CIVIL DESIGN CONSULTANTS, INC
344 North Main Street | Andover · MA 01810
(978) 416-0920 | www.civildci.com

July 22, 2026

Mr. Robert Moore
Environmental Health Technician
4 Summer Street
City Hall Room 300
Haverhill, MA 01830

Response to Peer Review Comment Letter #2
DEP File #: 33-1595
890 North Broadway
Haverhill, MA 01832
CDCI File #: 24-10594

Civil Design Consultants, Inc. (CDCI) has prepared this information and revised plans to address the peer review letter prepared by Comprehensive Environmental Inc., dated June 4, 2026, for the proposed development project located at 890 North Broadway in Haverhill, Massachusetts. The following information is provided for your review and consideration:

Standard 2

1.
   a. Minor revisions were made to the outlet control structure 2 (OCS-2) to eliminate oscillation within the HydroCAD model. The HydroCAD model and corresponding plan details have been revised accordingly.

Standard 4

1. The proposed wet swale has been replaced with a wet pond BMP designed to treat the required Water Quality Volume and retain 1.3 inches of runoff from the parking lot. The revised stormwater management system achieves a weighted Total Phosphorus removal efficiency of 61%, exceeding the minimum 60% removal requirement. Supporting phosphorus removal calculations are provided in the Stormwater Management Calculations (Section V) in the revised Drainage Report.

2. The deep sump catch basin has been removed from the proposed treatment train and is no longer relied upon to provide TSS removal credit. The revised stormwater management system independently achieves the required 90% TSS removal without any treatment credit assigned to the deep sump catch basin. Additionally, as noted in the Operations and Maintenance Plan, catch basin inspection and cleaning are required for a minimum of four (4) times per year to minimize sediment accumulation and maintain its hydraulic performance.

Standard 9

2. The proposed wet swale has been replaced with a wet pond that has been designed to minimize conditions favorable to mosquito breeding. The permanent pool provides sufficient water depth to avoid shallow, stagnant conditions. The wet pond includes a defined flow path and forebay to promote water circulation and facilitate sediment removal. Routine maintenance, including sediment removal, vegetation management, and debris removal, will be performed in accordance with the approved 2009 Long Term Operation and Maintenance Plan to maintain proper pond function and discourage mosquito breeding.

   The proposed trench drain has been included in the revised Long-Term Operations and Maintenance Plan.

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Other Comments

3. The wet pond and infiltration basin cross-section detail have been revised to be consistent with the elevations and dimensions reflected in the HydroCAD model. In addition, the emergency spillway has been added into the HydroCAD model for OCS-1.

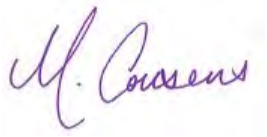
4. Additional native shrubs have been incorporated within the 25-FT No Disturb Zone to provide greater buffer enhancement than what currently exists on the site. The approved 2009 plans proposed a total of forty-five (45) shrubs within the buffer enhancement area. However, as documented on the *Front Nine Drive Roadway As-Built Plan* dated August 1, 2023, with revisions through May 5, 2024, and accepted under the Certificate of Compliance issued by the Haverhill Conservation Commission on November 14, 2024, only nine (9) blueberry shrubs were installed (see attached Certificate of Compliance). Of those nine (9) existing shrubs, three (3) are located within the current proposed grading limits and must be removed, while the remaining six (6) shrubs will be preserved. To mitigate the proposed work and enhance the buffer, the revised plans include forty-two (42) additional native shrubs within the 25-foot No Disturb Zone (see Sheet C-4). Upon completion, the buffer enhancement area will contain a total of forty-eight (48) native shrubs (six existing shrubs to remain and forty-two new shrubs), which exceed both the existing condition and the number of shrubs originally proposed under the approved 2009 design.

   Additionally, the proposed seed mix for the buffer area has been added to Sheet C-4.

We believe that the information provided and plan revisions fully address the review letter referenced above. Should you have further questions, comments, or require additional information, please do not hesitate to contact our office.

Very Truly Yours,

CIVIL DESIGN CONSULTANTS, INC.



Meera A. Cousens
Senior Project Manager

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 8B – Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number: 33-1476 (Provided by DEP)

A. Project Information

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

1. This Certificate of Compliance is issued to:

Civil Design Consultants, Inc
Name

344 North Main Street
Mailing Address

Andover | MA | 01810
City/Town | State | Zip Code

2. This Certificate of Compliance is issued for work regulated by a final Order of Conditions or Order of Resource Area Delineation issued to:

Jay Davidowicz and Stephen Smolak - Front Nine Drive LLC
Name

July 24, 2020 | 33-1476
Dated | DEP File Number

3. The project site is located at:

890 North Broadway | Haverhill
Street Address | City/Town

Map 575, Block 2 | Lot 8
Assessors Map/Plat Number | Parcel/Lot Number

The final Order of Conditions or Order of Resource Area Delineation was recorded at the Registry of Deeds for:

Sterling Golf Crystal Lake, LLC, Attn: Kevin Osgood
Property Owner (if different)

Southern Essex | 39130 | 222
County | Book | Page

Certificate

4. A site inspection was made in the presence of the applicant, or the applicant's agent, on:

11/05/2024
Date

B. Certification

Check all that apply:

☒ **Complete Certification**: It is hereby certified that the work regulated by the above-referenced Order of Conditions has been satisfactorily completed.

B. Certification (cont.)

☐ **Partial Certification:** It is hereby certified that only the following portions of work regulated by the above-referenced Order of Conditions have been satisfactorily completed. The project areas or work subject to this partial certification that have been completed and are released from this Order are:

☐ **Invalid Order of Conditions**: It is hereby certified that the work regulated by the above-referenced Order of Conditions never commenced. The Order of Conditions has lapsed and is therefore no longer valid. No future work subject to regulation under the Wetlands Protection Act may commence without filing a new Notice of Intent and receiving a new Order of Conditions.

☒ **Ongoing Conditions**: The following conditions of the Order shall continue: (Include any conditions contained in the Final Order, such as maintenance or monitoring, that should continue for a longer period).

Condition Numbers:

#33 and #78-93, inclusive, with the Homeowners Association being known as the "Association at Crystal Lake Golf Trust" and now being the party responsible for the maintenance and repair of the drainage systems. See attached "Long Term Operations and Maintenance Plan", made part of this Certificate.

☐ **Order of Resource Area Delineation:** It is hereby certified that the wetland resource area delineation for the above-referenced Order of Conditions has been satisfactorily completed

C. Authorization

Issued by:

Haverhill — Conservation Commission

11/14/2024 — Date of Issuance

This Certificate must be signed by a majority of the Conservation Commission and a copy sent to the applicant and appropriate DEP Regional Office (See https://www.mass.gov/service-details/massdep-regional-offices-by-community).

C. Authorization (cont.)

Pursuant to the vote taken by the Conservation Commission on May 7, 2020, the following signatures are made in accordance with M.G.L. c.110G and pursuant to said Commission's electronic signature authorization vote recorded on May 21, 2020, with the Southern Essex District Registry of Deeds in Book 38538, Page 455.

Signatures:

/Oliver Aguilo/	Oliver Aguilo
Signature	Printed Name
/Frederick Clark/	Frederick Clark
Signature	Printed Name
/Lisa DeMeo/	Lisa DeMeo
Signature	Printed Name
/Harmony Wilson/	Harmony Wilson
Signature	Printed Name
/Thomas Wylie/	Thomas Wylie
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name

LONG-TERM OPERATIONS AND MAINTENANCE PLAN

This Long-Term Operations and Maintenance (O&M) Plan has been prepared in accordance with the Stormwater Management Policy issued by the Department of Environmental Protection (DEP) for the existing residential subdivision and golf course located at Crystal Springs Golf Course at 940 North Broadway in Haverhill, MA. This maintenance plan addresses Stormwater Management Standard 9 and discusses the applicant's obligations to address long term operations and maintenance of the facility.

Owner / Responsible Party: Front Nine Drive, LLC
480 Boxford Road
Bradford, MA 01835

System Map:
See attached markups for 'Front Nine Drive' Roadway As-Built Plan prepared August 1, 2024, with revision dates through May 6, 2024, as well as Back Nine Drive Roadway As-Built Plan prepared June 1, 2016, for the locations of all BMPs.

Upon a period beginning twelve months after the completion of the roadway, all structural BMP's shall be inspected twice annually, once in April and once in November. The inspection shall be performed as indicated below:

Street Sweeping
Periodic sweeping can be an effective method to reduce pollutant loading in runoff generated from pavement. The road will be power-swept twice annually during the early spring and late fall. Additional sweeping may be required depending on local conditions.

Snow Storage / Removal
Snow plowed from the proposed roadway will be placed or disposed of in accordance with the policy developed by DEP. Any snow that accumulates over the grates of each catch basin shall be removed to ensure that the drainage systems functions properly. Under no circumstances shall snow plowed or removed from the road be stockpiled within wetland resource areas or the 50 ft wetland buffer.

Catch Basins
The sump/hooded catch basins will be inspected on a biannual basis. If sediment is greater than 12" it will be removed and disposed of with a truck-mounted vacuum unit or other appropriate apparatus. The sediment will be disposed of at an approved offsite location in accordance with all applicable local, state, and federal regulations.

Stormceptor
Units should be inspected post construction, prior to being put into service. Inspect every six months for the first year to determine the oil and sediment accumulation rate. In subsequent years, inspections can be based on first-year observations or local requirements. Cleaning is required once the sediment depth reaches 15% of storage capacity, (generally taking one year or longer). Local regulations for maintenance frequency may vary. Inspect the unit immediately after an oil, fuel or chemical spill. A licensed waste management company should remove oil and sediment and dispose responsibly.

Drainage Outfalls
The outlets of the storm water management system will be inspected biannually. Any evidence of erosion or other damage will be reported to the appropriate town representative and repaired as soon as possible. Any sediment should be removed from the outlet structures.

Sediment Forebay/Treatment Pond
Sediments and associated pollutants are removed only when sediment forebays are actually cleaned out, so regular maintenance is essential. Frequently removing accumulated sediments will make it less likely that

sediments will be re-suspended. At a minimum, inspect sediment forebays monthly and clean them out at least four times per year. Stabilize the floor and sidewalls of the sediment forebay before making it operational, otherwise the practice will discharge excess amounts of suspended sediments. When mowing grasses, keep the grass height no greater than 6 inches. Set mower blades no lower than 3 to 4 inches. Check for signs of rilling and gullying and repair as needed. After removing the sediment, replace any vegetation damaged during the clean-out by either reseeding or resodding. When reseeding, incorporate practices such as hydroseeding with a tackifier, blanket, or similar practice to ensure that no scour occurs in the forebay while the seeds germinate and develop roots.

Infiltration Ponds

Infiltration basins are prone to clogging and failure, so it is imperative to develop and implement aggressive maintenance plans and schedules. Installing the required pretreatment BMPs will significantly reduce maintenance requirements for the basin. The Operation and Maintenance Plan required by Standard 9 must include inspections and preventive maintenance at least twice a year, and after every time drainage discharges through the high outlet orifice. The Plan must require inspecting the pretreatment BMPs in accordance with the minimal requirements specified for those practices and after every major storm event. A major storm event is defined as a storm that is equal to or greater than the 2-year, 24-hour storm.

Once the basin is in use, inspect it after every major storm for the first few months to ensure it is stabilized and functioning properly and if necessary take corrective action. Note how long water remains standing in the basin after a storm; standing water within the basin 48 to 72 hours after a storm indicates that the infiltration capacity may have been overestimated. If the ponding is due to clogging, immediately address the reasons for the clogging (such as upland sediment erosion, excessive compaction of soils, or low spots).

Thereafter, inspect the infiltration basin at least twice per year. Important items to check during the inspection include:

- Signs of differential settlement,
- Cracking,
- Erosion,
- Leakage in the embankments,
- Tree growth on the embankments,
- Condition of riprap,
- Sediment accumulation and
- The health of the turf.

At least twice a year, mow the buffer area, side slopes, and basin bottom. Remove grass clippings and accumulated organic matter to prevent an impervious organic mat from forming. Remove trash and debris at the same time. Use deep tilling to break up clogged surfaces, and revegetate immediately. Remove sediment from the basin as necessary, but wait until the floor of the basin is thoroughly dry. Use light equipment to remove the top layer so as to not compact the underlying soil. Deeply till the remaining soil, and revegetate as soon as possible. Inspect and clean pretreatment devices associated with basins at least twice a year, and ideally every other month.

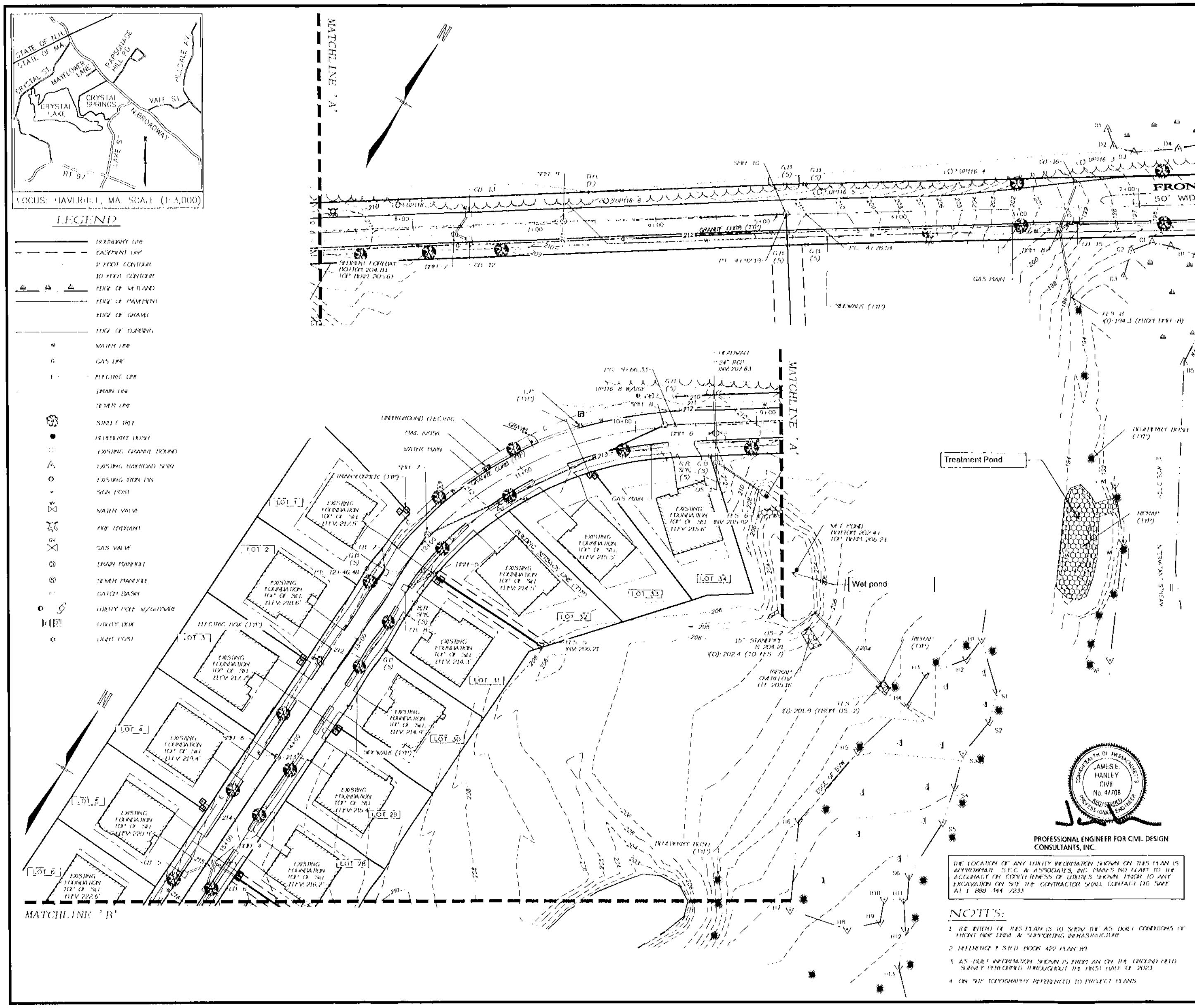
Wet Ponds

Inspect wet basins at least once per year to ensure they are operating as designed. Inspect the outlet structure for evidence of clogging or excessive outflow releases. Potential problems to check include: subsidence, erosion, cracking or tree growth on the embankment, damage to the emergency spillway, sediment accumulation around the outlet, inadequacy of the inlet/outlet channel erosion control measures, changes in the condition of the pilot channel, erosion within the basin and banks, and the emergence of invasive species. Make any necessary repairs immediately. During inspections, note any changes to the wet basin or the contributing watershed area because these may affect basin performance. At least twice a year, mow the upper-stage, side slopes, embankment and emergency spillway. At this time, also check the sediment forebay for accumulated material, sediment, trash, and debris and remove it. Remove sediment from the basin as necessary, and at least once every 10 years. Providing an on-site sediment disposal area will reduce the overall sediment removal costs.

Water Quality Swales

Incorporate a maintenance and inspection schedule into the design to ensure the effectiveness of water quality swales. Inspect swales during the first few months after installation to make sure that the vegetation in the swales becomes adequately established. Thereafter, inspect swales twice a year. During the inspections, check the swales for slope integrity, soil moisture, vegetative health, soil stability, soil compaction, soil erosion, ponding and sedimentation.

Regular maintenance includes mowing, fertilizing, liming, watering, pruning, and weed and pest control. Mow swales at least once per year. Do not cut the grass shorter than three to four inches, otherwise the effectiveness of the vegetation in reducing flow velocity and removing pollutants may be reduced. Do not let grass height exceed 6 inches.



PROFESSIONAL ENGINEER FOR CIVIL DESIGN CONSULTANTS, INC.

THE LOCATION OF ANY UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. S.E.C. & ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-344-7233

NOTES:

1. THE INTENT OF THIS PLAN IS TO SHOW THE AS-BUILT CONDITIONS OF FRONT NINE DRIVE & SUPPORTING INFRASTRUCTURE
2. REFERENCE E.S.R.D. BOOK 422 PLAN 89
3. AS-BUILT INFORMATION SHOWN IS FROM AN ON THE GROUND FIELD SURVEY PERFORMED THROUGHOUT THE FIRST HALF OF 2023
4. ON SITE TOPOGRAPHY REFERENCED TO PROJECT PLANS

FRONT NINE DRIVE

PLAN VIEW ~ HORIZONTAL SCALE 1" = 40'
(SEE SHEETS 3 & 4 FOR PROFILE)

GRAPHIC SCALE
(IN FEET)
1 inch = 40' (HORIZ.)

INITIAL RELEASE: AUGUST 1, 2023

SHEET INDEX

		RECENT REVISION DATE
SHEET C1	ROADWAY AS-BUILT PLAN	05-06-24
SHEET C2	ROADWAY AS-BUILT PLAN	05-06-24
SHEET C3	ROADWAY AS-BUILT PROFILE	05-06-24
SHEET C4	ROADWAY AS-BUILT PROFILE	05-06-24

'FRONT NINE DRIVE' ROADWAY AS-BUILT PLAN

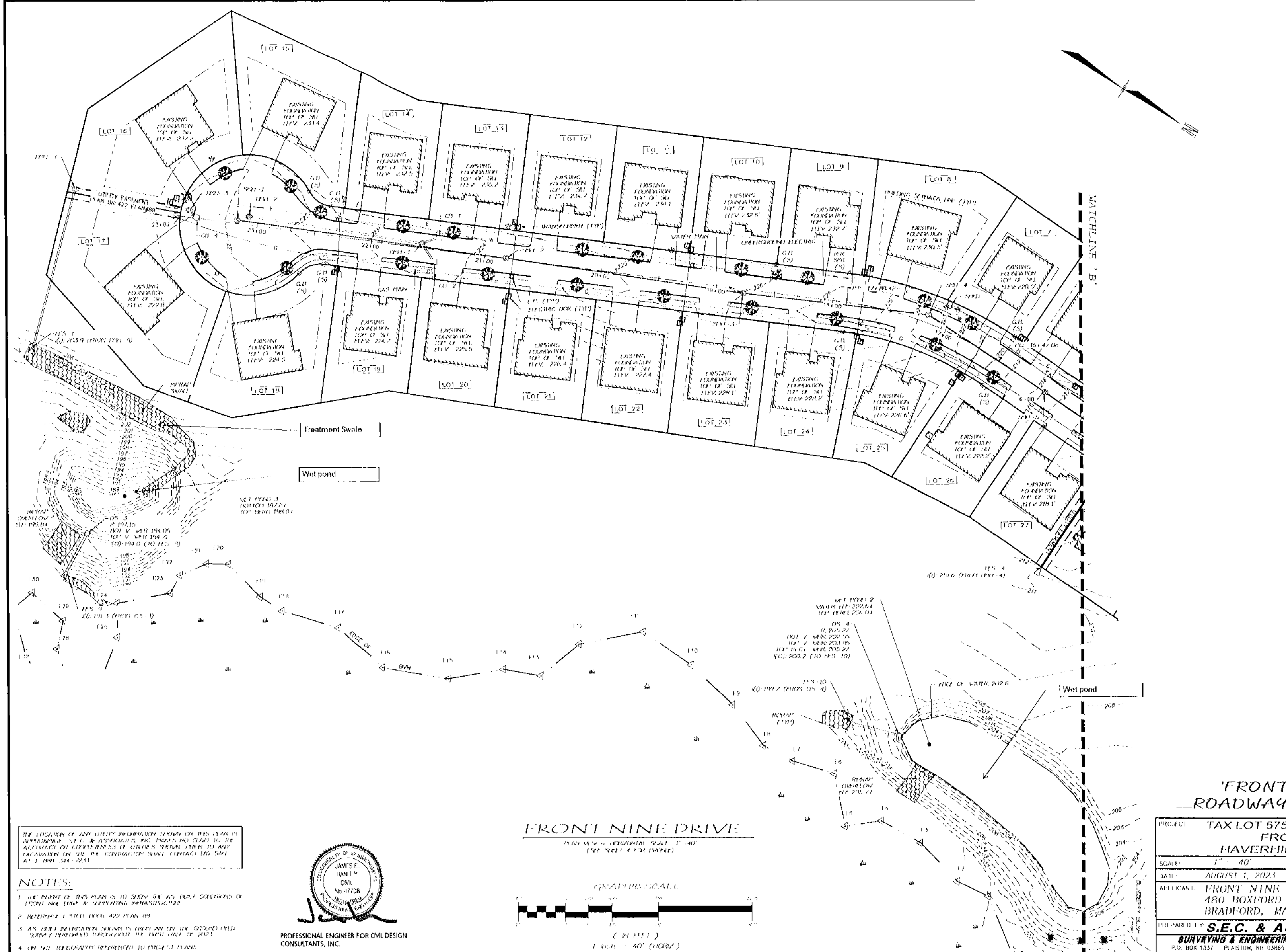
PROJECT: TAX LOT 575-2-8 - CRYSTAL SPRINGS
FRONT NINE DRIVE
HAVERHILL, MASSACHUSETTS

SCALE: 1" = 40'
DRAWN BY: FWS
DATE: AUGUST 1, 2023
REVISED: 1. 05-06-24
2.
3.
4.
5.

APPLICANT: FRONT NINE DRIVE, LLC
480 BOXFORD ROAD
BRADFORD, MA 01835

PREPARED BY: **S.E.C. & ASSOCIATES, INC.**
SURVEYING & ENGINEERING CONSULTANTS
P.O. BOX 1337 PLAISTOW, NH 03865 PHONE: (603)-382-5065
~ SERVING N.H. & MA. ~ EMAIL: SEC@SECSURVEYING.COM

SHEET C1
JOB NO. 19-2569



LEGEND

BOUNDARY LINE
EASEMENT LINE
2 FOOT CONTOUR
10 FOOT CONTOUR
EDGE OF WETLAND
EDGE OF PAVEMENT
EDGE OF GRAVEL
EDGE OF CURBING
W — WATER LINE
G — GAS LINE
E — ELECTRIC LINE
DRAIN LINE
SEWER LINE
STREET TREE
x203.23 — SPOT GRADE
EXISTING GRANITE BOUND
EXISTING RAILROAD SPIKE
EXISTING IRON PIN
SIGN POST
WV — WATER VALVE
FIRE HYDRANT
GV — GAS VALVE
DRAIN MANHOLE
SEWER MANHOLE
CATCH BASIN
UTILITY POLE W/GUYWIRE
UTILITY BOX
LIGHT POST

THE LOCATION OF ANY UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. S.E.C. & ASSOCIATES, INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-344-7233

NOTES:

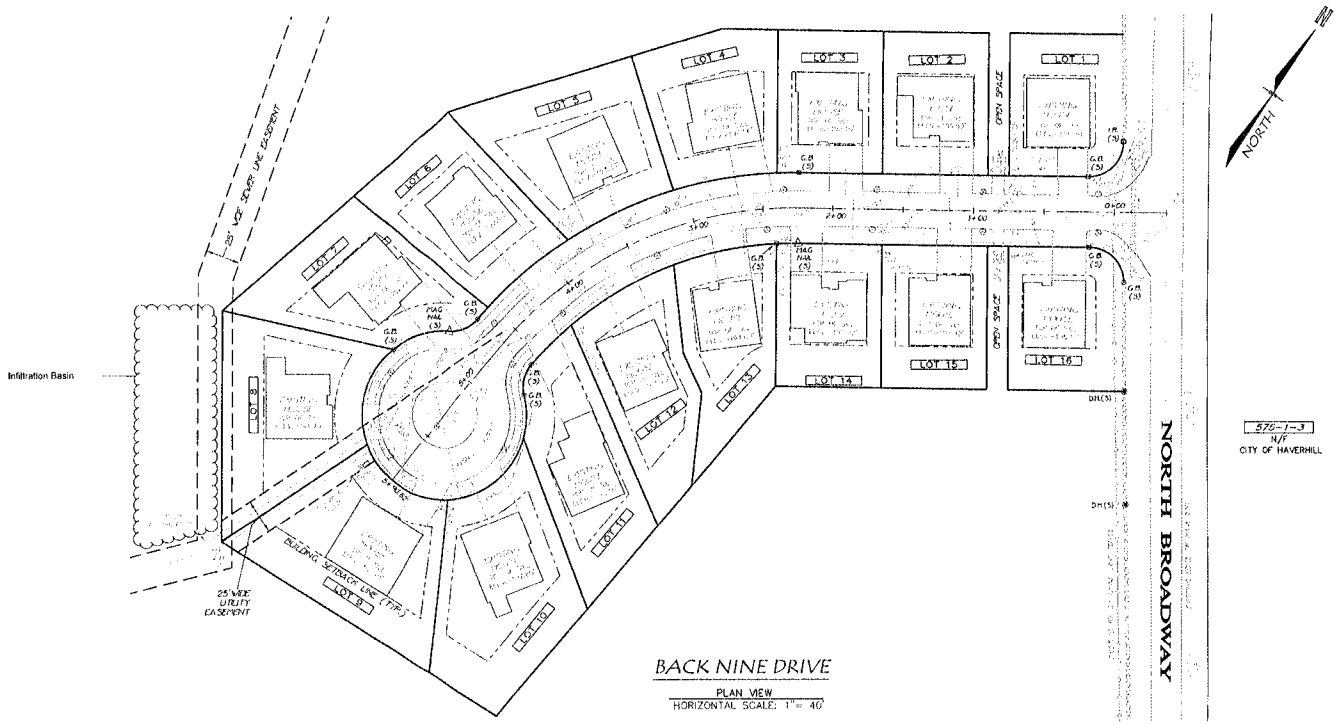
1. THE INTENT OF THIS PLAN IS TO SHOW THE AS-BUILT CONDITIONS OF FRONT NINE DRIVE & SUPPORTING INFRASTRUCTURE
2. REFERENCE E.S.R.D. BOOK 422 PLAN 89
3. AS-BUILT INFORMATION SHOWN IS FROM AN ON THE GROUND FIELD SURVEY PERFORMED THROUGHOUT THE FIRST HALF OF 2023
4. ON SITE TOPOGRAPHY REFERENCED TO PROJECT PLANS

COMMONWEALTH OF MASSACHUSETTS
JAMES E. HANLEY
CIVIL
No. 47708
REGISTERED PROFESSIONAL ENGINEER

PROFESSIONAL ENGINEER FOR CIVIL DESIGN CONSULTANTS, INC.

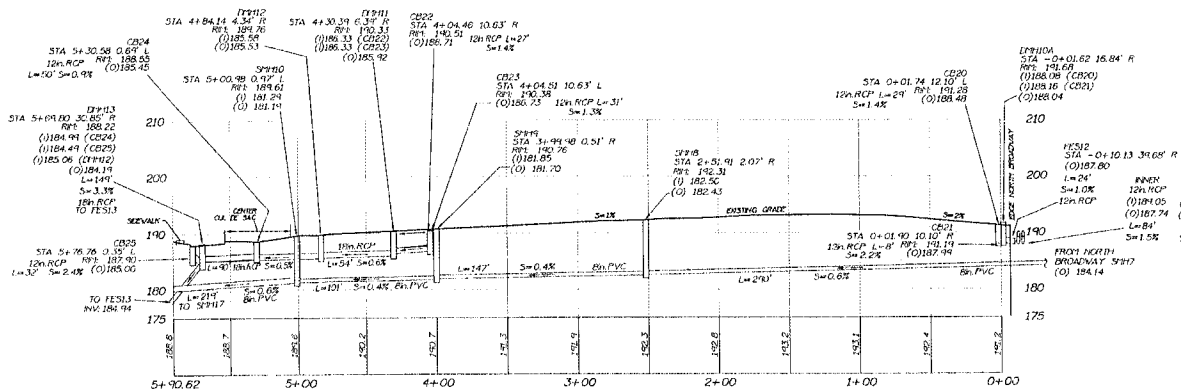
'FRONT NINE DRIVE'
ROADWAY AS-BUILT PLAN

PROJECT	TAX LOT 575-2-8 - CRYSTAL SPRINGS FRONT NINE DRIVE HAVERHILL, MASSACHUSETTS		
SCALE: 1" = 40'	DRAWN BY: JWS		
DATE: AUGUST 1, 2023	REVISED: 1. 05-06-24	2.	
APPLICANT: FRONT NINE DRIVE, LLC 480 BOXFORD ROAD BRADFORD, MA 01835		3. 4. 5.	
PREPARED BY: S.E.C. & ASSOCIATES, INC. SURVEYING & ENGINEERING CONSULTANTS P.O. BOX 1337 PLAISTOW, NH 03865 PHONE: (603)-382-5065 ~ SERVING N.H. & MA. ~ EMAIL: SEC@SECSURVEYING.COM		SHEET C2 JOB NO. 19-2569	



BACK NINE DRIVE

PLAN VIEW
HORIZONTAL SCALE: 1" = 40'



BACK NINE DRIVE

PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 10'

NOTES:

1. BACK NINE DRIVE ROADWAY ASBUILT INFORMATION HAS BEEN ACCUMULATED BY THIS OFFICE BETWEEN FALL 2015 TO SPRING 2016.
2. THE LOCATION OF ANY UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. S.E.C. & ASSOCIATES MAKES NO CLAIMS TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT NEW HAMPSHIRE DIG SAFE AT 1-888-344-7233.

LEGEND

- BOUNDARY LINE
- 2 FOOT CONTOUR
- 10 FOOT CONTOUR
- EDGE OF PAVEMENT
- EDGE OF CURBING
- WATER LINE
- DRAIN LINE
- SEWER LINE
- STREET RPKT
- SPOT GRADE
- EXISTING GRANITE BOUND
- EXISTING IRON PIN
- SIGN POST
- WATER VALVE
- FIRE HYDRANT
- GAS VALVE
- DRAIN MANHOLE
- SEWER MANHOLE
- CATCH BASIN
- UTILITY POLE W/GUYWIRE
- UTILITY BOX
- LIGHT POST

GRAPHIC SCALE

HORIZ. 40 0 20 40 80 160
VERT. 10 0 5 10 20 40
(IN FEET)
1 inch = 40 ft. HORIZONTAL
1 inch = 10 ft. VERTICAL

6-1-2016

FLORENCE T. THUDIUM No. 36829 REGISTERED PROFESSIONAL ENGINEER

BACK NINE DRIVE
ROADWAY AS-BUILT PLAN

PROJECT: TAX LOT 575-2-8 - CRYSTAL SPRINGS
BACK NINE DRIVE
HAVERHILL, MASSACHUSETTS

SCALE: 1"=40' (HORIZ.), 1"=10' (VERT.) DRAWN BY: JSS
DATE: JUNE 1, 2016 REVISED: 1. 2. 3. 4. 5.
APPLICANT: PREMIERE REALTY TRUST
123 EAST BROADWAY
HAVERHILL, MA 01830
DRAWING #: RDASBLT BCK9
JOB NO.: 08-1563

PREPARED BY: S.E.C. & ASSOCIATES, INC.
SURVEYING & ENGINEERING CONSULTANTS
P.O. BOX 1337 - PLAISTOW, NH 03865 PHONE: (603)-382-5065
SERVING N.H. & MA FAX: (603)-382-5215

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 8B – Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

33-1476
Provided by DEP

D. Recording Confirmation

The applicant is responsible for ensuring that this Certificate of Compliance is recorded in the Registry of Deeds or the Land Court for the district in which the land is located.

Detach on dotted line and submit to the Conservation Commission.

To:

Haverhill
Conservation Commission

Please be advised that the Certificate of Compliance for the project at:

890 North Broadway – Parcel ID: 575-2-8 — 33-1476
Project Location — DEP File Number

Has been recorded at the Registry of Deeds of:

Southern Essex District
County

for:

Property Owner

and has been noted in the chain of title of the affected property on:

Date — Book — Page

If recorded land, the instrument number which identifies this transaction is:

If registered land, the document number which identifies this transaction is:

Document Number

Signature of Applicant