Robinson+Cole

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Via Electronic Mail and Hand Delivery

June 27, 2025

Peter Nieman, Chair
Inland Wetlands and Water Courses Commission
Town of Berlin
240 Kensington Road
Berlin, CT 06037

Re: Shuttle Meadow Development; Application for 3-Lot Residential Subdivision Application 25-04W

Dear Chair Nieman and Members of the Commission:

Our firm represents Shuttle Meadow Development ("Applicant"), which has applied for a permit to conduct regulated activities (3-lot subdivision) at 398 Chamberlain Highway in Berlin. Enclosed with this letter are the following:

- Restoration Plan Sheets prepared by John Guilmartin
- Written Restoration Plan prepared by Ian Cole
- Functions and Values Assessment prepared by Ian Cole

We are providing these items to you now well in advance of the July 8, 2025 meeting. To the extent that anyone will review these items prior to the July 8 meeting, we respectfully request that the Town promptly provide further comments for the Applicant's consideration. To date, it has been Town staff's pattern and practice to provide comments the day before the Commission's next regularly scheduled meeting. This has made it virtually impossible to provide a timely response. The Applicant requests that the Town promptly provide any comments or acknowledge that it has no further comments.

Respectfully submitted,

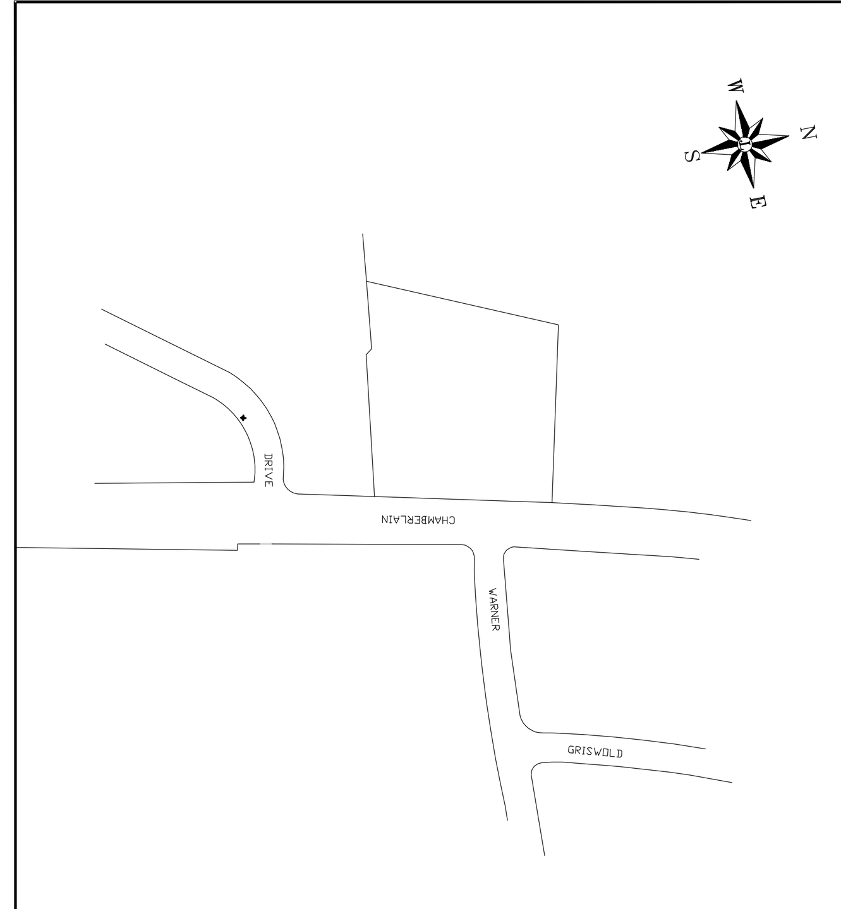
Shuttle Meadow Development

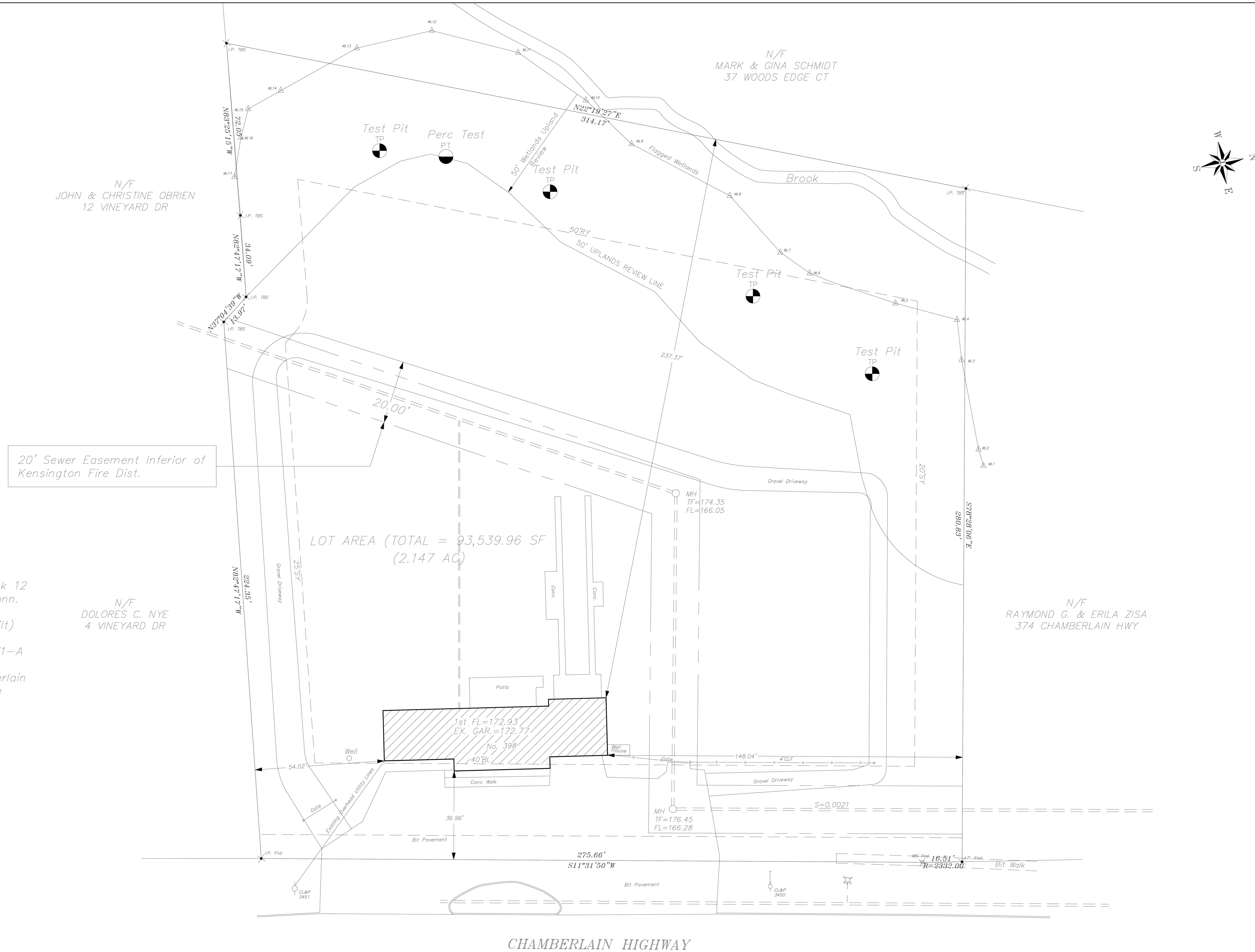
By: Evan Seeman
Evan J. Seeman, Esq.

Robinson & Cole LLP
Applicant's Attorney and Authorized Agent

EXHIBIT A

Restoration Plan Sheets prepared by John Guilmartin





Map References:

1. Site Plan for JOHNSON GARDENS Property Known Lots 6A & 6B Block 12 398 Chamberlain Highway, Berlin Conn. Scale 1"=20', Date August 2, 1991
2. Improvement Location Plan (as Built) Prepare for Raymond & Ekika Zisa 374 Chamberlain Highway CT. Rt. 71-A Scale 1"=20, Date May 5, 2004
3. Sewer Line Vinetard Dr. to Chamberlain Hwy., Kensington Fire District. Scale Vert. 1"=40' Horz. 1"=4'

ZONE TABLE R-21		
	REQUIRED	EXISTING LOT 6A
ACREAGE	21,000 SF	93,531 SF
FRONTAGE	125'	292.17'
BUILDING LINE	40'	36.96'
SIDE YARD SETBACK	20'/25'	54.02'/148.04'
REAR YARD SETBACK	50'	237.37'

LEGEND

I.P. Fnd.	IRON PIPE FOUND
I.P. TBS	IRON PIN TO BE SET
MON. Fnd.	MONUMENT FOUND
MON. SET	MONUMENT SET
N/F	NOW OR FORMERLY
T	TANGENT
R	RADIUS
L	LENGTH
△	DELTA ANGLE
No.	NUMBER
N.T.S.	NOT TO SCALE
RY	REAR YARD
SY	SIDE YARD
BL	BUILDING LINE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

ZONE TABLE R-21		
	REQUIRED	EXISTING LOT 6A
ACREAGE	21,000 SF	93,025.79 ST
FRONTAGE	125'	292.17
BUILDING LINE	40'	36.96'
SIDE YARD SETBACK	20'/25'	54.02'/148.04'
REAR YARD SETBACK	50'	237.37'

MAP CERTIFICATE:
THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20-300b-1 THRU 20-300b-20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES-"MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT STATE ASSOCIATION OF LAND SURVEYORS, INC. THIS MAP CONFORMS TO A HORIZONTAL ACCURACY CLASS OF A-2 THE SURVEY TYPE IS RESURVEY BASED ON EXISTING MAPS AND FIELD EVIDENCE. AND IS INTENDED TO BE USED: PLOT PLAN DEIGN

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

JEFF PESCOSOLIDO L.S. NO. 70405

REVISIONS:

BOUNDARY MAP
FOR
SHUTTLE MEADOW DEVELOPMENT LLC
LOT 6-A BLOCK 12F MAP 8-3
398 CHAMBERLAIN HIGHWAY
BERLIN, CONNECTICUT

J L SURVEYING
212 OLD BRICKYARD LANE
Berlin Connecticut
Phone 860-828-3200

DATE	FILE NAME	DRAWN BY	PROJECT NO. / SHEET NO.
Plot Date: 7-22-24	C:\DRAW\2024\2215\398 CHAMBERLAIN	JLG	22415 / 1 OF 4

ZONE TABLE R-21 (PLUS REAR LOT 42,000 SF)				
	REQUIRED	PROPOSED LOT 6A	PROPOSED LOT 6A-1	PROPOSED LOT 6A-2
ACREAGE	21,000 SF	21,056.93 SF	21,761.02 SF	50,722.01 SF
FRONTAGE	125'	140.34'	20.00'	131.83'
BUILDING LINE	40'	36.96'	40'	40'
SIDE YARD SETBACK	20'/25'	54.02'/21.35'	20'/25'	20'/25'
REAR YARD SETBACK	50'	80.54	50'	50'

LEGEND

I.P. Fnd.	IRON PIPE FOUND
I.P. TBS	IRON PIN TO BE SET
MON. Fnd.	MONUMENT FOUND
MON. SET	MONUMENT SET
N/F	NOW OR FORMERLY
T	TANGENT
R	RADIUS
L	LENGTH
Δ	DELTA ANGLE
No.	NUMBER
N.T.S.	NOT TO SCALE
RY	REAR YARD
SY	SIDE YARD
BL	BUILDING LINE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

APPROVED BY THE BERLIN PLANNING AND ZONING COMISSION

Chairman Date

CHAMBERLAIN HIGHWAY

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AND IS INTENDED TO BE USED: RESUBDIVISION PLAN

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

JEFF PESCOSOLIDO L.S. NO. 70405

RESUBDIVISION PLAN

REVISIONS:

RESUBDIVISION PLAN
FOR
SHUTTLE MEADOW DEVELOPMENT LLC
LOT 6-A BLOCK 12F MAP 8-3
398 CHAMBERLAIN HIGHWAY
BERLIN, CONNECTICUT

J L SURVEYING
212 OLD BRICKYARD LANE
Berlin Connecticut
Phone 860-828-3200

DATE	FILE NAME	DRAWN BY	PROJECT NO.	SHEET NO.
Plot Date: 7-22-24	C:\DRAW\2024\2215\398 CHAMBERLAIN	JLG	22415	2 OF 4

SITE PLAN / EROSION & SEDIMENTATION CONTROL PLAN

ZONE TABLE R-21 (PLUS REAR LOT 42,000 SF)					
	REQUIRED	EXISTING LOT 6A	PROPOSED LOT 6A	PROPOSED LOT 6A-1	PROPOSED LOT 6A-2
ACREAGE	21,000 SF	93,531 SF	21,056.93 SF	21,761.02 SF	50,722.01SF
FRONTAGE	125'	292.17'	140.34'	131.83	20
BUILDING LINE	40'	36.96'	36.96'	42.79'	49.13'
SIDE YARD SETBACK	20'/25'	54.02'/148.04'	54.02'/20.15'	21.35'/58.49'	56.87'/187.40'
REAR YARD SETBACK	50'	237.37'	80.54	66.82'	69.68'

LEGEND

○ I.P. Fnd.	IRON PIPE FOUND
● I.P. TBS	IRON PIN TO BE SET
☒ MON. Fnd.	MONUMENT FOUND
■ MON. SET	MONUMENT SET
N/F	NOW OR FORMERLY
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TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

JEFF PESCOSOLIDO L.S. NO. 70405

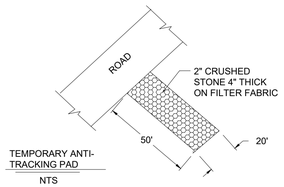
REVISIONS:
5-27-25 STAFF COMMENTS

SITE PLAN / EROSION & SEDIMENTATION CONTROL PLAN
FOR
SHUTTLE MEADOW DEVELOPMENT LLC
LOT 6-A BLOCK 12F MAP 8-3
398 CHAMBERLAIN HIGHWAY
BERLIN, CONNECTICUT

J L SURVEYING
212 OLD BRICKYARD LANE
Berlin Connecticut
Phone 860-828-3200

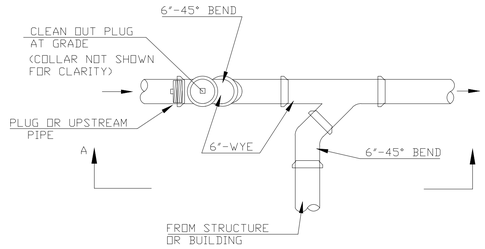
DATE	FILE NAME	DRAWN BY	SHEET NO.
Plot Date: 7-22-24	C:\DRAW\2024\2215\398 CHAMBERLAIN	JLG	3 OF 4

PROJECT NO.
22415

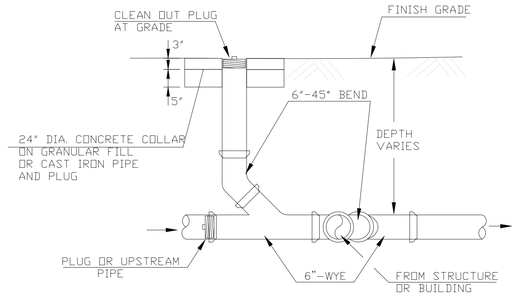


TEMPORARY ANTI-TRACKING PAD

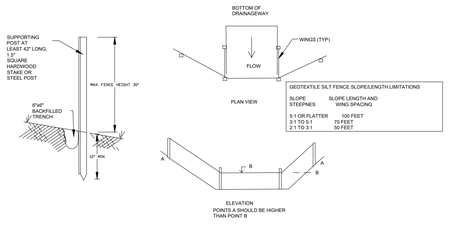
NTS



PLAN

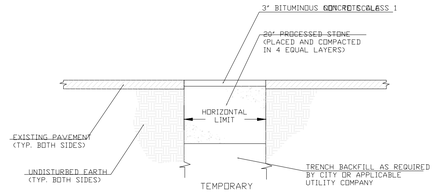


SECTION A-A



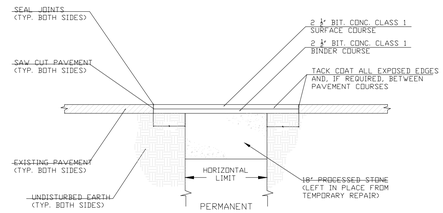
SILT FENCE DETAIL

NTS



NOTES:
RESIDENTIAL DRIVEWAYS = 6" THICK CONCRETE
ALL OTHER DRIVEWAYS = 8" THICK CONCRETE

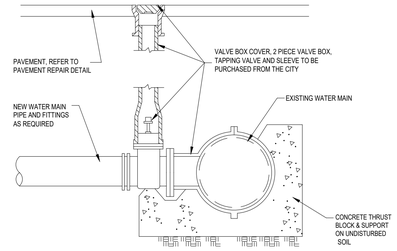
DRIVEWAY WIDTHS - MIN 10', MAX. 20'
(DRIVEWAY WIDTHS GREATER THAN 20' REQUIRE APPROVAL FROM THE CITY ENGINEER)



NOTES:
1) DETAILS REPRESENTED HEREIN TYPICALLY APPLY TO ALL UTILITY INSTALLATIONS EXCEPT LONGITUDINAL UTILITY TRENCHES IN EXCESS OF 50' IN LENGTH THAT RUN PARALLEL TO THE FLOW OF TRAFFIC. THESE DETAILS WOULD ALSO APPLY TO UTILITY LATERAL TRENCHES WHICH ARE PERPENDICULAR TO THE LONGITUDINAL MILLING AND OVERLAY AND EXTEND INTO OTHER TRAFFIC LANES AT A RATE OF MORE THAN 75' SEPARATION.

2) CONTRACTOR'S COST FOR TEMPORARY AND PERMANENT PAVEMENT REPAIR SHALL INCLUDE COST FOR PROVIDING MAINTENANCE AND PROTECTION OF TRAFFIC.

STANDARD UTILITY TRENCH PAVEMENT REPAIR



TYPICAL WET TAP FOR CONNECTION OF NEW AND EXISTING WATER MAIN

NOTES:
FOUNDATION DIMENSIONS ARE SHOWN FOR GENERAL REFERENCE ONLY.
THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT MEASUREMENTS. DO NOT SCALE.
DO NOT CHANGE THE ELEVATION OR LOCATION OF THE HOUSE WITHOUT PRIOR APPROVAL OF THE ENGINEER.
PLACE FOOTINGS ON VIRGIN SOIL OR SPREAD FOOTINGS ON COMPACTED GRAVEL.
1. LOT TO BE SWALED ALONG THE PROPERTY LINE
2. ELEVATIONS TO USGS

SOIL NOTES:
1. INSTALL SILT FENCES AND SEDIMENTATION MEASURES PRIOR TO STRIPPING TOPSOIL.
2. LOCATIONS AND CONTROLS ARE MINIMUMS. ADDITIONAL CONTROLS SHALL BE INSTALLED AS DIRECTED OR ON AN AS NEEDED BASIS TO INSURE ADEQUATE CONTROL OF RUNOFF AND SILT.
3. MINIMIZE DISTURBED AREAS TO THE GREATEST EXTENT POSSIBLE.
4. PROVIDE TEMPORARY ANNUAL GRASS SEEDING FOR AREAS TO BE LEFT EXPOSED FOR AN EXTENDED TIME PERIOD.
5. UTILIZE GROUND CONTOURS AND EXISTING VEGETATION TO CHANNEL AND CONTROL RUNOFF.
6. PERMANENT SEEDING SHALL BE BETWEEN 4/1 AND 6/1 PLUS 8/15 AND 9/15 IN ANY GIVEN YEAR.
7. FERTILIZER, LIME AND MULCH SHALL BE USED TO ESTABLISH GROWTH.
8. REMOVE CONTROLS AFTER PROJECT COMPLETION.

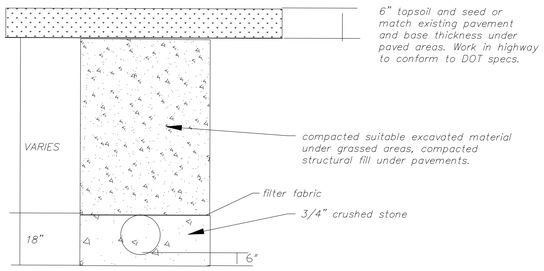
1. ALL PIPE AND FITTINGS SHALL CONFORM TO CITY OF NEW BRITAIN STANDARD SPECIFICATIONS.

2. ALL PLUGS SHALL BE OF THE THREADED TYPE.

3. THIS DETAIL COULD ALSO BE USED FOR UNDER DRAIN CLEAN-OUT AS DIRECTED.

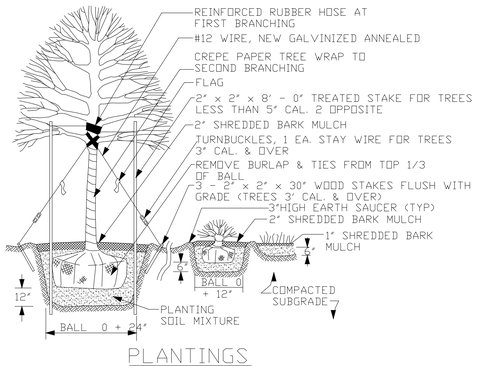
SEWER LATERAL CLEAN-OUT

NOT TO SCALE



TYPICAL STORM SEWER TRENCH DETAIL
GRASSED AND PAVED AREAS

N.T.S.



PLANTINGS

NTS

EROSION AND SEDIMENTATION CONTROL NOTES

1. ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION PUBLICATION " CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENTATION CONTROL" DATED JANUARY, 1988.
2. AREAS DISTURBED FOR SITE IMPROVEMENTS SHALL BE KEPT TO AN ABSOLUTE MINIMUM.
3. THE PRIMARY MEASURES USED TO CONTROL EROSION AND SEDIMENTATION SHALL BE SILT FENCES, STAKED HAY BALES, HAY MULCH, JUTE MESH NETTING AND TURF ESTABLISHMENT.
   A. SILT FENCES SHALL BE EMPLOYED ON THE DOWNHILL END OF ALL EXPOSED SLOPES.
   B. HAY MULCH SHALL BE APPLIED TO ALL EXPOSED AREAS AS SOON AS POSSIBLE AFTER EXPOSURE (1 WEEK MAXIMUM). MULCH ON SLOPES EXCEEDING 5% SHALL BE HELD IN PLACE WITH JUTE MESH NETTING.
   C. ALL EXPOSED AREAS SHALL BE FINAL GRADED, COVERED WITH TOPSOIL (4" MINIMUM) AND SEEDED AS SOON AS POSSIBLE AFTER EXPOSURE (1 MONTH MAXIMUM) TO STABILIZE SLOPES. TURF ESTABLISHMENT SHALL BE ACCOMPLISHED AS FOLLOWS:
4. SEED FOR PERMANENT TURF ESTABLISHMENT SHALL BE APPLIED TO A PREPARED BED OF TOPSOIL (4" IN DEPTH). FERTILIZER SHALL BE 10-10-10 OR EQUAL AND SHALL BE SPREAD AT A RATE OF 7.5 lbs. PER 100 SF. GROUND LIMESTONE SHALL BE APPLIED AT THE RATE OF 90 lbs. PER 1000 SF. SEED SHALL BE UNIFORMLY SPREAD AND SHALL BE A MIXTURE OF 45% KENTUCKY BLUE GRASS, 45% CREEPING RED FESCUE, AND 10% PERENNIAL RYEGRASS APPLIED AT A RATE OF 5 lbs. PER 1000 SF. PERMANENT TURF ESTABLISHMENT SHALL BE DONE BETWEEN THE DATES OF APRIL 1 AND JUNE 1 OR AUGUST 15 AND SEPT. 15
5. IF PERMANENT TURF ESTABLISHMENT CANNOT BE DONE WITHIN THE TIME CONSTRAINTS LISTED ABOVE, THE EXPOSED AREAS SHALL BE PROTECTED WITH A TEMPORARY VEGETATIVE COVER. THIS SHALL BE PROTECTED WITH A TEMPORARY VEGETATIVE COVER. THIS SHALL CONSIST OF ANNUAL RYEGRASS SEED APPLIED AT A RATE OF 5 lbs. PER 1000 SF. TO A SURFACE PREPARED BY THE APPLICATION OF A 10-10-10 FERTILIZER (7.5 lbs. PER 1000 SF. AND GROUND LIMESTONE (90 LBS. PER 1000 SF.). THIS MEASURE SHALL BE APPLICABLE BETWEEN THE DATES OD MARCH 1 AND JUNE 1 OR AUGUST 15 AND OCTOBER 15. OUTSIDE OF THOSE DATES EXPOSED AREAS SHELL BE PROTECTED WITH HAY MULCH (90 lbs. PER 1000 SF.) ANCHORED WITH JUTE MESH NETTING.
6. IT SHALL ALL BE THE RESPONSIBILITY OF THE OWNER TO INSTALL, INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL DEVICES. INSPECTION OF ALL CONTROL MEASURES SHALL BE AT LEAST ONCE A WEEK DURING PERIODS OF DRY WEATHER, AFTER EACH RAINOFF PRODUCING STORM AND ONCE A DAY DURING PERIODS OF PROLONGED RAINFALL. REPAIR OR REPLACEMENT OF DAMAGED CONTROL MEASURES SHALL BE DONE IMMEDIATELY.

DETAIL PLAN

REVISIONS:	DETAIL PLAN FOR SHUTTLE MEADOW DEVELOPMENT LLC LOT 6-A BLOCK 12F MAP 8-3 398 CHAMBERLAIN HIGHWAY BERLIN, CONNECTICUT	
	J L SURVEYING 212 OLD BRICKYARD LANE Berlin Connecticut Phone 860-828-3200	PROJECT NO. 22415
	DATE Plot Date: 7-22-24 / FILE NAME C:\DRAW\2024\2215\398 CHAMBERLAIN / DRAWN BY JLG	SHEET NO. 2 OF 4

EXHIBIT B

Written Restoration Plan prepared by Ian Cole

WETLAND RESTORATION AREA – 398 CHAMBERLAIN HIGHWAY

The goal of the restoration plan is to restore a well-functioning, self-sustaining buffer to the wetland resources. To restore wetland functionality the project will establish a 25' wide planted wetland creation area which will act as a buffer along the length of the wetland boundary located along the western property line. The restoration plan will consist of 3 zones.

Starting at the wetland boundary and moving landward the first zone will be a 15' wide native shrub and tree zone to provide vegetation structure, increase wildlife habitat. Behind the shrub zone will be a second zone consisting of a 10'-wide dense meadow habitat that will serve as a filter to enhance water quality. The third zone will be a 25' no disturbance zone which will be seeded with a standard conservation seed mix and/or continue to naturally revegetate with early successional upland species which will in-fill over time with natural recruitment. The 50' restoration zone would be backstopped by a line of large boulders placed at the limits of disturbance and every 50' a non-encroachment sign will be posted on 4"x4" posts.

There is a roughly 3'+ change in grade from the upland to the flagged referenced wetland. The project will establish a natural hydrology that matches the reference wetland. Planting zones 1 and 2 will need to be excavated to create the planting zone. The transition from the planting zone to the uplands should be at a 3:1 slope. Restoration and seeding notes are to be implemented upon removal of fill material with the new ground elevations to match the adjacent reference wetland forest floor elevations. Grading elevations will be established by the Project Land Surveyor prior to excavation. .

Because there is a noted watercourse that flows along the flagged wetland boundary, the excavation for the new proposed wetland creation areas (Zones 1 & 2) should be off-set by 5' to leave an "undistrubed" berm of earth in-situ to maintain the integrity of the stream's eastern bank. This 5' off-set will also adventitiously preserve most of the existing trees along the brook's edge. At the limits of disturbance a double row of erosion and sediment (E&S) controls will be installed to manage turbid water from reaching the watercourse. Once the site is stabilized, E&S controls will be removed.

The wetland restoration areas (Zone 1 & 2) shall be backfilled with 1"-2" inch stone free of fines, followed by the placement of a medium weight geotextile fabric over the stone, followed by compacted dense grade aggregate (DGA) to approximately 1-foot below the existing wetland grade and top dressed in approximately 12" of wetland soil and/or prepared topsoil consisting of a 1:1 mixture or equal volumes of organic compost and minerals. To increase the carbon content clean leaf litter or commercially available compost can be used to amend the soil.

1. A double row of erosion control barrier of entrenched fiber roll, straw waddles and or haybales shall be installed off-set Five (5) – feet east of the wetland boundary to stabilize the stream bank and prevent movement of sediment from the proposed restoration area into the adjacent wetlands.
2. Seed areas per plan at the application rate recommended by the manufacturer. The seed shall be spread in the prepared soil, lightly raked to establish good soil contact after sowing, seed mix substitutes shall be equivalent to that specified in the restoration plan.

3. Wetland and embankment seed mixes to be applied during the periods of March 1 to May 15 and August 1 to October 15.
4. Install type D woven coconut fiber matting within the inundation portion of the wetland to keep seed in place. In other areas apply small grain straw at a rate of 2 tons / ac and anchored with netting or tackifier. Erosion control blankets should be installed on slopes that are 3:1 or steeper.
5. Planting shall take place in the spring between April 15th and June 15th or early in the fall between September 1st and October 15th avoid seeding late June through August as portions of the seeding may fail due to drought and heat.
6. If seeding cannot occur due to seasonal and weather conditions, temporary seed disturbed wetland area with annual rye at a rate of 30 LBS per acre. Mulching without seeding may be used during the non-growing season in accordance with the Connecticut guidelines for soil erosion and sediment control.

ZONE 1 RECOMMENDED SHRUB AND TREE PLANTINGS

All plantings are to be placed under the auspices of the Wetland Scientist and/or Town Wetland Agent. To exceed Army Corps of Engineer's Mitigation standards of mitigation sites providing 60% hydrophytes and 500 woody species per 1-acre, a total of 10 Trees and 100 shrubs are to be planted within Zone 1 of the restoration area. Shrub Plantings will be randomly placed in small groupings of 4 or more. Tree Saplings will be placed roughly 20' + on center along the outermost limits of the wetland restoration to provide a higher concentration of shading to the brook.

Highbush Blueberry – Vaccinum corymbosum 3-4' Tall, Qty 25

Sweet pepperbush – Clethra alnifolia 3-4' Tall, Qty 25

Silky dogwood – Cornus amomum, 3-4' Tall, Qty 25

Black Chokeberry – Aronia melanocarpa, 3-4' Tall, Qty 25

Black Tupelo – Nyssa sylvatica min 3" caliber and 6' Tall, Qty 10

SEED MIX – New England Wetmix (Wetland Seed Mix) should be applied to the forest floor in Zone 2.

ZONE 2 RECOMMENDED SEED MIX FOR DENSE MEADOW HABITAT

To create a dense meadow habitat a pre-mixed seed mix from New England Wetland Plants, Inc. will be implemented. Specifically, the project will use The New England Erosion Control/Restoration Mix for Detention Basins and Moist Sites. This seed mix contains a selection of native grasses and wildflowers designed to colonize generally moist, recently disturbed sites where quick growth of vegetation is desired to stabilize the soil surface. It is an appropriate seed mix for ecologically sensitive restorations that require stabilization as well as long-term establishment of native vegetation.

The mix may be applied by hand, by the mechanical spreader, or by hydro-seeder. After sowing, lightly rake, roll or cultipack to insure good seed to soil contact. Best results are obtained with a

Spring or late Summer seeding. Late Fall and Winter dormant seeding requires an increase in the application rate. A light mulching of clean, weed-free straw is recommended.

EXCAVATED MATERIAL

Approximately 1050 C.Y. of soil will be excavated to create the wetland restoration plan. This material will remain on site to be used as beneficial fill to raise the proposed home foundations. The proposed wetland restoration area and fill to be removed covers approximately 2,166 SQ FT.

All soil material handling will be completed in an environmentally responsible and complaint manner.

PERFORMANCE STANDARDS, MONITORING AND REPORTING

The project has committed to a monitoring/maintenance period for the mitigation plantings and removal of invasives for three (3) years, with a brief memo to the Commission at the end of each growing season (Due to the Commission for each November Meeting). A site evaluation will be completed in the height of the growing season (June or July). Anecdotal information such as opportunistic wildlife usage of the restoration area will be included in the monitoring, as well as photos demonstrating restoration progress.

The project will guarantee survivorship of planted material for the duration of the 3 year monitoring period and will replace lost species if deemed appropriate. Because of the overplanting ratio provided and anticipated natural recruitment, replacement plantings may not be warranted but would be assessed yearly and if acceptable coverage has not been achieved the project will replace shrubs lost to mortality.

The project is committed to eradicating invasive species within the 50' upland review area, acknowledging that invasive seed sources on adjoining properties are problematic because the mitigation proponent does not have control over those invasive source areas.

The project will contract an invasive vegetation management vendor such as, All-Habitats (https://allhabitat.com/), a Connecticut licensed contractor who specializes in invasive species removal will follow the protocols promulgated by the Connecticut Invasive Plant Working Group (CIPWG). The removal methods may include excavation, smothering with black plastic /tarp, and/or targeted herbicide treatments. The removal of invasive species will commence with construction activities. However, to limit secondary disturbances only mechanical removal methods of invasives will occur within the wetland boundary. If any invasive have propagated into the planted zones the invasive species management vendor will eradicate their presence during the monitoring period.

Erosion and sediment control monitoring will be completed by the developer. Sediment control measures will meet the compliance standards of the Town of Berlin and will be maintained throughout construction in good working order. No plastic netting will be used on-site that could entrap wildlife.

EXHIBIT C

Functions and Values Assessment prepared by Ian Cole

WETLAND FUNCTIONS AND VALUES ASSESSMENT

398 CHAMBERLAIN HIGHWAY

The assessment of wetlands and watercourses functions and values is based on the US Army Corps of Engineers' (USACE) *The Highway Methodology Workbook, A Descriptive Approach* (1995) methodology, and on best professional judgment.

The functions and values of the wetland corridor is summarized in Table 1. The *Highway Methodology* recognizes 13 separate wetland functions and values. The degree to which a wetland provides each of these functions is determined by one or more of the following factors: landscape position, substrate, hydrology, vegetation, history of disturbance, and size. Each wetland may provide one or more of the listed functions at significant levels. The determining factors that affect the level of function provided by a wetland can often be broken into two categories. The effectiveness of a wetland to provide a specified function is generally dependent on factors within the wetland whereas the opportunity to provide a function is often influenced by the wetland's position in the landscape as well as adjacent land uses. For example, a depressed wetland with a restricted outlet may be considered highly effective in trapping sediment due to the long residence time of runoff water passing through the system. If this wetland is located in gently sloping woodland, however, there is no significant source of sediment in the runoff therefore the wetland is considered to have a small opportunity of providing this function.

Wetland Functions and Values	Groundwater Recharge/Discharge	Sediment/Shoreline Stabilization	Floodflow Alteration	Fish & Shellfish Habitat	Sediment/Toxicant/ Pathogen Retention	Nutrient Removal/Attenuation	Production Export	Wildlife Habitat	Recreation	Educational/Scientific Value	Uniqueness/Heritage	Visual Quality/Aesthetics	Listed Species Habitat
WETLAND #1	P	S	P	S	P	P	S	s	U	U	U	U	U

Suitability
P = principal function
S = secondary function
U = function unlikely to be provided at a significant level
N/A = not applicable or unknown

Table:1 Wetland Functions and Values

The wetlands in the rear of 398 Chamberlain Highway is a forested wetland corridor associated with the source of a watercourse. The on-site wetlands provide groundwater discharge, flood-flow alteration and water quality renovation properties, as well as general wildlife habitat functions are provided at the principal level. The wetland is low gradient (i.e., will have longer retention times),

and is densely vegetated with a classic Red Maple swamp community assemblage. Other functions and values are limited to private ownership of the site and lack of public access.

The planned mitigation and enhancement plantings will be densely vegetated with new wetland vegetation which would enhance sediment trapping and pollutant attenuation capabilities (effectiveness). The holistic functions will be re-created with the better performance of the mitigation wetland than existing conditions.