31/2014 Accident Experience Detail Report

Date	Town	Road	Mile	Location Description	DOT #	Police Case #	Contributing Factor	Lighting	Surface Condition	Weather Condition	Collision Type
Fri Jul-12-13 4:39	East Lyme	NORTH BRIDE BROOK RD	0.02	100 feet South of US 1-BOSTON POST RD	2068688	1300436239	Speed Too Fast For Conditions	Dawn	Dry	No Adverse Condition	Fixed Object

Contrib. Factor	Direction	Veh Type	Maneuver Prefix	Maneuver Suffix	1st/2nd Object Struck	1st/2nd Object Location	Injuries K	A	B	C	Total
*	North	Automobile	None Apply	Vehicle Negotiating Curve	Fire Hydrant / Tree	Off Road and Shoulder, Right / Off Road and Shoulder, Right	0	0	0	0	0

Date	Town	Road	Mile	Location Description	DOT #	Police Case #	Contributing Factor	Lighting	Surface Condition	Weather Condition	Collision Type
Fri Jan-25-13 21:35	East Lyme	NORTH BRIDE BROOK RD	0.20	2 tenths South of US 1-BOSTON POST RD	2025704	1300051042	Speed Too Fast For Conditions	Dark - Not Lighted	Snow/Slush	Snow	Fixed Object

Contrib. Factor	Direction	Veh Type	Maneuver Prefix	Maneuver Suffix	1st/2nd Object Struck	1st/2nd Object Location	Injuries K	A	B	C	Total
*	South	Automobile	None Apply	Vehicle Going Straight	Utility Pole	Off Road and Shoulder, Right	0	0	0	0	0

Date	Town	Road	Mile	Location Description	DOT #	Police Case #	Contributing Factor	Lighting	Surface Condition	Weather Condition	Collision Type
Wed Oct-29-14 9:03	East Lyme	NORTH BRIDE BROOK RD	0.37	250 feet South of APPLEWOOD COMMON	2222686	1400674694	Failed To Grant Right Of Way	Daylight	Dry	No Adverse Condition	Turning - Intersecting Paths

Contrib. Factor	Direction	Veh Type	Maneuver Prefix	Maneuver Suffix	1st/2nd Object Struck	1st/2nd Object Location	Injuries K	A	B	C	Total
*	West	Automobile	None Apply	Vehicle Turning Right From Driveway			0	0	0	0	0
	South	Automobile	None Apply	Vehicle Going Straight			0	0	0	0	0

Date	Town	Road	Mile	Location Description	DOT #	Police Case #	Contributing Factor	Lighting	Surface Condition	Weather Condition	Collision Type
Sat Jun-14-14 1:33	East Lyme	NORTH BRIDE BROOK RD	1.11	200 feet North of WEST SOCIETY RD	2192531	1400366414	Speed Too Fast For Conditions	Dark - Not Lighted	Wet	Rain	Fixed Object

Contrib. Factor	Direction	Veh Type	Maneuver Prefix	Maneuver Suffix	1st/2nd Object Struck	1st/2nd Object Location	Injuries K	A	B	C	Total
*	North	Single Unit Truck 2 Axle 4 Tires	None Apply	Vehicle Skidding in Roadway	Wall / Tree	Off Road and Shoulder, Left / Off Road and Shoulder, Left	0	0	0	0	0

Town of East Lyme Route/Road Mile Marker 0.00 to 2.84 2012 To 2014 East Lyme North Bride Brook Road MM 0.00 To MM 2.84 Total of 8 accidents

Date	Town	Road	Mile	Location Description	DOT #	Police Case #	Contributing Factor	Lighting	Surface Condition	Weather Condition	Collision Type
Thu Aug-30-12 0:00	East Lyme	NORTH BRIDE BROOK RD	1.17	100 feet South of WEST SOCIETY RD	1884214	1200491767	Animal Or Foreign Object In Road	Dark - Not Lighted	Dry	No Adverse Condition	Fixed Object

Contrib. Factor	Direction	Veh Type	Maneuver Prefix	Maneuver Suffix	1st/2nd Object Struck	1st/2nd Object Location	Injuries K	A	B	C	Total
*	South	Automobile	None Apply	Vehicle Going Straight	Utility Pole	Off Road and Shoulder, Left	0	0	0	0	0

Date	Town	Road	Mile	Location Description	DOT #	Police Case #	Contributing Factor	Lighting	Surface Condition	Weather Condition	Collision Type
Tue Jan-21-14 13:13	East Lyme	NORTH BRIDE BROOK RD	1.75	3 tenths South of UP I-95	2145406	1400041777	Speed Too Fast For Conditions	Daylight	Snow/Slush	Snow	Fixed Object

Contrib. Factor	Direction	Veh Type	Maneuver Prefix	Maneuver Suffix	1st/2nd Object Struck	1st/2nd Object Location	Injuries K	A	B	C	Total
*	South	Automobile	None Apply	Vehicle Negotiating Curve	Utility Pole	Off Road and Shoulder, Left	0	0	0	0	0

Date	Town	Road	Mile	Location Description	DOT #	Police Case #	Contributing Factor	Lighting	Surface Condition	Weather Condition	Collision Type
Wed Jan-15-14 19:12	East Lyme	NORTH BRIDE BROOK RD	1.79	8 tenths North of ATWOOD DR	2144738	1400029414	Speed Too Fast For Conditions	Dark - Lighted	Wet	No Adverse Condition	Fixed Object

Contrib. Factor	Direction	Veh Type	Maneuver Prefix	Maneuver Suffix	1st/2nd Object Struck	1st/2nd Object Location	Injuries K	A	B	C	Total
*	North	Automobile	None Apply	Vehicle Negotiating Curve	Curbing / Tree	Off Road and Shoulder, Right / Off Road and Shoulder, Right	0	0	0	1	1

Date	Town	Road	Mile	Location Description	DOT #	Police Case #	Contributing Factor	Lighting	Surface Condition	Weather Condition	Collision Type
Tue Oct-28-14 21:07	East Lyme	NORTH BRIDE BROOK RD	2.80	200 feet North of RT 156-WEST RD	2220636	1400673813	Speed Too Fast For Conditions	Dark - Lighted	Dry	No Adverse Condition	Turning - Intersecting Paths

Contrib. Factor	Direction	Veh Type	Maneuver Prefix	Maneuver Suffix	1st/2nd Object Struck	1st/2nd Object Location	Injuries K	A	B	C	Total
*	East	Automobile	None Apply	Vehicle Turning Left From Driveway	Fire Hydrant	Off Road and Shoulder, Right	0	0	0	0	0
	South	Automobile	None Apply	Vehicle Going Straight			0	0	0	0	0

plus

North Bride Brook Road, north of Bride Brook, South of I-95, 9-17-15, non-collision off road, east side

North Bride Brook Road, South of Bride Brook, North of Health & Rehab. Center, 8-27-17, Southbound, hit deer