# Site Plan Amendment - Phase 5

**Project Name:** 

**Beckley Farms** 

Address:

Beckley Road (MBL 11-2-133-41)

Zone:

OT-2 Zone

Applicant/Owner:Estates of Berlin, LLC

Active Adult Community Development per BZR XI.AA.

#### **PROPOSAL**

Proposal:

The Estates of Berlin, LLC is requesting site plan amendment for modifications to the grading plan within Phase 5 of the approved 5-phase active adult community development (aka Beckley Farms) that is currently under development at (MBL 11-2-133-41) Beckley Road.

The applicant has submitted the attached enhanced narrative dated March 2, 2021 which specifically clarified the parameters of the site plan amendment application.

#### STAFF COMMENTS

- 1. All relevant conditions of approval not specifically modified by this application be carried over with this amendment and noted on revised plans, including:
  - a. Unit owners be made aware of the proximity of the existing gun club/firing range (identified as Mattabassett Rifle & Pistol Club, 193 Beckley Mill Road) to the east, by notice on the Land Records, as previously required for each unit and per Police Department comments.
- Vigorous soil erosion controls be used to protect against disturbance of the adjacent Town open space parcel including fencing along the property line to protect from encroachment.
- 3. Other outstanding interdepartmental comments be rectified to the satisfaction of staff.
- 4. Pending Town Engineer comments be resolved to the satisfaction of staff and may require additional Commission review.

#### For the Commission to consider:

5. If additional landscaping is required, particularly along the revised sloping in phase 5 along the northeast property line.

#### **BACKGROUND / HISTORY**

Research has found that Site Plan and Special Permit applications for an Active Adult Community for Field Road LLC was approved with conditions for this parcel on March 31, 2005. The project has been known as Beckleyville, Beckley Farms and Estates of Berlin. There have been several site plan/special permit amendments and extensions. New Special Permit and Site Plan applications were approved on February 20, 2020 for completion of the project which included Phase 5 construction of 57 Townhouse style units. Phase 5 has 10 buildings of 4 to 7 units each.

Active construction is underway. The status of construction across the entire development is reflected in the narrative attached to the application. As described by the applicant, Phases 1, 1A, 2, and 3 are substantially complete with a few unsold/unbuilt units and phase 4 is under construction and they are doing site work in phase 5. Phases 1-4 are mostly single-family units with a few duplexes. No change to approved plans as permitted is being requested for the remaining work on Phases 1-4.

#### **ANALYSIS**

#### ZONING

The proposed revisions to approved site work plan requires this site plan amendment application. The approved Special Permit for the development will not be affected by the proposed grading modifications. No changes are proposed to the approved building design or layout.

#### PHASE 5 MODIFICATIONS

As allowed by the 2020 PZC and IWWCC approvals site work has begun for phase 5. As reviewed with the 2020 approval, there is a significant grade change from phase 2 and 3 to the north into phase 5 and beyond to the abutting Town owned woodland along the Mattabassett River. The applicant is proposing to retain some of the excavated materials on site. The material was previously approved to be trucked from the site. Grading, improvement elevation changes and design modifications will result which result in revisions to the approved retaining wall and sloping and retention areas mostly along the northeast property line. The terrain slopes down to the Beckley Quarry Open Space Trail along the Mattabessett River behind the units in this area.

#### INTERDEPARTMENTAL REVIEWS

- The Inland Wetlands and Watercourses Commission approved the revised site plan on November 10,2020.
- Board of Police Commissioners and Police Chief: see attached. Their comment is specifically recommended to be carried forward from previous approvals.
- Conservation Commission: at their meeting of February 9, 2021, noted that their focus is protection of the adjacent open space parcel and would recommend vigorous erosion control measures be put in place until the area is stable and to protect against any encroachment onto the adjacent Town Open Space property, which should not be tolerated. Noting that construction and disturbance into the area for the phase was previously approved, they suggested enhanced landscaping, including a row of trees, to protect and stabilize the slope and further noted the overall view-shed had been disturbed and that the open space included an historic trolley way.
- Fire Marshall, Building Official and Health District provided "No Comment"
- Town Engineer: Comments pending.

# Estates of Berlin, LLC

Beckley Road March 2, 2021

#### Phase 5 Site Plan Amendment Project Narrative

The Estates of Berlin, LLC has previously received town approvals for the phased construction of single family detached and townhouse style units, roads, storm drainage and utilities. More recently the entire project was re-approved in February of 2020. The project has been designed to be consistent with the town's plan of land use which is permitted in the current zoning district.

With this application we are seeking a site plan amendment for the re-grading of Phase 5. The modifications are limited to maximize the material that is currently on site and includes the following changes:

- Revise grading throughout the phase by raising the grade by an average of seven (7) feet.
- Eliminated retaining wall that ran parallel to units 151-156.
- Relocate the stormwater management area located at the bottom of the slope to an underground detention system.
- Fill in slope near units 151-156 where retaining wall was removed.
- Add retaining wall along entrance from phase 4.

The limits of disturbance remains the same (approximately 4.4 acres). Blasting has been reduced to an area of approximately 1.0 acre.



# **Town of Berlin**

# **Planning and Zoning Department**

240 Kensington Road Berlin, Connecticut 06037 www.town.berlin.ct.us

# Town of Berlin Received

JAN 27 2021

Planning & Zoning Department Berlin, Connecticut

# SITE PLAN APPLICATION

LI Site Plan	Site Plan Amendment
Project Name: BECKLEY FARMS Property Owner(s): ESTATES OF BE Project Address*: 107 BECKLEY [ Map: 11-2 Block: 133 Lot: 4]	Zone(s): OT - 2 Lot Area: 58.7 AC.
☐ Amendment to Zoning Regulations – S	pal Boundary of
Applicant	Information
Name: ESTATES OF BERLINLLC Street Address: 833 GLEN DRIVE Email: PLMBG Sol @ Aol. Com Signature:	Firm Name:  City: \[ \langle \langle 000000000000000000000000000000000000
Property Owner(s) Inform	nation (If Not the Applicant)
Name:	Principal:
	City: ST: Zip:
Email:	Phone:
*Letter of Authorization Required	

<sup>\*</sup>Any town official and/or employee that the town deems necessary may enter the property to verify information submitted with this application.

This Site Plan Involves:  ☐ Additions ☐	Alterations	☐ Demolition	✓ New Construction
Description of Project*:	CONDOMIN	IUM PROJECT	
*****			
470			
*If more space is needed, then pl	ease provide separa	te narrative document.	
S	SITE PLAN ZON	ING STATISTICS	
	EXISTING	PROPOSED	REQUIRED
USE(S)			
COMMERCIAL			
Gross Floor Area	***	-	
Parking Spaces	•		
INDUSTRIAL			
Gross Floor Area			
Parking Spaces			particular and a second
RESIDENTIAL			
Number of Units		164	
Number of Bedrooms	-		
Gross Floor Area	•		
Parking Spaces	•		
OTHER USES		1 CLUBHOUSE	
Gross Floor Area	#F4-777707-74417044-74707-7474-7474-7474-7		
Parking Spaces			
To be completed by P&Z staff	only:		
2 /	er to current Fee Sch	edule)	
	ck #3802		

# Estates of Berlin, LLC

Beckley Road

## Town of Berlin Received

JAN 27 2021

## **Project Narrative**

Planning & Zoning Department Berlin, Connecticut

The Estates of Berlin, LLC has previously received town approvals for the phased construction of single family detached and townhouse style units, roads, storm drainage and utilities but will expire over the next few months.

The following describes each phase of the project:

#### Phases 1, 1A & 2

Construction of the houses are complete except for custom units 14 & 51. The installation of the bituminous concrete pavement wearing surface on phase 1 and 1A has been installed. In Phase 1 the gazebo area is yet to be completed and Phase 2 has the bituminous concrete pavement binder surface installed. All sidewalks and landscaping have been installed. All utilities have been installed.

#### Phase 3

The construction of houses are complete except for custom units 79 & 80 and the clubhouse. Bituminous concrete binder course of pavement has been installed. Most of the concrete sidewalks have been installed. Landscaping needs to be installed. All utilities have been installed.

#### Phase 4

The development of the age restricted community continues in phase 4 of the project. Drainage improvements, utilities and the binder course of pavement have been installed. Houses are being constructed, as of the beginning of December, 2019, eleven (11) units are either constructed or under construction.

#### Phase 5

The development of this phase shall consist of the construction of townhouse buildings, installation of storm drainage, utilities and bituminous concrete access drives. Approximately 4.4 acres of tree clearing will be required prior to construction. An areas of approximately 2.8 acres, where the proposed townhouses, access drives, utilities and storm drainage will be constructed requires blasting.

#### Percent of Units with C/O's per Phase

Phase 1A-11 of 11 units (100%)

Phase 1- 25 of 27 units (93%)

Phase 2- 17 of 17 units (100%)

Phase 3-24 of 26 units (92%)

Phase 4- Under construction with a total of 25 units.

Phase 5- Proposed construction of 57 townhouse type units.

The project has been designed to be consistent with the town's plan of land use which is permitted in the current zoning district.

Existing utilities with suitable capacity provide service to the project.

The project has been designed to minimize impact on the inland wetlands and other site features. The unit site layout, road network, site grading & amenities are accessible from area roads, provide needed age restricted housing and have no significant impact on the surrounding area.

February 11, 2021

(Updated February 16, 2021 – Fire Marshal; Building Official; Inlsnad Wetlands; Health District)

# TOWN OF BERLIN PLANNING & ZONING DEPARTMENT - STAFF COMMENTS

APPLICATION:

Site Plan Amendment

APPLICANT:

Estates of Berlin LLC

LOCATION:

Map 11-2, Block 133 Lot 41,107 Beckley Road

**AGENDA:** 

March 4, 2021

#### To the Applicant:

• These are the comments received to date, additional comments may be forthcoming. Please submit any written response to Maureen Giusti, Acting Town Planner/Zoning Enforcement Officer at <a href="mailto:mgiusti@town.berlin.ct.us">mgiusti@town.berlin.ct.us</a> or revised plans directly to the Planning & Zoning Department in Room 121. We will forward your comments or distribute materials to the relevant department.

#### **Board of Police Commissioners**

See Chief Klett's comments

#### Police Chief

See Attached

#### Fire Marshal

No comment

#### **Building Official**

No comment

#### Inland Wetlands

Revised site plan approved by IWWCC 11/10/2020

#### Health District

No comment

Emailed to J. Resplar – February 16, 2021



#### Chief John M. Klett

# Berlin Police Department

240 KENSINGTON ROAD BERLIN, CONN. 06037-2647 Phone (860) 828-7080 Fax (860) 828-7590 policechief@berlinpd.org



February 5, 2021

To:

Planning and Zoning Department

From:

Chief John M. Klett

Subject:

Beckley Farms Project

I have reviewed the application for the proposed site plan amendment for the Beckley Farms Development (phase 5A and 5B, Condominium Project).

The Mattabassett Rifle and Pistol Club and the Berlin Police Firing range are located immediately east of the proposed site. The Town of Berlin owns this property and the Mattabassett R&P Club maintains the range facility. The Police Department has priority of this facility for training. This has been an active firing range for over fifty years and the R&P Club has invested considerable funds in updating and maintaining the facility. They currently have a 30-year lease agreement with the Town to maintain this relationship.

The developer must be required to note on the land records or property deed that there is an active firing range located immediately east of the proposed development. Buyers must be made aware of this to avoid future complaints regarding noise from this firing range.

This range is the only firearms training area available to this department as well as several other neighboring departments that use it for their required firearms training.

Chief John M. Klett



# **Engineering Summary Report**

For The

# **Beckley Farms Redesign**

located on Beckley Road Berlin, CT

Submittal to the: Town of Berlin, CT

Submitted: May 20, 2011

Revised July 2, 2020

Prepared By:



LAND PLANNING ~ CIVIL ENGINEERING~ ENVIRONMENTAL SERVICES

160 WEST STREET, SUITE E CROMWELL, CONNECTICUT 06416

PHONE 860-635-2877 FAX 860-635-4226

Town of Berlin Received

JAN 27 2021

Planning & Zoning Department Berlin, Connecticut

# Beckley Farms Redesign – Engineering Summary Report

# **Table of Contents**

Topic	Page
Introduction	2
<b>Existing Site Conditions</b>	2
Proposed Improvements	3
Site Drainage Design	3
Method of Analysis	3
Runoff Summary	4
<b>Temporary Sediment Trap Calculations</b>	4, 5
Runoff Quality & BMP Performance	5, 6
Conclusions	6
Appendix A – Storm System Design Deta 1) Outlet Protection Design 2) Pipe Sizing Calculations 3) Stormceptor Sizing Calc	Data
Appendix B – Post Construction Inspecti	on & Maintenance
Appendix C – Pre & Post Developed Hydrony 1) 25-Year Storm Runoff Da 2) Pre and Post Developed	ata

Appendix D – Temporary Diversion Design – Sediment Trap Lining Calculations

#### Introduction

Beckley Farms is an Age-restricted housing development that was approved in 2006 for the development of a 90.688 parcel of land now or formerly of Quarry Associates, Susan B. Gaffney and Guy T. Gaffney, Trustees, Cary Dobkin and Lee Dobkin, Trustees and the Town of Berlin located on Beckley Road, Wethersfield Road and Beckley Mills Road entitled "Active Adult Residential Community Beckley Road Town of Berlin, Connecticut" Dated 8/6/04 and revised through 5/10/07. The project was to be developed in 5 phases. House construction, roads and utility installation is complete for a majority of phases 1 and 2 with many of the houses occupied. Also, a piece of land on the eastern portion of the property containing 31.99 acres has been deeded to the Town of Berlin for open space.

Construction was started in 2006, but due to the economy the project stalled, the developer halted construction and eventually lost the property to bankruptcy. A new group of developers has purchased the property and are actively working on finalizing existing construction in phases 1 and 2 and are preparing to begin construction on additional phases.

This summary report has been prepared to review the site engineering and storm water drainage design for the redesign of phases 3, 4 & 5 of the above referenced parcel. The plans entitled "Beckley Farms Redesign" reflect our new design of the project.

#### **Existing Site Conditions**

The site subject to this design is phases 3, 4 & 5 of the aforementioned property and contains 34.55 acres of land. Some minor clearing and stockpiling of surplus material has been conducted on the land. The balance of the property is undisturbed and consists of existing woodland and areas on inland wetlands.

The following is a list of the existing soil types that were referenced from the United States Department of Agriculture Natural Resources Conservation Service Web Soil Survey National Cooperative Soil Survey. The Map Unit Symbol followed by the Map Unit Name and description is provided. 6 – Wilbraham and Menlo soils, extremely stony is Soil Group D. 9 – Scitico, Shaker and Maybid soils is Soil Group D. 78E – Holyoke-Rock outcrop complex, 3 to 15 percent slopes, very rocky is Soil Group D. 87B – Wethersfield loam, 3 to 8 percent slopes is Soil Group C. 87C – Wethersfield loam, 8 to 15 percent slopes is Soil Group C. 87D – Wethersfield loam, 15 to 25 percent slopes is Soil Group C. 88B – Wethersfield Loam, 3 to 8 percent slopes, very stony is Soil Group C. 89D – Wethersfield loam, 15 to 35 percent slopes, extremely stony is Soil Group C. The Wethersfield soil type covers a majority of the existing site.

The existing runoff leaving the site has been analyzed at five locations called Outlet Points, which are the points where Pre and Post Developed runoff values are compared. There are several

ridge lines that define the flow direction. The surface water flows from the ridge lines to area of existing wetlands in the southern, northern and eastern portions of the property. See the Pre Developed Drainage Area Maps located in Appendix B for more detail.

#### **Proposed Improvements**

The proposed project consists of the construction of single family and multifamily buildings, bituminous concrete access roads and parking areas, utility installation, storm drainage systems, a sanitary sewer system with pump station, landscaping and signage. Since the project disturbs greater than 10 acres, it will require a General Permit Application and Report to be filed with the Department of Environmental Protection (CTDEP).

As part of the construction of phase 2 some storm drainage structures and piping have been installed and are incorporated where possible in our redesign of phase 3. These structures include catch basins, manholes and a Vortechs model 9000 stormwater treatment unit. Calculations are enclosed to show that the previously approved Vortechs unit can treat peak design flows of 14 cfs. Bypass manholes were also installed to accommodate flows above the 10 year storm. The proposed peak flow for a 10 year storm is 12.2 cfs. Detention basin #4 east and #4 west are design to include the previously approved development of phase 2 and the future development of phase 3.

#### Site Drainage Design

The proposed development will change the existing groundcover from woods to grass and impervious surfaces which affects the runoff from the project area. The increase in runoff will be detained on-site using stormwater detention basins and outlet structures to attenuate the flows and mimic pre-developed conditions. Stormceptor Water quality units will be installed at discharge locations of the drainage system prior to entering the detention basins to provide at least 80% removal of the Total Suspended Solids (TSS). The stormwater runoff system is designed to accommodate runoff from a twenty-five (25) year storm without overtopping any of the structures.

An underground chamber system is proposed to replace the previously approved detention basin in Phase 5. The chamber system includes an isolator row which collects debris and allows sediment to settle out prior to discharge. The remainder of the stormwater management system (catch basins, detention basins and piping remain unchanged). The underground chamber system provides the a slight increase in stormwater detention compared to the excavated detention basin. The stormwater detention basins are designed as extended basins, which mean that the "Water Quality Volume" will be held and released slowly over a 24-hour period. The stormwater basins have been designed with oversized forbays and extra long travel paths much greater than the 2:1 length to width ratio required by the CTDEP. During construction the extended detention basins will act as Temporary Sediment Traps or sediment traps will be constructed in areas where a detention basin is not proposed. Calculations adhere to the 2002 Connecticut Erosion and Sediment Control Guidelines for capacity.

#### Method of Analysis

The HydroCAD Stormwater Modeling System computer program by Applied Microcomputer Systems was used to analyze and design the storm sewer system. HydroCAD uses the TR-55 curve number method to estimate the quantity and peak rates of runoff produced by each subcatchment; the resulting flows are routed through the different storm system elements to the system's Outlet Points, typically where the stormwater flows leave the subject property. Storm events were analyzed with Type III, 24-hour rainfall values and curve number/cover types as selected from the SCS TR-55 Manual. Also, the minimum of Time of Concentration used was 0.10 hours (6 Minutes) as selected from the SCS TR-55 Manual, Urban Hydrology for Small Watersheds. Runoff rates chosen from the 2004 Connecticut Stormwater Quality Manual for Middlesex County are listed below:

#### **Design Rainfall Amounts:**

25 year 5.50 in

#### **Detailed Runoff Summary**

#### Flow Rate Attenuation - 25 Year Storm

Design Point #1

Pre Developed = 7.94 cfs

Post Developed = 6.94 cfs

Design Point #2

Pre Developed = 9.32 cfs

Post Developed = 7.44 cfs

Design Point #3

Pre Developed = 10.74 cfs

Post Developed = 8.83 cfs

Design Point #4

Pre Developed = 2.85 cfs

Post Developed = 0.43 cfs

Design Point #5

Pre Developed = 19.89 cfs

Post Developed = 19.05 cfs

Total Pre Developed = 50.74 cfs

Total Post Developed = 42.69 cfs

Values listed above are in cubic feet per second.

#### **Temporary Sediment Trap Calculations**

Temporary sediment trap shall have a storage volume of 134 cubic yards per acre of contributing drainage area. The proposed detention areas shall serve this function.

#### Temporary Sediment Traps - Phase 5

Required Volume - 914 cubic yards

Provided Volume - 1,164 cubic yards

#### Runoff Quality & BMP Performance

Practice Used:	Effective Use	Performance Effectiveness
Water Quality Unit; Oversized Forbays;	Preliminary Water Quality Treatment of runoff from the parking area and access drive	Pretreatment - 20% TSS removal; Extended Travel Time; Vegetated with species appropriate for nutrient uptake in wet or dry conditions. Units remove oil and grit from parking area runoff.
Extended Stormwater Detention with 2:1 or Greater Travel Time	Peak Flow control; First Flush Infiltration; Sediment Filtering;	Primary- 80% TSS removal, Extended Detention Time =>100% WQV

Calculated TSS removal for impacted site lands using practices above: The area of the proposed roads and parking were analyzed for TSS removal.

<u>Impervious road and parking areas contributing To Detention Basin #1:</u> Stormceptor 2400 – 82 %

<u>Impervious road and parking areas contributing To Detention Basin #2:</u> Stormceptor 4800 – 83 %

<u>Impervious road and parking areas contributing To Detention Basin #3:</u> Stormceptor 2400 – 81 %

<u>Impervious road and parking areas contributing To Detention Basin #5:</u> Stormceptor 2400 – 80 %

Total Site TSS Removal → 82%

#### Conclusions

This summary report demonstrates that all design criteria set forth by the State of Connecticut and Town of Berlin have been met or exceeded, and all design and mitigation measures have been derived from standard practices and procedures as directed by the Connecticut DEP and DOT design manuals. In conclusion, the proposed project will satisfy all design requirements as have been stipulated by the Town, State and Federal regulations that may apply.

Town of Berlin Received

JAN 27 2021

Planning 6 7 oning Department



#### **TOWN OF BERLIN**

Inland Wetlands and

Water Courses Commission

240 Kensington Road • Berlin, CT 06037 Office (860) 828-7022 • Fax (860) 828-7180

CERTIFED MAIL: 7012 1010 0002 6991 6089

Mr. Nicholas Morizio- Colliers International 550-554 Berlin Turnpike Associates, LLC 864 Wethersfield Avenue Hartford, CT 06114

January 8, 2021

Re: Application 20-07WF

Dear Mr. Morizio:

Please be advised that during its meeting of January 5, 2021, the Town of Berlin Inland Wetland and Water Courses Commission voted unanimously to approve the above referenced application. This approval was granted contingent upon the following;

- 1. That *all* erosion and sedimentation control devices be installed to the satisfaction of the Wetlands Agent prior to the commencement of construction.
- 2. That all other construction-related activities be installed in accordance with the plan entitled "Proposed Multi-Family Development, Parcel# 10-2-83-13, 522 Berlin Turnpike, Berlin, CT, Prepared for 550-554 Berlin Turnpike Assoc., LLC, designed by Harry E. Cole & Son, Plantsville, CT, Dated June 23, 2020, revised June 23, 2020 (Sheet M2 revised December 18, 2020".

Please be advised that this permit will become effective on January 23, 2021 following a successful completion of the Fifteen (15) day appeal period commencing on January 9, 2021.

You are hereby further advised that failure to demonstrate activity in relation to this application within a five (5) year period (January 23, 2026) may necessitate further Commission action.

Attached is a copy of the legal notice, which appeared on the Town of Berlin website (according to COVID-19 guidelines), beginning January 8, 2021.

If you should have any further questions regarding this matter, please do not hesitate to call me at (860) 828-7069.

Sincerely,

James P. Horbal

Agent for the Inland Wetlands Commissions

P Horles 1/48

Attachment

cc: Peter Nieman, IWWCC Chairman Maureen Giusti, Acting Town Planner

(C)



#### **TOWN OF BERLIN**

Inland Wetlands

and

#### Watercourses Commission

240 Kensington Road • Berlin, CT 06037 Office (860) 828-7069 • Fax (860) 828-7180

#### LEGAL NOTICE

## **NOTICE OF ACTION**

During its meeting of January 5, 2021, the Town of Berlin Inland Wetland and Water Courses Commission took the following actions:

**Application 20-07WF**- Proposal by 550-554 Berlin Turnpike Associates, LLC, to construct a Multi-Family Development and associated appurtenances within an upland review area, floodway and floodplain on Lot 13, Block 83, #522 Berlin Turnpike. Approved with Standard Conditions.

**Application 20-11WF** - Proposal by the Berlin Water Control Commission (BWCC) to reconstruct the Deming Road Sanitary Sewer Pump Station within both an Upland Review Area and Flood Hazard Zone on Lot 3A, Block 127, Deming Road. Approved with Standard Conditions.

**Application 20-06W** - Proposal by 833 Deming Road, LLC and Berlin Remnant Land Parcels, LLC to construct a Multi-Family Development and Associated Appurtences within an upland review area on Lot 11-1, 11-2 and 10, Block 122 Deming Road. Approved Permit Modification.

Effective date will be January 23, 2021.

Peter Nieman, Chairman Inland Wetlands and Watercourses Commission



#### **TOWN OF BERLIN**

Inland Wetlands and

## Watercourses Commission

240 Kensington Road • Berlin, CT 06037 Office (860) 828-7069 • Fax (860) 828-7180

#### LEGAL NOTICE

## NOTICE OF ACTION

During its meeting of January 5, 2021, the Town of Berlin Inland Wetland and Water Courses Commission took the following actions:

**Application 20-07WF**- Proposal by 550-554 Berlin Turnpike Associates, LLC, to construct a Multi-Family Development and associated appurtenances within an upland review area, floodway and floodplain on Lot 13, Block 83, #522 Berlin Turnpike. Approved with Standard Conditions.

**Application 20-11WF** - Proposal by the Berlin Water Control Commission (BWCC) to reconstruct the Deming Road Sanitary Sewer Pump Station within both an Upland Review Area and Flood Hazard Zone on Lot 3A, Block 127, Deming Road. Approved with Standard Conditions.

**Application 20-06W** - Proposal by 833 Deming Road, LLC and Berlin Remnant Land Parcels, LLC to construct a Multi-Family Development and Associated Appurtences within an upland review area on Lot 11-1, 11-2 and 10, Block 122 Deming Road. Approved Permit Modification.

Effective date will be January 23, 2021.

Peter Nieman, Chairman Inland Wetlands and Watercourses Commission



# LOCATION MAP

SCALE: 1"=1000'

# OWNER/APPLICANT

ESTATES OF BERLIN, LLC 833 GLEN DRIVE WOODMERE, NY 11598



Land Planning ~ Civil Engineering Land Surveying ~ Environmental Services Landscape Architecture

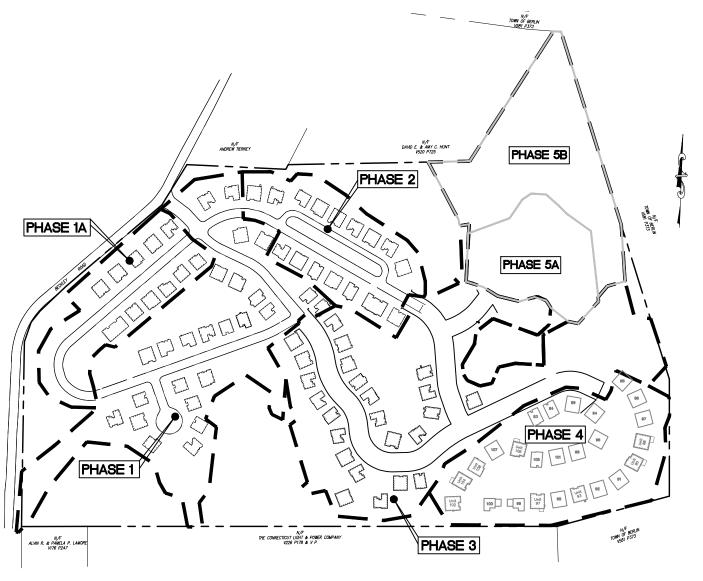
LRC Engineering & Surveying, D.P.C. LRC Engineering and Surveying, LLC LRC Environmental Services, Inc. Land Resource Consultants, Inc.

160 West Street, Suite "E" Cromwell, CT 06416 Tel 860-635-2877 Fax 860-635-4266 85 Civic Center Plaza, Suite 103 Poughkeepsie, NY 12601 Tel 845-243-2880 Fax 845-265-8175

# BECKLEY FARMS DEVELOPMENT

# AN AGED RESTRICTED COMMUNITY BECKLEY ROAD BERLIN, CONNECTICUT

# SITE PLAN AMENDMENT APPLICATION



# OVERALL SITE PLAN

SCALE: 1"=200'

DATE: FEBRUARY 22, 2018
REVISION DATE: JULY 2, 2020



VICINITY MAP





# INDEX OF DRAWINGS

EX-1 & EX-2 EXISTING CONDITIONS PLAN

SP-1 SITE PLAN

GD-1 GRADING AND DRAINAGE PLAN

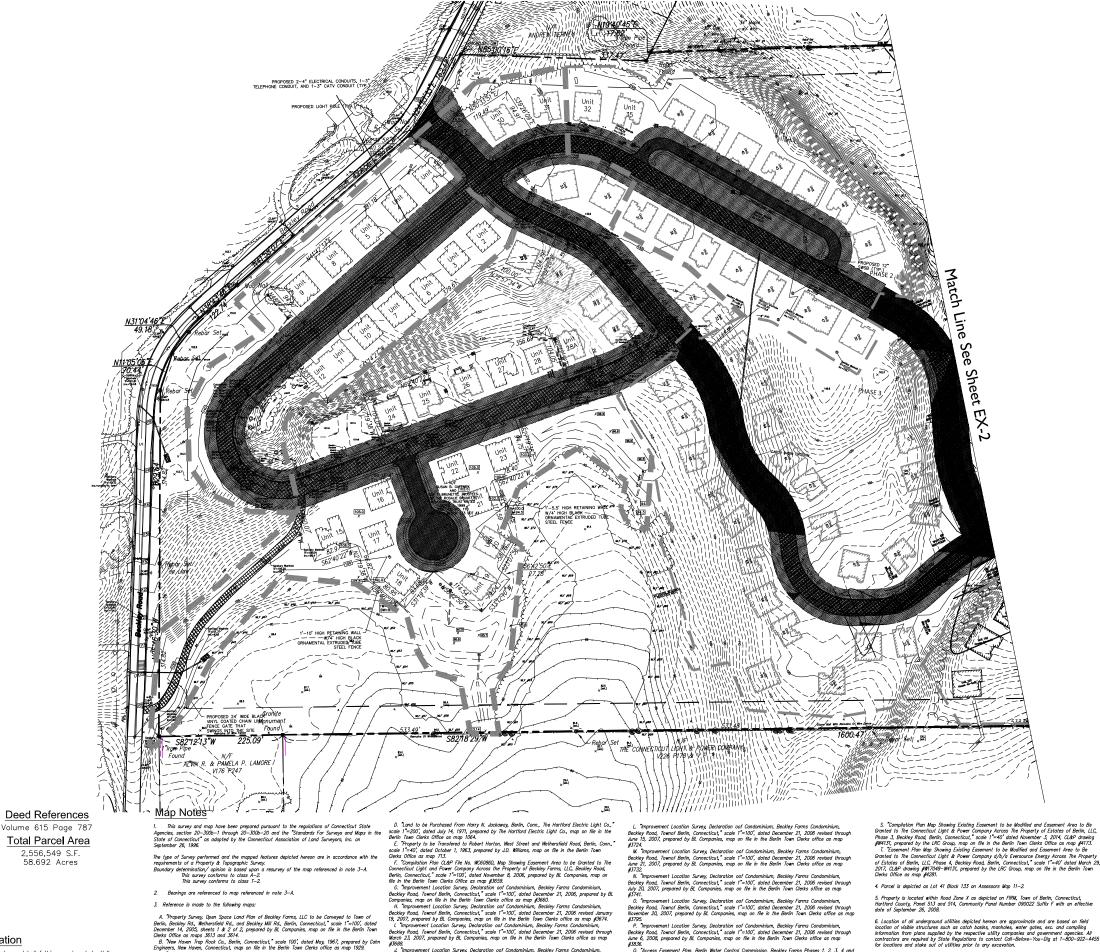
UT-1 UTILITY PLAN

EC-1 EROSION AND SEDIMENT CONTROL PLAN - PHASE 5

EC-2 EROSION AND SEDIMENT CONTROL PLAN - PHASE 4

DN-1 to DN-7 DETAIL SHEET

OSP-1 OVERALL SITE PLAN



Vicinity Map

#### Legend

Property Line Existing Spot Grade Concrete Monument Found Angle Point Drill Hole Deciduous Tree Sanitary Sewer  $\stackrel{\wedge}{\approx}$ Gas Main  $\odot$ Shrub Telephone Line • Fence Post Utility Pole Lamp Post Water Gate Span Pole Gas Gate  $\rightleftharpoons$ Drainage Manhole Sanitary Manhole Flectric Manhale Ħ ● WF-6 Wetland Flag **#** Yard Drain Index Contour \_\_200\_\_\_ \_202-Curbless Catch Basin Catch Basin Stone Wall Wire Fence \_\_\_\_\_ Guide Rail Limit of Wetlands Limit of Easement Granted to The Connecticut Light & Power Company more formerly Eversource Energy recorded in Volume 580 page 802, dated December 13, 2006 Modified in Volume 707 page 171, dated Journy 22, 2015 and again in Volun 738 page 539, dated July 7, 2017. GRAPHIC SCALE

( IN FEET ) 1 inch = 80 ft.

#### **EXISTING CONDITIONS**

JIRC

#### PROPERTY & TOPOGRAPHIC **SURVEY**

**BECKLEY FARMS DEVELOPMENT** AN AGE RESTRICTED COMMUNITY

BECKLEY ROAD TOWN OF BERLIN STATE OF CONNECTICUT

EX-I

11-1173 8/16/19

To my knowledge and belief this map is substantially correct as noted hereon.

2,556,549 S.F.

58.692 Acres

A Property Survey, One Space Land Plan of Beckley Farms, LLC to be Conveyed to Town of Berlin, Beckley Pd., Wethersfield Rid., and Beckley Mil Rid. Berlin, Connecticut, "scale 1"-10", dated December 14, 2005, sentes 1.4 e. 2 of 2 prepared by BL Componies, map on file in the Berlin Town Clerks Office as maps 3613 and 3614.

B. Yeer Hoven Trip Rock Co., Berlin, Connecticut," scale 100°, dated May, 1967, prepared by Cohn Enginees, New Hoven, Connecticut, map on file in the Berlin Town Clerks Office as map 1829.

C. Map of Properties of Clostor 4 Annie Bodard, Neel St. 48. Wetherfield Rid, Berlin, Connecticut, Showing Conveyabce June 1950 to May 1959' scale 1"=100°, dated Octaber 1, 1963, revised Octaber, Nowling Conveyabce June 1950 to May 1959' scale 1"=100°, dated Octaber 1, 1963, revised Octaber, Nowling Conveyabce June 1950 to May 1959' scale 1"=100°, dated Octaber 1, 1963, revised Octaber, Nowling Conveyabce Williams, map on file in the Berlin Town Clerks Office as map 112.

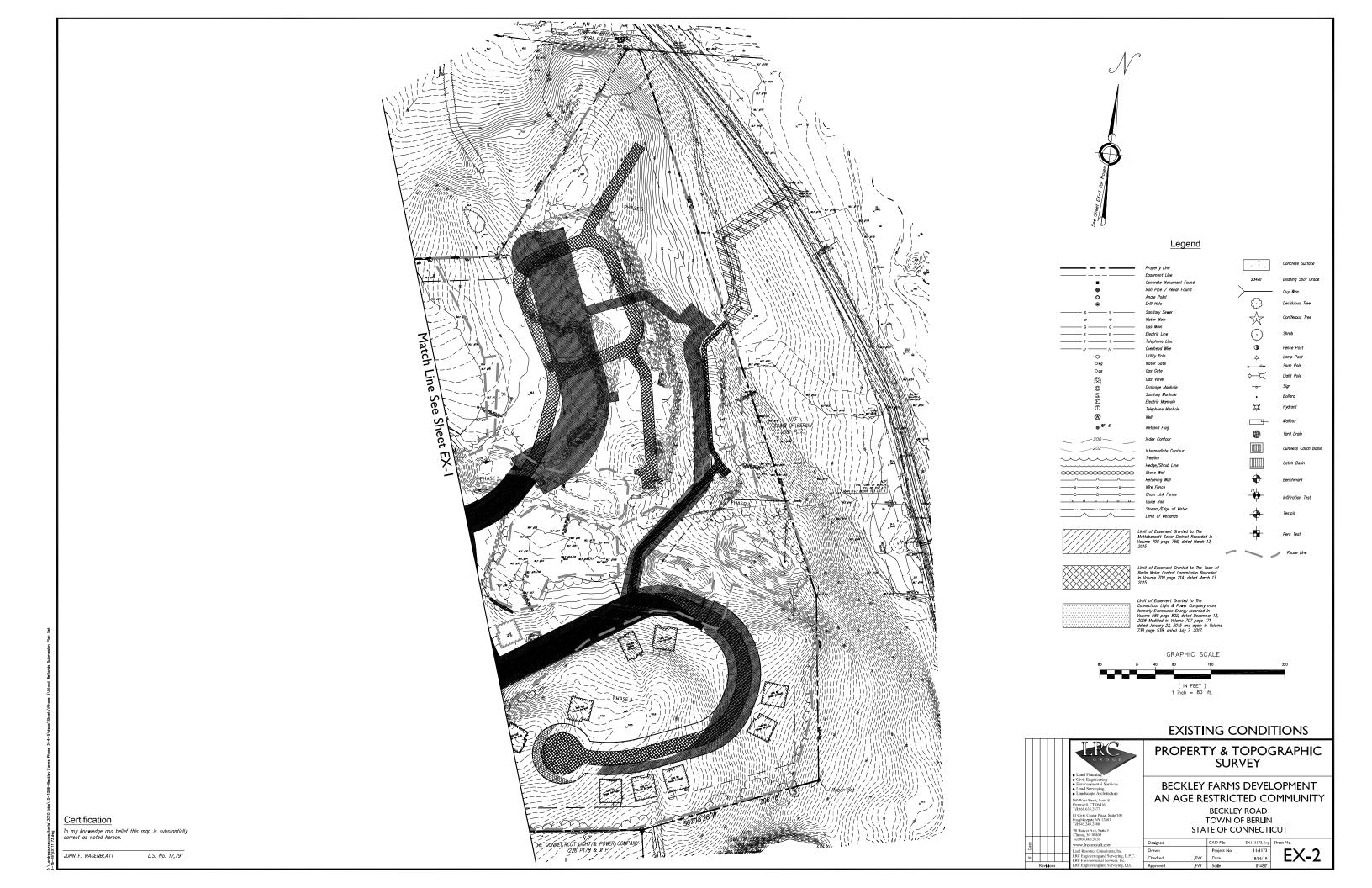
D. Land to be Purchased From Harry N. Jockaway, Berlin, Conn., The Hortford Electric Light Co., map on file in the Berlin Town Clerks Office as map 1064.

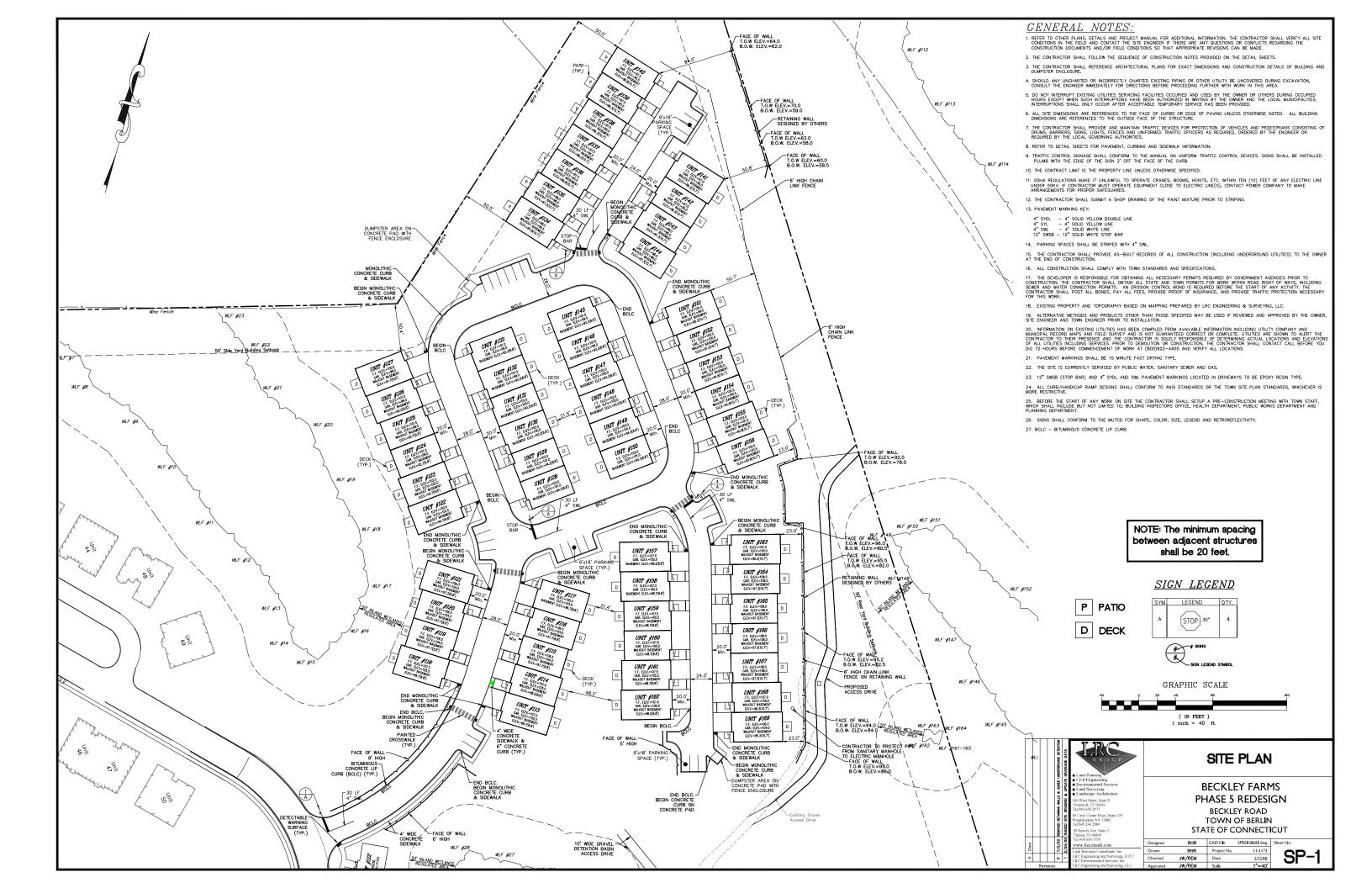
ATTENDED TO THE CONTROL OF THE CONTR

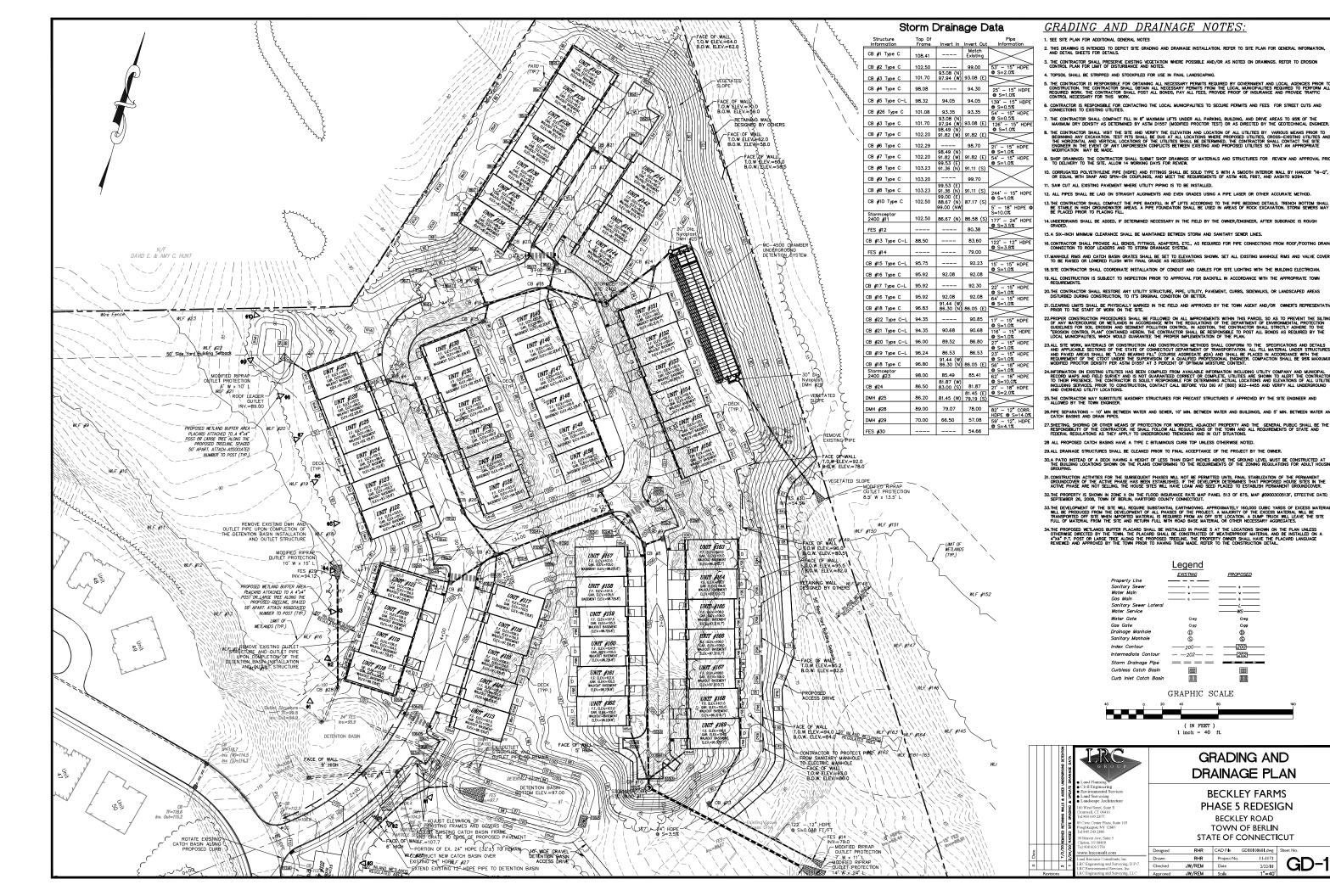
the LRC Group.

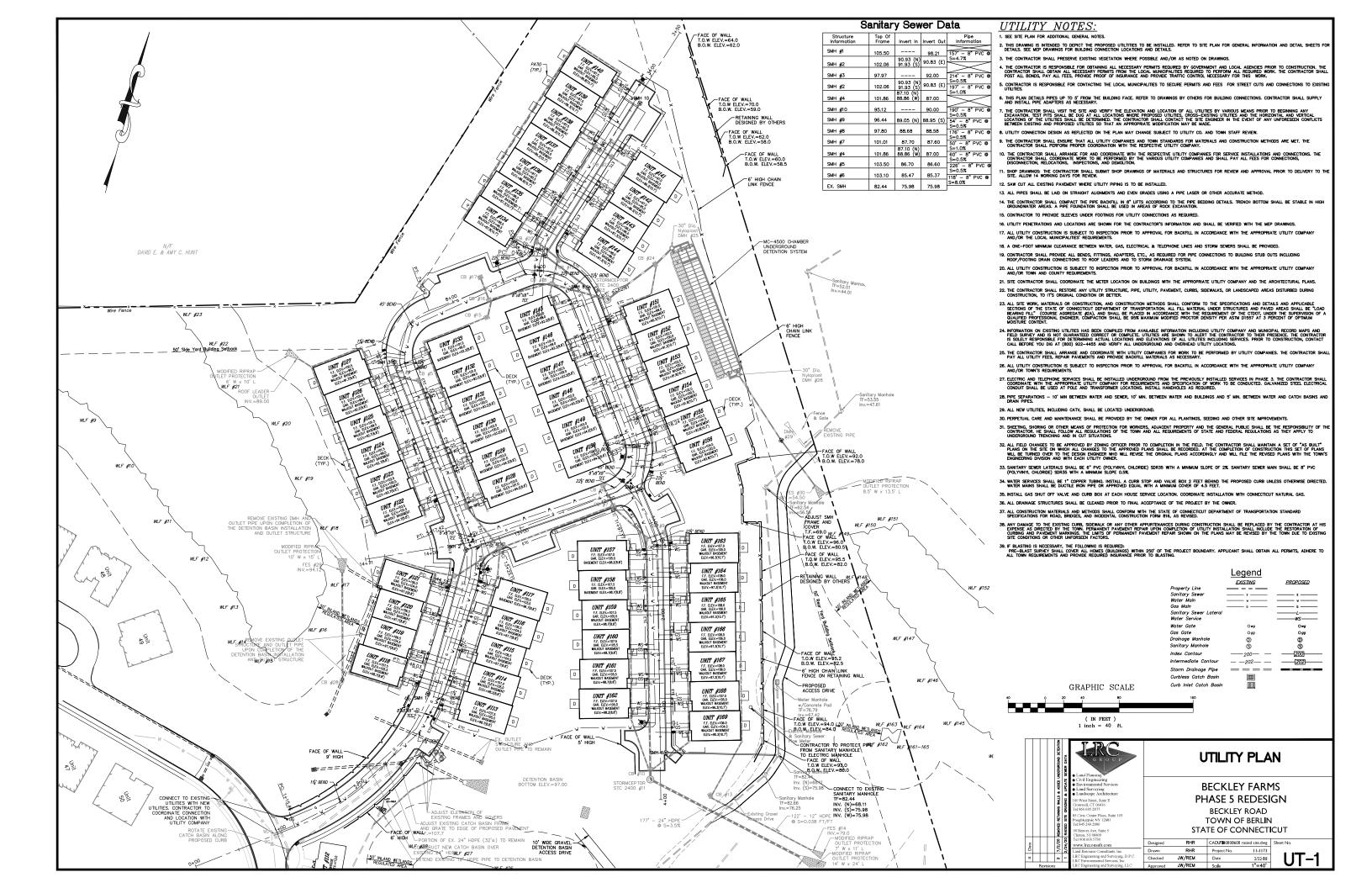
R. \*Access Easement Plan, Mattabassett Sewer District, Beckley Forms Phases 1, 2, 3, 4 and 5, Beckley Road, Town of Berlin, Connecticut, "scale 1"=80", dated December 8, 2014, prepared by the LRC Group, map on file in the Berlin Town Clerks Office as map \$4241.

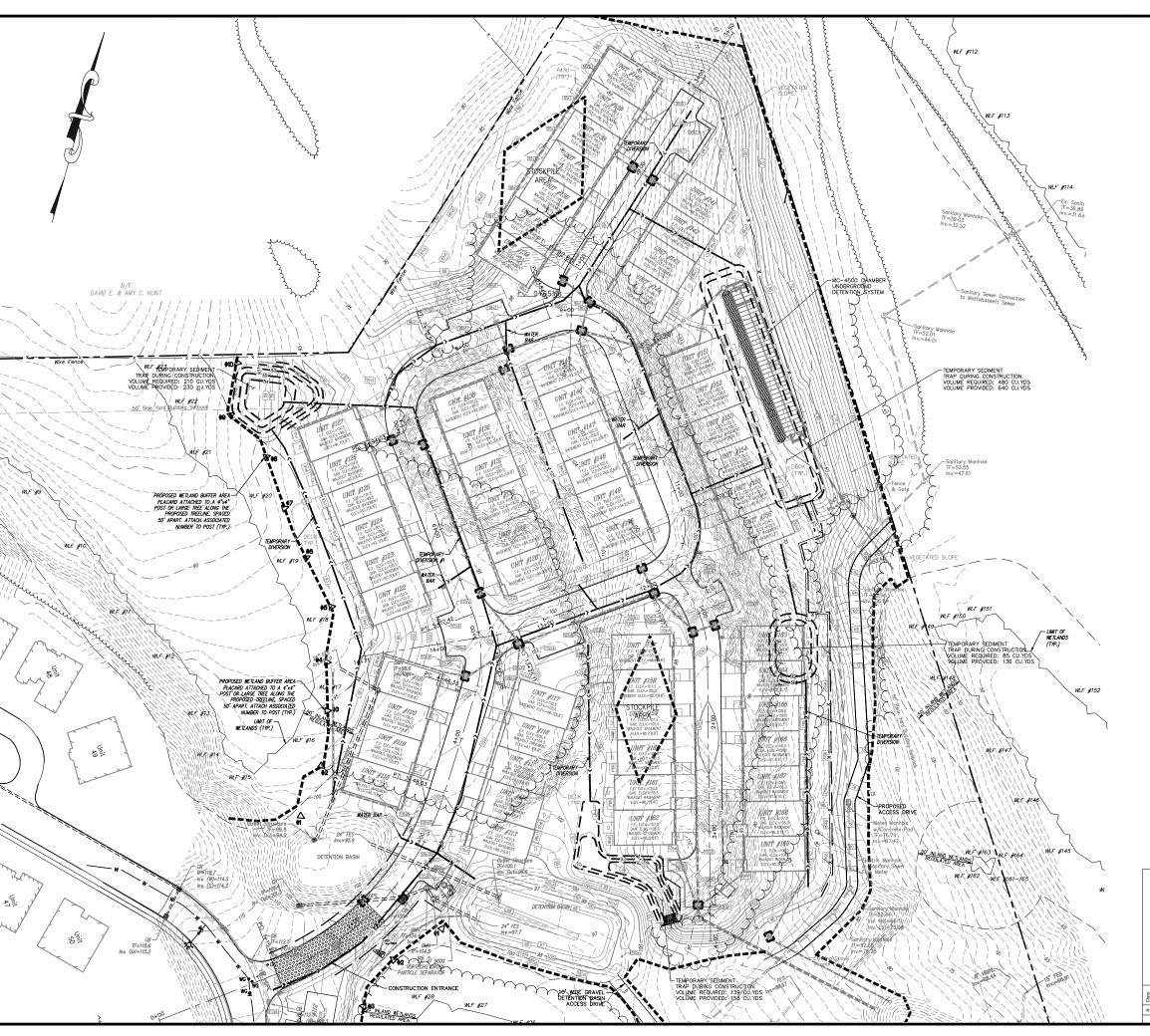
6. Location of all underground utilities depicted hereon are approximate and are based on field location of visible structures such as cotch basis, manholes, water gates, exc. and compiliar information from plans supplied by the respective fully componies and government agencies. All contractors are required by State Regulations to contact Call-Before—You-Dig at 1-800-922-4455 for locations and stake out of utilities prior to any excrevation.











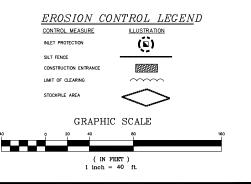
#### EROSION CONTROL NOTES:

- At any particular time, land disturbance shall be kept to a minimum. Restabilization shall be scheduled as soon as possible, do not wait for building construction to be completed for stabilization of grass and pave areas to proceed.
- 2. IF PERMANENT SLOPES CAN NOT BE COMPLETED IMMEDIATELY UPON THEIR PLACEMENT, TEMPORARY MULCH OR GRASS COVER SHALL BE ESTABLISHED. SILT FENCE AND/OR HAY BALE BERMS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AT THE LOCATIONS SHOWN ON THE PLANS, AND STAKED IN PLACE. ALL SUCH PROTECTIVE MEASURES SHALL BE IN PLACE PRIOR TO ANY CUTTING OR FILLING PROCEEDS.
- CATCH BASINS SHALL BE PROTECTED WITH SILT FENCE, HAY BALES OR SILT SACKS THROUGHOUT THE CONSTRUCTION PERIOD THE STRUCTURES SHALL BE ENCIRCLED COMPLETELY AT LOW POINTS.
- 5. ALL CONTROL MEASURES SHALL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD AND UNT ALL DISTURBED AREAS ARE STABILIZED WITH EITHER PAYEMENT, GRASS OR APPROVED GROUND COVER. CONTROL MEASURES SHALL BE CHECKED BY THE RESPONSIBLE INDIVIDUAL OR HIS DESIGNATED REPRESENTATIVE BEFORE AND AFTER ALL RAIN STORMS AND AFTER EACH WORKING DAY.
- 6. THE SITE CONTRACTOR IS RESPONSIBILE FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN A SITE REPRESENTATIVE FOR DALLY INSPECTIONS, AND SHALL FURNISH THAT NAME TO THE TOWN. THE RI SHALL REST WITH THE PERSON NAMED ABOVE FOR THE INSTALLATION AND MANITEMANCE OF CONTROL ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAT TOWN OF ANY TRANSER OF THE DALLY ON-SITE RESPONSIBILITY. A COPY OF THE PLAN SHALL BE TRAINEW OWNERS IN THE CASE OF TRANSFER OF TITLE. COPIES OF MONITORING REPORTS TO BE SUBMITTED! AND WELL AND SCENT ON A BI-MERKLY BASIS, AFTER MAJOR STORMS AND UPON REQUEST FOR SPECIAL

- 9. ALL DISTURBED AND STOCKPILED MATERIALS SHALL BE SEEDED AS SOON AS POSSIBLE, IN THE CASE OF WINTER CONSTRUCTION, MULCH SHALL BE PLACED AND EROSION CONTROL MEASURES PLACED TO PREVENT WASHOUTS OF THE STOCKPILED MATERIAL THE SAME REQUIREMENTS MAY BE NEEDED FOR CONSTRUCTION DURING OTHER SEASONS AS DIRECTL BY THE TOWN AND THE ENGINEER. IF IN THE OPINION OF THE TOWN, HAY BALES SHOULD BE USED INSTEAD OF SILT FENCE SUCH SUBSTITUTION SHALL BE MADE AT THE LOCATIONS REQUISTED. FOR ANY AREAS WHERE SILT FENCE IS DIFFICULT TO MAINTAIN DUE TO WATER FLOW OR OTHER REASON, THE FENCE SHALL BE BACKED UP WITH HAY BALES STAKED INTO PLACE.

- 15. INSTALL TEMPORARY DIVERSION SWALES IN THE LOCATIONS SHOWN ON THE DRAWINGS AND IN OTHER NECESSARY LOCATIONS.

- 18. INSTALL EROSION CONTROL BLANKET ON 3:1 SLOPES OR GREATER. SEE DETAIL SHEET.
- SITE CONTRACTOR TO COORDINATE THE ROOF LEADER DRAINS AND FOOTING DRAINS WITH ARCHITECTURAL PLANS. INSTALL ROOF LEADER/FOUNDATION DRAIN OUTLET SPLASH PAD AT OUTLETS UNLESS OTHERWISE PIPED TO DRAINAGE SYSTEM.
- 20. THE TREELINE SHOWN ON THE PLANS IS THE LIMIT OF CLEARING AND DISTURBANCE.
- 21. INSTALL DOUBLE ROW OF SILT FENCE AROUND ALL STOCKPILE AREAS.
- 22. A BOND MAY BE REQUIRED FOR THE EROSION CONTROL MAINTENANCE AND INSTALLATION. CONTRACTOR SHALL VERIFY WITH THE TOWN OF BERLIN.
- 23. A CONSTRUCTION ENTRANCE SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION AND SHALL BE MAINATINED DURING ALL EXCAVATION AND CONSTRUCTION ACTIVITIES.
- 24. MINIMIZE LAND DISTURBANCE, SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICAL (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS/ACRE. MULCH ALL CUT AND FILL SLOPES AND SMALES WITH LOSSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY REPLACE LOSSE HAY ON SLOPES WITH EROSIOI CONTROL BLAKKET OR JUTE CLOTH.
- 25. BUILDING FOUNDATIONS WILL REQUIRE FOUNDATION DRAINS THAT EITHER CONNECT TO THE DRAINAGE SYSTEM OR DAYLIGHT TO PROPOSED GRADES. INSTALL APPROPRIATE OUTLET PROTECTION.
- 26. CONSTRUCTION IN PHASE 5 IS ANTICIPATED TO BEGIN AS SOON AS POSSIBLE (SUMMER 2020).

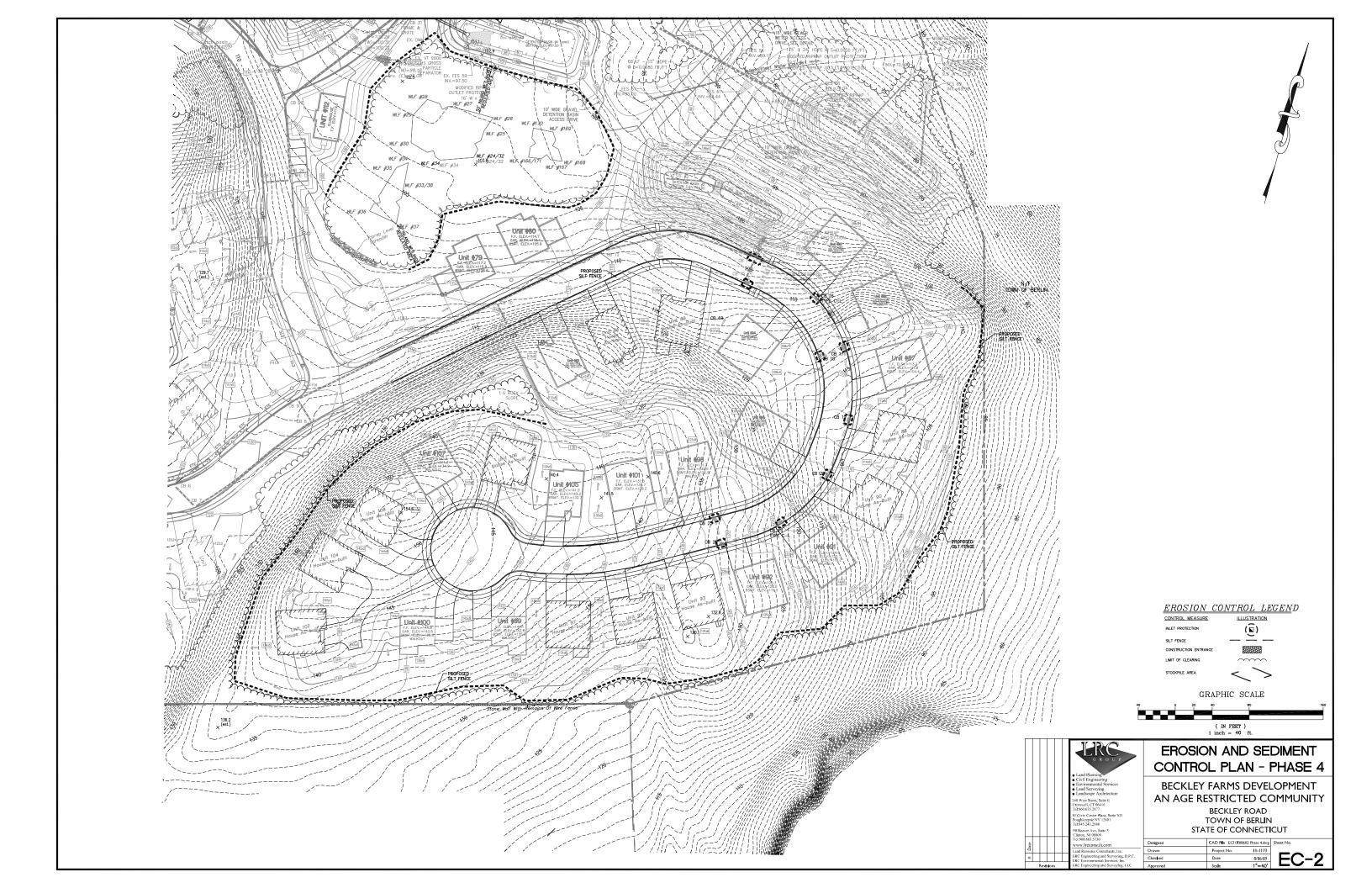


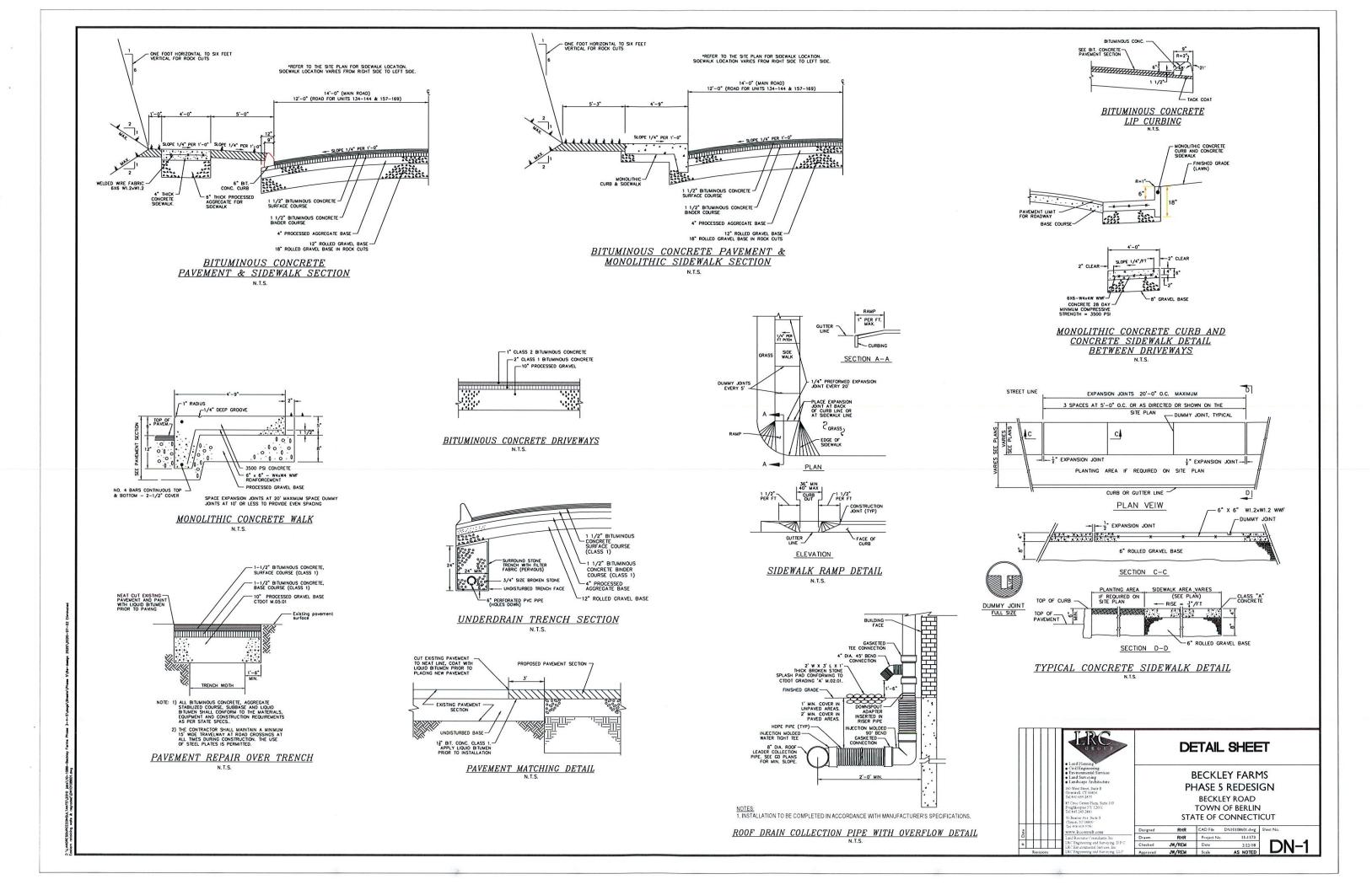
# **EROSION AND SEDIMENT CONTROL PLAN BECKLEY FARMS**

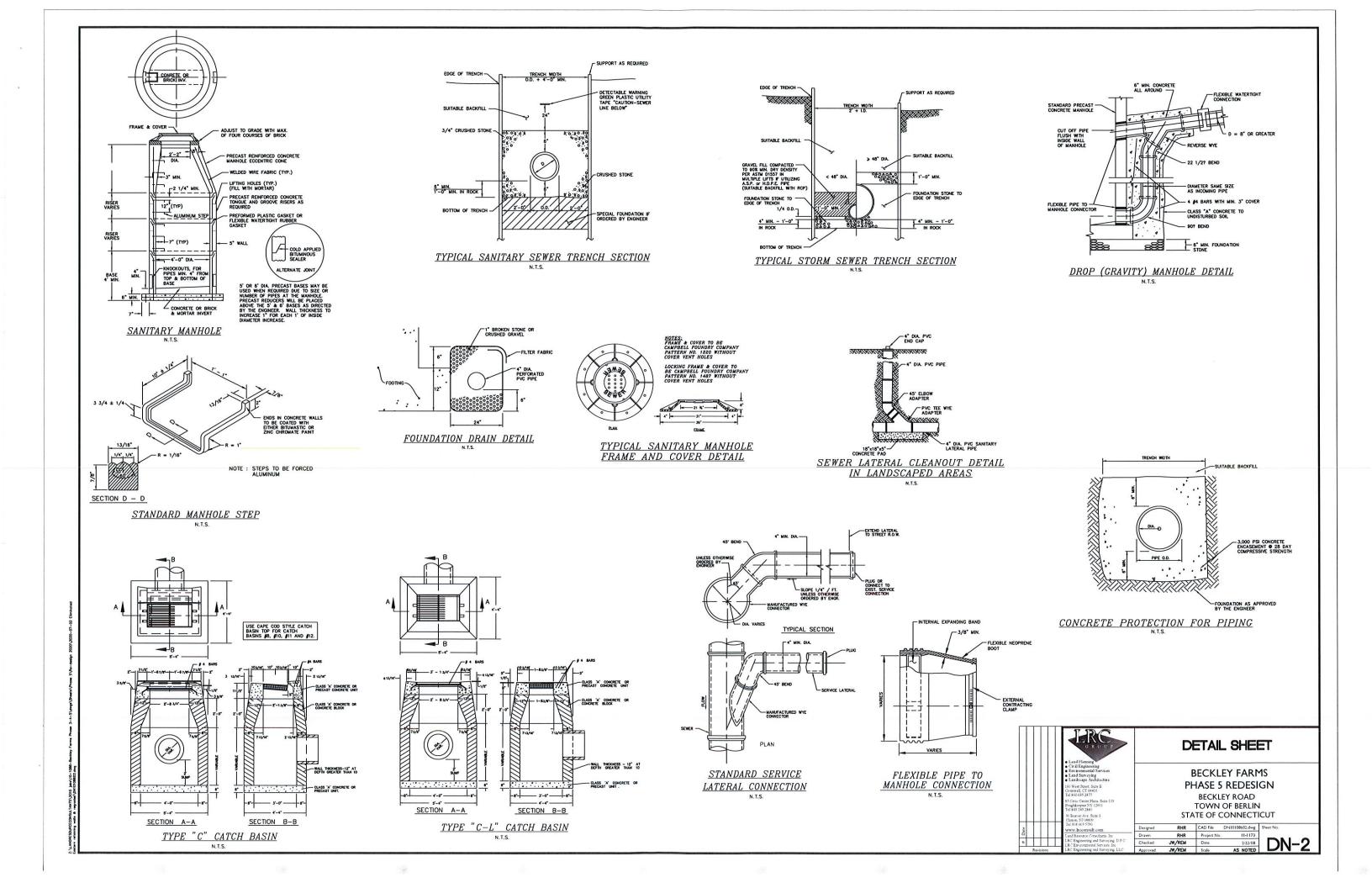
PHASE 5 REDESIGN BECKLEY ROAD TOWN OF BERLIN STATE OF CONNECTICUT

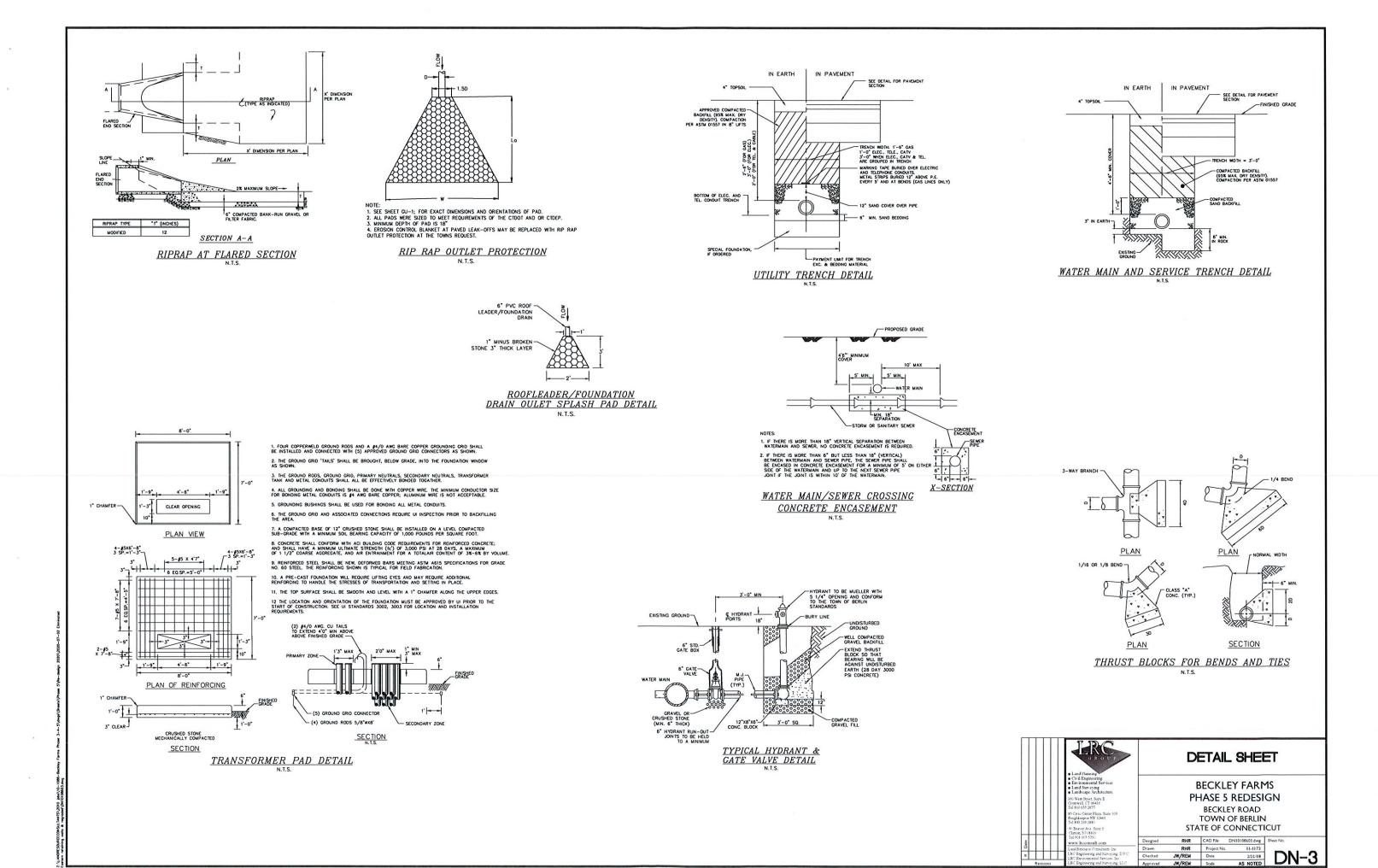
RHR Project No. 11-1173

EC-1









#### 1.0 POST CONSTRUCTION INSPECTION & MAINTENANCE

Post—construction, regularly scheduled inspections and maintenance will be necessary to ensure the permonent structural features such as the stormwater monagement basins, underground detention, water quality units and the conveyance system components remain optimally functional and continue to reduce the risk of sediment loading of surface water bodies.

When construction is complete, the Contractor will remain responsible for the site until the entire site has reached final stabilization. The site is considered stabilized when all soil disturbing activities have been completed and a full uniform, perennial vegetative cover has been established or equivalent stabilization measures such as the use of mulches or geotextiles have been employed an all unpoved aroes and areas not covered by permanent structures. Weekly inspections should continue until the site has reached this point. Additionally, inspections should be performed after every rain event of 0.5 inches or more in 24-hours.

At the time of final stabilization, the Owner's Engineer shall perform a final inspection of the site and certify that the site has successfully undergone final stabilization using either vegetative or structural stabilization methods and that all temporary erasion and sediment controls such as sit fence, not needed for long term use, have been removed. At this point, the Owner is responsible for the

- Submit to the CTDEP a Notice of Termination prepared by the Owners' Engineer. Identify all the permanent stormwater management structures that have been constructed and provide the Land Owner with an Operations and Maintenance (O&M) manual that will be necessary in order for the structures to function properly after the site has been stabilized. Section 1.0 of this report satisfies properly after the site has been stabilized.

  the O&M requirements.
  Transfer the Water Quality and Quantity Report and Stormwater Pollution
  Prevention Control Plan (SWPPP) to the Land Owner.
  Certify that the permanent structures have been constructed as described by
  this plan and the drawings.

The Land Owner shall overtake responsibility of inspecting and maintaining drainage and erosion control features over the lifetime of the structures. Maintenance personnel, employed by the Land Owner, must be aware of the SMPPP and should be trained to recognize signs that stabilization measures may not be performing optimally or are failing. The inspection of on-site stabilization measures will become part of routine preventative maintenance practiced by the Land Owner. Inspections should be performed after rain events of 0.5 inches or greater in a 24-hour period and at a minimum of twice per year (April 1st and Nov 1st.). Inspections and maintenance should be performed as described below within this section.

#### 1.1 Inspection

#### Overall Site Inspection

The overall site, embankments, vegetation and stormwater conveyance system components including water quality units, outlet structures, structure sumps, culverts swales, and pond spillways should be inspected regularly after every major rain event of 0.5 inch or greater in a 24-hour period and twice per year (April 1st and Nov 1st). A rain gauge should be installed and permanently maintained at the site. The inspections should include but are not limited to:

- Density and condition of vegetation and ground cover.
  Erosion, differential settlement or crocking of embankment.
  Bulging or sliding of loe of embankments.
  Sedimentation of on-site or downstream water bodies.
  Sedimentation of culverts or swales.
  Sedimentation of lown croos, poved areas, underground detention outlet structure,
  water quality units or outlet structure sumps.
  Accumulation of pollutants, including alls or grease in water quality units and
  outlet structure sumps.
- outlet structure sumps.

  Domage or folique of storm sewer structures or associated components.

  Accumulation of sediment and debris at poved colch basin grates.

#### Stormwater Basin/ Water Quality Practice Inspection

Stormwater management basins and other water quality practices and all associated features such as spillways, inlets, outlets, forebays and rip rap filter berms should be inspected regularly ofter every major rain event of 0.5 inch or greater in a 24-hour period and twice per year (April 1st and Nov 1st). A rain gauge should be installed and permanently maintained at the site. The inspections should include but are not limited to:

- Density and condition of vegetation and ground cover.

  All features of the basin should be clear of brush and tree growth.

  Erosion, differential settlement or crocking of basin embankments.

  Bulging or sliding of toe of embankments.

  Presence of onimal burrows.

  Evidence of clogging or sedimentation at inlets or outlets, including paved leak-offs.
- leak—offs.

  Erosion or sedimentation of the extended flow poth through the detention bosin.

  Spillways should be inspected for structural integrity.

  Spillways should be clear of obstructions.

- initel/outlet riprop should be inspected for scour and dislodged stones and obstructions should be removed. Accumulation of sediments at iniets, outlets, silt trops, and catch basin grates. All forbays and rip rop berms should be inspected to ensure proper function and structural integrity.

#### Overall Site Maintenance

Maintaining vegetative and structural measures for soil protection is necessary to keep the storm water system functioning properly. Maintenance should occur on a regular basis and should include but is not limited to:

- Vegetoted oreas should be maintained to promote vigorous and dense growth. Lawn areas should be mowed at least three times a year but may require more frequent mowings depending on the growth rate.
- 2. Accumulation of litter and debris should be removed during each mowing or
- 3. Structural components of the storm sewer system such as culverts, water quality units and outlet structures (including sumps) which require repair or replacement should be addressed immediately following identification.
- Swale and drainageway maintenance will include periodic mowing, occasional s reseasing and weed control. Weeds and woody plants should be eradicated or back since they reduce the efficiency of the drainageway.
- Rip rop lined outlets that show signs of scour should be repaired. Weed and brush growth at the inlets and outlets should controlled as needed.
- 6. Cotch basin sumps shall be inspected a least 3 times per year starting in April. Cleaning of silts and debris using a vacuum type truck shall be performed if the occumilated sediment depth is greater than 12 inches. Removed material shall be disposed of at on off site location. The location of disposal shall be provided to the owner as necessary.

#### Winter Maintenance

- Remove snow and ice from catch basin grotes, basin inlet and outlet structures and away from culvert end sections.
- Snow removed from paved areas should not be piled at inlets/outlets of the storm water management basin or on the catch basin grates.
- 4. Sand used for deicing should be clean, course material free of fines, silt, and
- 5. Materials used for deicing should be removed during the early spring by sweeping

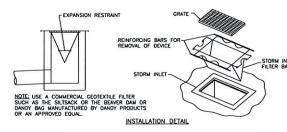
#### Stormwater Management/Water Quality Maintenance

- Side slope, embankments, inlets and overflow spillways should be mowed at least three times a year but may require more frequent mowings depending on the growth rate.
- 2. Trees and shrubs should be removed at the inlets and outlets
- Accumulation of litter and debris should be removed during each mowing or
- Structural components of the bosin which require repair or replacement should be addressed immediately following identification.
- Sedimentation of stormwater management basins is dependent on storage capacity, inflow and sediment load. Basins and forebays should be monitored periodically for sediment accumulation. Sediments should be removed when or when 6 inches has occumulated. When sediment removal is required, original grades should be restored as shown on the Construction Plans
- The water quality units should be maintained by manufacturer's specifications after construction is complete, when the site has reached a full uniform, perennial vegetative cover. The water quality units should also be maintained twice a year (April 1st and Nov 1st) per manufacturer's specifications; which typically involves measurements of sludge depth with a "sludge judge" followed by removal with a "vac-truck". These maintenance measures are to be performed at the Land Owners expense.
- 7. Spillways should be cleared of obstructions.
- 8. Inlet / outlet riprop damage due to scour and sedimentation should be repaired.

# SNOW FENCE CORRECT TRUNK ARMORING NOTE: USE FOR PROTECTING STREET TREES ADJACENT TO CONSTRUCTION AREA WHERE PAVED SURFACES MAKE IT IMPRACTICAL TO ESTABLISH TREE PROTECTION ZONE.

MECHANICAL TREE PROTECTION

NIS



SILT SACK INLET PROTECTION

# SLOPE SEEDING MIXTURE (NO MOW MIX)

To be used on slopes 3:1 or greater

TYPE OF SEED PERCENT BY WEIGHT

Crownvetch (Coronilla Varia)						
Birdsfoot Trefoil (Lotus Cornicultus Var. Arvensis)	409					
Annual Ryegrass (Lolium Multiflorum)	40					
Alsike Clover (Trifolium Hybridum)	10					
Leguminous See to be incoulated						

#### WETLAND SEEDING MIXTURE

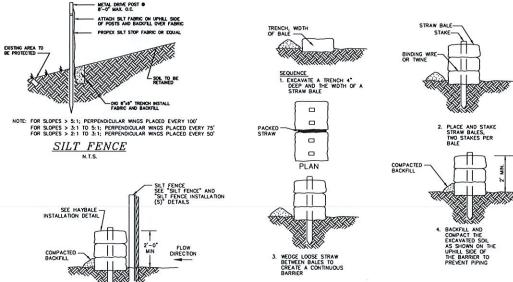
To be used in or around wetland areas as shown on the Contract Drawings.

TYPE OF SEED PERCENT BY WEIGHT	
Fox Sedge (Carex vulpinoidea)	30%
Fringed Sedge (Corex crinito)	22%
Canada Manna Gross (Glyceria Canadensis)	10%
Chufa (Cyperus esculentus)	10%
Soft Rush (Juncus effuses)	5%
Bearded Sedge (Carex comosa)	4%
Lurid Sedge (Carex Iurido)	4%
Woolgrass (Scirpus cyperinus)	3%
Boneset (Eupatorium perfoliatum)	3%
Hop Sedge (Carex lumpulina)	3%
Blue Vervain (Verbena hostate)	2%
Green Bulrush (Scirpus atrovirens)	2%
Joe-Pye Weed (Eupatorium fistulosum)	2%

#### EROSION CONTROL BLANKETS

3:1 slopes or steeper where indicated on the Contract Drawings:

Erosion Control Blanket shall be North American Green SC 150 or shall be a green, wood fiber mat constructed from 100% Aspen curled fibers with a green photo-degradoble netting applied to one side. Erosion Control Blanket to be a manufactured by American Excelsior Company, Arlington, TX, "Quick Grass" or



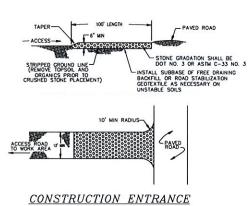
PLACEMENT AND CONSTRUCTION OF HAYBALE BARRIER

A BURY THE TOP END OF BLANKET STRIP TRENCH 8" INCHES OR MORE IN DEPTH C OVERLAP -- BURY UPPER END OF LOWER STRIP AS IN 'A' AND 'B', OVERLAP END OF TOP STRIP 4 TYPICAL STAPLES

NOTE: BLANKET IS TO BE INSTALLED ON ANY FINISHED SLOPES THAT ARE 3:1 OR GREATER EROSION CONTROL BLANKET INSTALLATION DETAIL

KFILL AND COMPACT THE EXCAVATED

AS SHOWN ON THE UPHILL SIDE OF SEDIMENTATION CONTROL BARRIER WITH HAY BALE BARRIER N.T.S.



FLOW -CATCH BASIN FLOW SILT FENCE INSTALLATION AT ANCHOR EACH BALE WITH TWO 2"X2"X3"-0" STAKES HAY BALE FILTER INSTALLATION AT CATCH BASINS AT LOW POINTS CATCH BASIN AT LOW POINTS CATCH BASIN EROSION CONTROL

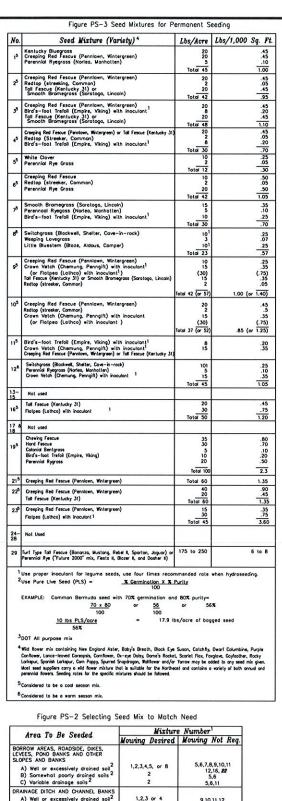
JERC aw breconsult con

# DETAIL SHEET

**BECKLEY FARMS** PHASE 5 REDESIGN **BECKLEY ROAD** TOWN OF BERLIN STATE OF CONNECTICUT

RHR

DN-4



Area To Be Seeded	Mixture Number						
Area to be Seeded	Mowing Desired	Mowing Not Req					
BORROW AREAS, ROADSIDE, DIKES, LEVEES, POND BANKS AND OTHER SLOPES AND BANKS A) Well or excessively drained soil <sup>2</sup> B) Somewhat poorly drained soils <sup>2</sup> C) Variable drainage soils <sup>2</sup>	1,2,3,4,5, or 8 2 2	5,6,7,8,9,10,11 12,16, <i>22</i> 5,6 5,6,11					
DRAINAGE DITCH AND CHANNEL BANKS A) Well or excessively drained soil <sup>2</sup> B) Somewhat poorly drained soils <sup>2</sup> C) Variable drainage soils <sup>2</sup>	1,2,3 or 4 2 2	9,10,11,12					
DIVERSIONS  A) Well or excessively drained soil <sup>2</sup> B) Somewhat poorly drained soils <sup>2</sup> C) Variable drainage soils <sup>2</sup>	2,3 or 4 2 2	9,10,11					
GULLIED AND ERODED AREAS		3,4,5,8,10,11,12					
SOO WATERWAYS AND SPILLWAYS	1,2,3,4,6,7, or 8	1,2,3,4,6,7, or 8					
SUNNY RECREATION AREAS (Picnic areas and playgrounds or driving and archery ranges, nature trails)	1,2, or <i>23</i>						
LAWNS AND HIGH MAINTENANCE AREAS	1,19,2f or 29						

- 1 The numbers following in these columns refer to seed mixtures in Figure P8-3. Mixes for shody areas are in bold-finite print (including mixes 20 through 24)
- 2 See county soil survey for droinage class. Soil surveys are available from the County Soil and Water Conservation District Office.
- 3Use mix 26 when soil possing a 200 mesh sieve is less than 15% of total weight. Use mix 26 & 27 when possing a 200 mesh sieve is between 15 and 20% of total weight. Use mix 26, 27 & 28 when soil possing a 200 mesh is down

		ding			Op	tim	um !	Seedi	ing (	Dates	Attentionals
Species <sup>4</sup>	Rates (pounds)		Optimum Seed	3,	<b>/15</b> 4	/\s	5/15 6	/15 7 <sub>1</sub>	/15 B	/15 9/15 10/15	Plant Characteristics
Species	/kom	/000 m, n,	Depth <sup>2</sup> (inches)	3/	Ŷ	1	'n	'n	*^	9/ 10/	Characteristics
Annual ryegross Lolium muftiflorum	40	1.0	0.5					П			May be added in mixes. Will mow out of most stands
Perennial ryegrass Lolium perenne	40	1.0	0.5	П							Use for winter cover. Talerates cold and low moisture.
Winter rye Secole cereale	120	3.0	1.0	П							Quick germinating and heavy spring growth. Dies back in June with little regrowth.
Oats Avena sativa	86	2.0	1.0					П			In northern CT, will winter kill with the first killing frost and may through- out the state in severe winters.
Winter Wheat Triticum oestivum	120	3.0	1.0	Ī	I	ı			П		Quick germination with moderate growth. Dies back in June with no regrowth.
Millet Echinochioa crusgalli	20	0.5	1.0	П	П	П	ı		П	ШΙ	Worm season small grain. Dies with frost in September.
Sudangrass Sorphum sudanense	30	0.7	1.0	П	П	П	1			ШШ	Tolerotes worm temperatures and droughty conditions.
Sudangrass Sorphum sudanense	15	0.4	1.0		П						Hardy plant that will reseed itself and is good as a green manure crop.
Weeping Lovegross Erogostis curbulo	5	0.2	0.25								Worm-season perennial. May bunch. Talerates hot, dry slopes, acid infertile soils. Excellent nurse crop. Usually winter kills.
DOT All Purpose Mix <sup>3</sup>	150	3.4	0.5	П				П	П		Suitable for all conditions.

- agy be planted broughout summer if som mosture is doequate or can be engated. For seeding may be extended to 3th condit forms.
   3 be Permonent Seeding Figure 19-3.3 for seeding militure requirements.
   4 Lated species may be used in combinations to be obtain a broader time spectrum. If used in combinations, reduce if pointing rate by 200 of that falset.
- ALL SEEDED AREAS SHALL BE WATERED UNTIL AREAS ARE FULLY STABILIZED. RE-SEED, RE-MULCH AND CONTINUE TO WATER UNDERDEVELOPED AREAS AS NECESSARY.

#### CONSTRUCTION SEQUENCE

THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED FOR THE PROJECT.

#### PHASE 5

- PLIASE 3

  1. CONTACT THE TOWN OF BERLIN AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.

  2. CLEARING LIMITS SHALL BE MARKED IN THE FIELD AND APPROVED BY THE TOWN OF BERLIN METLANDS ENFORCEMENT OFFICER PRIOR TO STRAT OF WORK ON THE SITE.

  3. CLEAR AND GRUBE TOWN OF THE PLAN.

  4. CLEAR AND GRUB THE SITE. STOCKPILE TOPSOILINSTALL DOUBLE ROW OF SLIT FENCE AROUND STOCKPILE AREASTON BASIN AND RESIN AND THE PLAN.

  5. CONSTRUCT GRUEENT TRAP DIBING CONSTRUCTION, REMOVE ACCUMULATED SCIMENT IN BASIN WHEN IT REACHES SIX INCHES IN OFFICE.

  6. CONTINUE REACHES IN KINCES IN OFFICE.

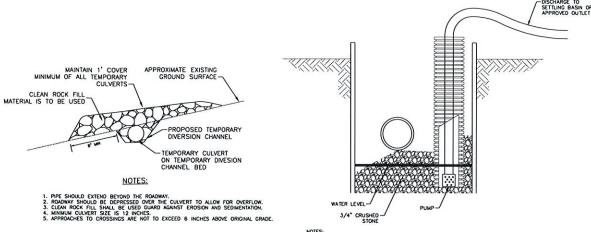
  6. CONTINUE EARTHWORK, PLACE TOPSOIL, SEED AND MULCH ON DISTURBED AREAS THAT ARE PROPOSED TO BE GRASS IN CHES IN OFFICE.

  7. CONSTRUCTION STAKEDUT OF ROAD AND UTILITIES.

  8. INSTALL SANITARY SEWER MANNS AND WINDLER AS

- B. ROUGH (PRADE THE ROAD AND SHOULDER APEAS:

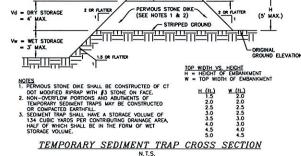
  9. INSTALL SANITARY SEWER WAINS AND MANDOLES. INSTALL LATERALS TO A POINT TO BEHIND CURB.
  10. INSTALL STORM DRAINAGE SYSTEM. INSTALL GAS AND WATER MAINS AND ASSENCE LATERALS TO A POINT TO 'BEHIND CURB.
  11. INSTALL GRAVEL BASE FOR ROAD AND BITUMINOUS CONCRETE BINDER PAVEMENT.
  12. INSTALL CONCRETE SIDEMAL AND BITUMINOUS CONCRETE CURB.
  13. INSTALL SITE LIGHTING.
  14. INSTALL LAMOSCAPING PER LANDSCAPING PLAN. PLACE TOPSOIL, SEED, FERTILIZER AND MULCH IN ACCORDANCE WITH THE PERMANENT SEEDING SCHEDULE ON ALL DISTURBED AREAS.
  15. INSTALL WHITH THE PERMANENT SEEDING SCHEDULE ON ALL DISTURBED AREAS.
  16. INSTALL SHOW THE SEEDING SCHEDULE ON ALL DISTURBED AREAS.
  17. INSTALL SHOW THE SEEDING SCHEDULE ON ALL DISTURBED AREAS.
  18. INSTALL SHOW THE SEEDING SCHEDULE ON ALL DISTURBED AREAS.
  19. INSTALL SHOW THE SEEDING SCHEDULE ON ALL DISTURBED AREAS.
  19. INSTALL SHOW THE SEEDING SCHEDULE ON ALL DISTURBED AREAS.
  19. INSTALL SHOW THE SEEDING SCHEDULE ON ALL DISTURBED AREAS.
  19. INSTALL SHOW THE SEEDING SCHEDULE ON ALL DISTURBED AREAS.
  19. INSTALL SHOW THE SEEDING SCHEDULE ON ALL DISTURBED AREAS.
  19. INSTALL SHOW THE SEEDING SCHEDULE ON ALL DISTURBED AREAS.



NOTES:

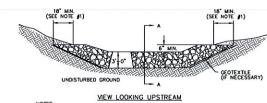
1. PLACE 15 INCH DAMETER PERFORATED HDPE PIPE AND CRUSHED STONE BELOW TRENCH
BOTTOM AHEAD OF WORK AREA. SET INTAKE OF PLUP INSIDE PIPE AND DEWATER TRENCH.
2. DISCHARGE MUDOY WHATER TO OUTLET PROTECTION OF A DIST BLG, TANK TRUCK, PLUP OUTLET
BARREL, SETTLING BASIN OR OTHER APPROVED OUTLET. DO NOT DISCHARGE MUDOY WATER TO
THE ROAD OUTLET, STORM DRIANGE STSTEM, WETLANDS OR STREAMS.
3. MAINTAIN INLET PER SECTION 5-13 DEWATERING OF THE 2002 CONNECTICUT GUIDELINES FOR
PUT LEDGEN AND SEDIMENT CONTROL. TEMPORARY CHANNEL CROSSING

TRENCH DEWATERING - PUMP INTAKE PROTECTION

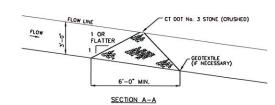


-WEIR CRES

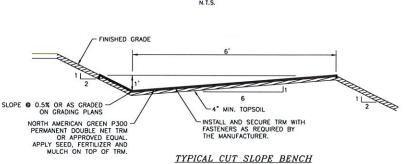
TRENCH DEWATERING - SETTLING BASIN

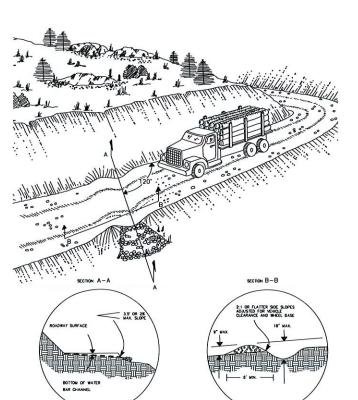


 KEY STONE INTO THE DIRCH BANKS AND EXTEND INTO THE ABUTMENTS A MINIMUM OF 18" TO PREVENT FLOW FROM FLANKING THE CHECK DAM. 2. THE MINIMUM DESIGN CAPACITY SHALL CONVEY A 2 YEAR - 24 HOUR PEAK FLOW

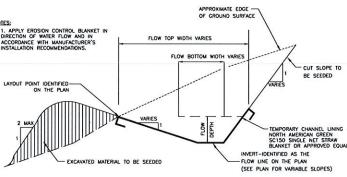


STONE CHECK DAM DETAIL N.T.S.





WATER BAR DETAILS



# TEMPORARY LINED DIVERSION CHANNEL N.I.S.

CHANNEL IDENTIFICATION	SHAPE	SIDE SLOPES	DESIGN SLOPE (%)	BOTTOM WIDTH (ft.)	DESIGN DISCHARGE (cfs)	DESIGN VELOCITY (fps)	CALCULATED FLOW DEPTH (ft.)	DESIGN DEPTH (ft.) (D)	PROPOSED LINING TYPE
TEMPORARY DIVERSION	TRAP.	2:1	5.0 (MAX.)	2.0	7.90 (MAX.)	3.90 (MAX.)	0.62	1.12	NORTH AMERICAN GREEN SC150

TEMPORARY LINED DIVERSION CHANNEL SPECIFICATIONS

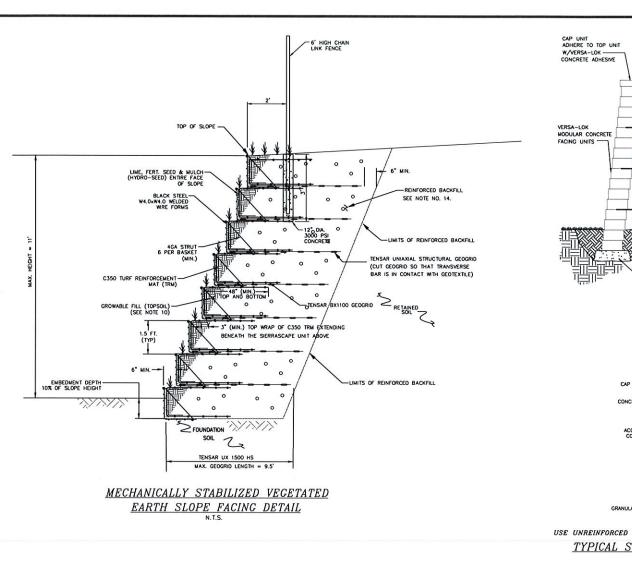


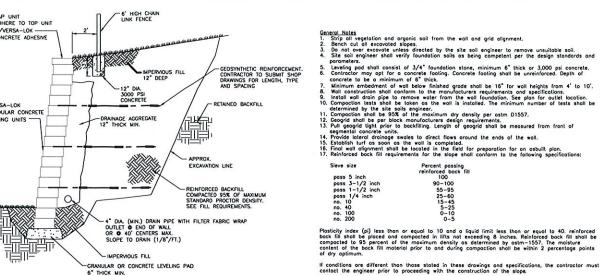
# DETAIL SHEET

**BECKLEY FARMS** PHASE 5 REDESIGN BECKLEY ROAD TOWN OF BERLIN STATE OF CONNECTICUT RHR CAD File DN10108605.dwg

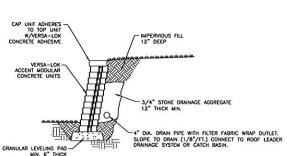
11-1173 2/22/18

DN-5

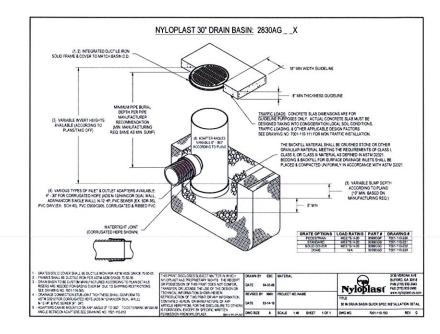


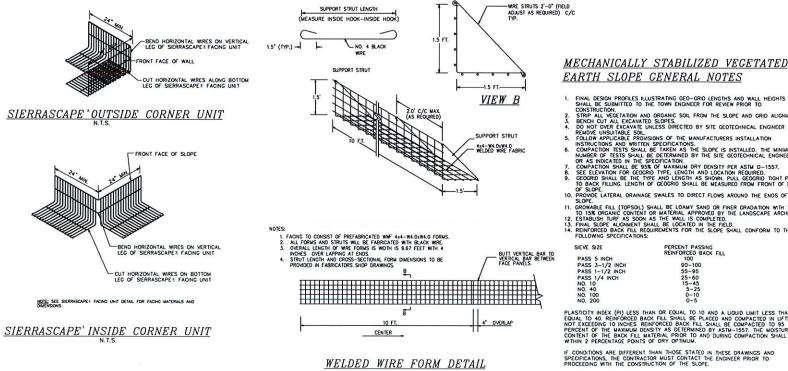


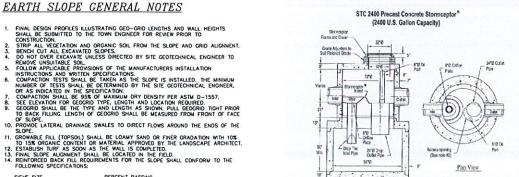
TYPICAL SECTION-REINFORCED RETAINING WALL



USE UNREINFORCED RETAINING WALL DETAIL FOR WALLS LESS THAN 3 FEET IN HEIGHT TYPICAL SECTION-UNREINFORCED RETAINING WALL







Section Thru Chamber

The Use OF FERRIS CONCENDE IN PROCESSIONS AS THE THE CASE OF PROCESSION.
 The Chart Should be Practiced On the Could Doug Pep and the Oil Part.
 The Samespite System is quieted by sector more of the following U.S. Princips \$4885146, 4898505, 4872500, 28755115, 4868505, 48701605.
 Charica Comment Pep Division representations for further delial says fixed on this drawing.

STORMCEPTOR STC 2400

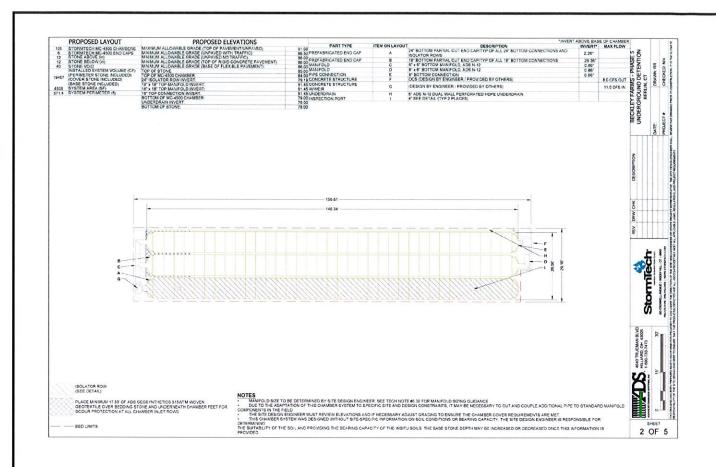


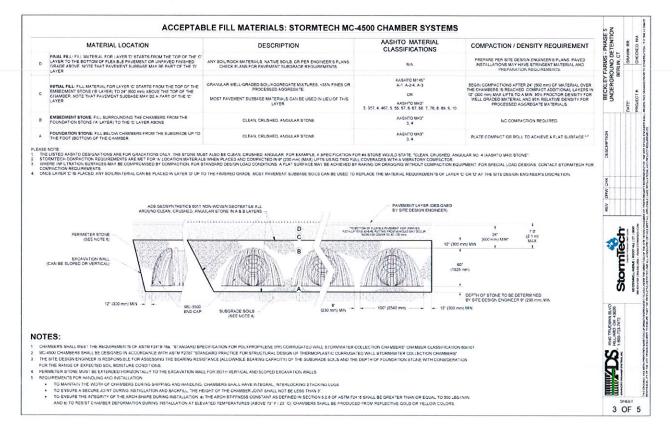
#### **BECKLEY FARMS** PHASE 5 REDESIGN BECKLEY ROAD TOWN OF BERLIN STATE OF CONNECTICUT

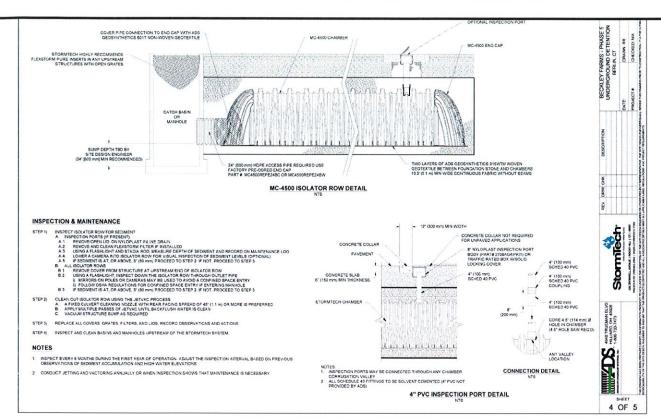
**DETAIL SHEET** 

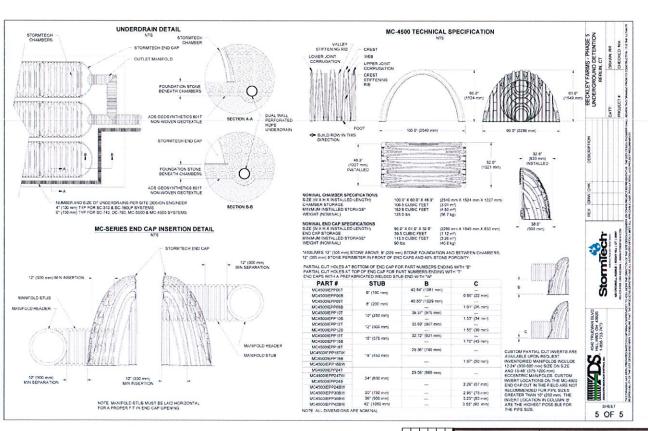
	Designed	RHR	CAD File	DN10108606.dwg	She
-	Drawn	RHR	Project No.	11-1173	
	Checked	JW/REM	Date	2/22/18	]
	Approved	JW/REM	Scale	AS NOTED	1

DN-6











# DETAIL SHEET

BECKLEY FARMS
PHASE 5 REDESIGN
BECKLEY ROAD
TOWN OF BERLIN
STATE OF CONNECTICUT

Designed	RHR	CAD File	DN10108607.dwg	Sheet No.
Drawn	RHR	Project No.	11-1173	
Checked	JW/REM	Date	2/22/18	DM-7
Approved	JW/REM	Scale	AS NOTED	

