AGENDA
Regular Hybrid Meeting
Town of Granby
Inland Wetlands and Watercourses Commission
Wednesday, July 9, 2025, at 7:00 pm
Town Hall Meeting Room

Live Stream Under "Shows and Spotlight": www.gctv16.org
Zoom: https://us02web.zoom.us/j/85855529739?pwd=oBJBDVhxi3THYsnVCWFkEbT9ugIXpN.1
Call In: 929-205-6099
Meeting ID: 858 5552 9739
Passcode: 320331

1. Call to Order

2. Action on the minutes of June 11, 2025

3. Public Hearings
   a. 8 East Granby Road – C. Peeler c/o AutoZone, Inc. – Permit application to demolish existing structures and construct a 6,796 sq. ft. commercial building and other associated site work within a regulated area. (Hearing to open 7/9/25)

   b. 15 Peck Orchard Road – R. Marr – Permit request to modify an existing permit to construct a brook crossing, driveway and associated improvements within a regulated area, to include test borings on both brook banks as part of a geotechnical review. (Hearing to open 7/9/25)

4. Permit Requests
   a. 7 Juniper Drive – M. Christian – Permit request to place a new 392 sq. ft. prefabricated shed on crushed stone within a regulated area. (Received and continued from 6/11/25)

   b. 129 Barn Door Hills Road – D. Weiss – Permit request to install a ground-mount solar array with associated electrical conduit within a regulated area. (To be received)

5. Agent Report and Correspondence
   a. 170 Silver Street – M. Vargas – Permit request to place a new 288 sq. ft. prefabricated garage on an existing crushed stone pad within a regulated area. (Authorized Agent Approval 7/3/25)

6. Commissioner Reports and Correspondence

7. Adjourn

Please note: The Town of Granby invites any resident who wishes to provide materials to this Commission to provide them to the Office of Community Development by noon on the prior Thursday of the scheduled meeting. In the event you are unable to meet that deadline but still wish to provide the Commission with materials, the Town of Granby respectfully asks that you provide sufficient copies of your materials to the Office prior to the meeting so the materials may be distributed to the Commission. Thank you in advance for your cooperation.

MEETING MINUTES
Town of Granby
Inland Wetlands and Watercourses Commission
Wednesday, June 11, 2025, at 7:00 pm

PRESENT: Nicholas Dethlefsen, Sue Okie, Vickie Dirienzo, and David Tolli
ABSENT: John Laudati, Aurelle Locke and Fred Jones
ALSO PRESENT: IWWC Agent Kate Bednaz and Land Use Coordinator Renee Deltenre (Zoom)

1. **Call to Order**
   Vice Chair S. Okie called the meeting to order at 7:00 p.m.

2. **Action on the minutes of May 22, 2025**

   ON A MOTION by V. Dirienzo seconded by N. Dethlefsen, the Commission voted 4-0-0 to approve the May 22, 2025, minutes as presented.

3. **Public Hearings**
   a. **8 East Granby Road – C. Peeler c/o AutoZone, Inc. – Permit application to demolish existing structures and construct a 6,796 sq. ft. commercial building and other associated site work within a regulated area.**
   This opening of this public hearing was postponed to July 9, 2025, at 7:00 p.m.

4. **Show Cause Hearing**
   a. **7 Laurel Drive – E. Buckland and J. LaChance – Conducting a Regulated Activity without a valid IWWC Permit.**
   Due to work conducted without a valid permit from the IWWC, the property owners were issued an Enforcement Order on 5/21/25. The property owners were directed to cease all activities and install an erosion control barrier, stabilize the exposed soil, retain a Soil Scientist to delineate the wetland boundary and submit documentation, and submit a wetland enhancement replanting plan. Property owner Eric Buckland was present to discuss what has been done to date to address the outstanding items. Erosion control measures have been installed, the site has been stabilized and a replanting plan has been prepared, which was provided at the meeting.

   K. Bednaz provided background information on the situation, including observations from a recent site inspection and comments on documentation submitted to date. Horticulturalist Jessica McCue ran through the proposed replanting plan. K. Bednaz requested that the owners provide an updated narrative and/or plan outlining the planting schedule, sizes, placement of boulders used to mark the wetlands boundary, native seed mix to be used, period for monitoring invasive species, and estimated project completion date.

   ON A MOTION by V. Dirienzo seconded by N. Dethlefsen, the Commission voted 4-0-0 to uphold the Enforcement Order and accept the replanting plan, which shall be amended to incorporate information required by the IWWC Agent as discussed, this evening.

5. **Permit Requests**
   a. **<u>7 Laurel Drive</u> – E. Buckland – Permit application to construct a rear deck, remove/replace vegetation, replace septic system, and other associated work within a regulated area.**
   Applicant and property owner Eric Buckland was present to discuss the application. He is seeking permission to re-construct a 20' x 14' deck off the back of the house, install a new 1,250-gallon septic tank that will tie into the existing leach field, crush and fill the failed septic tank, and reconfigure the driveway. Permits have been received from the Farmington Valley Health District. K. Bednaz noted that the application is straight forward, and erosion control measures are already in place. The Commission discussed conditions of approval and K. Bednaz indicated that the payment schedule must be updated to reflect total wetland disturbance and the post activity application fee.

   ON A MOTION by V. Dirienzo seconded by N. Dethlefsen, the Commission voted 4-0-0 to approve the application as presented with the following conditions:
      1. Necessary stabilization of the site.
      2. Prevent erosion at point sources and augment, as necessary.
      3. Additional fee to be calculated and paid prior to sign off on approval.

   b. **<u>17 Harness Way</u> – J. Scanlan – Permit application to construct a 50' x 25' multi-purpose asphalt court within a regulated area.**
   This application was withdrawn by the applicant on June 5, 2025.

   c. **<u>24 Heather Lane</u> – A. Michaud – Permit request to place a new 160 sq. ft. prefabricated shed on crushed stone within a regulated area.**
   Applicant and property owner Albert Michaud was present to discuss the application and answer any questions the Commission had. He is looking to install a 16'x10' prefabricated shed at the end of his driveway within an existing lawn area. This application was received and continued from the 5/22/25 Special Meeting of the IWWC.

   ON A MOTION by N. Dethlefsen seconded by D. Tolli, the Commission voted to 4-0-0 to approve the application and draft approval letter as presented.

   d. **<u>11 Brookside Drive</u> – J. Anglin – Permit request to place a new 200 sq. ft. prefabricated shed on crushed stone within a regulated area.**
   Applicant and property owner Jerome Anglin was present via Zoom to discuss the application and answer any questions the Commission had. He is looking to install a 20' x 10' prefabricated shed on crushed stone within an existing lawn area roughly 79' from the edge of Hungary Brook. This application was received and continued from the 5/22/25 Special Meeting of the IWWC.

   ON A MOTION by V. Dirienzo seconded by N. Dethlefsen, the Commission voted to 4-0-0 to approve the application and draft approval letter as presented.

   e. **<u>7 Juniper Drive</u> – M. Christian – Permit request to place a new 392 sq. ft. prefabricated shed on crushed stone within a regulated area.**
   Applicant and property owner Martin Christian was present to discuss the application and answer any questions the Commission had. He is looking to install a 28' x 14' prefabricated shed on a crushed stone base approximately 45' off the northern property line and 75' off the

back corner of the house within an existing lawn area. The proposed location is mapped wetlands, and the application is being received this evening. K. Bednaz conducted a site inspection earlier in the day and noted that erosion control measures are not really necessary due to the existing flat nature of the lawn, and the applicant indicated that the excavated soil will be brought off site by his son. The application was received this evening and continued to the next regular meeting.

f. **15 Peck Orchard Road – R. Marr – Permit request to modify an existing permit to construct a brook crossing, driveway and associated improvements within a regulated area, to include test borings on both brook banks as part of a geotechnical review.**
Property owner and applicant Richard Marr was present to discuss the application. Upon approval at the last meeting, the applicant was made aware that the bridge company requires a geotechnical report to determine footing sizes. This requires the drilling of several bore holes about 80 feet into the ground on both the east and west banks of the brook. While the east bank can be accessed at the proposed site, it is too steep at that location to cross to the west side. There is a location about 200 feet downstream where the drilling rig can cross the brook. As this temporary crossing location is outside the area that was permitted under the permit that was just issued, and some vegetation clearing is required to provide access, the property owner was informed that a permit modification is needed. The Commission discussed the need for a public hearing due to the nature of the proposed activities and based on the prior approval, which went through the public hearing process.

ON A MOTION by N. Dethlefsen seconded by D. Tolli, the Commission voted 4-0-0 to receive the application and schedule a public hearing for the next regular meeting due to public interest.

6. **Request for Review**
   a. **16 Barn Door Hills Road – D. Baggott – RFR to conduct agricultural field and access maintenance within a regulated area.**
   K. Bednaz provided a review of the application. The town owns 16 Barn Door Hills Road, which is leased to Doug Baggott to farm. A Request for Review has been submitted to mow along the edges of the existing driveway that provides access from Barn Door Hills Road to the field and to grade this driveway to remove ruts; remove fallen trees around the edge of the field; cut back vegetation from the edge of the field and brook; and to remove a small impoundment in the field.

   ON A MOTION by D. Tolli seconded by V. Dirienzo, the Commission voted 4-0-0 to receive and approve the application as presented.

   b. **87 Simsbury Road – S. Perry c/o Friends of Holcomb Farm – RFR to remove trees within a regulated area.**
   Applicant Steve Perry was present to discuss the application. The town owns 87 Simsbury Road, which will be used by the Friends of Holcomb Farm to support their farm operation. The applicant is seeking permission to remove several dead or dying spruce and ash trees that pose a risk to utilities, buildings and the public.

   ON A MOTION by V. Direnzo seconded by N. Dethlefsen, the Commission voted 4-0-0 to receive and approve the application as presented.

S. Okie recused herself from the following agenda item.

7. **Agent Report and Correspondence**
   a. **<u>157 Loomis Street</u> – S. Okie – RFR to place a 120 sq. ft. agricultural building on crushed stone within a regulated area.** Nonregulated Use Determination 5.29.25

8. **Commissioner Reports and Correspondence**
   a. **<u>253 Loomis Street</u> – D. Emery – RFR to conduct repairs to an existing footbridge over Dismal Brook within a regulated area.** Nonregulated Use Determination 5.29.25

9. **Commission Discussion**
   a. **<u>310R Salmon Brook Street</u> – M. Lamaj – Permit application to remove and replace an existing deck, clear lawn, cut down trees, construct a retaining wall, and rebuilt a patio within a regulated area.**
   Applicant and prior owner Marko Lamaj was present to discuss his request for a permit modification, which is directly tied to an Enforcement Order that was issued on 1/7/25. During the property transfer, the current owner required that $5,000 be retained in escrow in order to ensure that all outstanding items outlined in the Enforcement Order were completed by the prior owner. To date, all outstanding items have been addressed and the applicant is requesting that the Commission remove the condition that the plantings survive one growing season. The required plantings were planted this spring; therefore, per the requirement, they must survive through the following spring. K. Bednaz does not recommend removing the condition, and the main concern is site stability and ensuring the plantings survive. V. Dirienzo recommended that a letter be prepared for the property owner indicating that all items have been addressed beside the plantings, which will be evaluated next spring.

   ON A MOTION by V. Direnzo seconded by N. Dethlefsen, the Commission voted 4-0-0 to instruct the IWWC Agent to review the Enforcement Order and prepare a letter that states which items have been met and that the site's stability and plant survival be evaluated in the spring of 2026.

10. **Adjourn**

    ON A MOTION by D. Tolli seconded by V. Dirienzo, the Commission voted 4-0-0 to adjourn the meeting at 8:27 p.m.

Respectfully submitted,

Renee Deltenre
Land Use Coordinator

TOWN OF GRANBY
MEMORANDUM

TO: Inland Wetlands and Watercourses Commission

FROM: Abby Kenyon, Director of Community Development

DATE: July 3, 2025

RE: Overview and Status of IWWC Applications

The following provides an overview and status of applications pending before the IWWC.

Public Hearings

8 East Granby Road – C. Peeler c/o AutoZone, Inc. – Permit application to demolish existing structures and construct a 6,796 sq. ft. commercial building and other associated site work within a regulated area. (Received 5/22/25. Public Hearing to open 07/09/2025)

The applicant proposes to demolish an existing house and detached garage on the property and construct a commercial building, parking lot, and other associated site improvements. There are no mapped wetlands on the property however, there is an intermittent watercourse located to the west on the other side of Hungary Road. Much of this property is within 200 feet of that intermittent watercourse and is therefore within the upland review area. As such, any proposed work requires permitting through this Commission.

At the Commission's May 22, 2025 meeting, the Commission voted to hold a public hearing on the subject application due to public interest and significant impact.

Once the public hearing opens, it must close within 35 days, unless the applicant grants an extension. A draft approval letter is included for further discussion.

It should be noted that if approved by the IWWC, an application to the Planning and Zoning Commission will then be needed. The Planning and Zoning Commission will consider the site layout and proposed use.

15 Peck Orchard Road –R. Marr—Permit request to modify an existing permit to construct a brook crossing, driveway and associated improvements within a regulated area, to include a temporary brook crossing and test borings test borings. Received 6/11/25)

At the Commission's May meeting, an application was approved for 15 Peck Orchard Road. The approval included a bridge crossing, driveway, and associated improvements. Following approval, the property owner contacted staff. It was explained that the bridge company wants a geotechnical report to determine footing sizes. This requires the drilling of several bore holes about 80 feet into the ground on both the east and west banks of the brook. While the east bank can be accessed at

the proposed site, it is too steep at that location to cross to the west side. There is a location about 200 feet downstream where the drilling rig can cross the brook. As this temporary crossing location is outside the area that was permitted under the permit that was just issued, and some vegetation clearing is required to provide access, the property owner was informed that a permit modification is needed.

At the Commission's June 11, 2025 meeting, the Commission voted to hold a public hearing on the subject application due to public interest. The property owner will be at the meeting to explain the crossing and borings, and answer any questions the Commission may have.

Once the public hearing opens, it must close within 35 days, unless the applicant grants an extension. A draft approval letter is included for further discussion. It should be noted that the approval letter issued in May was used, with some items added that address the modifications proposed. Please refer to the red text for the new language.

Permit Requests

7 Juniper Drive –M. Christian — Permit request to place a new 392 sq. ft. prefabricated shed on crushed stone within a regulated area. (Received 6/11/25)

The applicant proposes to install a 392 square foot prefabricated shed on the property. The shed would be placed on a crushed stone base. There would be an underground line extended to the shed to provide power. The proposed area is currently maintained lawn. The plot plan shows that the proposed shed would be located within the regulated area. Refer to the application materials for details.

A draft approval letter is included in the meeting packet for consideration.

129 Barn Door Hills Road – D. Weiss – Permit request to install a ground-mount solar array with associated electrical conduit within a regulated area. (To be received 7/9/25)

The applicant proposes to install a ground mount solar array that will be just over 1,000 square feet. The proposed array is shown to be located to the north of the existing driveway in an area that has already been cleared. This location is about 55 feet from the flagged wetland boundary. There is a proposed electrical trench that will extend from the solar array to the house. This proposed trench would cross through the mapped wetland boundary. Refer to the application materials for details.

The Commission can't act on an application the same day it is received. Therefore, a decision on this application can be made at the Commission's August 13th meeting.

It should be noted that if approved by the IWWC, an application to the Planning and Zoning Commission with then be needed.

Agent Approval

<u>170 Silver Street</u> – M. Vargas – Permit request to place a new 288 sq. ft. prefabricated garage on an existing crushed stone pad within a regulated area. (Authorized Agent Approval 7/3/25)

The applicant proposes to install a 288 square foot prefabricated shed/garage on the property. The structure would be placed on a crushed stone base and future electrical may be extended to the structure. The proposed location is adjacent to the existing driveway in a gravel area. As shown in the application materials, the proposed location is just over 100 feet away from the pond, therefore permitting is required.

Since the proposed area is within the upland review area, the Wetlands Agent reviewed the application and approved it.

TOWN OF GRANBY
Public Hearing
Inland Wetlands and Watercourses Commission (IWWC)

There will be a public hearing conducted by the IWWC on Wednesday, July 9, 2025, at 7:00 p.m. in the Granby Town Hall Meeting Room, 15 North Granby Road to hear and consider the following items:

8 East Granby Road – C. Peeler c/o AutoZone, Inc. – Permit application to demolish existing structures and construct a 6,796 sq. ft. commercial building and other associated site work within a regulated area.

15 Peck Orchard Road – R. Marr – Permit request to modify an existing permit to construct a brook crossing, driveway and associated improvements within a regulated area, to include test borings on both brook banks as part of a geotechnical review.

At the hearing interested persons may appear and written communications will be received. Copies of the proposal are on file in the Community Development Office.

TOWN OF GRANBY

Incorporated 1786
15 North Granby Road
Granby, Connecticut 06035-2102
860-844-5318

July 9, 2025

Cassandra Peeler
c/o AutoZone, Inc.
123 S. Front Street, 3rd Floor
Memphis, TN 38103

Re: 8 East Granby Road – C. Peeler c/o AutoZone, Inc. – Permit application to demolish existing structures and construct a 6,796 sq. ft. commercial building and other associated site work within a regulated area.

Dear Ms. Peeler,

Please be advised that on July 9, 2025, the Inland Wetlands and Watercourses Commission (IWWC) approved the subject application in accordance with the following documentation:

1. Preliminary Site Plans; 8 East Granby Road; Prepared by Kimley Horn; Dated 5/13/25; Revised 7/1/25 (16 Sheets)
2. Stormwater Management Plan; Prepared by Dean Apostoleris; Dated May 2025; Revised July 2025
3. Application dated 5/13/25 and all other corresponding materials.

The following are the conditions of this approval.

1. All construction activities shall be coordinated through the Office of Community Development.

2. The Office of Community Development shall be notified:
   a. At least 48 hours prior to the start of any activities and when barrier erosion controls have been installed prior to earth disturbance activities.
   b. Upon completion of construction and site stabilization, the IWWC shall be notified in writing that work is complete, and a final inspection may be completed at that time.

3. Prior to the start of work the applicant shall reimburse the Town of Granby for all payments made to the Town Wetlands Officer for monitoring the development for compliance with this approval. The applicant will reimburse the Town at a rate of $100 per hour for the services of the Town Wetlands Officer. The applicant shall deposit with the Town of Granby the sum of $500 to be applied to the costs as described herein. Should the costs exceed this amount the applicant will be billed for the difference. Any funds not used for the project will be remitted to the applicant at the conclusion of the project. As used in this condition, the term Town Wetlands Officer includes any person or firm so designated by the Director of Community Development for the purposes of monitoring the development activities to assure compliance with this approval and the IWWC Regulations.

4. All work shall be in conformance with the approval and application materials as submitted for this Permit Approval. Any modifications to the approved plans must be reviewed and approved by the Granby Inland Wetlands and Watercourses Commission or their designated Agent.

5. Erosion controls shall be maintained until the site has achieved permanent stabilization. Permanent stabilization is defined as 70% permanent vegetation covering over 90% of the area. A stockpile of erosion controls shall remain on site to prepare controls as necessary. The IWWC shall be notified in writing at least 48 hours in advance of erosion controls being removed.

6. Excavated soil shall not be brought off-property without the notification and approval of the Office of Community Development. The applicant shall supply the destination in writing for any excavated soil removed from the property.

7. Only clean fill, free of invasive species shall be brought on-site.

8. It shall be noted that the issuance of a permit through the Granby IWWC only satisfies approval with the local Inland Wetlands and Watercourse Regulations and does not satisfy any other local, state, or federal permits which may apply to this project.

9. This permit shall be considered valid for a period of 5-years from the date of issuance.

Please provide a Mylar copy of the approved maps to the Office of Community Development for the signature of the Inland Wetlands and Watercourses Commission's Chair at your earliest convenience. Once the approved Mylars are signed by the Commission's Chair, you will need to file it in the office of the Town Clerk.

If you have any questions, please call the Office of Community Development at your earliest convenience.

Sincerely,

John Laudati
Granby IWWC Chairman

Kevin Clark, PEL
Town Engineer
Town of Granby
15 North Granby Road
Granby, CT 06035

(860) 844-5318
Cell: (860) 559-1902
townengineer@granby-ct.gov

Site Plan Review for Inland Wetlands Application

Date: July 2, 2025

Plan: "Preliminary Site Plan Application Plans for AutoZone Granby, 8 E Granby Road, Granby, CT 06035, Date: 5/13/2025, Sheets C-0.0 through C-6.2, Kimley-Horn & Associates, Inc, Revised 7/01/25."

Note: Review is for the Inland and Watercourses application. Erosion and sediment control plan required per section 8.7 of the Town of Granby Zoning regulations because the project will disturb more than ½ acre of the site.

Sheet C-0.0 No comments

Sheet C-0.1 No comments

Survey Sheet 1

1. Show and label existing sidewalk.

Sheet C-1.0 No comments

Sheet C-2.0 No comments

Sheet C-3.0

2. Show test hole information on this sheet.

Sheet C-4.0 No comments

Sheet C-5.0 No comments

Sheet C-5.1 No comments

Sheet C-5.2 No comments

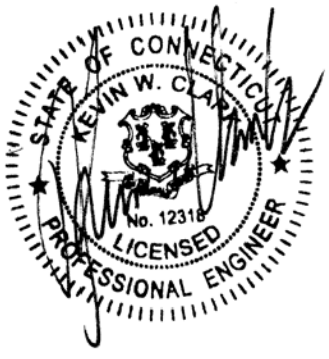
Sheets C-6.0 through C-6.2 No comments at this time.

Sheets L.0 & L.1 No comments at this time.

Stormwater Management Plan

3. Add the test hole pit data to the report and on sheet C-3.0. Test pits and soil data reporting to comply with the Connecticut Stormwater Quality Manual, March 30, 2024, Chapter 10, Test pits and Borings, pages 178 and 179.
4. Concur with the results and conclusions.

By: Kevin Clark PEL – Town Engineer



July 1, 2025

Town of Granby – Inland Wetlands & Watercourses Commission
Town Hall
15 North Granby Road
Granby, CT 06035

Attn: Kevin Clark, PEL, Kate Bednaz, and Abigail St. Peter Kenyon, AICP

RE: **AutoZone Granby**
8 East Granby Road, Granby, CT 06035
IWWC Application Submitted 5/14/2025

Dear Commission Members,

This letter is being submitted by Kimley-Horn & Associates, Inc. on behalf of AutoZone, Inc. ("Applicant") in response to the department review letters listed below:

- Town Engineer – Kevin Clark, PEL dated 5/22/2025
- Inland Wetlands Agent Review – Kate Bednaz dated 6/2/2025
- Department of Community Development – Abigail St. Peter Kenyon, AICP dated 5/28/2025

The below comments are followed by responses numbered based on the comments in the above referenced review letters.

Town Engineer – Kevin Clark, PEL

Sheet C-0.1

1. What are Infiltration Notes for?

   Response: The infiltration notes on Sheet C-0.1 have been removed as they do not apply.

Survey Sheet 1

2. Show existing information easterly from site past the property line by about 20-feet.

   Response: The survey has been revised to include the existing information east of the property approximately 20'.

3. For the trees to shown on the survey that are to remain, show their existing drip line.

   Response: The survey has been revised to show all existing trees on the property and the existing drip line. The civil design sheets have been revised to show which trees are to remain and the remaining drip line.

Sheet C-3.0

4. Add a stone trench at least 2-feet deep in the infiltration area to provide for infiltration during periods of frozen ground.

Response: The infiltration basin has been revised to include a 2' x 2' stone trench to promote infiltration during periods of frozen ground. A detail is of the stone trench is provided on Sheet C-6.1.

5. Show additional spot grades in the pavement areas to indicate how the pavement will drain.

   Response: Sheet C-3.0 has been revised to include additional spot grades, drainage ridge lines, and drainage flow lines to denote the drainage within the pavement area.

Sheet C-4.0

6. Show FFE.

   Response: Sheet C-4.0 has been revised to include the FFE.

7. Additional information (e.g. inverts, cleanouts, pipe length and slope, etc.) is required for the sanitary sewer connection. This is not needed for the wetlands application but will need to be shown on the site plan application plans.

   Response: Comment Acknowledged. Additional information regarding the sanitary sewer connection will be provided with the site plan application plans.

Sheet C-5.0

8. Show tree protection where its required.

   Response: Sheet C-5.0 has been revised to show tree protection where required.

Sheet C-5.1

9. Show outlet protection for pipes that will discharge into the infiltration basin. Include stone check dams to protect the area outside of the outlet protection. This will limit the spread of sediment in the forebay.

   Response: Sheet 3.0 and Sheet C-5.1 have been revised to show a flared end section with associated rip-rap and stone check dam to meet out

10. Show proposed stabilization for the basin (e.g. seeding, ECM). Show protection of the basin during construction.

    Response: Sheet C-5.0 and C-5.1 have been revised to show the proposed stabilization and protection of the infiltration basin.

11. Suggest leaving the basin partially excavated during construction until the pavement area is stabilized. Then remove any sediment and excavate to the final design depth.

    Response: Comment Acknowledged. Infiltration basin construction notes have been included on Sheet C-3.0.

12. Basin area will most likely require temporary irrigation after seeding.

    Response: Note 1.6 on Sheet 3.0 has been included to require temporary irrigation after seeding.

13. Add callouts for location of all erosion and sediment control features. (e.g. topsoiling, temporary and permanent seeding, tree protection, etc.) Put the specifications for these items on sheet 5.2.

    Response: Sheets C-5.0 and C-5.1 have been revised to include callouts for locations of all erosion and sediment control features. Sheet C-5.3 (previously C-5.2) has been revised to include specifications for each item.

Sheet C-5.2

14. Add a detail for a compost filter sock.

    Response: Sheet C-5.2 has been revised to include a detail for a compost filter sock.

15. In general, the information contained in section 4 of the Stormwater Management Plan should be shown on the erosion and sediment control sheets. The site contractor will typically refer to the approved drawings and the Stormwater Plan.

    Response: Sheet C-5.3 has been included to provide these notes.

16. A project narrative is required for erosion and sediment control plans. See chapter 3 of Connecticut Guidelines. For this project include items i through vii.

    Response: Sheet C-5.3 has been revised to include a project narrative per Chapter 3 of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

Stormwater Management

17. At least two test pits are required in the proposed infiltration basin to support the design infiltration rate described on page 16 of the Stormwater Management Report. Add the test hole pit to the report and on sheet C-3.0. Test pits and soil data reporting to comply with the Connecticut Stormwater Quality Manual, March 30, 2024, Chapter 10, Test pits and Borings, pages 178 and 179. Refer design infiltration rate to table 10-2 and add it to the drainage report.

    Response: Two test pits were completed on 6/24/25. The results have been added to the stormwater report and the locations are shown on C-3.0. An infiltration rate of 26 in/hr was observed, therefore, a design rate of 13 in/hr is utilized for the design calculations.

    The preliminary testing results were provided for this submittal. The full geotechnical report will be provided at a later date once completed.

Inland Wetlands Agent Review – Kate Bednaz

1. Kevin Clark, Granby Town Engineer's provided comments in his review letter dated May 22, 2025. The IWWC generally requires that all comments have been addressed prior to the closure of the public hearing.

    Response: Comment Acknowledged.

2. Request confirmation that all existing trees are accurately located and that the diameter at breast height (DBH) has been properly recorded within the proposed clearing area.

    Response: The survey has been revised to show all existing trees on the property and the existing drip line. The civil design sheets have been revised to show which trees are to remain and the remaining drip line.

3. Sheet C-5.0 shows silt fence to be specified as a perimeter erosion control barrier enclosing the entire disturbance area. It is recommended that a more robust perimeter control be located along the westerly property boundary, to aid in protecting the adjacent watercourse, where there is a slope adjacent to Hungary Road.

   Response: Sheets C-5.0 and C-5.1 have been revised to include an additional row of silt sock before the silt fence on the western property boundary per discussion with Kate Bednaz on 6/5/2025.

4. Please confirm and supply the reference to how the "Approximate Centerline of Intermittent Watercourse" shown on sheet C-1.0 has been determined.

   Response: The centerline of the intermittent watercourse shown on Sheet C-1.0 was determined by as-builts provided by the Town of Granby and aerial imagery. Note 5 has been added to Sheet C-1.0 detailing the determination.

5. The tree line shown on Sheet 1 of 1 the Site Survey and subsequent site plans shows the westerly tree line type indicating that the tree line is located to the east. It appears that this is intended to indicate that the tree line is located to the west, along Hungary Road. Please confirm.

   Response: The survey has been revised to indicate the tree line along Hungary Road to be to the west. The civil plan set has been revised to match.

6. It is appreciated that the proposed site plan conserves the tree lines to the maximum extent practicable with this design. Due to the extensive change in cover types within the URA, please supply a landscaping plan for the property for review by the IWWC as part of this application. It is strongly recommended that the applicant consider revegetating the URA to the maximum extent practicable to maintain the functions and values that this property provides, to the adjacent watercourse and any associated wetlands. It is recommended that the applicant consider the following.
   a. Native plantings within the URA, including the infiltration basin.
   b. An invasive species removal plan that is initiated when the initial project clearing is conducted and maintained for 2-years post initial treatment.
   c. Relocation of existing specimen species.

   Response: A landscape plan has been provided and is shown on Sheet L-1.0 and L-1.1.
   - ***The landscape plan proposes native plantings on the property including the infiltration basin.***
   - ***Invasive Species removal notes have been provided on Sheet L-1.1.***
   - ***There are no proposed relocations of existing specimen species on the property. All vegetation will remain as is or will be removed.***

7. The property will be modified from having limited impervious area, to having the majority of the site be impervious. Thermal warming of this site is reasonably likely with the proposed site improvements. Please confirm what measures are being taken to reduce the thermal warming within the URA.

   Response: The project proposes the installation of an infiltration basin as the primary stormwater management practice. The infiltration basin promotes the reduction of thermal warming due to stormwater infiltration into the ground and passing cool soil layers before it recharges the groundwater. Additional measures include the following:
   - ***Underground stormwater pipe network to direct water to the infiltration basin versus sheet flowing along the impervious area.***

- ***The roof membrane will be white to reflect more sunlight and keep stormwater cooler as stormwater is directed to the roof drains.***

8. The following are recommended conditions of approval for consideration by the IWWC. Additional conditions regarding invasive species removal and success and planting survival rate will likely be additional conditions to be added once a response to comments is supplied.
    a. The Office of Community Development shall be notified:
        i. At least 48 hours prior to the start of any activities and when barrier erosion controls have been installed prior to earth disturbance activities.
        ii. Upon the completion of any invasive species management effort.
        iii. Upon completion of construction and site stabilization, the IWWC shall be notified in writing that work is complete, and a final inspection may be completed at that time.
    b. The applicant shall reimburse the Town of Granby for all payments made to the Town Wetlands Officer for monitoring the development for compliance with this approval. The applicant will reimburse the Town at a rate of $100 per hour for the services of the Town Wetlands Officer or other designated expert. The applicant shall deposit with the Town of Granby the sum of $5,000 to be applied to the costs as described herein. Should the costs exceed this amount, the applicant will be billed for the difference. Any funds not used for the project will be remitted to the applicant at the conclusion of the project. As used in this context, the term “Town Wetlands Officer” includes any person or firm so designated by the Director of Community Development for the purposes of monitoring the development activities to assure compliance with this approval and the IWWC Regulations.
    c. All work shall be in conformance with the approval and application materials as submitted for this Permit Approval. Any modifications to the approved plans must be reviewed and approved by the Granby Inland Wetlands and Watercourses Commission or their designated Agent.
    d. Prior to the start of work, a copy of the Stormwater Pollution Prevention Plan (SWPPP), or similar plan as may be required by the CT General Permit for Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, shall be submitted to the Office of Community Development.
    e. Erosion controls shall be maintained until the site has achieved permanent stabilization. Permanent stabilization is defined as 70% permanent vegetation covering over 90% of the area. A stockpile of erosion controls shall remain on site to prepare controls as necessary. The IWWC shall be notified in writing at least 48 hours in advance of erosion controls being removed.
    f. Excavated soil shall not be brought off-property without the notification and approval of the Office of Community Development. The applicant shall supply the destination in writing for any excavated soil removed from the property.
    g. Only clean fill, free of invasive species shall be brought on-site. Utilizing on-site fill will reduce, if not eliminate the potential for the introduction and potential colonization of new invasive species into this area of the watershed.
    h. Excavated soil shall not be brought off-property without the notification and approval of the Office of Community Development. The applicant shall supply the destination in writing for any excavated soil removed from the property.
    i. The site development contractor shall supply the Town of Granby Office of Community Development, via hard copy or electronic, copies of their weekly site inspection reports.
    j. This permit is valid for a period of 5 years from the date of issuance.

Response: Comment Acknowledged.

Department of Community Development – Abigail St. Peter Kenyon, AICP

"I will prepare more detailed comments at the time of PZ submission, but for site items that may impact layout for IWWC's consideration, refer to the following:"

1. A loading space 10 x 25 feet is required. Check the proposed space for compliance with those dimensions and adjust pavement if needed.

   Response: The proposed loading space is 24' x 63.8' as shown on Sheet C-2.0.

2. I do not see a landscape plan. Typically IWWC will want to see this as part of the application, specifically plantings within the URA.

   Response: A landscape plan and notes have been added to the planset as Sheets L-1.0 & L-1.1.

3. There should be a 25-foot buffer to the single-family house to the north. Look at the location/configuration of the basin to provide this buffer. Landscaping should be shown.

   Response: A 25-foot landscape buffer is provided at the north of the property. The extents of the infiltration basin have been revised to be outside the 25-foot buffer. Landscaping has been added and is shown on Sheet L-1.0.

Please contact us at (914) 369-1733 or trent.suddeth@kimley-horn.com if you have any questions or require further information.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.

Trent A Suddeth

Trent Suddeth, P.E.

STORMWATER MANAGEMENT PLAN (SWMP)

AutoZone Granby
8 East Granby Road, Granby, CT 06035

July 2025

Prepared for:

AutoZone, Inc
123 S. Front St, 3rd Floor
Memphis, TN 38103

Prepared by:

Dean A. Apostoleris, P.E.

Connecticut License # 37922

Kimley»Horn
Kimley-Horn & Associates, Inc.

Table of Contents

1. General Information

Applicant:

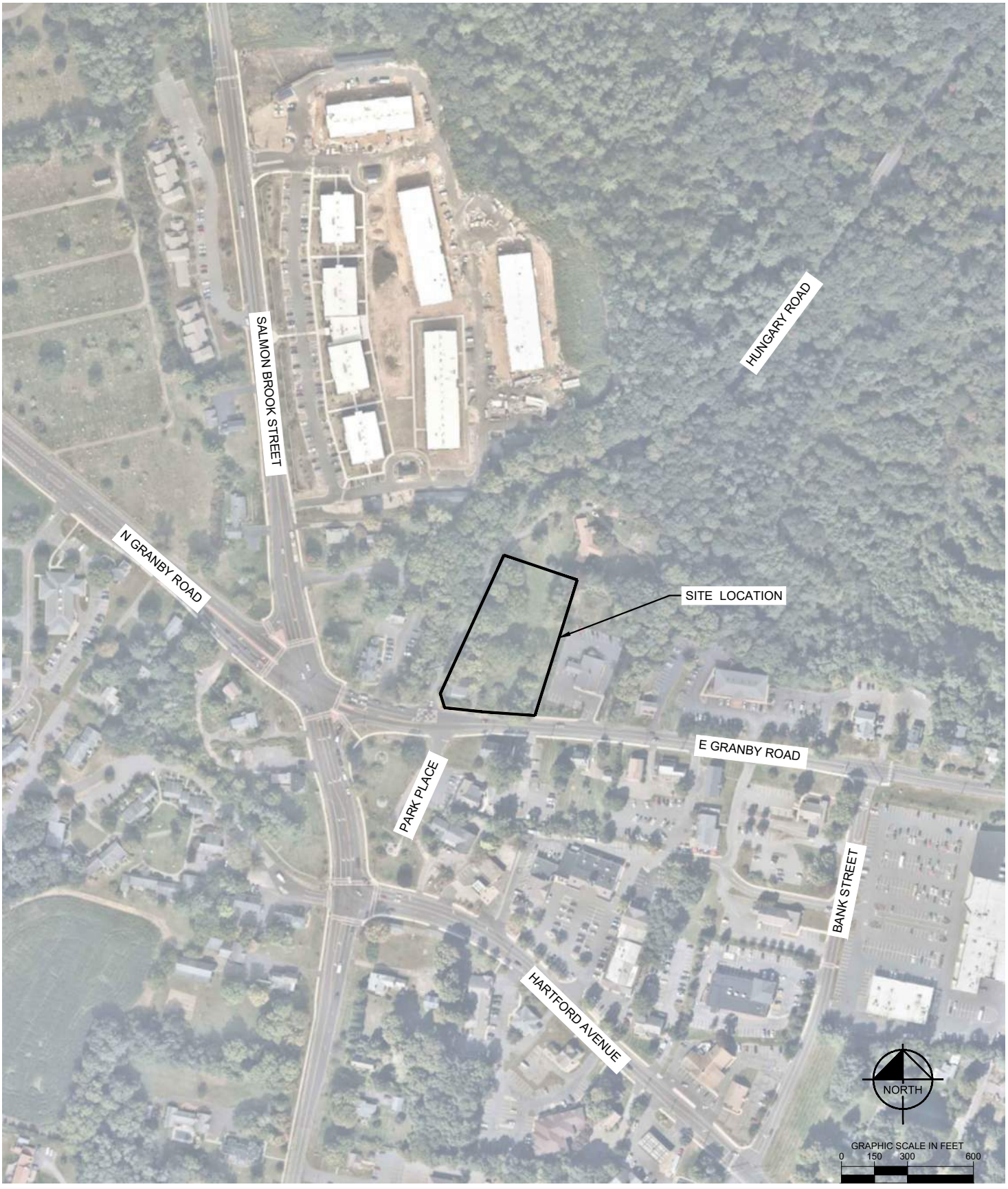
Cassandra Peeler
AutoZone, Inc.
123 S. Front St, 3rd Floor
Memphis, TN 38103
Email: Cassandra.Peeler@autozone.com
Phone Number: 901-495-8753

Civil Engineer:

Dean A. Apostoleris, P.E.
Kimley-Horn and Associates, Inc
1 N Lexington Ave, Suite 505, White Plains, NY 10601
Email: Dean.Aposostoleris@kimley-horn.com
Phone: 914-368-9200

Site Information:

Address: 8 East Granby Road, Granby, CT 06035 (Map: G-51; Block: 71; Lot: 2)
Zoning: Center Commons (CC) & Historic Overlay District
Current Use: Residential
Proposed Use: Commercial



AUTOZONE GRANBY

8 E GRANBY ROAD
GRANBY, CT 06035

SITE LOCATION EXHIBIT

KHA PROJECT:	112703002
DATE:	04-28-2025
DESIGNED BY:	AMA
DRAWN BY:	AMA
CHECKED BY:	TS

Kimley»Horn

1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
PHONE: 914-368-9200
WWW.KIMLEY-HORN.COM

2. Project Summary

2.1 – Project Description & Purpose (For Existing & Proposed Conditions)

The proposed project is located on an approximately 1.58-acre site in Granby, CT at 8 East Granby Road. The site is bounded by East Granby Road (CT Route 20) to the south, Hungary Road to the west, a commercial bank to the west, and a residential property to the north. The site is developed with a 2,058 S.F. residential building and 688 detached garage with associated paved parking areas and utility infrastructure. The project seeks to demolish the existing structures and construct a new 6,796 S.F. commercial building for a retail establishment. Additional improvements to the site include paved parking areas, curbs, lighting fixtures, signage, utility infrastructure, and stormwater infrastructure.

The project seeks to avoid disturbance of wetlands, watercourse, or other sensitive water resources. Based on a review of the Town of Granby Wetlands Map, National Wetland Inventory, and State of Connecticut Department of Energy and Environmental Protection mappers, there are no wetlands located on site nor are there watercourses on site. A nearby intermittent watercourse is located approximately 40 feet west of the site across Hungary Road and is a receiving waterbody for a portion of the site's stormwater runoff. The intermittent watercourse flows north and outfalls into the East Branch Salmon Brook. Based on Federal Emergency Management Agency Flood Insurance Rate Maps (09003C0183F dated 09/26/2008), the entire property is located within Zone X.

The existing site topography ranges from 214 ft to 204 ft with the existing developed area ranging from 214 ft to 209 ft. The site generally slopes from the southeast corner towards the northwest corner. There is no existing stormwater infrastructure onsite. The majority of stormwater runoff infiltrates onsite due to good soil conditions and flat topography. Stormwater runoff that does run offsite runs along Hungary Road and outfalls into the intermittent watercourse.

The existing site consists of impervious, grass, and wood areas. The total existing impervious area is approximately 0.17 acres. The proposed impervious area will be 0.80 acres, resulting in a 0.63 acre increase in impervious area. The total site area to be disturbed, including improvements to the right-of-way, is 1.47 acres. A total drainage of 1.85 acres was delineated and will be analyzed in this report for stormwater management, see section 3 for further discussion on stormwater management

Soil characteristics including soil types and hydrological soil group classification of the studied drainage area was obtained online from the Web Soil Survey (WSS) operated by the USDA Natural Resources Conservation Service (NRCS). Appendix A provides the reports generated from the WSS and the below table summarizes as follows:

Symbol	Description	Hydrological Soil Group
29A	Agawam fine sandy loam, 0 to 3 percent slopes	B
34A	Merrimac fine sandy loam, 0 to 3 percent slopes	B

A subsurface investigation was conducted at the site on November 1, 2024, and included eight soil borings (B1 through B8) advanced to depths ranging from approximately 10 to 21 feet below grade. The surface layer generally consisted of a dark brown organic topsoil extending to about 2 feet, underlain by a medium dense sand deposit with varying amounts of gravel, classified as well-graded sand with gravel (SW) per the Unified Soil Classification System. No bedrock was encountered in any of the borings. Groundwater was not observed in any of the borings at the time of drilling. No significant subsurface or geologic features, such as bedrock outcrops or clay lenses, were identified during the investigation. Refer to Appendix A for the Geotechnical Report.

Stormwater discharges from the site will be detailed in Section 3 – Stormwater Analysis and Calculations. In summation, there are no impaired waters, critical areas, buffers, and setbacks established by the local, state, and federal regulatory authorities within the project site.

The following is a list of applicable local and state permits and approvals anticipated for the project:

- Town of Granby Inland Wetland & Watercourse Commission Approval
- Town of Granby Planning & Zoning Commission Special Use Permit and Site Plan Approval
- General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities from the Connecticut Department of Energy and Environmental Protection (CTDEEP).

2.2 – Potential Stormwater Impacts

There are no potential pollution sources such as erosive soils, steep slopes, vehicle fueling, and vehicle washing anticipated in the proposed condition. During construction, the contractor will mitigate against any potential pollution sources, installing protective measures per the Erosion and Sediment Control Plans included in Appendix A. For a summary of calculated pre- and post-development peak flows, see Section 3.

2.3 – Critical On-Site Resources

There is no evidence of onsite site contamination. There are no additional existing or proposed critical on-site resources such as wells, aquifers, wetlands, streams, or ponds as identified by the NWI, CT DEEP, and Town of Granby mappers.

2.4 – Critical Off-Site (Adjacent to or Downstream of Site) Resources

The neighboring land uses are residential and commercial.

An intermittent watercourse is located to the west of the site and is the current receiving waterbody for a portion of the stormwater runoff for the existing conditions. The re-development of the property proposes to use onsite infiltration basin to convey, treat, and infiltrate stormwater discharge up to the 100-year storm.

2.5 – Proposed Stormwater Management Practices

All controls in this section must be in conformance with the 2024 Connecticut Stormwater Quality Manual and the town's qualified product list.

The following measures shall be implemented during construction and post-construction.

- No litter, debris, building materials, or similar materials shall discharge to the watercourses of the State.
- Off-site tracking of sediments by vehicles or equipment and the generation of dust shall be minimized.
- Erosion and sediment control measures shall be implemented in accordance with the Town of Granby E&S Guidelines.
- All post-development stormwater management measures shall be maintained and cleaned of construction sediment.
- All silt fences shall be removed upon stabilization of upslope areas of the site.

The following BMPs shall be installed during the construction process to minimize the discharge of pollutants, and stormwater discharges that will occur after construction operations have been completed.

- Catch Basin: Existing inlet sumps will intercept and store sediment during and after construction. During construction, if sedimentation of the inlet occurs, inlet protection shall be re-installed, or other upstream measures added by the contractor to prevent sediment from leaving the site.
- Infiltration Basin: An infiltration basin is a stormwater management practice designed to capture and infiltrate the water quality volume within 48 to 72 hours, promoting groundwater recharge and reducing runoff volume. These dry basins are typically offline systems with flat bottoms and vegetated surfaces to enhance infiltration and prevent erosion. They must be underlain by soils with a minimum infiltration rate of 0.3 inches per hour, be located at least 3 feet above seasonal high groundwater, and include pretreatment (e.g., sediment forebays) to prevent clogging.

Post-Construction Guidelines

After the project is complete, the property owner will perform the following maintenance and restorative measures:

- Litter/debris and sweepings will be removed from the site regularly.
- Mowing and maintenance of vegetated areas will occur, as needed.
- Stormwater drainage system will be cleaned of sediment/debris.
- Identify, inspect, and maintain all stormwater quality BMPs included within the project, as per manufacturer recommendations.

2.6 – Construction Schedule

The Contractor will be given approximately 12 months for the construction of all phases of the project, which shall be revised as necessary to keep the Plan current.

The suggested sequence of construction is as follows:

1. Conduct a preconstruction meeting.
2. Conduct the plan implementation inspection and clearly identify the limits of disturbance (LOD).

3. Install erosion and sedimentation controls at the effected inlets/outlets and at limits of disturbed slopes/toe of slope.
4. Perform clearing and grubbing activities.
5. Apply temporary stabilization measures for disturbed areas in accordance with Temporary Stabilization Practices.
6. Major construction activities listed below.
    a. Site preparation and erosion control
    b. Construction, removal of sediment and final stabilization
7. Install permanent stormwater control measures (infiltration basin)
    a. No stormwater runoff shall be directed to the infiltration basin unless and until the infiltration basis, basin bottom, basin slopes, plantings, etc. have achieved 100% stabilization **AND** all upstream areas have achieved 80% stabilization.
    b. The infiltration shall not be used as a temporary sediment basin during construction.
8. Remove erosion and sedimentation controls when it has been determined that the disturbed areas have been stabilized. (This determination will be made by the Qualified Inspector).
9. All post-construction stormwater structures shall be cleaned of construction sediment and any remaining sediment control systems (SCS) shall be removed prior to the filing of the “Notice of Termination Form.”
10. Ensure project area is cleaned, free of debris, and catch basins have been cleaned, etc.

3. Stormwater Calculations

3.1 – Rainfall Event and Sizing Criteria

Rainfall event data was obtained through the NOAA Rainfall Frequency Atlas, see Appendix B. The following data provides the 24-hour rainfall for the following storm events for a NOAA_D distribution, located in Town of Granby, CT:

Storm Event	24-Hour Rainfall (in)
2-Year	3.28
10-Year	5.29
100-Year	8.94

The intent of this project is to attenuate the runoff peak rates, while improving the water quality volume (WQv) of stormwater runoff from the re-development's drainage area, consistent with the requirements of the Connecticut Stormwater Manual.

Hydrologic Analysis

HydroCAD is a stormwater modeling program by Applied Microcomputer Systems and was used to analyze the stormwater design.

The project's time of concentration was calculated for pre-development and post-development stormwater conditions. CN values were calculated under existing and proposed conditions by following TR-55 Handbook Guideline for each drainage area. Refer to Appendix B for HydroCAD report and detailed calculations.

Study Points

Study points show where stormwater runoff from drainage areas exits the site. The existing and proposed conditions are analyzed with these same study points so that a comparison can be made. One study point has been determined for the project:

➢ Study Point 1 (SP-1) – located at the northwest end of the site. Storm runoff will flow to the northwest portion of the site and eventually discharge to the intermittent watercourse across from Hungary Road.

➢ Study Point 2 (SP-2) – located at the northeast end of the site. Storm runoff will flow to the northeast portion of the site and discharge to the adjacent neighbor's stormwater practice.

Refer to Appendix B – Drainage Area Maps for Study Point 1 & 2

Existing Drainage Area Conditions

Drainage Areas are modeled in what HydroCAD defines as sub-catchment areas. The existing drainage areas area described in detail below. Refer to Appendix B for Existing Drainage Area Map.

- **Existing Drainage Area 1A (EX-1A)**

  Drainage Area 1A consists of approximately 1.22 acres of on-site and off-site areas. The onsite area is mostly pervious coverage of grass and woods with additional impervious coverage. Stormwater in this area mainly sheet flows and shallow concentrated flows to the northwest of the site before eventually discharging offsite (Study Point 1) into the adjacent intermittent watercourse. Drainage Area 1 contains soils in the hydrological soil group classification of B.

- **Existing Drainage Area 1B (EX-1B)**

  Drainage Area 1B consists of approximately 0.53 acres of on-site and off-site areas. The onsite area is mostly pervious coverage of grass and woods with additional impervious coverage. The offsite area is primarily impervious pavement. Stormwater in this area sheet flows and shallow concentrated flows to the northwest offsite via Hungary Road before eventually discharging offsite (Study Point 1) into the adjacent intermittent watercourse. Drainage Area 1 contains soils in the hydrological soil group classification of B.

- **Existing Drainage Area 2 (EX-2)**

  Drainage Area 2 consists of approximately 0.10 acres of on-site area. The onsite area consists of grass and woods cover. Stormwater in this area mainly sheet flows to the northeast end of the site before out flowing onto the adjacent property. Drainage Area 2 contains soils in the hydrological soil group classifications of B.

Existing Conditions Drainage Area					
Sub-catchment	Area (ac)	Land Cover	Average Curve Number	Hydrologic Soil Group	Time of Concentration (min)
1A	1.22	0.08 ac of impervious cover 0.98 ac of grass cover 0.16 ac of woods cover	63	B	30.8
1B	0.53	0.25 ac of impervious cover 0.24 ac of grass cover 0.04 ac of woods cover	78	B	16.6
2	0.10	0.01 ac of woods cover	58	B	15.3

Post-Development Drainage Area Conditions

Drainage Areas are modeled in what HydroCAD defines as sub-catchment areas. The proposed drainage areas area described in detail below. Refer to Appendix B for Post-Development Drainage Area Map.

- **Proposed Drainage Area 1A (PR-1A)**

  Drainage Area 1A consists of approximately 1.39 acres of on-site and off-site areas. The increase in area from the existing conditions is due to re-grading of the site allowing additional runoff to entire the drainage area. Stormwater in this area mainly sheet flows and shallow concentrated flows to the north of the site before getting captured into the onsite stormwater system. The onsite stormwater system outfalls into the proposed infiltration basin. Drainage Area 1A contains soils in the hydrological soil group classification of B.

- **Proposed Drainage Area 1B (PR-1B)**

  Drainage Area 1B consists of approximately 0.41 acres of on-site and off-site areas. The onsite area is mostly pervious coverage of grass and woods with additional impervious coverage. The offsite area is primarily impervious pavement. Stormwater in this area sheet flows and shallow concentrated flows to the northwest offsite via Hungary Road before eventually discharging offsite (Study Point 1) into the adjacent intermittent watercourse. Drainage Area 1B contains soils in the hydrological soil group classification of B.

- **Proposed Drainage Area 2 (PR-2)**

  Drainage Area 2 consists of approximately 0.05 acres of on-site area. The onsite area consists of grass and woods cover. Stormwater in this area mainly sheet flows to the northeast end of the site before out flowing onto the adjacent property. Drainage Area 2 contains soils in the hydrological soil group classifications of B.

The table below summarizes the proposed condition drainage area:

Proposed Conditions Drainage Area					
Sub-catchment	Area (ac)	Land Cover	Average Curve Number	Hydrologic Soil Group	Time of Concentration (min)
1A	1.39	0.71 ac of impervious cover 0.68 ac of grass cover 0.00 ac of woods cover	80	B	15.5
1B	0.41	0.17 ac of impervious cover 0.16 ac of grass cover 0.09 ac of woods cover	76	B	9.3
2	0.05	0.05 ac of woods cover	58	B	8.1

3.2 – LID Site Planning and Design Strategies

Avoided Impacts

Minimizing Soil Compaction

- Construction activities are limited to the designated limit of disturbance. The design minimizes equipment travel across infiltration areas. Areas outside of the limit of the disturbance are defined for existing vegetation, and infiltration BMP areas will be protected during construction with restricted equipment access. Soils in landscaped areas will be decompacted and amended per specifications.

Minimizing Site Disturbance

- Limits of disturbance have been clearly defined and marked on the site plan. Disturbed areas are limited to building footprints, access drives, required utility trenches, and stormwater practices. Existing vegetated areas outside these limits will remain untouched and will be protected during construction.

Protecting Sensitive Natural Areas

- No wetlands or regulated watercourses exist on the project site. However, the design preserved all vegetated buffers along adjacent parcels, and care will be taken to avoid sediment migration into offsite natural areas.

Preserving Vegetated Buffers

- Existing vegetation along property edges, particularly near adjacent residential and undeveloped areas, will be preserved and protected during construction. Disturbance within these zones has been avoided wherever feasible.

Avoiding Disturbance of Steep Slopes

- The site is relatively flat. No development is occurring on slopes greater than 25%, and grading was designed to minimize cut and fill operations.

Siting on Permeable and Erodible Soils

- Infiltration BMPs have been strategically located in areas identified in the geotechnical report as suitable due to sandy, well-draining soils. Areas with poor infiltration potential were avoided for stormwater infiltration features.

Protecting Natural Flow Pathways

- The stormwater design mimics existing hydrology where possible.

Conservation and Compact Development

- The development utilizes a compact footprint consistent with zoning regulations and reuses a portion of a developed parcel, thus avoiding unnecessary land consumption. Parking and building areas were minimized to essential needs to allow for operation and deliveries.

Reduced Impacts

Reducing Impervious Surfaces

- Impervious areas were minimized through efficient site layout. The minimum required parking spaces are proposed to meet zoning requirements, and the parking layout is designed to allow deliveries with the minimum footprint needed for truck movement.

Preserving Pre-Development Time of Concentration

- Runoff is routed to vegetated areas and infiltration basins, helping to maintain time of concentration and reduce peak flows. Site grading and BMP selection were designed to closely replicate pre-development hydrology.

Use of Low Maintenance Landscaping

- Proposed landscaping includes drought-tolerant, native, and adapted species requiring minimal irrigation and chemical use.

Managed Impacts at the Source

Disconnecting Impervious Surfaces

- The development utilizes a compact footprint consistent with zoning regulations, which limits the amount of available space for disconnection. An infiltration basin is utilized to treat water quality and reduce the runoff reduction.

Conversation of Impervious Areas to Pervious Areas

- While the site was previously developed, additional impervious areas are required to meet the zoning requirements. The design includes substantial landscape areas and infiltration areas that replace older impervious surface areas, improving infiltration and reducing runoff volume.

Source Controls

- The site plan incorporates source controls such as erosion control measures, designated staging areas for materials, and proper waste management during construction. Inlet protection and stabilized construction entrances are detailed in the erosion control plans.

3.3 – Stormwater Runoff Quality Volume (WQv), Pollutant Reduction, & Required Retention Volume (RRV)

The proposed development utilizes a proposed infiltration basin which is a CTDEEP approved stormwater management practice for water quality and quantity. The infiltration basin practice provides water quality pretreatment and treatment via forebays and permanent pools.

The proposed infiltration basin will receive runoff from proposed drainage area PR-1. The proposed I-infiltration basin consists of one forebay sized based on 25% of the required design WQv. The main detention pond is sized based on the required design WQv to **capture and treat the entire design WQv**. Below is the summary table of the water quality volume for the infiltration basin.

Water Quality Volume				
	Forebay Volume (ac-ft)		Design Water Quality Volume (ac-ft)	
	Required	Provided	Required	Provided
Infiltration Basin	0.019	0.027	0.077	0.284

The infiltration basin is designed to achieve the average annual pollutant load reductions from directly connected impervious area for sediment (Total Suspended Solids) and nutrients (Total Phosphorus and Total Nitrogen). This is achieved by meeting the full retention goal (Required Retention Volume, RRv) by treating 100% of the WQv with the infiltration basin.

The impervious surfaces on the project site are designed to discharge stormwater runoff through a subsurface drainage system that directs flow to an infiltration basin, which is a structural stormwater best management practice sized to fully retain the required Water Quality Volume (WQV) in accordance with current stormwater management standards. As the infiltration basin is specifically engineered to retain and infiltrate the WQV, the impervious areas draining to it are considered

disconnected. Therefore, these impervious areas are not classified as Directly Connected Impervious Area (DCIA) under the Connecticut DEEP General Permit criteria.

Refer to Appendix B for detailed design water quality volume calculations.

3.4 – Stormwater Runoff Quantity Control

From the HydroCAD analysis, the existing and proposed conditions peak flows at Study Point 1 & 2 for storms ranging from the 2-year to the 100-year design frequencies are modeled. Refer to Appendix B for supporting calculations for both existing and proposed conditions. Summary Table #1 and #2 below shows the comparison of flows produced under existing and developed conditions for Study Point 1 & 2.

Table 1 – Existing Conditions Peak Flows

		Peak Discharges (cfs) of Various Storm Frequency		
Drainage Area	**Area (ac)**	**2-yr**	**10-yr**	**100-yr**
1	1.750	0.73	2.16	4.89
2	0.098	0.02	0.10	0.29

Table 2 – Proposed Conditions Peak Flows

		Peak Discharges (cfs) of Various Storm Frequency		
Drainage Area	**Area (ac)**	**2-yr**	**10-yr**	**100-yr**
1	1.801	0.50	1.17	2.35
2	0.050	0.01	0.06	0.18

There is a decrease in peak discharge for all-storm events under the proposed conditions.

3.5 – Proposed Stormwater Practices

Infiltration Basin

An infiltration basin was utilized for the site due to the flat existing topography and good soil conditions. In the existing conditions, most of the stormwater runoff infiltrates onsite. The proposed conditions try to match the existing conditions using the infiltration basin.

The proposed infiltration basin is located at the north end of the project site and receives runoff from drainage area PR-1. It consists of one forebay for water quality pre-treatment and a main pond area for water quality treatment. The forebay is sized to treat 25% of the water quality volume. Tables 3.15 below show the elevation vs area vs volume of the infiltration basin.

<u>Forebay</u> - Pretreatment Volume Provided: 0.027

Contour Elev. (ft)	Contour Area Proposed (ft^2)	Contour Area Average (ft^2)	Proposed (ac)	Average (ac)	Depth (ft)	Volume Provided (ft^3)	Volume Provided (ac-ft)	Cumulative Volume Provided (ac-ft)
206	285		0.0065					
		426		0.0098	1	426	0.0098	0.0098
207	566		0.0130					
		735		0.0169	1	735	0.0169	0.0266
208	903		0.0207					

<u>Main Pond</u> - Total Water Quality treatment provided (at elevation 209.0) = 0.284 ac-ft

Contour Elev. (ft)	Contour Area Proposed (ft^2)	Contour Area Average (ft^2)	Proposed (ac)	Average (ac)	Depth (ft)	Volume Provided (ft^3)	Volume Provided (ac-ft)	Cumulative Volume Provided (ac-ft)
206	2606		0.0598					
		3074		0.0706	1	3074	0.071	0.071
207	3542		0.0813					
		4067		0.0934	1	4067	0.093	0.164
208	4592		0.1054					
		5210		0.1196	1	5209.5	0.120	0.284
209	5827		0.1338					
		6320		0.1451	1	6319.5	0.145	0.429
210	6812		0.1564					

The infiltration basin provided the required water quality volume at elevation 207.1. Additional design criteria is provided below:

- The maximum contributing drainage is less than 10 acres (PR-1A acreage is 1.39 ac)
- The basin completely drains in 48 hours or less after the end of the design storm
- The bottom slope of the basin is level
- Side slopes are 3:1
- The infiltration basin will not be utilized for snow storage during winter months

In designing the stormwater infiltration system, the project utilizes an infiltration rate of 13 in/hr. Infiltration testing was conducted by Pinchin, LLC on June 24, 2025 following the CT Stormwater Quality Manual. A rate of 26 in/hr was determined in the field. As required by the CT Stormwater Quality Manual, 50% of the slowest field measured infiltration should be utilized in the design. Appendix A includes the geotechnical report.

The infiltration basin is designed to infiltrate the runoff up to the 100-year storm event. The table below indicates the elevation for each storm event in the infiltration basin:

Storm Event	2-yr	10-yr	100-yr
Infiltration Basin Volume Elevation	206.36	207.25	208.56

The Infiltration basin construction should follow the requirements below:

- Pre-Operational Requirements
  - Ensure the entire drainage area is stabilized before allowing flow into the basin.
  - Establish adequate vegetative cover on contributing pervious areas.
    - At least 80% of the drainage should be stabilized
  - Maintain proper erosion and sediment controls per CT Guidelines and the project's SESC plan.

- Construction Practices
  - Do not use the infiltration basin as a temporary sediment trap.
  - Avoid soil compaction at the basin location during site clearing/grading.
  - Fence off the area during construction to prevent disturbance.

- Excavation and Material Placement
  - Excavate to specified dimensions/slopes/elevations using equipment outside the basin footprint.
  - Avoid compacting the basin bottom—use a hydraulic excavator/backhoe operating from outside the limits.
  - Install vegetation or grass per the planting plan and water thoroughly until fully established.

4 - Erosion and Sediment Control

The purposes of providing erosion and sediment control is to minimize temporary impacts to downgradient open water during any construction activities by controlling runoff and retaining sediment as much as possible within the site. Refer to site plan for proposed erosion control practices and details. The erosion and sediment control practices shall comply with requirements from the latest Connecticut Guidelines for Soil Erosion and Sediment Control.

Erosion and sediment control practices includes, but not limiting to, providing the following activities by the owner/operator:

A) Silt Fence

A temporary barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from drainage area of disturbed soil by temporary ponding the sediment laden runoff allowing settling to occur.

B) Straw Bale

A temporary barrier of straw used to intercept sediment laden runoff from drainage area of disturbed soil to reduce runoff velocity and effect deposition of the transported sediment load.

C) Inlet Protection

A temporary barrier with low permeability, installed around inlets in the form of fence, berm, or excavation around an opening, detaining water and thereby reducing the sediment content of sediment laden water by settling thus preventing heavily sediment laden water from entering a storm drainage system.

D) Dust Control

Water shall be strayed from water truck during construction activity to prevent dust from forming and minimize sediment transport that may cause off-site damage, health hazards or traffic safety problem.

E) Pavement Sweeping

Pavement sweeping will remove sediments from the paved surfaces directly thus preventing sediment from stormwater runoff.

F) Catch Basin Cleaning

Sediments that are not removed by pavement sweeping or inlet protection practices will be drained by stormwater runoff into the site's catch basin system. Catch basin shall be cleaned on a regular basis to make sure the catch basin system function as intended.

G) Stabilized Construction Entrance

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, or parking area. The purpose of stabilized construction entrance is to reduce or eliminate the tracking of sediment onto public right-of way or streets.

H) Mulching

Applying coarse plant residue or chips, or other suitable materials, to cover the soil surface to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control.

I) Concrete Truck Washout

A temporary excavated or above ground lined constructed pit where concrete truck mixers and equipment can be washed after their loads have been discharged, to prevent highly alkaline runoff from entering the storm drainage systems or leaching into soil.

J) Land Grading

Reshaping of the existing land surface by grading in accordance with an engineering topographic plan and specification to provide for erosion control and vegetative establishment on disturbed, reshaped areas.

K) Seeding

Providing temporary erosion control protection to disturbed areas and/or localized critical areas for an interim period by covering all bare ground that exists because of construction activities or natural event. Critical areas may include but not limited to steep excavated cut or fill slopes and any disturbed, denuded natural slopes subject to erosion.

L) Impaired Waters

For those areas for which construction activity will be temporarily suspended for a period of greater than 14 days, temporary stabilization measures shall be implemented within 3 days of such suspension activity.

Stabilization practices shall be implemented after completion, as final grades are reached, within seven (7) days.

The Contractor may elect to utilize other controls in conformance with the 2002 E&S Guidelines, as approved by the Qualified Inspector. The Contractor will be required to provide the necessary details for any erosion controls not specifically called for on the project plans.

During construction, all areas disturbed by the construction activity that have not been stabilized, structural control measures, and locations where vehicles enter or exit the site shall be inspected at least once a week and within 24 hours of the end of a storm that generates a discharge. For storms that end on a weekend, holiday, or other time in which normal working hours will not commence within 24 hours, an inspection is required within 24 hours following any storm in which 0.1 inches or greater of rain occurs. For lesser storms, inspection shall occur immediately upon the start of subsequent normal working hours.

5 - General Construction Stages

Site development in general will occur in four generalized stages:

1. Initial Stage
2. Site Work
3. Site Stabilization

1) Initial Stage

Prior to any construction activities, erosion control measures shall be implemented to minimize or control erosion on site. These include but not limited to silt fence, inlet protection, stabilized construction entrance, concrete truck wash-out area and stockpile area. Tree protection fencing will shall be placed around trees to be protected, if any.

Please refer to the Erosion & Sediment Control Plan (Sheet C-6.0 & C-6.1) and Erosion & Sediment Control Notes and Details (Sheet C-6.2) found in Appendix A for further details.

2) Site Work

Construction of paved parking lot, concrete sidewalk, striping, stormwater BMPs, water well, septic system, and grading of the site will occur. Seeding shall occur during this phase for proposed grass cover.

Land disturbance associated with this site work is estimated to be 1.469 acres.

Please refer to the Erosion & Sediment Control Plan (Sheet C-6.0 & C-6.1) and Erosion & Sediment Control Notes and Details (Sheet C-6.2) found in Appendix A for further details.

3) Site Stabilization

Final site grading and stabilization shall be completed as soon as practicable to eliminate exposed soil and minimize erosion. Contractor shall plan a permanent topsoil, seed, mulch and install other stabilization practices in the disturbed areas as appropriate. Stabilization shall be undertaken no later than 14 days after construction activities has ceased.

All temporary control measures shall be removed once the site has been stabilized and all sediment has been removed. Additionally, all litter shall be removed from site.

Erosion control measures shall not be removed until the qualified engineer has performed a site visit and has deemed that the site’s permanent stabilization is satisfactory.

Please refer to the Erosion & Sediment Control Plan (Sheet C-6.0 & C-6.1) and Erosion & Sediment Control Notes and Details (Sheet C-6.2) found in Appendix A for further details.

6 - Inspection and Maintenance

The owner/operator is responsible for inspecting and maintaining the erosion control practices implemented on site. The owner/operator must document compliance with the permit throughout the entire construction process.

A) Construction Inspection

- The owner/operator shall have a qualified inspector inspect all erosion and sediment control practices to ensure their integrity and effectiveness throughout the entire construction process.
- The qualified inspector shall perform inspection at least once every seven (7) calendar days. If construction work includes soil disturbance of greater than five (5) acres, qualified inspector shall conduct at least two (2) site inspections every seven (7) calendar days with minimum separation of two (2) full calendar days.
- Within one business day of the completion of an inspection, the qualified inspector shall notify the owner/operator and appropriate contractor, or subcontractor of any corrective actions shall be taken.
- The qualified inspector shall prepare an inspection report in accordance with the permit after each inspection. The owner/operator shall maintain a record of all inspection reports in a site logbook as part of the updated SWMP and shall be make available upon request by permitting authority.

B) Construction Maintenance

- Sediment shall be removed from behind silt fence or straw bale if accumulation of greater than 6-inches deep or as needed.
- Sediment that is collected in inlet protection practice shall be removed on a regular basis to ensure the integrity of the drainage inlet system.
- The underside of straw bale shall be kept in close contact with the ground surface.
- Straw bale and silt fence that are damaged shall be replaced or as necessary.
- Inspect roads, stockpiles, and disturbed areas to ensure proper coverage of dust control measures as needed.
- Remove sediment buildup from the entrance when it reaches 50% of the stone depth or when tracking onto roadways becomes excessive.
- Monitor for signs of erosion or sediment accumulation around equipment storage or vehicle movement areas.
- Regularly remove any concrete residue, slurry, or solids that accumulate in the concrete washout area
- The contractor or subcontractor shall begin implementing the corrective actions within one business day of the notification from qualified inspector and shall complete the corrective actions within a reasonable time frame.

C) Operation Maintenance and Inspection for Permanent BMPs

Infiltration Basin

- Inspection Tasks:
  - Check for sediment accumulation, erosion, and vegetation health.
  - Inspect inlet and outlet structures for blockages or damage.
- Maintenance Tasks:
  - Remove accumulated sediments when depth exceeds 25% of design volume.
  - Repair eroded areas and re-establish vegetation as needed.
  - Ensure proper functioning of inlet and outlet structures.

Catch Basins

- Inspection Tasks:
  - Inspect for sediment accumulation and structural integrity
- Maintenance Tasks:
  - Clean out sediments when depth exceeds 50% of sump capacity.
  - Repair or replace damaged components.

Stormwater Conveyance System

- Inspection Tasks:
  - Check for blockages, structural damage, and signs of leakage.
- Maintenance Tasks:
  - Remove obstructions and repair damaged sections promptly.

BMP Type	Inspection Frequency	Maintenance Frequency
Infiltration Basin	Semi-annually	As needed based on inspections
Catch Basins	Quarterly	As needed based on inspections
Conveyance System	Annually	As needed based on inspections

Note: Additional inspections should be conducted after major storm events (e.g., storms exceeding 1 inch of rainfall).

7- Spill Prevention/Control and Usage of Fertilizers

Spill Prevention

The following material management practices shall be implemented to minimize the risk of spills of material or substances to stormwater runoff:

- All materials stored onsite will be stored in an organized and proper manner in their appropriate containers, and (if possible) in a building or other enclosure.
- Products will be kept in their original containers and their original label.
- Un-used, remaining products will be stored in an appropriate manner to prevent leakage.
- No petroleum products or fertilizers shall be stored or handled within 100 feet of a wetland or waterway.
- Substance will not be mixed with one another unless recommended by the manufacturer and in a safe environment.
- Concrete trucks will not be allowed to wash out or discharge surplus concrete within 100 feet of wetland and waterway or into existing catch basins.
- Disposal of the products shall follow the manufacturer's recommendation.
- The contractor shall inspect the storage area daily to ensure proper use and disposal of the material onsite.

Spill Control

The following management practices shall be implemented for spill control, notification, and cleanup:

- Manufacturer's recommended methods for spill cleanup shall be posted onsite and personnel shall be informed of the cleanup procedure.
- Cleanup material and supplies shall be adequately provided onsite at all times. These includes, but not limited to, shovels, brooms, dustpans, rags, mops, goggles, speedy-dry sand, metal trash containers.
- All spills shall be cleaned up immediately after discovery.
- Personnel cleaning up the spills shall wear proper protective clothing to avoid injury.
- Spill of hazardous material that cannot be cleaned up properly shall be reported to the CTDEEP Spill Hotline: 1-860-424-3338 or others appropriate agency.

PRELIMINARY SITE PLAN APPLICATION PLANS

FOR

AUTOZONE GRANBY

8 E GRANBY ROAD

GRANBY, CT 06035

PROJECT TEAM

CIVIL ENGINEER
KIMLEY-HORN & ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
TEL: (914) 368-9200
CONTACT: DEAN APOSTOLERIS, P.E.

TRAFFIC ENGINEER
KIMLEY-HORN & ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
TEL: (914) 368-9200
CONTACT: JOHN CANNING, P.E.

LANDSCAPE ARCHITECT
KIMLEY-HORN & ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
TEL: (914) 368-9200
CONTACT: FRANK MADER, PLA

ELECTRICAL ENGINEER
KIMLEY-HORN & ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
TEL: (914) 368-9200
CONTACT: GRAHAM PENROSE, P.E.

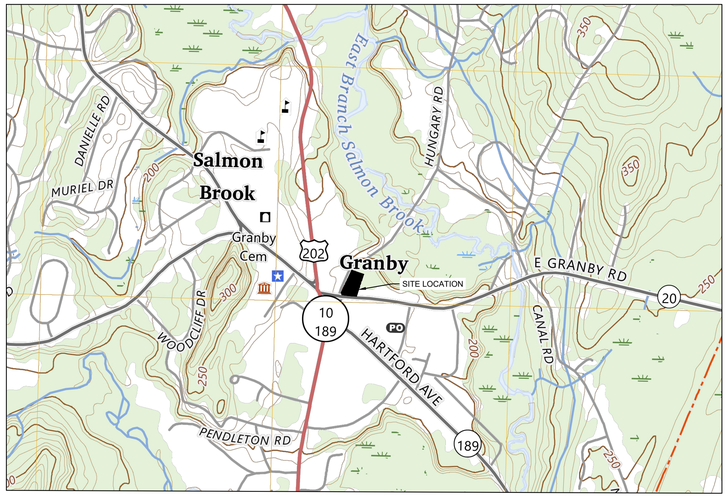
SURVEYOR
VALLEY LAND SERVICES, LLC
4383 HECKTOWN ROAD, SUITE B
BETHLEHEM, PA 18020
TEL: (610) 365-2907
CONTACT: JACK W. SHOEMAKER, PLS

SITE LOCATION MAP

SOURCE: NEARMAPS

NORTH

GRAPHIC SCALE IN FEET
0 100 200 400



VICINITY MAP

SOURCE: USGS

NORTH

GRAPHIC SCALE IN FEET
0 500 1000 2000

PROPERTY INFORMATION

APPLICANT
AUTOZONE INC.
123 S. FRONT STREET, FLOOR 3
MEMPHIS, TN 38103
TEL: 901- 495 - 8753
CONTACT: CASSANDRA PEELER

OWNER
DOCARMO CHRISTOPHER & MANUELA T
116 SOUTHWOOD DR
LUDLOW, MA 01056

MAP: G-51
BLOCK: 71
LOT: 2

ZONE: CENTER COMMONS (CC) AND HISTORIC OVERLAY DISTRICT

Sheet List Table

NO.	REVISIONS	DATE	BY
1	IWWC COMMENTS REVISION	07/01/25	KH

FOR PERMIT REVIEW

STATE OF CONNECTICUT
DEAN APOSTOLERIS
37922
LICENSED PROFESSIONAL ENGINEER
07/01/2025

KHA PROJECT: 112703002
DATE: 06/13/2025
SCALE: AS SHOWN
DESIGNED BY: TS
DRAWN BY: AMA
CHECKED BY: TS

COVER SHEET

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY CONNECTICUT

SHEET NUMBER
C-0.0

GENERAL CONSTRUCTION NOTES

1. THE CONTRACTOR AND SUBCONTRACTORS SHOULD BE FAMILIAR WITH ALL STATE AND LOCAL REQUIREMENTS RELATED TO SITE CONSTRUCTION ACTIVITIES PRIOR TO COMMENCING WORK. ALL WORK SHALL CONFORM AS APPLICABLE TO THESE GOVERNING STANDARDS AND SPECIFICATIONS.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE APPROVING AUTHORITIES, SPECIFICATIONS AND REQUIREMENTS. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS UNLESS OTHERWISE INDICATED, REMOVING TREES, STUMPS, ROOTS, MUCK, EXISTING PAVEMENT AND ALL OTHER DELETERIOUS MATERIAL.

3. EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF THE TOPOGRAPHIC SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES DUE TO THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.

4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK. THE CONTRACTOR SHALL PROVIDE 72 HOURS MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. AN APPROXIMATE LIST OF THE UTILITY COMPANIES WHICH THE CONTRACTOR MUST CALL BEFORE COMMENCING WORK IS PROVIDED ON THE COVER SHEET OF THESE CONSTRUCTION PLANS. THIS LIST SERVES AS A GUIDE ONLY AND IS NOT INTENDED TO LIMIT THE UTILITY COMPANIES WHICH THE CONTRACTOR MAY WISH TO NOTIFY.

5. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED CONSTRUCTION PERMITS PRIOR TO CONSTRUCTION.

6. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES ONE COPY OF THE CONSTRUCTION DOCUMENTS INCLUDING PLANS, SPECIFICATIONS, GEOTECHNICAL REPORT AND SPECIAL CONDITIONS AND COPIES OF ANY REQUIRED CONSTRUCTION PERMITS.

7. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER.

8. DURING THE COURSE OF THE WORK, THE CONTRACTOR SHALL MAINTAIN AN ACCURATE RECORD OF ANY AND ALL CHANGES RELATED TO FIELD CONDITIONS, INCLUDING AREAS OF ROCK EXCAVATION. UPON COMPLETION OF THE WORK, THE CONTRACTOR SHALL FILE WITH THE OWNER A COMPLETE SET OF "AS CONSTRUCTED" DRAWINGS PREPARED BY A NYS LICENSED LAND SURVEYOR SHOWING AND LOCATING ALL FEATURES OF THE WORK AS INSTALLED.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO THE ENGINEER A CERTIFIED RECORD SURVEY SIGNED AND SEALED BY A PROFESSIONAL LAND SURVEYOR REGISTERED IN THE STATE OF CONNECTICUT DEPICTING THE ACTUAL FIELD LOCATION OF ALL CONSTRUCTED IMPROVEMENTS THAT ARE REQUIRED BY THE JURISDICTIONAL AGENCIES FOR THE CERTIFICATION PROCESS. ALL SURVEY COSTS WILL BE THE CONTRACTORS RESPONSIBILITY.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DOCUMENTING AND MAINTAINING AS-BUILT INFORMATION WHICH SHALL BE RECORDED AS CONSTRUCTION PROGRESSES OR AT THE COMPLETION OF APPROPRIATE CONSTRUCTION INTERVALS AND SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT DRAWINGS TO THE OWNER FOR THE PURPOSE OF CERTIFICATION TO JURISDICTIONAL AGENCIES AS REQUIRED. ALL AS-BUILT DATA SHALL BE COLLECTED BY A STATE OF CONNECTICUT PROFESSIONAL LAND SURVEYOR WHOSE SERVICES ARE ENGAGED BY THE CONTRACTOR.

11. ANY WELL DISCOVERED DURING EARTH MOVING OR EXCAVATION SHALL BE REPORTED TO THE OWNER WITHIN 24 HOURS AFTER DISCOVERY IS MADE.

12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS DO NOT CONFLICT WITH ANY KNOWN EXISTING OR OTHER PROPOSED IMPROVEMENTS. IF ANY CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE OWNER PRIOR TO INSTALLATION OF ANY PORTION OF THE SITE WORK THAT WOULD BE AFFECTED. FAILURE TO NOTIFY OWNER OF AN IDENTIFIABLE CONFLICT PRIOR TO PROCEEDING WITH INSTALLATION RELIEVES OWNER OF ANY OBLIGATION TO PAY FOR A RELATED CHANGE ORDER.

13. ANY EXISTING UTILITY, WHICH IS TO BE EXTENDED, WHICH IS THE CONNECTION POINT FOR NEW UNDERGROUND UTILITIES, OR WHICH NEW FACILITIES CROSS, SHALL BE EXPOSED BY THE CONTRACTOR PRIOR TO PLACEMENT OF THE NEW UTILITIES. COST OF SUCH EXCAVATION AND SUBSEQUENT BACKFILL SHALL BE INCLUDED IN THE PRICES PAID FOR THE VARIOUS ITEMS OF WORK. THE ELEVATIONS AND LOCATIONS OF THE EXISTING FACILITIES WILL BE CHECKED BY THE PUBLIC WORKS INSPECTOR AND THE ENGINEER. IF IN THE OPINION OF THE INSPECTOR A CONFLICT EXISTS, THEN THE ENGINEER SHALL MAKE ANY NEEDED GRADE AND/ OR ALIGNMENT ADJUSTMENTS AND REVISE THE PLANS ACCORDINGLY. ALL GRAVITY FLOW PIPELINES TO BE LAID UPGRADE FROM THE LOWEST POINT STARTING AT THE END OF EXISTING IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 24 HOURS PRIOR TO BACKFILLING OF ANY PIPE WHICH STUBS TO A FUTURE PHASE OF CONSTRUCTION FOR INVERT VERIFICATION. TOLERANCE SHALL BE IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS.

14. WORK OF THIS CONTRACT IS TO INCLUDE, BUT NOT LIMITED TO, DEMOLITION OF EXISTING BUILDING FOUNDATIONS AND OLD UTILITY SYSTEMS, SITE IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, UTILITIES, UTILITY STRUCTURES, ASPHALT AND CONCRETE PAVEMENT. CONCRETE PAVERS. CONCRETE AND GRANITE CURBING, DRIVEWAY APRONS, CONCRETE AND ASPHALT RAMPS, SIDEWALKS. FENCING, RAILINGS, SIGNAGE, SITE LIGHTING, RETAINING WALLS AND MISCELLANEOUS STRUCTURES.

15. HOURS OF CONSTRUCTION ACTIVITY MUST COMPLY WITH THE TOWN OF GRANBY CODE.

16. PRIOR STARTING CONSTRUCTION ALL ACTIVE UTILITIES SHOULD BE IDENTIFIED, MARKED OUT IN THE FIELD, AND SECURED AS NECESSARY.

16. CONTRACTOR IS ALSO TO FAMILIARIZE HIMSELF WITH THE SUBSURFACE EXPLORATIONS AND GEOTECHNICAL REPORTS APPLICABLE TO THE PROJECT. ASSUMED PROVIDED BY OTHERS.

17. INFORMATION GIVEN IN THE SUBSURFACE EXPLORATIONS AND GEOTECHNICAL ENGINEERING REPORTS WAS OBTAINED FOR USE BY THE OWNER IN EXECUTION OF DESIGN. THE SUBSURFACE CONDITIONS DESCRIBED IN THE REPORTS ARE NOT INTENDED AS REPRESENTATIONS OR WARRANTIES OF ACCURACY. THE SUBSURFACE STRATIGRAPHY SHOWN IN THE REPORTS ARE BASED ON NECESSARY INTERPOLATIONS BETWEEN BORINGS AND MAY OR MAY NOT REPRESENT ACTUAL SUBSURFACE CONDITIONS. THE OWNER WILL NOT BE RESPONSIBLE FOR INTERPRETATIONS OR CONCLUSIONS MADE FROM THE DATA IN THE REPORTS BY THE CONTRACTOR.

18. CONDUCT A PRE-CONSTRUCTION CONFERENCE AT THE PROJECT SITE A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO COMMENCING ANY WORK OF THIS CONTRACT. THE MEETING WILL BE ARRANGED BY THE OWNER UPON NOTIFICATION OF THE CONTRACTOR AND IS TO BE ATTENDED BY REPRESENTATIVES OF THE CONTRACTOR, OWNER, CONSTRUCTION MANAGER, GEOTECHNICAL ENGINEER, SITE/CIVIL ENGINEER AND REPRESENTATIVES OF THE TOWN OF GRANBY.

19. ADJOINING PROPERTY OWNERS WILL CONTINUE TO OCCUPY THEIR FACILITIES IMMEDIATELY ADJACENT TO THE PROJECT SITE AND DEMOLITION AREAS. THUS, THE CONTRACTOR MUST CONDUCT HIS OPERATIONS IN SUCH A MANNER AND MAKE ANY ARRANGEMENTS NECESSARY SO THAT THE ADJOINING PROPERTY OWNER'S USE OF THEIR FACILITIES WILL NOT BE DISRUPTED DURING THE COURSE OF THE WORK.

20. PROVIDE NOT LESS THAN SEVENTY-TWO (72) HOURS' NOTICE TO THE OWNER AND ADJACENT PROPERTY OWNERS OF ACTIVITIES THAT WILL AFFECT THEIR RESPECTIVE USE OF THEIR PROPERTY.

21. MAINTAIN ACCESS TO EXISTING WALKWAYS, EXITS, AND OTHER ADJACENT OCCUPIED OR USED FACILITIES.

22. DO NOT CLOSE OR OBSTRUCT WALKWAYS, EXITS, OR OTHER OCCUPIED OR USED FACILITIES WITHOUT WRITTEN PERMISSION FROM AUTHORITIES HAVING JURISDICTION OR THE AFFECTED PROPERTY OWNER.

23. IT IS NOT EXPECTED THAT HAZARDOUS MATERIALS WILL BE ENCOUNTERED IN THE CONDUCT OF THE WORK. HOWEVER, IF MATERIALS SUSPECTED OF CONTAINING HAZARDOUS MATERIALS ARE ENCOUNTERED. DO NOT DISTURB AND IMMEDIATELY NOTIFY THE OWNER AND CONSTRUCTION MANAGER. HAZARDOUS MATERIALS WILL BE REMOVED BY THE OWNER AND/OR CONTRACTOR UNDER A SEPARATE CONTRACT.

24. REVIEW PROJECT RECORD DOCUMENTS OF EXISTING CONSTRUCTION PROVIDED BY OWNER. OWNER DOES NOT GUARANTEE THAT EXISTING CONDITIONS ARE SAME AS THOSE INDICATED IN PROJECT RECORD DOCUMENTS.

25. THE CONTRACTOR IS RESPONSIBLE FOR ENGAGING A PROFESSIONAL ENGINEER TO PERFORM AN ENGINEERING SURVEY OF THE CONDITION OF ANY REMAINING BUILDING STRUCTURE OR FOUNDATION SYSTEM TO DETERMINE WHETHER REMOVING ANY ELEMENT MIGHT RESULT IN A STRUCTURAL DEFICIENCY OR UNPLANNED COLLAPSE OF ANY PORTION OF THAT STRUCTURE OR ADJACENT STRUCTURES DURING DEMOLITION OPERATIONS.

26. PROVIDE AND MAINTAIN INTERIOR AND EXTERIOR SHORING, BRACING, OR STRUCTURAL SUPPORT TO PRESERVE STABILITY AND PREVENT UNEXPECTED MOVEMENT OR COLLAPSE OF CONSTRUCTION BEING DEMOLISHED.

27. EXISTING UTILITIES: MAINTAIN ACTIVE UTILITY SERVICES INDICATED TO REMAIN AND PROTECT THEM AGAINST DAMAGE DURING DEMOLITION OPERATIONS.

28. DO NOT INTERRUPT EXISTING UTILITIES SERVING BOTH ON SITE AND OFF SITE ADJACENT OCCUPIED OR OPERATING FACILITIES UNLESS AUTHORIZED IN WRITING BY OWNER AND AUTHORITIES HAVING JURISDICTION.

29. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO OWNER AND TO AUTHORITIES HAVING JURISDICTION.

30. PROVIDE AT LEAST SEVENTY-TWO (72) HOURS' NOTICE TO OWNER IF SHUTDOWN OF SERVICE IS REQUIRED DURING CHANGEOVER.

31. TEMPORARY PROTECTION: ERECT TEMPORARY PROTECTION, SUCH AS WALKS, FENCES, RAILINGS, CANOPIES, AND COVERED PASSAGEWAYS, WHERE REQUIRED BY AUTHORITIES HAVING JURISDICTION AND AS INDICATED.

32. PROTECT EXISTING SITE IMPROVEMENTS, APPURTENANCES, AND LANDSCAPING TO REMAIN.

33. PROVIDE TEMPORARY BARRICADES AND OTHER PROTECTION REQUIRED TO PREVENT INJURY TO PEOPLE AND DAMAGE TO ADJACENT BUILDINGS AND FACILITIES TO REMAIN.

34. PROVIDE PROTECTION TO ENSURE SAFE PASSAGE OF PEOPLE AROUND BUILDING DEMOLITION AREA AND TO AND FROM OCCUPIED PORTIONS OF ADJACENT BUILDINGS AND STRUCTURES.

35. PROTECT WALLS, WINDOWS, ROOFS, AND OTHER ADJACENT EXTERIOR CONSTRUCTION THAT ARE TO REMAIN AND THAT ARE EXPOSED TO BUILDING DEMOLITION OPERATIONS OR OTHER CONSTRUCTION ACTIVITY.

36. GENERAL: DEMOLISH ALL ITEMS, AS EITHER INDICATED ON THE PLANS OR ENCOUNTERED IN THE FIELD DURING THE WORK, COMPLETELY. USE METHODS REQUIRED TO COMPLETE THE WORK WITHIN LIMITATIONS OF GOVERNING REGULATIONS AND AS FOLLOWS:

37. DO NOT USE CUTTING TORCHES UNTIL WORK AREA IS CLEARED OF FLAMMABLE MATERIALS. MAINTAIN FIRE WATCH AND PORTABLE FIRE-SUPPRESSION DEVICES DURING FLAME-CUTTING OPERATIONS.

38. MAINTAIN ADEQUATE VENTILATION WHEN USING CUTTING TORCHES.

39. LOCATE DEMOLITION EQUIPMENT AND REMOVE DEBRIS AND OTHER MATERIALS SO AS NOT TO IMPOSE EXCESSIVE LOADS ON SUPPORTING WALLS, FLOORS, OR FRAMING OF ADJOINING STRUCTURES.

40. ENGINEERING SURVEYS: PERFORM SURVEYS AS THE WORK PROGRESSES TO DETECT HAZARDS THAT MAY RESULT FROM BUILDING DEMOLITION ACTIVITIES.

41. SITE ACCESS AND TEMPORARY CONTROLS: CONDUCT DEMOLITION AND DEBRIS-REMOVAL OPERATIONS TO ENSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS, WALKWAYS, AND OTHER ADJACENT OCCUPIED AND USED FACILITIES.

42. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS, WALKWAYS. OR OTHER ADJACENT OCCUPIED OR USED FACILITIES WITHOUT PERMISSION FROM OWNER AND AUTHORITIES HAVING JURISDICTION. PROVIDE ALTERNATE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY AUTHORITIES HAVING JURISDICTION.

43. USE WATER MIST AND OTHER SUITABLE METHODS TO LIMIT SPREAD OF DUST AND DIRT. COMPLY WITH GOVERNING ENVIRONMENTAL-PROTECTION REGULATIONS. DO NOT USE WATER WHEN IT MAY DAMAGE ADJACENT CONSTRUCTION OR CREATE HAZARDOUS OR OBJECTIONABLE CONDITIONS, SUCH AS ICE, FLOODING, AND POLLUTION.

44. REMOVE STRUCTURES AND OTHER SITE IMPROVEMENTS INTACT WHEN PERMITTED BY AUTHORITIES HAVING JURISDICTION.

45. CONCRETE: CUT CONCRETE FULL DEPTH AT JUNCTURES WITH CONSTRUCTION INDICATED TO REMAIN, USING POWER-DRIVEN SAW, THEN REMOVE CONCRETE BETWEEN SAW CUTS.

46. MASONRY: CUT MASONRY AT JUNCTURES WITH CONSTRUCTION INDICATED TO REMAIN, USING POWER-DRIVEN SAW, THEN REMOVE MASONRY BETWEEN SAW CUTS.

47. CONCRETE SLABS-ON-GRADE: SAW-CUT PERIMETER OF AREA TO BE DEMOLISHED AT JUNCTURES WITH CONSTRUCTION INDICATED TO REMAIN, THEN BREAK UP AND REMOVE.

48. EQUIPMENT: DISCONNECT EQUIPMENT AT NEAREST FITTING CONNECTION TO SERVICES, COMPLETE WITH SERVICE VALVES. REMOVE AS WHOLE UNITS, COMPLETE WITH CONTROLS.

49. BELOW-GRADE CONSTRUCTION: DEMOLISH EXISTING FOUNDATIONS AND FOOTINGS, FOUNDATION WALLS, WALLS, SLABS AND OTHER BELOW-GRADE CONSTRUCTION THAT IS WITHIN TEN (10) FEET OUTSIDE OF FOOTPRINT INDICATED FOR NEW CONSTRUCTION. ABANDON BELOW-GRADE CONSTRUCTION OUTSIDE THIS AREA.

50. REMOVE BELOW-GRADE CONSTRUCTION TO DEPTHS INDICATED ON THE PLANS.

51. EXISTING BELOW GRADE CONSTRUCTION SHOULD BE REMOVED ENTIRELY FROM BELOW PROPOSED FOUNDATIONS AND THEIR ZONES OF INFLUENCE (IF DETERMINED BY LINES EXTENDING AT LEAST ONE (1) FOOT LATERALLY BEYOND FOOTING EDGES FOR EACH VERTICAL FOOT OF DEPTH) AND EXCAVATED TO AT LEAST TWO {2) FEET BELOW PROPOSED CONSTRUCTION SUBGRADE LEVELS ELSEWHERE.

52. FOUNDATION AND SLABS MAY REMAIN IN PLACE BELOW THESE DEPTHS BELOW GROUND SUPPORTED SLABS, PAVEMENTS AND LANDSCAPED AREAS, PROVIDED THEY ARE APPROVED BY THE GEOTECHNICAL ENGINEER AND DO NOT INTERFERE WITH FUTURE CONSTRUCTION (INCLUDING UTILITIES); HOWEVER, IF EXISTING SLAB OR STRUCTURE TO REMAIN SHOULD BE THOROUGHLY BROKEN TO ALLOW VERTICAL DRAINAGE OF INFILTRATING WATER.

53. EXISTING UTILITIES: ABANDON EXISTING UTILITIES AND BELOW-(3RADE UTILITY STRUCTURES. CUT UTILITIES FLUSH WITH GRADE.

54. EXISTING UTILITIES: DEMOLISH EXISTING UTILITIES AND BELOW-GRADE UTILITY STRUCTURES THAT ARE WITHIN TEN (10) FEET OUTSIDE OF FOOTPRINT INDICATED FOR NEW CONSTRUCTION. ABANDON UTILITIES OUTSIDE THIS AREA.

55. FILL ABANDONED UTILITY STRUCTURES AND PIPING WITH EITHER LEAN CONCRETE OR SATISFACTORY SOIL MATERIALS APPROVED BY THE OWNER OR GEOTECHNICAL ENGINEER.

56. EXISTING UTILITIES: DEMOLISH AND REMOVE EXISTING UTILITIES AND BELOW-GRADE UTILITY STRUCTURES.

57. SITE DRAINAGE: SITE SOILS MAY SOFTEN WHEN EXPOSED TO WATER, EVERY EFFORT MUST BE MADE TO MAINTAIN DRAINAGE OF SURFACE WATER RUNOFF AWAY FROM CONSTRUCTION AREAS AND OPEN EXCAVATIONS BY GRADING AND LIMITING THE EXPOSURE OF EXCAVATIONS AND PREPARED SUBGRADES TO RAINFALL.

58. BELOW-GRADE AREAS: COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM BUILDING DEMOLITION OPERATIONS WITH SATISFACTORY SOIL MATERIALS APPROVED BY THE OWNER AND/OR GEOTECHNICAL ENGINEER.

59. SITE GRADING: UNIFORMLY ROUGH GRADE AREA OF DEMOLISHED CONSTRUCTION TO A SMOOTH SURFACE, FREE FROM IRREGULAR SURFACE CHANGES. PROVIDE A SMOOTH TRANSITION BETWEEN ADJACENT EXISTING GRADES AND NEW GRADES.

60. SEPARATE RECYCLABLE DEMOLISHED MATERIALS FROM OTHER DEMOLISHED MATERIALS TO THE MAXIMUM EXTENT POSSIBLE. SEPARATE RECYCLABLE MATERIALS BY TYPE.

61. PROVIDE CONTAINERS OR OTHER STORAGE METHOD APPROVED BY ARCHITECT FOR CONTROLLING RECYCLABLE MATERIALS UNTIL THEY ARE REMOVED FROM PROJECT SITE.

62. STOCKPILE PROCESSED MATERIALS ON-SITE WITHOUT INTERMIXING WITH OTHER MATERIALS. PLACE, GRADE, AND SHAPE STOCKPILES TO DRAIN SURFACE WATER. COVER TO PREVENT WINDBLOWN DUST.

63. STOCKPILE MATERIALS IN DESIGNATED AREAS SHOWN ON THE PLANS OR AS APPROVED IN THE FIELD BY THE OWNER OR CONSTRUCTION MANAGER.

64. IF RECYCLABLE MATERIAL CANNOT BE USED ON-SITE, THE CONTRACTOR SHALL TRANSPORT THE RECYCLABLE MATERIALS OFF OWNER'S PROPERTY AND LEGALLY DISPOSE OF THEM AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH THE SWP.

65. DEMOLITION MATERIAL. FREE OF ENVIRONMENTAL CONCERNS, AND APPROVED BY NYSDEC, MAY BE USED AS FILL MATERIAL. PROVIDED THE MATERIAL IS PROPERLY SEGREGATED AND PROCESSED AS FOLLOWS AND APPROVED FOR REUSE ON THE SITE BY THE GEOTECHNICAL ENGINEER:

66. CONCRETE MASONRY MATERIALS SHOULD BE CRUSHED TO A WELL GRADED BLEND WITH A MAXIMUM SIZE OF THREE (3) INCHES IN DIAMETER, PER EARTHWORK SPECIFICATIONS.

67. MILLED OR RECYCLED ASPHALT PAVEMENT (RAP) MAY BE REUSED AS GRANULAR BASE MATERIAL FOR PAVEMENTS PROVIDED THAT THE RAP PARTICLE SIZE MEETS THE CONNECTICUT STATE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR GRANULAR BASE AND NO MORE THAN FIFTY (50) PERCENT OF THE PAVEMENT GRANULAR BASE CONTAINS RAP.

68. OTHER ASPHALTIC MATERIALS AND DELETERIOUS BUILDING MATERIALS SUCH AS WOOD, INSULATION, METAL, SHINGLES, ETC. SHOULD NOT BE USED AS GENERAL STRUCTURAL FILL MATERIAL.

69. EXCEPT FOR ITEMS OR MATERIALS INDICATED TO BE RECYCLED, REUSED, SALVAGED, REINSTALLED, OR OTHERWISE INDICATED TO REMAIN OWNER'S PROPERTY, REMOVE DEMOLISHED MATERIALS FROM PROJECT SITE AND LEGALLY DISPOSE OF THEM IN AN EPA-APPROVED LANDFILL.

70. REMOVE AND TRANSPORT DEBRIS IN A MANNER THAT WILL PREVENT SPILLAGE ON ADJACENT SURFACES AND AREAS.

71. BURNING: ON SITE BURNING OF RUBBISH AND OTHER DEMOLITION DEBRIS WILL NOT BE PERMITTED.

72. DISPOSAL: TRANSPORT DEMOLISHED MATERIALS OFF OWNER'S PROPERTY AND PROVIDE FOR THE LEGAL OFF SITE DISPOSAL OF THE MATERIAL IN ACCORDANCE WITH THE SMP.

73. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF DUST, DIRT, AND DEBRIS CAUSED BY BUILDING DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE BUILDING DEMOLITION OPERATIONS BEGAN.

74. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE OWNER WITH A SURVEY PREPARED BY A NYS LICENSED LAND SURVEYOR SHOWING THE LOCATION AND THE ELEVATIONS TO WHICH THE DEMARCATION BARRIER IS INSTALLED.

75. THE CONTRACTOR IS TO NOTE THAT THE WORK OF THIS CONTRACT WILL INCLUDE WORK BY OTHERS AND THE CONTRACTOR SHALL COORDINATE HIS WORK AND MAKE EVERY REASONABLE EFFORT TO PERMIT THE EXECUTION OF SUCH WORK BY OTHERS WITHOUT DELAY.

76. IF TEMPORARY UTILITY SERVICES ARE REQUIRED THE CONTRACTOR SHALL SEE TO IT THAT THEY ARE PROVIDED AT NO ADDITIONAL COST TO THE OWNER AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN SUCH TEMPORARY FACILITIES FOR THE DURATION OF THEIR WORK.

77. ALL WORK OF THIS CONTRACT SHALL CONFORM TO THESE CONTRACT DRAWINGS AND SPECIFICATIONS AS WELL AS TO THE APPLICABLE REQUIREMENTS OF THE JURISDICTION HAVING AUTHORITY BUILDING, PUBLIC WORKS, AND FIRE DEPARTMENTS, AS WELL AS THE COGNIZANT PUBLIC UTILITY COMPANIES.

78. ALL WORK SHALL COMPLY WITH THE BUILDING CODE OF CONNECTICUT AND ALL OTHER APPLICABLE FEDERAL, STATE, AND LOCAL RULES, LAWS, AND REGULATIONS.

79. ALL PROJECT RELATED LINES AND GRADES ARE TO BE ESTABLISHED BY A LICENSED SURVEYOR REGISTERED TO PRACTICE IN THE STATE OF CONNECTICUT.

80. SIZES OF EXISTING UTILITY LINES ARE TO BE VERIFIED IN THE FIELD BY CAREFUL TEST EXCAVATIONS BY THE CONTRACTOR PRIOR TO STARTING THE WORK ANY SUBSTANTIVE VARIATIONS FROM THE SURVEY DATA PROVIDED ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT OR ENGINEER SO THAT APPROPRIATE DESIGN MODIFICATIONS MAY BE MADE.

81. THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE EXISTING DRAINAGE OR UTILITY SYSTEMS WITHIN OR ADJACENT TO THE WORK SHOWN ON THESE DRAWINGS. ANY DAMAGE CAUSED BY THE CONTRACTOR'S OPERATIONS SHALL IMMEDIATELY BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE AND TO THE SATISFACTION OF THE OWNER OR UTILITY COMPANY INVOLVED.

82. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL TRADES REQUIRED BY THE CONTRACT WORK AND SHALL OBTAIN AU. REQUIRED BONDS, PERMITS, ETC. REQUIRED FOR THE EXECUTION OF THE WORK AND CONFORM THE WORK WITH ALL APPLICABLE CODES, RULES AND REGULATIONS OF THE GOVERNING AGENCIES. THE CONTRACTOR IN ACCORDANCE WITH CONNECTICUT STATE LAW SHALL BE RESPONSIBLE FOR NOTIFYING THE APPROPRIATE UTILITY COMPANY OR AGENCY PRIOR TO COMMENCING ANY EXCAVATION WORK AND SHALL NOTIFY THE "CALL BEFORE YOU DIG" HOTLINE @ 1-800-962-7962 PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.

83. SAFE AND ADEQUATE PEDESTRIAN AND VEHICULAR TRAFFIC FLOW SHALL BE MAINTAINED AT ALL TIMES TO THE ADJACENT BUILDINGS WHILE THE WORK IS PROGRESSING. THE CONTRACTOR SHALL SUBMIT FOR APPROVAL OF THE OWNER A CONSTRUCTION SEQUENCE SCHEDULE AND PLAN FOR PEDESTRIAN AND VEHICULAR TRAFFIC FLOW.

84. ALL UNPAVED AREAS WITHIN THE WORK AREAS AND ALL AREAS DISTURBED DURING CONSTRUCTION ARE TO BE STABILIZED IN ACCORDANCE WITH THE NYSDEC APPROVED STORMWATER POLLUTION PREVENTION PLAN. UNLESS OTHERWISE DIRECTED BY THE OWNER, TURFED AREAS, DISTURBED BY REGRADING AND OTHER WORK OF CONTRACTOR, SHALL BE BROUGHT TO THE PROPER SUBGRADE ELEVATION, TOPSOIL TO A MINIMUM DEPTH OF 4 INCHES SHALL BE PLACED AND, LIMING, FERTILIZING AND SEEDING ACCOMPLISHED, AS SPECIFIED. THE CONTRACTOR SHALL WATER AND MAINTAIN THE SEEDED AREAS UNTIL THEY HAVE BECOME WELL ESTABLISHED.

85. EXISTING PAVEMENT WHICH IS TO REMAIN AND WHICH IS REMOVED OR DAMAGED DURING THE CONSTRUCTION WORK OF THIS CONTRACT IS TO BE RESTORED TO ITS ORIGINAL CONDITION.

86. UNLESS OTHERWISE SHOWN HEREON OR DIRECTED BY THE ENGINEER, THE CONTRACTOR SHALL MATCH THE MATERIALS, TYPES, THICKNESS AND QUALITY OF EXISTING BITUMINOUS CONCRETE PAVEMENTS, WALKWAYS AND CURBS WITHIN THE PUBLIC RIGHT-OF-WAY WHICH ARE TO BE REPLACED.

87. ASA REFERENCE STANDARD ALL WORK CONTAINED HEREIN SHALL BE GOVERNED BY THE REQUIREMENTS SET FORTH IN THE "STANDARD SPECIFICATIONS. CONSTRUCTION AND MATERIALS" AS PUBLISHED BY THE CTDOT, DESIGN AND CONSTRUCTION DIVISION, DATED JANUARY 2, 2002, INCLUDING ALL LATEST AMENDMENTS THERETO

88. AT NO TIME, SHALL ANY EXCAVATED AREAS BE LEFT UNATTENDED UNLESS APPROPRIATE MARKING AND BARRICADING IS EMPLOYED.

89. WITH REGARD TO EXISTING UTILITIES TO REMAIN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING ALL EXISTING UTILITY VALVES, MANHOLE FRAMES, COVERS, RIMS, INVERTS AND HYDRANTS TO MEET NEW FINISH GRADE OR AS OTHERWISE REQUIRED TO FUNCTION PROPERLY.

90. CONTRACTOR SHALL REVIEW PLANS FROM SITE PREPARATION AND SITE PACKAGE CONTRACT AND FAMILIARIZE THEMSELVES WITH PREVIOUS SCOPE OF WORK.

91. CONTRACTOR SHALL LIMIT ACTIVITIES IN AREAS OF DEVELOPMENT THAT ARE OCCUPIED.

PAVING, GRADING AND DRAINAGE NOTES

1. CONTRACTOR SHALL MAINTAIN GRADES AT ENTRANCES TO PHASE 2 CONSTRUCTION.

2. ALL PAVING, CONSTRUCTION, MATERIALS, AND WORKMANSHIP WITHIN JURISDICTION'S RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH LOCAL OR COUNTY SPECIFICATIONS AND STANDARDS (LATEST EDITION) OR CONNECTICUT DEPARTMENT OF TRANSPORTATION SPECIFICATIONS AND STANDARDS (LATEST EDITION) IF NOT COVERED BY LOCAL OR COUNTY REGULATIONS.

3. ALL UNPAVED AREAS IN EXISTING RIGHTS-OF-WAY DISTURBED BY CONSTRUCTION SHALL BE REGRADED AND REPAIRED TO EXISTING CONDITION OR BETTER.

4. TRAFFIC CONTROL ON ALL CTDOT, LOCAL AND COUNTY RIGHTS-OF-WAY SHALL MEET THE REQUIREMENTS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (U.S. DOT/FHA) AND THE REQUIREMENTS OF THE STATE AND ANY LOCAL AGENCY HAVING JURISDICTION. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

5. THE CONTRACTOR SHALL GRADE THE SITE TO THE ELEVATIONS INDICATED AND SHALL REGRADE WASHOUTS WHERE THEY OCCUR AFTER EVERY RAINFALL UNTIL AN ADEQUATE STABILIZATION OCCURS.

6. ALL OPEN AREAS WITHIN THE PROJECT SITE SHALL BE COVERED WITH TOPSOIL AND SEED AS INDICATED ON THE LANDSCAPE PLAN.

7. ALL AREAS INDICATED AS PAVEMENT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE TYPICAL PAVEMENT SECTIONS AS INDICATED ON THE DRAWINGS.

8. WHERE EXISTING PAVEMENT IS INDICATED TO BE REMOVED AND REPLACED, THE CONTRACTOR SHALL SAW CUT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND REPLACE THE PAVEMENT WITH THE SAME TYPE AND DEPTH OF MATERIAL AS EXISTING OR AS INDICATED.

9. WHERE NEW PAVEMENT MEETS THE EXISTING PAVEMENT, THE CONTRACTOR SHALL SAW CUT THE EXISTING PAVEMENT A MINIMUM 2" DEEP FOR A SMOOTH AND STRAIGHT JOINT AND MATCH THE EXISTING PAVEMENT ELEVATION WITH THE PROPOSED PAVEMENT UNLESS OTHERWISE INDICATED.

10. THE CONTRACTOR SHALL INSTALL FILTER FABRIC OVER ALL DRAINAGE STRUCTURES FOR THE DURATION OF CONSTRUCTION AND UNTIL ACCEPTANCE OF THE PROJECT BY THE OWNER. ALL DRAINAGE STRUCTURES SHALL BE CLEANED OF DEBRIS AS REQUIRED DURING AND AT THE END OF CONSTRUCTION TO PROVIDE POSITIVE DRAINAGE FLOWS.

11. DEWATERING DISCHARGE WILL NOT BE PERMITTED TO DISCHARGE ONTO OPEN GROUND. IT SHALL BE TREATED AND DISCHARGED INTO THE COUNTY SEWER. PERMIT TO BE COORDINATED BY THE OWNER.

12. STRIP TOPSOIL AND ORGANIC MATTER FROM ALL AREAS OF THE SITE AS REQUIRED. IN SOME CASES TOPSOIL MAY BE STOCKPILED ON SITE FOR PLACEMENT WITHIN LANDSCAPED AREAS BUT ONLY AS DIRECTED BY THE OWNER.

13. FIELD DENSITY TESTS SHALL BE TAKEN AT INTERVALS IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.

14. ALL SLOPES AND AREAS DISTURBED BY CONSTRUCTION SHALL BE GRADED AS PER PLANS. THE AREAS SHALL THEN BE STABILIZED BY MEANS AND METHODS APPROVED BY THE AUTHORITY HAVING JURISDICTION. ANY AREAS DISTURBED FOR ANY REASON PRIOR TO FINAL ACCEPTANCE OF THE JOB SHALL BE CORRECTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. ALL EARTHEN AREAS WILL BE COVERED WITH ROCK OR MULCHED AS SHOWN ON THE LANDSCAPING PLAN.

15. ALL CUT OR FILL SLOPES SHALL BE 3 (HORIZONTAL) :1 (VERTICAL) OR FLATTER UNLESS OTHERWISE SHOWN.

16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTROL OF DUST AND DIRT RISING AND SCATTERING IN THE AIR DURING CONSTRUCTION AND SHALL PROVIDE WATER SPRINKLING OR OTHER SUITABLE METHODS OF CONTROL. THE CONTRACTOR SHALL COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION.

17. THE CONTRACTOR SHALL TAKE ALL REQUIRED MEASURES TO CONTROL TURBIDITY, INCLUDING BUT NOT LIMITED TO THE INSTALLATION OF TURBIDITY BARRIERS AT ALL LOCATIONS WHERE THE POSSIBILITY OF TRANSFERRING SUSPENDED SOLIDS INTO THE RECEIVING WATER BODY EXISTS DUE TO THE PROPOSED WORK. TURBIDITY BARRIERS MUST BE MAINTAINED IN EFFECTIVE CONDITION AT ALL LOCATIONS UNTIL CONSTRUCTION IS COMPLETED AND DISTURBED SOIL AREAS ARE STABILIZED. THEREAFTER, THE CONTRACTOR MUST REMOVE THE BARRIERS. AT NO TIME SHALL THERE BE ANY OFF-SITE DISCHARGE WHICH VIOLATES THE WATER QUALITY STANDARDS OF THE GOVERNING CODE.

18. EXPOSED SLOPES SHOULD BE STABILIZED WITHIN 48 HOURS OF COMPLETING FINAL GRADING, AND AT ANY OTHER TIME AS NECESSARY, TO PREVENT EROSION, SEDIMENTATION OR TURBID DISCHARGES.

19. THE CONTRACTOR MUST REVIEW AND MAINTAIN A COPY OF THE REQUIRED PERMITS COMPLETE WITH ALL CONDITIONS, ATTACHMENTS, EXHIBITS, AND PERMIT MODIFICATIONS IN GOOD CONDITION AT THE CONSTRUCTION SITE. THE COMPLETE PERMIT MUST BE AVAILABLE FOR REVIEW UPON REQUEST BY GOVERNING JURISDICTIONS.

20. THE CONTRACTOR SHALL ENSURE THAT ISLAND PLANTING AREAS AND OTHER PLANTING AREAS ARE NOT COMPACTED AND DO NOT CONTAIN ROAD BASE MATERIALS. THE CONTRACTOR SHALL ALSO EXCAVATE AND REMOVE ALL UNDESIRABLE MATERIAL FROM ALL AREAS ON THE SITE TO BE PLANTED AND PROPERLY DISPOSED OF IN A LEGAL MANNER.

21. THE CONTRACTOR SHALL INSTALL ALL UNDERGROUND STORM WATER PIPING PER MANUFACTURER'S RECOMMENDATIONS.

BUILDING AND SAFETY DIVISION NOTES

1. FILL TO BE COMPACTED TO NOT LESS THAN 90% OF MAXIMUM DENSITY AS DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D1557.

2. FIELD DENSITY WILL BE DETERMINED BY THE SAND-CONE METHOD A.S.T.M. 1556-07 AND/OR NUCLEAR DENSITY GAUGE METHOD A.S.T.M. 2922/3017. IN FINE GRAINED, COHESIVE SOILS, FIELD DENSITY MAY BE DETERMINED BY THE DRIVE-CYLINDER METHOD D2937 A.S.T.M. PROVIDED NOT LESS THAN 20% OF THE REQUIRED DENSITY TESTS, UNIFORMLY DISTRIBUTED, ARE BY THE SAND-CONE METHOD. THE METHOD OF DETERMINING FIELD DENSITY SHALL BE SHOWN IN THE COMPACTION REPORT. OTHER METHODS MAY BE USED IF RECOMMENDED BY THE SOILS ENGINEER AND APPROVED IN ADVANCE BY THE BUILDING OFFICIAL.

3. NOT LESS THAN ONE FIELD DENSITY TEST WILL BE MADE FOR EACH TWO-FOOT VERTICAL LIFT OF FILL NOR LESS THAN ONE SUCH TEST FOR EACH 1,000 CUBIC YARDS OF MATERIAL PLACED UNLESS OTHERWISE RECOMMENDED BY THE SOILS ENGINEER.

4. NO FILL TO BE PLACED UNTIL STRIPPING OF VEGETATION, REMOVAL OF UNSUITABLE SOILS AND INSTALLATION OF SUBDRAINS (IF ANY) HAS BEEN INSPECTED AND APPROVED BY THE SOILS ENGINEER.

5. NO ROCK OR SIMILAR MATERIAL GREATER THAN 8" IN DIAMETER WILL BE PLACED IN THE FILL UNLESS RECOMMENDATIONS FOR SUCH PLACEMENT HAVE BEEN SUBMITTED BY THE SOILS ENGINEER IN ADVANCE AND APPROVED BY THE BUILDING OFFICIAL.

6. FINISH GRADING WILL BE COMPLETED AND APPROVED BEFORE OCCUPANCY OF BUILDINGS.

7. SEE GRADING PLANS FOR EARTHWORK VOLUMES.

8. FILL SLOPES SHALL NOT BE STEEPER THAN 2.1.

9. DENSITY TESTS WILL BE MADE AT POINTS APPROXIMATELY ONE FOOT BELOW THE FILL SLOPE SURFACE. ONE TEST WILL BE MADE FOR EACH 1,000 SQ. FT. OF SLOPE SURFACE, BUT NOT LESS THAN ONE TEST FOR EACH 10 FT. VERTICAL OF SLOPE HEIGHT UNLESS OTHERWISE RECOMMENDED BY THE SOILS ENGINEER.

10. ALL PADS AT ROUGH GRADING WILL HAVE A MINIMUM SLOPE OF 1 % TOWARDS THE STREET OR DESIGNED DRAINAGE OUTLET.

11. APPROVAL OF THIS PLAN BY THE LOCAL AGENCY DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OF THE LOCATION OR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITY PIPE OR STRUCTURE WITHIN THE LIMITS OF THIS PROJECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES WITHIN THE LIMITS OF THIS PROJECT.

12. FILLS SHALL BE BENCHED IN ACCORDANCE WITH APPROVED GEOTECHNICAL REPORT

13. ALL TRENCH BACKFILLS SHALL BE TESTED AND CERTIFIED BY THE SITE SOILS ENGINEER PER THE GRADING CODE.

14. ALL CUT SLOPES SHALL BE INVESTIGATED BOTH DURING AND AFTER GRADING BY AN ENGINEERING GEOLOGIST TO DETERMINE IF ANY SLOPE STABILITY PROBLEM EXISTS. SHOULD EXCAVATION DISCLOSE ANY GEOLOGICAL HAZARDS OR POTENTIAL GEOLOGICAL HAZARDS, THE ENGINEERING GEOLOGIST SHALL RECOMMEND NECESSARY TREATMENT TO THE BUILDING OFFICIAL FOR APPROVAL.

15. WHERE SUPPORT OR BUTTRESSING OF CUT AND NATURAL SLOPES IS DETERMINED TO BE NECESSARY BY THE ENGINEERING GEOLOGIST AND SOILS ENGINEER, THE SOILS ENGINEER WILL SUBMIT DESIGN, LOCATION AND CALCULATIONS TO THE BUILDING OFFICIAL PRIOR TO CONSTRUCTION. THE ENGINEERING GEOLOGIST AND SOILS ENGINEER WILL INSPECT AND CONTROL THE CONSTRUCTION OF THE BUTTRESSING AND CERTIFY TO THE STABILITY OF THE SLOPE AND ADJACENT STRUCTURES UPON COMPLETION.

16. THE SOILS ENGINEER AND ENGINEERING GEOLOGIST SHALL PERFORM SUFFICIENT INSPECTIONS AND BE AVAILABLE DURING GRADING AND CONSTRUCTION TO PROVIDE CONSULTATION CONCERNING COMPLIANCE WITH THE PLANS, SPECIFICATIONS, AND CODE WITHIN THEIR PURVIEW.

17. THE DESIGN CIVIL ENGINEER SHALL BE AVAILABLE DURING GRADING AND CONSTRUCTION FOR CONSULTATION CONCERNING COMPLIANCE WITH THE PLANS, SPECIFICATIONS, AND CODE WITHIN THIS PURVIEW.

18. SANITARY FACILITIES SHALL BE MAINTAINED ON THE SITE.

MAINTENANCE

ALL MEASURES STATED ON THE EROSION AND SEDIMENT CONTROL PLAN, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES MAY BE CHECKED BY A QUALIFIED PERSON ON A SCHEDULE THAT MEETS OR EXCEEDS THE GOVERNING REQUIREMENTS, AND CLEANED AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.

2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED AND RESEEDED AS NEEDED.

3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.

4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.

5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.

6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 55 CUBIC YARDS / ACRE.

7. ALL MAINTENANCE OPERATIONS SHALL BE DONE IN A TIMELY MANNER.

WATER AND SEWER UTILITY NOTES

1. THE CONTRACTOR SHALL CONSTRUCT GRAVITY SEWER LATERALS, CLEANOUTS, GRAVITY SEWER LINES, AND DOMESTIC WATER AND FIRE PROTECTION SYSTEM AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY MATERIALS, EQUIPMENT, MACHINERY, TOOLS, MEANS OF TRANSPORTATION AND LABOR NECESSARY TO COMPLETE THE WORK IN FULL AND COMPLETE ACCORDANCE WITH THE SHOWN, DESCRIBED AND REASONABLY INTENDED REQUIREMENTS OF THE CONTRACT DOCUMENTS AND JURISDICTIONAL AGENCY REQUIREMENTS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

2. ALL EXISTING UNDERGROUND UTILITY LOCATIONS SHOWN ARE APPROXIMATE THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS FOR UTILITY LOCATION AND COORDINATION IN ACCORDANCE WITH THE NOTES CONTAINED IN THE GENERAL CONSTRUCTION SECTION OF THIS SHEET. THE CONTRACTOR SHALL ALSO SCOPE THE SEWER LINES ON SITE AND RECORD A DVD.

3. THE CONTRACTOR SHALL RESTORE ALL DISTURBED VEGETATION IN KIND, UNLESS SHOWN OTHERWISE.

4. DEFLECTION OF PIPE JOINTS AND CURVATURE OF PIPE SHALL NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS. SECURELY CLOSE ALL OPEN ENDS OF PIPE AND FITTINGS WITH A WATERTIGHT PLUG WHEN WORK IS NOT IN PROGRESS. THE INTERIOR OF ALL PIPES SHALL BE CLEAN AND JOINT SURFACES WIPED CLEAN AND DRY AFTER THE PIPE HAS BEEN LOWERED INTO THE TRENCH. VALVES SHALL BE PLUMB AND LOCATED ACCORDING TO THE PLANS.

5. ALL PHASES OF INSTALLATION, INCLUDING UNLOADING, TRENCHING, LAYING AND BACK FILLING, SHALL BE DONE IN A FIRST CLASS WORKMANLIKE MANNER. ALL PIPE AND FITTINGS SHALL BE CAREFULLY STORED FOLLOWING MANUFACTURER'S RECOMMENDATIONS. CARE SHALL BE TAKEN TO AVOID DAMAGE TO THE COATING OR LINING IN ANY D.I. PIPE FITTINGS. ANY PIPE OR FITTING WHICH IS DAMAGED OR WHICH HAS FLAWS OR IMPERFECTIONS WHICH, IN THE OPINION OF THE ENGINEER OR OWNER, RENDERS IT UNFIT FOR USE, SHALL NOT BE USED. ANY PIPE NOT SATISFACTORY FOR USE SHALL BE CLEARLY MARKED AND IMMEDIATELY REMOVED FROM THE JOB SITE, AND SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

6. WATER FOR FIRE FIGHTING SHALL BE AVAILABLE FOR USE PRIOR TO COMBUSTIBLES BEING BROUGHT ON SITE.

7. ALL UTILITY AND STORM DRAIN TRENCHES LOCATED UNDER AREAS TO RECEIVE PAVING SHALL BE COMPLETELY BACK FILLED IN ACCORDANCE WITH THE GOVERNING JURISDICTIONAL AGENCY'S SPECIFICATIONS. IN THE EVENT THAT THE CONTRACT DOCUMENTS AND THE JURISDICTIONAL AGENCY REQUIREMENTS ARE NOT IN AGREEMENT, THE MOST STRINGENT SHALL GOVERN.

8. CONTRACTOR SHALL PERFORM, AT HIS OWN EXPENSE, ANY AND ALL TESTS REQUIRED BY THE SPECIFICATIONS AND/OR ANY AGENCY HAVING JURISDICTION. THESE TESTS MAY INCLUDE, BUT MAY NOT BE LIMITED TO, INFILTRATION AND EXFILTRATION, TELEVISION INSPECTION AND A MANDREL TEST ON GRAVITY SEWER. A COPY OF THE TEST RESULTS SHALL BE PROVIDED TO THE UTILITY PROVIDER, OWNER AND JURISDICTIONAL AGENCY AS REQUIRED.

RECORD DRAWINGS

1. WHERE LOCAL JURISDICTIONS REQUIRE RECORD DRAWINGS, THE CONTRACTOR SHALL PROVIDE TO THE ENGINEER AND OWNER COPIES OF A PAVING, GRADING AND DRAINAGE RECORD DRAWING AND A SEPARATE UTILITY RECORD DRAWING, BOTH PREPARED BY A CONNECTICUT REGISTERED SURVEYOR. THE RECORD DRAWINGS SHALL VERIFY ALL DESIGN INFORMATION INCLUDED ON THE DESIGN PLANS OF THE SAME NAME.

PROJECT CLOSEOUT

1. CONTRACTOR SHALL PROVIDE THE NECESSARY ITEMS INCLUDING ANY TESTING, REPORTS, OR CERTIFICATION DOCUMENTS REQUIRED BY THE GOVERNING JURISDICTIONS TO PROPERLY CLOSEOUT THE PROJECT BEFORE IT CAN BE DEEMED COMPLETE.

DOCUMENT USE

1. THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGNS PRESENTED HEREIN, AS AN INSTRUMENT OF SERVICE, IS INTENDED ONLY FOR THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. REUSE OF AND IMPROPER RELIANCE ON THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND ADAPTATION BY KIMLEY-HORN & ASSOCIATES, INC. SHALL BE WITHOUT LIABILITY TO KIMLEY-HORN & ASSOCIATES, INC.

2. CONTRACTOR SHALL NOT RELY SOLELY ON ELECTRONIC VERSIONS OF PLANS, SPECIFICATIONS, AND DATA FILES THAT ARE OBTAINED FROM THE DESIGNERS, BUT SHALL VERIFY LOCATION OF PROJECT FEATURES IN ACCORDANCE WITH THE PAPER COPIES OF THE PLANS AND SPECIFICATIONS THAT ARE SUPPLIED AS PART OF THE CONTRACT DOCUMENTS.

3. SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SCALED TO THEIR ACTUAL DIMENSIONS OR LOCATIONS ON THE DRAWINGS. THE CONTRACTOR SHALL REFER TO THE DETAIL SHEET DIMENSIONS, CTDOT STANDARD SHEETS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.

NO.	REVISIONS	DATE	BY
1	IWWC COMMENTS REVISION	07/01/25	KH

FOR
PERMIT REVIEW

Kimley»Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
PHONE: 914-368-9200
WWW.KIMLEY-HORN.COM

AutoZone

STATE OF CONNECTICUT
DEAN APOSTOLERIS
37922
LICENSED
PROFESSIONAL ENGINEER
07/01/2025

KHA PROJECT 112703002
DATE 05/13/2025
SCALE: AS SHOWN
DESIGNED BY: TS
DRAWN BY: AMA
CHECKED BY: TS

GENERAL NOTES

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035

TOWN OF GRANBY CONNECTICUT

SHEET NUMBER
C-0.1

Saved Tuesday, July 1, 2025 1:03:38 PM TRENT.SUDDETH Plotted Tuesday, July 1, 2025 1:15:13 PM Suddeth, Trent

TITLE INFORMATION

FIRST AMERICAN TITLE INSURANCE COMPANY
COMMITMENT NUMBER: NCS-1228156-MICH
COMMITMENT DATE: JULY 30, 2024 AT 8:30 A.M.

LEGAL DESCRIPTION

The Land is described as follows:

Real property in the City of Granby, County of Hartford, State of Connecticut, described as follows:

A certain piece or parcel of land, containing 1.6 acres more or less, with the buildings thereon standing, situated in the Town of Granby, County of Hartford and State of Connecticut and located on the Northeasterly side of East Granby Road, being No. 8 East Granby Road, and being more particularly described as follows:

NOTHEREASTERLY, by land now or formerly of Storrs T. Brigham, 176.08 feet;

SOUTHEASTERLY by land now or formerly of Robert W. Lawson, et al 322.90 feet;

SOUTHWESTERLY by East Granby Road, 206.15 feet;

WESTERLY by Hungary Road, 34.0 feet; and

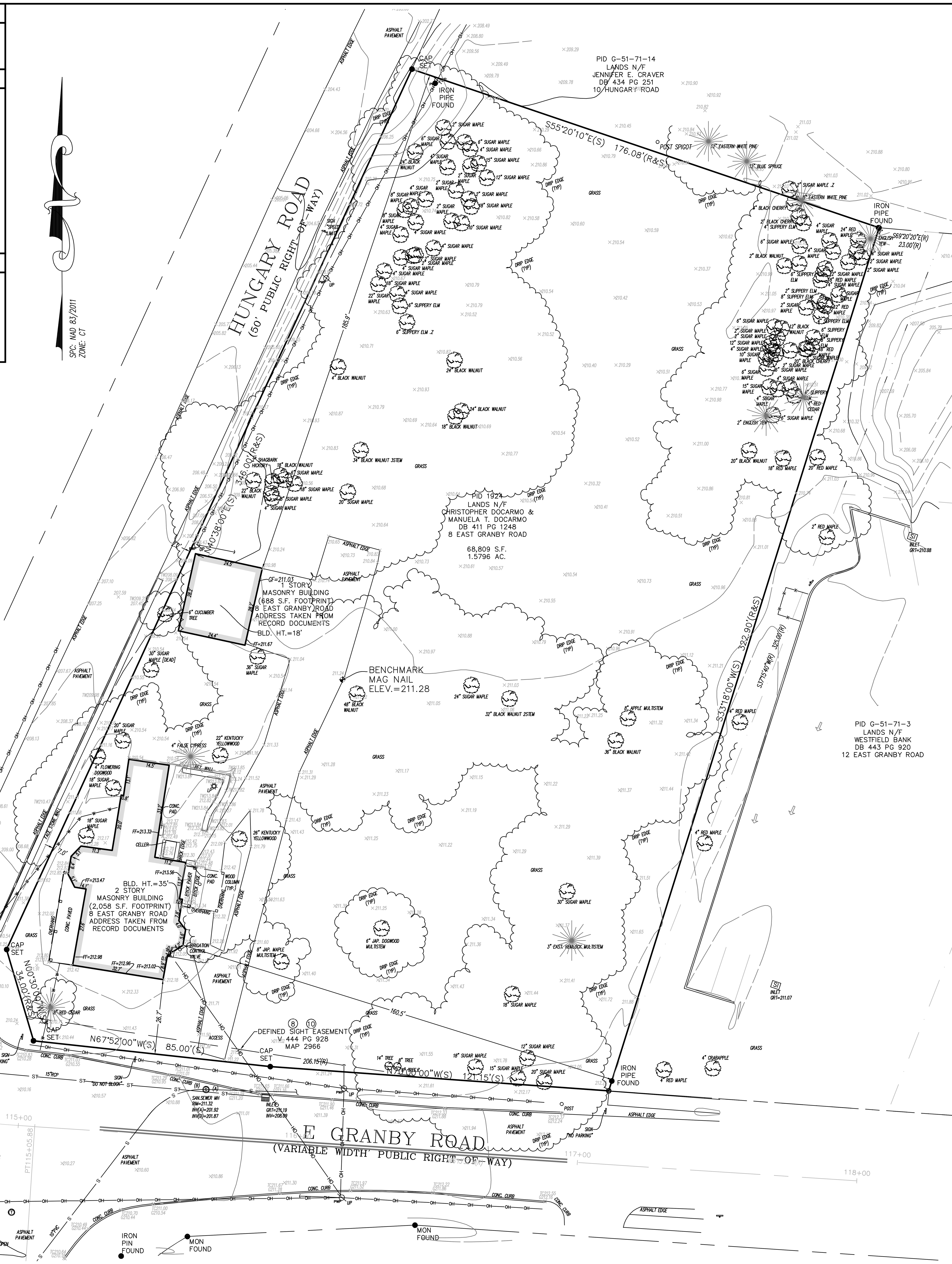
NORTHWESTERLY by Hungary Road, 346.00 feet.

SCHEDULE B EXCEPTIONS

(8) Certificate of condemnation by the State of Connecticut dated January 24, 2021 and recorded February 26, 2021 in Volume 444 at Page 928, - PLOTTED ON SURVEY.

(9) Certificate of lien by the Salmon Brook District water company for the sum of $ 2,000.00 dated June 8, 2021 and recorded June 14, 2021 in Volume 447 at Page 768, - NOT PLOTTED ON SURVEY, NOT SURVEY RELATED.

(10) Any items that may appear on map no. 2966, on file in the Granby town clerk's office, - PLOTTED ON SURVEY.



UTILITY NOTES

ONE CALL TICKET NUMBER DS20244100010 CALL DATE 10/10/2024

UTILITIES SHOWN ARE BASED ON LIMITED DATA. THERE IS NO GUARANTEE AS TO THEIR LOCATION OR SIZE. PLEASE CONTACT RESPECTIVE UTILITY COMPANIES PRIOR TO CONSTRUCTION. POSSIBLE CONTACTS IN THIS AREA ARE;

CONNECTICUT NATURAL GAS CORP–
PHONE: 8607273030,

EVERSOURCE ELECTRIC–
PHONE: 2039152555, 8007789140

FRONTIER COMMUNICATIONS–
PHONE: 203 694 4183,

SALMON BROOK DISTRICT WATER CO–
PHONE: 8606533327,

STATELINE PROPANE–
PHONE: 860–653–8076/860–653–7241,

TOWN OF GRANBY–
PHONE: 8606538960,

SYMBOLS

(THIS IS A STANDARD LEGEND. NOT ALL ITEMS ARE ON THE SURVEY.)

MONUMENT FOUND	SPOT LIGHT	WATER MANHOLE
MONUMENT TO BE SET	POWERPOLE	WATER VALVE
BENCHMARK TOPO	GUY WIRE	WATER METER
(R) RECORD DATA	LIGHT POLE	HYDRANT / FDC
(S) SURVEYED DATA	STREET LIGHT POLE	GAS MANHOLE
R/W RIGHT OF WAY	ELEC. TRANSFORMER	GAS VALVE
SBL SET BACK LINE	AIR CONDITIONER	GAS METER
RCP REINFORCED CONC PIPE	ELEC. MANHOLE	UNDERGROUND GAS MARKER
CMP CORRUGATED METAL PIPE	ELECTRIC METER	TELEPHONE MANHOLE
PVC PLASTIC PIPE	CABLE BOX	PAY PHONE
HDPE HIGH DENSITY POLYETHYLENE PIPE	UNDERGROUND CABLE MARKER	TELEPHONE BOX
CIP CAST IRON PIPE	TRAFFIC POLES	UNDERGROUND TELEPHONE MARKER
DIP DUCTILE IRON PIPE	TRAFFIC SIGNAL	FLAG POLE
L/S LANDSCAPING	TRAFFIC MANHOLE	BOLLARD
DECIDUOUS TREE	TRAFFIC SIGNAL BOX	BORE HOLE
EVERGREEN TREE	SEWER MANHOLE	MONITORING WELL
U.G. UNDER GROUND	CLEAN OUT	MAIL BOX
— C — CABLE TELEVISION LINE	STORM DRAIN MANHOLE	SIGN
— E — ELECTRICAL LINE	STORM INLET	METAL TANK COVER
— G — GAS LINE	CURB INLET	AIR COMPRESSOR
— T — TELEPHONE LINE	ROUND STORM INLET	
— W — WATER LINE	UNKNOWN MANHOLE	
—OH— OVERHEAD ELECTRIC WIRE		

SURVEYOR'S CERTIFICATION

To: AutoZone; & First American Title Insurance Company;

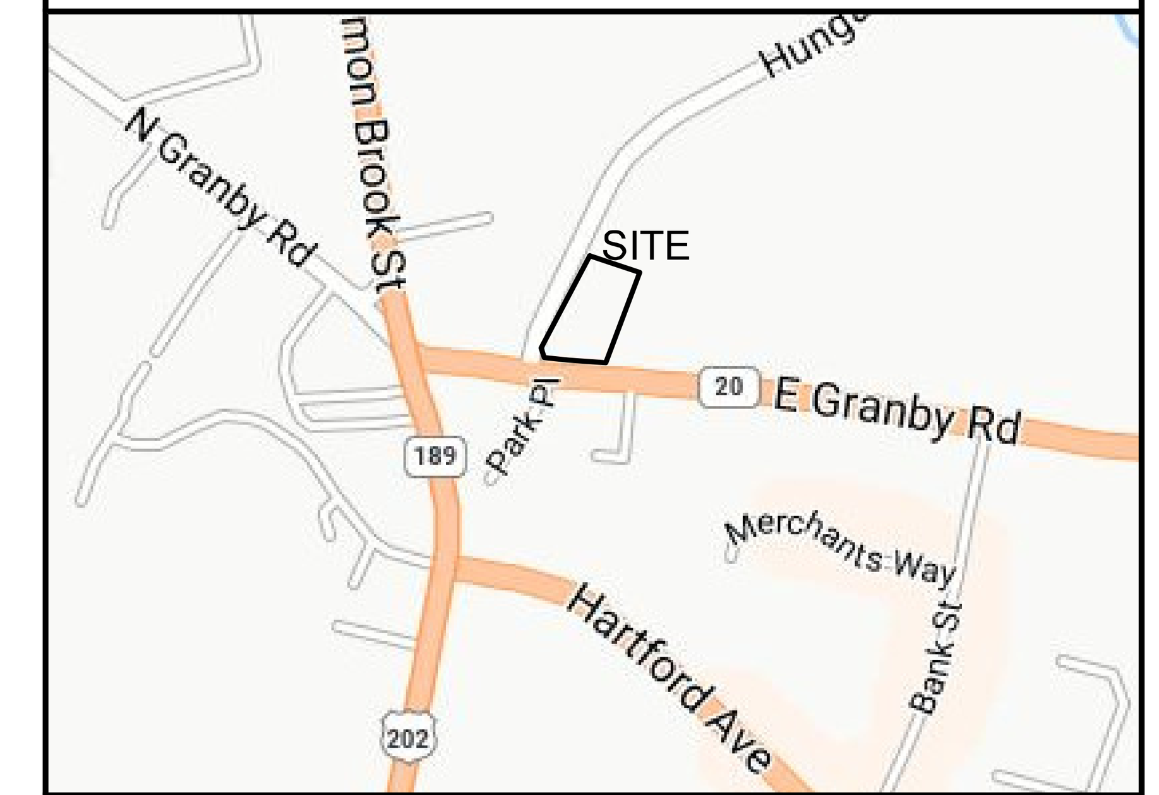
This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2021 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1, 2, 3, 4, 5, 6, 7a, 8, 9, 11b & 13 of Table A thereof.

[Surveyor's Signature]
Jack W. Shoemaker
Professional Land Surveyor 70323
In the State of Connecticut
Date of Survey: October 30, 2024
Date of Last Revision: June 27, 2025
Network Project No. CT10582

Survey Performed By:
Valley Land Services, LLC
4383 Hecktown Road, Suite B
Bethlehem, PA 18020
Phone 610–365–2907
Fax 610–365–2958
Email: jshoemaker@firstorderllc.net
Project No. V240258

THIS CERTIFICATION IS MADE TO ONLY NAMED PARTIES FOR PURCHASE AND/OR MORTGAGE OF HEREIN DELINEATED PROPERTY BY THE NAMED PURCHASER. NO RESPONSIBILITY OR LIABILITY IS ASSUMED BY SURVEYOR FOR THE USE OF SURVEY FOR ANY OTHER PURPOSE INCLUDING, BUT NOT LIMITED TO, USE OF SURVEY AFFIDAVIT, RESALE OF PROPERTY, OR TO ANY OTHER PERSON NOT LISTED IN CERTIFICATION, EITHER DIRECTLY OR INDIRECTLY.

VICINITY MAP — NOT TO SCALE



SITE DATA

1. PROPERTY IS KNOWN AS MAP G–51 BLOCK 71 LOT 2 IN THE TOWN OF GRANBY, HARTFORD COUNTY, CONNECTICUT.

2. LOT AREA = 68,809 S.F. OR 1.5796 AC.

3. NO CHANGES IN STREET RIGHT OF WAY LINES EITHER COMPLETED OR PROPOSED KNOWN TO THIS SURVEYOR. NO OBSERVABLE EVIDENCE OF RECENT STREET OR SIDEWALK CONSTRUCTION OR REPAIRS.

4. VERTICAL DATUM = NAVD 88 .
BENCHMARK – MAG NAIL, ELEV. = 211.28

5. LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE. ALL LOCATIONS AND SIZES ARE BASED ON UTILITY MARK–OUTS, ABOVE GROUND STRUCTURES THAT WERE VISIBLE & ACCESSIBLE IN THE FIELD, AND THE MAPS LISTED IN THE REFERENCES AVAILABLE AT THE TIME OF THE SURVEY. AVAILABLE AS–BUILT PLANS AND UTILITY MARK–OUT DOES NOT ENSURE MAPPING OF ALL UNDERGROUND UTILITIES AND STRUCTURES. BEFORE ANY EXCAVATION IS TO BEGIN, ALL UNDERGROUND UTILITIES SHOULD BE VERIFIED AS TO THEIR LOCATION, SIZE AND TYPE BY THE PROPER UTILITY COMPANIES.

6. THE EXISTENCE OF UNDERGROUND STORAGE TANKS, IF ANY, WAS NOT KNOWN AT THE TIME OF THIS SURVEY.

7. TOPOGRAPHIC INFORMATION SHOWN HEREON TAKEN FROM GROUND SURVEY PERFORMED BY VALLEY LAND SERVICES, LLC. DATE OF FIELD SURVEY = OCTOBER 22, 2024.

8. THIS PLAN IS VALID ONLY WHEN SIGNED IN COLORED INK AND EMBOSSED WITH AN ORIGINAL SEAL AND WAS PREPARED IN ACCORDANCE WITH THE MINIMUM STANDARD OF ACCURACY OF THE STATE IN WHICH THE PROJECT IS LOCATED.

9. THE WORD "CERTIFY" OR "CERTIFICATE" AS SHOWN AND USED HEREON MEANS AN EXPRESSION OF PROFESSIONAL OPINION REGARDING THE FACTS OF THIS SURVEY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE, EXPRESSED OR IMPLIED.

11. PARKING PROVIDED –
–REGULAR = 0 SPACES
–HANDICAP = 0 SPACES
TOTAL SPACES PROVIDED = 0

12. THIS SURVEY CONFORMS TO A CLASS A–2 SURVEY AND HAS BEEN PREPARED IN ACCORDANCE WITH THE "RECOMMENDED STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC., ON OCTOBER 26, 2018.

13. THE TYPE OF SURVEY PERFORMED IS A PROPERTY SURVEY.

14. BOUNDARY DETERMINATION IS BASED UPON A DEPENDENT RESURVEY AND THIS SURVEY IS SUBJECT TO SUCH FACTS AS AN INDEPENDENT RESURVEY MAY DISCLOSE.

FLOOD NOTE

BY GRAPHICAL REPRESENTATION ONLY THIS PROPERTY IS LOCATED IN FLOOD HAZARD ZONE X(UNSHADED) AS SHOWN ON FLOOD INSURANCE RATE MAP 09003C0183F, COMMUNITY PANEL No. 090125 0183 F WHICH HAS AN EFFECTIVE DATE OF SEPTEMBER 26, 2008 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA. FIELD SURVEYING WAS NOT PERFORMED TO DETERMINE THIS ZONE. AN ELEVATION CERTIFICATE MAY BE NEEDED TO VERIFY THIS DETERMINATION OR APPLY FOR AN AMENDMENT FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY.(NAVD88)

TYPE OF SURVEY: ALTA/NSPS LAND TITLE SURVEY

VALLEY LAND SERVICES, LLC
4383 HECKTOWN ROAD
BETHLEHEM, PA 18020
Phone (610) 365–2907 Fax (610) 365–2958
NJ Certificate of Authorization: 24GA28339300

SITE ADDRESS: 8 E GRANBY ROAD
CITY OF GRANBY
HARTFORD COUNTY, CONNECTICUT

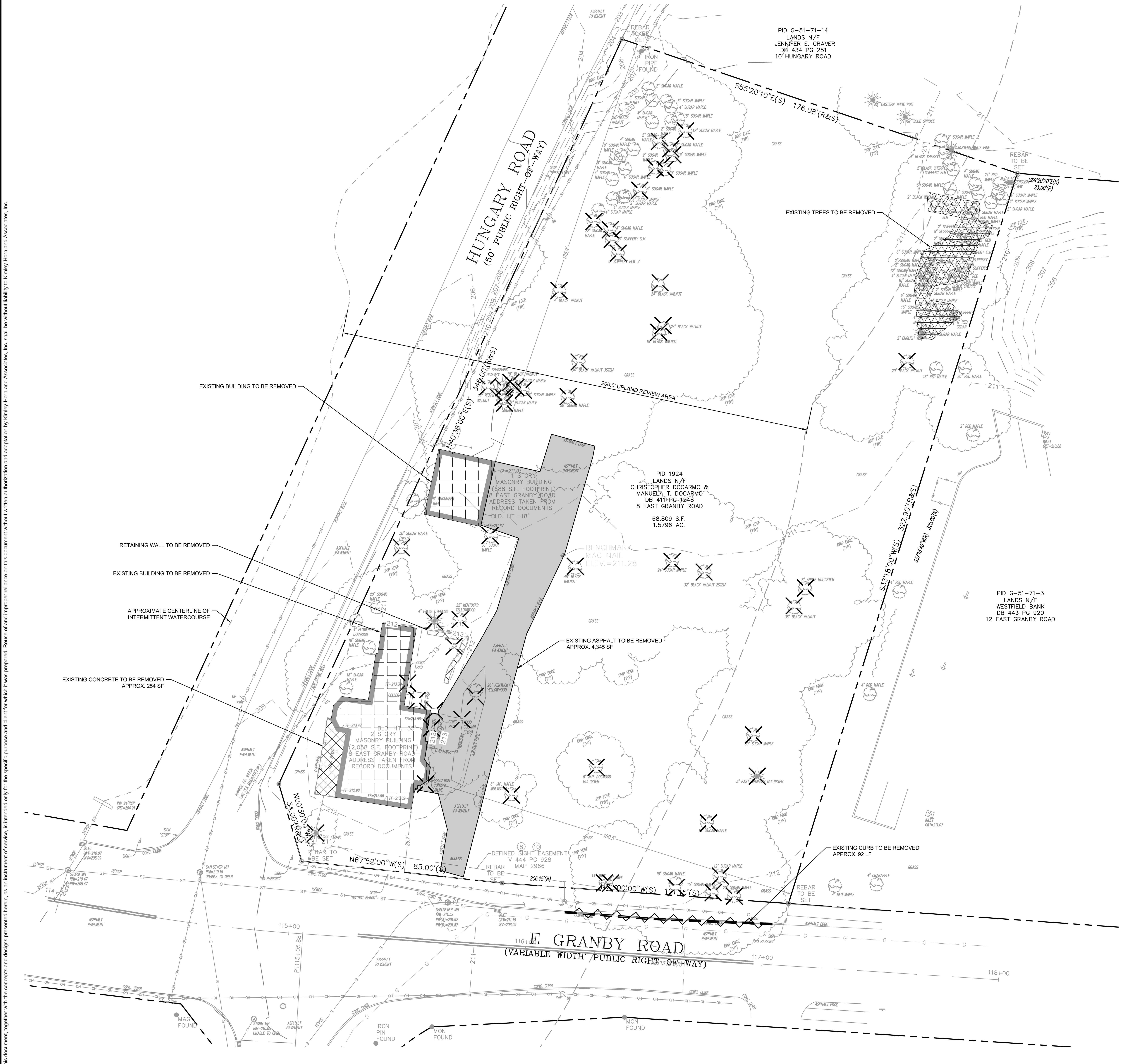
CLIENT: AUTOZONE
PROJECT NO. CT10582

JOB NO: V240258	DRAWN BY: IND	APPROVED BY: AJS

DATE: OCTOBER 30, 2024
REVISIONS:

No.	DATE	DESCRIPTION
1	04-25-25	UPDATED WITH PROPERTY CORNERS SET
2	06-27-25	UPDATED TREE SIZES AND DRIP LINES

0' 20' 40' 60'
SCALE: 1" = 20'



EXISTING CONDITIONS PLAN LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING CURB
- EXISTING EDGE OF WOODS
- EXISTING OVERHEAD ELECTRICAL
- EXISTING ELECTRICAL LINE
- EXISTING SANITARY LINE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING UNDERGROUND STORM PIPE
- EXISTING INTERMITTENT WATERCOURSE CENTERLINE
- EXISTING POWER POLE
- PROPERTY LINE
- EASEMENT LINE
- CURB REMOVAL
- SAWCUT LINE
- UTILITY REMOVAL
- BUILDING REMOVAL
- CONCRETE REMOVAL
- PAVEMENT REMOVAL (DEPTH UNKNOWN)
- VEGETATION REMOVAL
- ITEMS TO BE REMOVED/RELOCATED

EXISTING CONDITIONS NOTES

1. PROPERTY LINES AND EXISTING CONDITIONS SHOWN ARE BASED ON A SURVEY MAP ENTITLED "ALTA/NSPS LAND TITLE SURVEY," PREPARED BY VALLEY LAND SERVICES, LLC, DATED OCTOBER 30, 2024.
2. REFERENCE GEOTECHNICAL REPORT ENTITLED "GEOTECHNICAL ENGINEERING REPORT PROPOSED AUTOZONE STORE #10582 8 EAST GRANBY ROAD, GRANBY, CONNECTICUT," PREPARED BY RANSOM CONSULTING, LLC, DATED NOVEMBER 8, 2024, OR LATEST VERSION.
3. ALL UTILITY INFORMATION SHOWN ON THE PLAN IS NOT WARRANTED TO BE EXACT, NOR IS IT WARRANTED THAT ALL UNDERGROUND UTILITIES OR OTHER STRUCTURES WILL BE SHOWN ON THE SURVEY. EXACT LOCATIONS TO BE VERIFIED BY THE CONTRACTOR BEFORE BEGINNING CONSTRUCTION.
4. ELEVATIONS SHOWN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AS SHOWN ON THE ABOVE MENTIONED SURVEY.
5. THE APPROXIMATE CENTERLINE OF THE INTERMITTENT WATERCOURSE IS SHOWN BASED ON AS-BUILT DRAWINGS PROVIDED BY THE TOWN OF GRANBY TITLED "IMPROVEMENT LOCATION SURVEY 4 EAST GRANBY ROAD" DATED SEPTEMBER 20, 2016 BY ALFORD ASSOCIATES, INC. AND AERIAL IMAGERY PROVIDED BY NEARMAPS, INC.

DEMOLITION NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF THE EXISTING STRUCTURES, RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED.
2. CONTRACTOR IS TO REMOVE AND DISPOSE OF ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
3. THE GENERAL CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT. CONTRACTOR SHALL NOT DEMOLISH ANYTHING OUTSIDE THE OWNERS LEASE/PROPERTY LINE UNLESS SPECIFICALLY MENTIONED ON THIS SHEET.
4. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.
5. IF DEMOLITION OR CONSTRUCTION ON SITE WILL INTERFERE WITH THE ADJACENT PROPERTY OWNER'S TRAFFIC FLOW, THE CONTRACTOR SHALL COORDINATE WITH ADJACENT PROPERTY OWNER, TO MINIMIZE THE IMPACT ON TRAFFIC FLOW. TEMPORARY RE-ROUTING OF TRAFFIC IS TO BE ACCOMPLISHED BY USING TOWN OF GRANBY APPROVED TRAFFIC BARRICADES, BARRELS, AND/OR CONES. TEMPORARY SIGNAGE AND FLAGMEN MAY BE ALSO NECESSARY.
6. QUANTITIES DEPICTED ON THIS SHEET SHALL SERVE AS A GUIDE ONLY. CONTRACTOR TO VERIFY ALL DEMOLITION QUANTITIES.
7. REFER TO GEOTECHNICAL REPORT PROVIDED BY OTHERS FOR ALL SUBSURFACE INFORMATION.
8. CONTRACTOR SHALL BEGIN CONSTRUCTION OF ANY LIGHT POLE BASES FOR RELOCATED LIGHT FIXTURES AND RELOCATION OF ELECTRICAL SYSTEM AS SOON AS DEMOLITION BEGINS. CONTRACTOR SHALL BE AWARE THAT INTERRUPTION OF POWER TO ANY LIGHT POLES OR SIGNS SHALL NOT EXCEED 24 HOURS.
9. EROSION CONTROL MUST BE ESTABLISHED PRIOR TO ANY WORK ON SITE INCLUDING DEMOLITION.
10. THE EXTENT OF SITE DEMOLITION WORK IS AS SHOWN ON THE CONTRACT DOCUMENTS AND AS SPECIFIED HEREIN.
11. CONTRACTOR MUST RECEIVE APPROVAL FROM CIVIL ENGINEER AND GEOTECHNICAL ENGINEER FOR THE MATERIAL TYPE AND USE IF CONTRACTOR DESIRES TO REUSE DEMOLISHED SITE PAVEMENT AS STRUCTURAL FILL.
12. EXISTING UTILITIES, WHICH DO NOT SERVICE STRUCTURES BEING DEMOLISHED, ARE TO BE KEPT IN SERVICE AND PROTECTED AGAINST DAMAGE DURING DEMOLITION OPERATIONS. CONTRACTOR SHALL ARRANGE FOR SHUT-OFF OF UTILITIES SERVING STRUCTURES TO BE DEMOLISHED. CONTRACTOR IS RESPONSIBLE FOR TURNING OFF, DISCONNECTING, AND SEALING INDICATED UTILITIES BEFORE STARTING DEMOLITION OPERATIONS. EXISTING UTILITIES TO BE ABANDONED ARE TO BE CAPPED AT BOTH ENDS AND FILLED WITH FA-1 OR APPROVED EQUAL. ALL UNDERGROUND UTILITIES TO BE REMOVED ARE TO BE BACKFILLED WITH ENGINEERED FILL OR SELECT EXCAVATED MATERIAL, AS APPROVED BY THE GEOTECHNICAL ENGINEER, TO 95% OF MODIFIED PROCTOR DENSITY WITHIN PAVED AREAS AND TO 90% OF MODIFIED PROCTOR DENSITY FOR GREEN SPACE AREAS, IN ACCORDANCE WITH THE EARTHWORK SPECIFICATIONS. ALL PRIVATE UTILITIES (ELECTRIC, CABLE, TELEPHONE, FIBER OPTIC, GAS) SHALL BE REMOVED AND RELOCATED PER THE UTILITY OWNER AND THE LOCAL MUNICIPALITY'S REQUIREMENTS.
13. UNDERGROUND UTILITIES SHOWN ARE BASED ON ATLASES AND AVAILABLE INFORMATION PRESENTED AT THE TIME OF SURVEY. CONTRACTOR SHOULD CONTACT DIG SAFELY CONNECTICUT AT 811 OR 1-800-922-4455 TO COORDINATE FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES BEFORE ORDERING MATERIALS OR COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF ANY DISCREPANCIES IMMEDIATELY. CONTRACTOR SHALL LOCATE AND PROTECT EXISTING UNDERGROUND AND OVERHEAD UTILITIES DURING CONSTRUCTION. UTILITY PROTECTION SHALL BE COORDINATED WITH THE RESPECTIVE UTILITY OWNER AND AS DIRECTED BY THE GOVERNING MUNICIPALITY. DAMAGED CABLES/CONDUITS SHALL BE REPLACED IMMEDIATELY. ALL EXISTING STRUCTURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PROCESS. ALL DAMAGED STRUCTURES SHALL BE REPLACED IN-KIND AND THEIR REPLACEMENT COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. PROPER NOTIFICATION TO THE OWNERS OF THE EXISTING UTILITIES SHALL BE MADE AT LEAST 48 HOURS BEFORE CONSTRUCTION COMMENCES.
14. USE WATER SPRINKLING, TEMPORARY ENCLOSURES, AND OTHER SUITABLE METHODS TO LIMIT DUST AND DIRT RISING AND SCATTERING IN THE AIR TO THE LOWEST LEVEL. COMPLY WITH ALL GOVERNING REGULATIONS PERTAINING TO ENVIRONMENTAL PROTECTION. SEE EROSION CONTROL SHEETS FOR FURTHER EROSION CONTROL REQUIREMENTS.
15. COMPLETELY FILL BELOW-GRADE AREAS AND VOIDS RESULTING FROM DEMOLITION OF STRUCTURES TO THE FINAL LINES AND GRADES SHOWN ON THE CONTRACT DOCUMENTS. BACKFILL MATERIAL SHALL BE SUITABLE CTDOT, TOWN OF GRANBY, OR APPROVED EQUAL. USE SATISFACTORY SOIL MATERIALS CONSISTING OF STONE, GRAVEL AND SAND, FREE FROM DEBRIS, TRASH, FROZEN MATERIALS, ROOTS AND OTHER ORGANIC MATTER. PRIOR TO PLACEMENT OF FILL MATERIALS, ENSURE THAT AREAS TO BE FILLED ARE FREE OF STANDING WATER, FROST, FROZEN MATERIAL, TRASH AND DEBRIS. PLACE FILL MATERIALS IN HORIZONTAL LAYERS NOT EXCEEDING 9" IN LOOSE DEPTH. COMPACT EACH LAYER AT OPTIMUM MOISTURE CONTENT OF FILL MATERIAL TO 95% OF MODIFIED PROCTOR DENSITY UNLESS SUBSEQUENT EXCAVATION FOR NEW WORK IS REQUIRED.

NO.	REVISIONS	DATE	BY
1	IWWC COMMENTS REVISION	07/01/25	KH

FOR PERMIT REVIEW

Kimley-Horn

© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
PHONE: 914-368-9200
WWW.KIMLEY-HORN.COM

AutoZone

STATE OF CONNECTICUT · DEAN APOSTOLERIS · 37922 · LICENSED PROFESSIONAL ENGINEER
07/01/2025

KHA PROJECT	112703002
DATE	05/13/2025
SCALE:	AS SHOWN
DESIGNED BY:	TS
DRAWN BY:	AMA
CHECKED BY:	TS

EXISTING CONDITIONS AND DEMO PLAN

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035

TOWN OF GRANBY CONNECTICUT

SHEET NUMBER
C-1.0

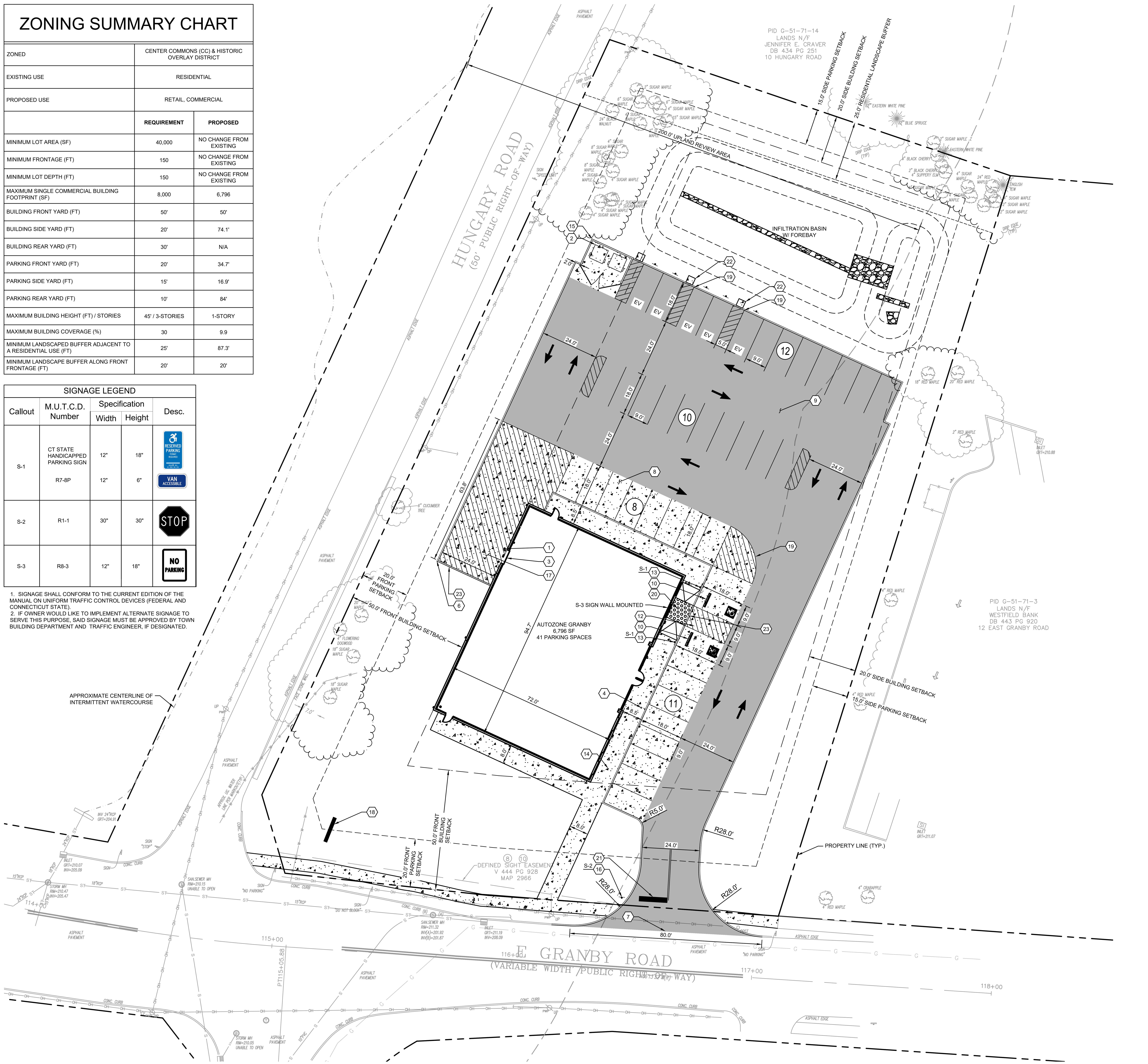
ZONING SUMMARY CHART

ZONED	CENTER COMMONS (CC) & HISTORIC OVERLAY DISTRICT	
EXISTING USE	RESIDENTIAL	
PROPOSED USE	RETAIL, COMMERCIAL	
	REQUIREMENT	PROPOSED
MINIMUM LOT AREA (SF)	40,000	NO CHANGE FROM EXISTING
MINIMUM FRONTAGE (FT)	150	NO CHANGE FROM EXISTING
MINIMUM LOT DEPTH (FT)	150	NO CHANGE FROM EXISTING
MAXIMUM SINGLE COMMERCIAL BUILDING FOOTPRINT (SF)	8,000	6,796
BUILDING FRONT YARD (FT)	50'	50'
BUILDING SIDE YARD (FT)	20'	74.1'
BUILDING REAR YARD (FT)	30'	N/A
PARKING FRONT YARD (FT)	20'	34.7'
PARKING SIDE YARD (FT)	15'	16.9'
PARKING REAR YARD (FT)	10'	84'
MAXIMUM BUILDING HEIGHT (FT) / STORIES	45' / 3-STORIES	1-STORY
MAXIMUM BUILDING COVERAGE (%)	30	9.9
MINIMUM LANDSCAPED BUFFER ADJACENT TO A RESIDENTIAL USE (FT)	25'	87.3'
MINIMUM LANDSCAPE BUFFER ALONG FRONT FRONTAGE (FT)	20'	20'

SIGNAGE LEGEND

Callout	M.U.T.C.D. Number	Specification Width	Specification Height	Desc.
S-1	CT STATE HANDICAPPED PARKING SIGN	12"	18"	RESERVED PARKING
S-1	R7-8P	12"	6"	VAN ACCESSIBLE
S-2	R1-1	30"	30"	STOP
S-3	R8-3	12"	18"	NO PARKING

1. SIGNAGE SHALL CONFORM TO THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (FEDERAL AND CONNECTICUT STATE).
2. IF OWNER WOULD LIKE TO IMPLEMENT ALTERNATE SIGNAGE TO SERVE THIS PURPOSE, SAID SIGNAGE MUST BE APPROVED BY TOWN BUILDING DEPARTMENT AND TRAFFIC ENGINEER, IF DESIGNATED.



KEYNOTES

1. PIPE GUARD - SEE DETAIL 16 / C-7.0
2. DUMPSTER LAYOUT - SEE DETAILS 8,9,10, & 11/ C-7.0
3. SERVICE DOOR PLAN - SEE DETAIL 15/ C-7.0
4. BOLLARD PLAN - SEE DETAIL 14/ C-7.0
5. EXISTING CONCRETE LIGHT POLE BASE TO REMAIN - SEE LIGHTING PLAN FOR FIXTURE DETAILS
6. SLOPE END OF CURB 4:1
7. NEW CURB CUT AND APPROACH.
8. CONCRETE PAVING - SEE DTL. 4 / C-7.0. EXPANSION AND CONTROL JOINTS - SEE DTLS. 23 & 24/ C-7.0. MAXIMUM SPACING FOR CONTROL JOINTS IS 15' O.C. EACH WAY.
9. ASPHALT PAVING - SEE DTL. 2&3/ C-7.0.
10. 6'-0" LONG CONCRETE WHEEL STOP PINNED TO PAVEMENT (TYPICAL). LOCATE 3'-6" FROM FACE OF CURB OR SIDEWALK SEE DETAIL 17 / C-7.0
11. 4" WIDE PARKING STRIPE PAINTED WHITE (TYP.)
12. 4" WIDE DIAGONAL STRIPES PAINTED BLUE AT 2 FT. O.C.
13. HANDICAP PARKING SIGN - SEE DETAIL 20 SHEET C-7.0 & SHEET C-7.1 FOR DETAILS. G.C. TO PROVIDE TWO VAN ACCESSIBLE SIGNS.
14. CONCRETE SIDEWALK - SEE DETAIL 28 C-7.0 FOR SIDEWALKS AROUND BUILDING
15. MASONRY WALL - SEE DETAIL 18/ C-7.0 FOR MATERIAL AND OVERALL HEIGHT AND FOUNDATION REQUIREMENTS.
16. STREET SIGN
17. LOADING AREA: SLOPE AT MAX. 2-1/2% AWAY FROM BUILDING.
18. AUTOZONE SIGN - SEE ARCHITECTURAL PLANS FOR DETAILS
19. 4" WIDE DIAGONAL STRIPE PAINTED WHITE AT 2' O.C.
20. ACCESSIBLE RAMP - SEE DETAIL 19 /C-7.0 - MAX. SLOPE 1:12 (8.33%) , MAX. CROSS SLOPE 1:50 (2.00%) TRUNCATED DOME TO BE A CONTRASTING COLOR.
21. STOP BAR AND 13 LF OF 4" DOUBLE YELLOW SOLID LINE
22. EV CHARGING FOUNDATIONS
23. FLUSH CURB (SEE SHEET C-6.1 FOR DETAIL)

SITE PLAN LEGEND

- PROPERTY LINE
- BUILDING SETBACK
- PARKING SETBACK
- LANDSCAPE BUFFER
- CONCRETE PAVEMENT — SEE DETAILS FOR PAVEMENT SECTION
- ASPHALT PAVEMENT (ON-SITE) — SEE DETAILS FOR PAVEMENT SECTION
- STANDARD CONCRETE CURB
- CONCRETE FLUSH CURB
- PROPOSED TREE LINE
- LIGHT FIXTURES
- SIGN
- WHEEL STOP BARRIER
- PARKING COUNT

MINIMUM PARKING REQUIREMENTS

TOTAL GROSS SQUARE FLOOR AREA	6,796 SF	X	6 SPACES FOR EACH 1,000 SF OF BUILDING AREA	=	41 SPACES
TOTAL PARKING PROVIDED				=	41 SPACES

MINIMUM EV PARKING REQUIREMENTS

TOTAL REQUIRED PARKING SPACES	41 SPACES	X	1 EV SPACE FOR 10% OF THE REQUIRED PARKING SPACES	=	5 SPACES
TOTAL EV PARKING PROVIDED				=	5 SPACES

MINIMUM LOADING REQUIREMENTS

TOTAL LOADING SPACES REQUIRED	=	TBD - PENDING COMMISSION REQUIREMENT
TOTAL LOADING SPACES PROVIDED	=	1 SPACE

OVERALL PARKING SUMMARY

DESCRIPTION	SIZE REQUIRED	SIZE PROPOSED	SPACES REQUIRED	SPACES PROPOSED
STANDARD SPACES	9' x 18'	9' x 18'	34	34
VAN ACCESSIBLE SPACES	9' x 18'	9' x 18'	2	2
EV PARKING SPACES	9' x 18'	9' x 18'	5	5
TOTAL SPACES			41	41

NO.	REVISIONS	DATE	BY
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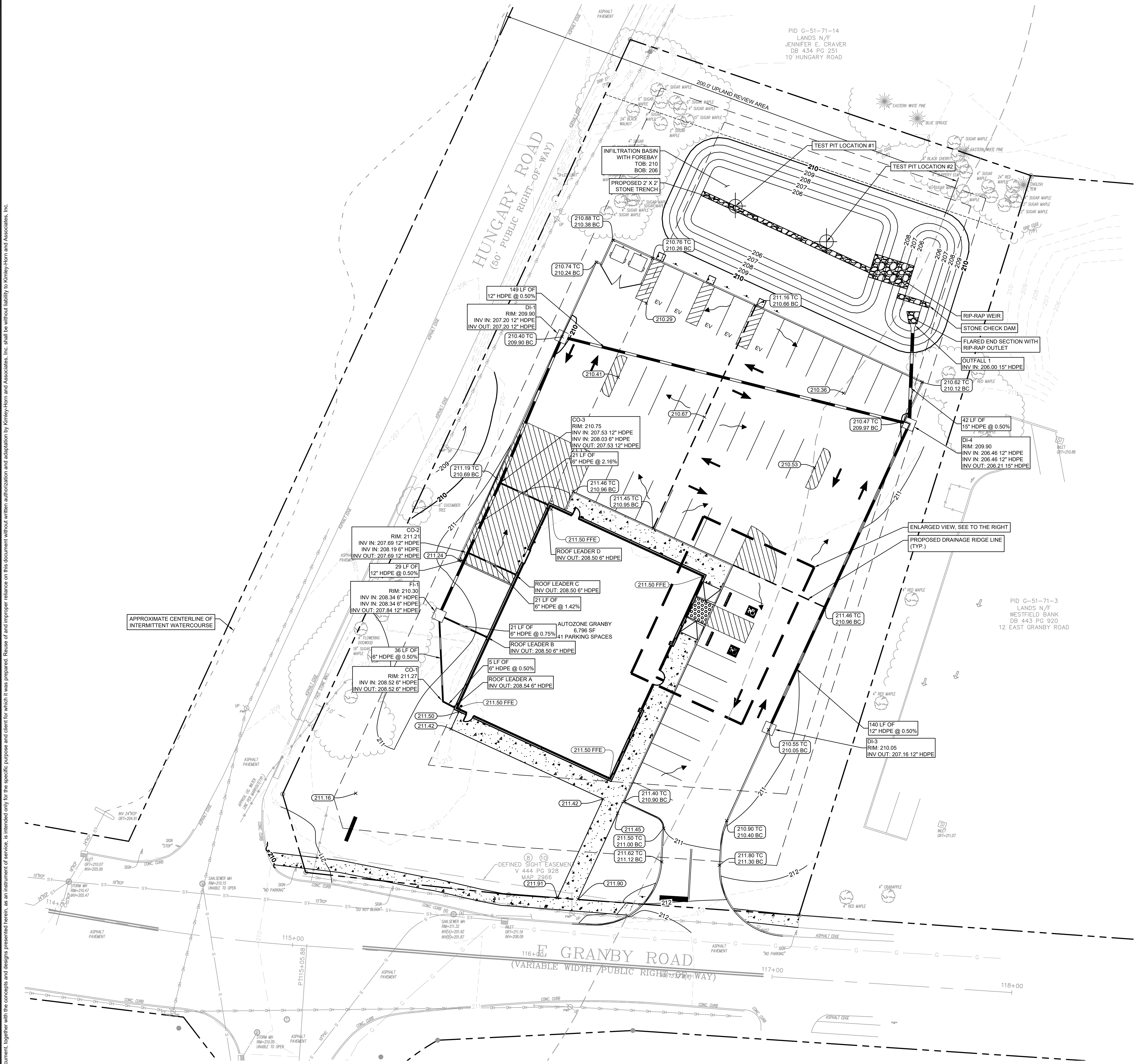
STATE OF CONNECTICUT — SEAN APOSTOLICO — 37922 — LICENSED PROFESSIONAL ENGINEER — 07/01/2025

KHA PROJECT	112703002
DATE	05/13/2025
SCALE:	AS SHOWN
DESIGNED BY:	TS
DRAWN BY:	AMA
CHECKED BY:	TS

SITE PLAN

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY — CONNECTICUT

SHEET NUMBER
C-2.0



GRADING AND DRAINAGE PLAN LEGEND

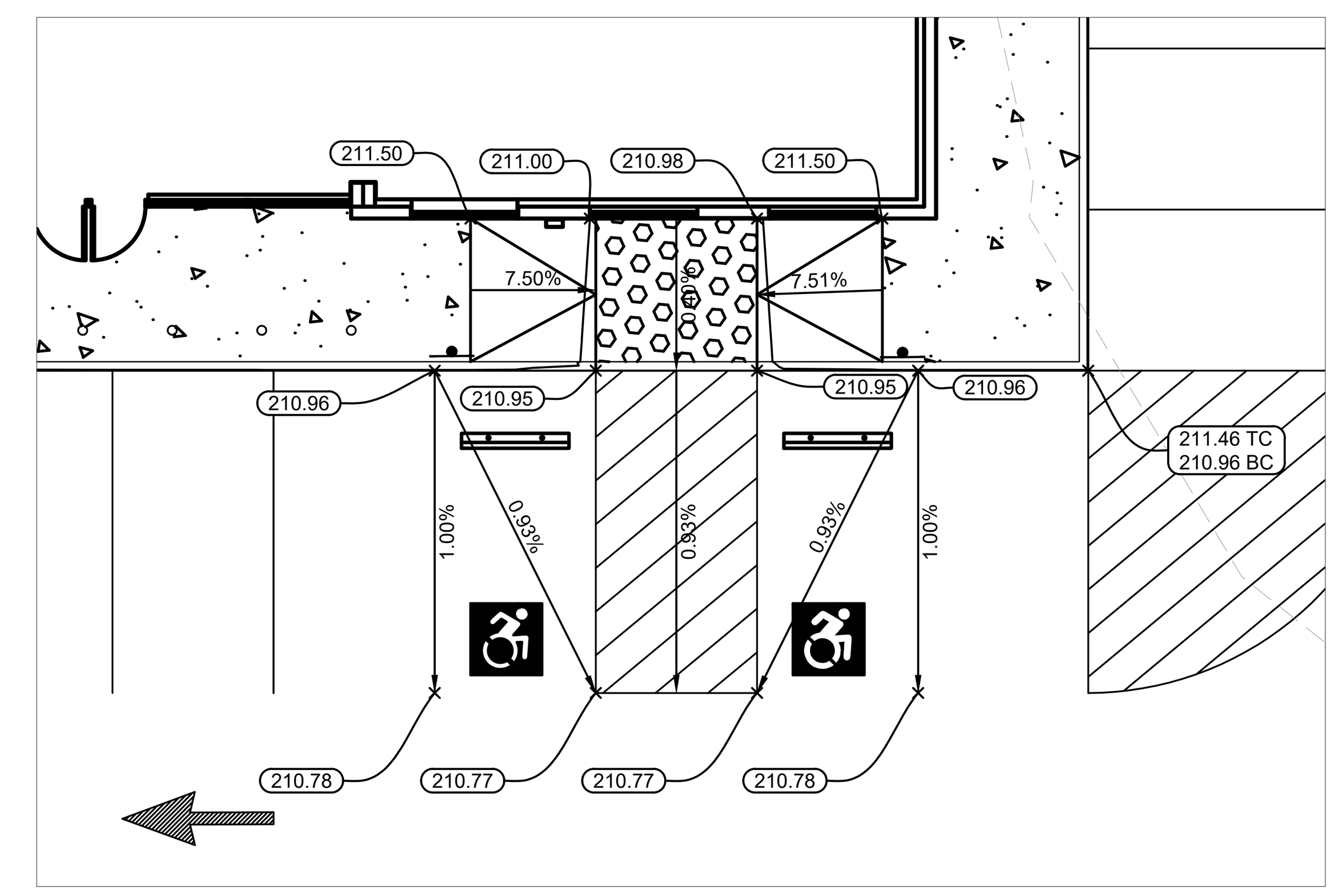
- EXISTING STORM DRAINAGE INLET
- EXISTING STORM DRAINAGE PIPE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED CONTOUR
- PROPOSED DRAINAGE RIDGE LINE
- PROPOSED DRAINAGE FLOW
- PROPOSED SLOPE
- PROPOSED ELEVATION
- PROPOSED STORM DRAIN STRUCTURES
- PROPOSED STORM DRAINAGE PIPE

CUT/FILL CALCULATIONS

CUT: 1,241 CY
FILL: 209 CY
NET: 1,032 CY (CUT)

GRADING & DRAINAGE NOTES

1. INFILTRATION BASIN CONSTRUCTION
   - 1.1. THE ENTIRE CONTRIBUTING DRAINAGE AREA SHOULD BE COMPLETELY STABILIZED PRIOR TO DIRECTING ANY FLOW TO THE SYSTEM. ADEQUATE VEGETATIVE COVER MUST BE ESTABLISHED OVER ANY PERVIOUS AREA ADJACENT OR CONTRIBUTING TO THE SYSTEM BEFORE RUNOFF CAN BE ACCEPTED.
   - 1.2. INFILTRATION BASINS SHOULD NOT BE USED AS TEMPORARY SEDIMENT TRAPS FOR CONSTRUCTION EROSION AND SEDIMENT CONTROL.
   - 1.3. DURING CLEARING AND GRADING OF THE SITE, MEASURES SHOULD BE TAKEN TO AVOID SOIL COMPACTION AT THE LOCATION OF THE PROPOSED SYSTEM.
   - 1.4. THE SYSTEM SHOULD BE FENCED OFF DURING THE CONSTRUCTION PERIOD TO PREVENT DISTURBANCE OF THE SOILS.
   - 1.5. THE INFILTRATION BASIN SHOULD BE EXCAVATED TO THE DIMENSIONS, SIDE SLOPES, AND ELEVATIONS SHOWN ON THE PLANS. THE METHOD OF EXCAVATION SHOULD AVOID COMPACTION OF THE BOTTOM OF THE SYSTEM. A HYDRAULIC EXCAVATOR OR BACKHOE LOADER, OPERATING OUTSIDE THE LIMITS OF THE INFILTRATION BASIN, SHOULD BE USED TO EXCAVATE THE SYSTEM. EXCAVATION EQUIPMENT SHOULD NOT BE ALLOWED WITHIN THE LIMITS OF THE SYSTEM.
   - 1.6. INSTALL VEGETATION ON THE SIDE SLOPES AND SURFACE OF THE INFILTRATION BASIN IN ACCORDANCE WITH THE PLANTING PLAN AND PLANT SCHEDULE ON THE PLANS. WATER VEGETATION THOROUGHLY IMMEDIATELY AFTER PLANTING AND AS NECESSARY UNTIL FULLY ESTABLISHED.



ENLARGED VIEW
SCALE 1" = 10'

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

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STATE OF CONNECTICUT DEAN APOSTOLERIS LICENSED PROFESSIONAL ENGINEER 37922
07/01/2025

KHA PROJECT	112703002
DATE	05/13/2025
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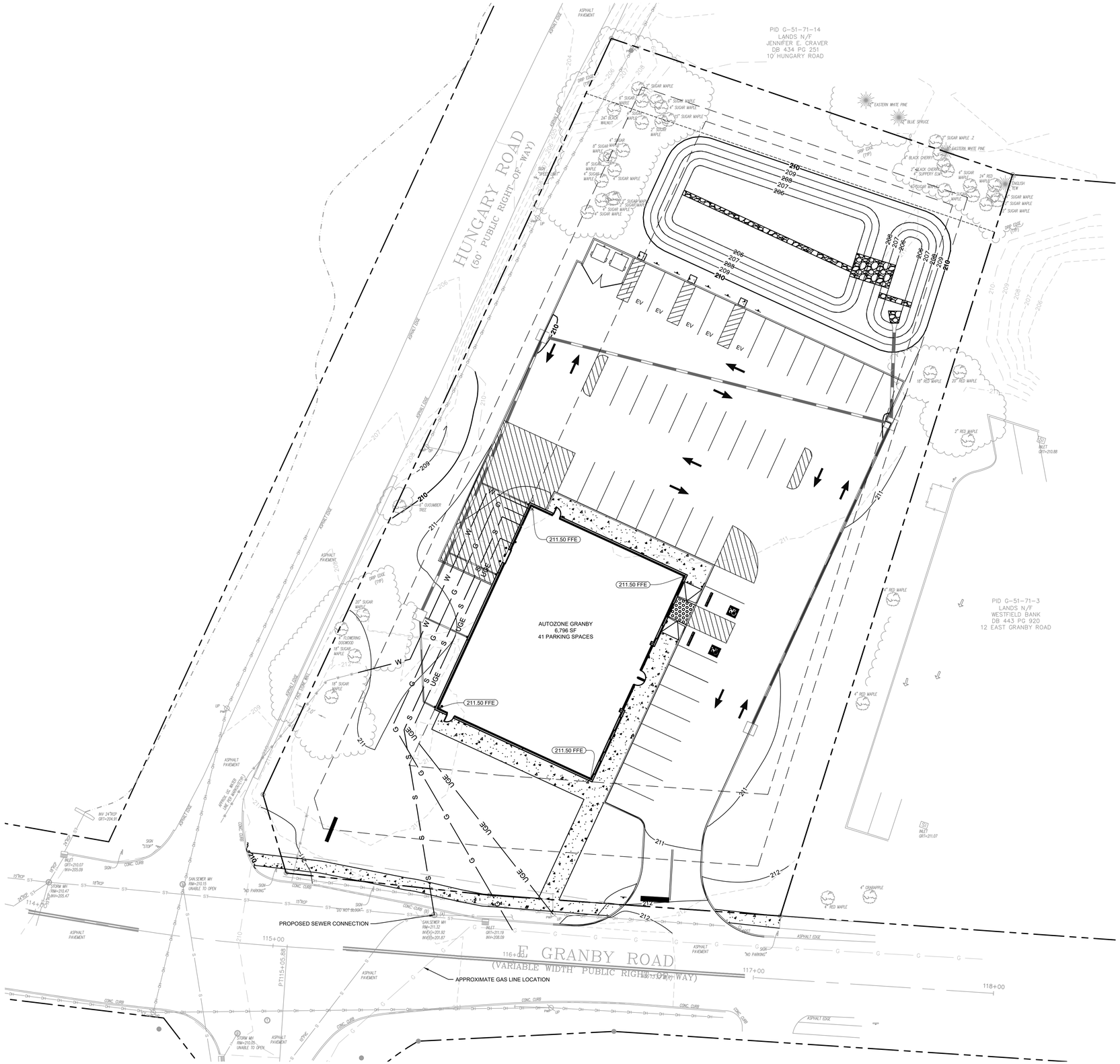
GRADING AND DRAINAGE PLAN

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY CONNECTICUT

SHEET NUMBER
C-3.0



UTILITY PLAN LEGEND

OH OH OH OH OH	EXISTING OVERHEAD ELECTRICAL
E E E E E	EXISTING ELECTRICAL LINE
S S	EXISTING SANITARY LINE
G G G G G	EXISTING GAS LINE
W W W W W	EXISTING WATER LINE
	EXISTING STORM DRAINAGE INLET
ST ST	EXISTING STORM DRAINAGE PIPE
W	PROPOSED WATER LINE
S S	PROPOSED SANITARY LINE
UGE	PROPOSED UNDERGROUND ELECTRIC LINE
G	PROPOSED GAS LINE
	PROPOSED STORM DRAINAGE STRUCTURES
	PROPOSED STORM DRAINAGE PIPE

UTILITY NOTES

1. PROPOSED UTILITY CONNECTIONS TO BE COORDINATED WITH THE TOWN OF GRANBY, SALMON BROOK WATER DISTRICT, AND EVERSOURCE ENERGY.
2. UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE CIVIL ENGINEER AT THE TIME OF THE SURVEY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE APPLICANT, OWNER, OR THE CIVIL ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ENTIRELY ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE DONE BEFORE COMMENCING ANY WORK IN THE VICINITY.
3. PRIOR TO ORDERING MATERIALS AND BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND DETERMINE THE EXACT LOCATIONS, SIZES, AND ELEVATIONS OF THE POINTS OF CONNECTION TO EXISTING UTILITIES, AND, SHALL CONFIRM THAT THERE ARE NO INTERFERENCES WITH EXISTING UTILITIES AND THE PROPOSED UTILITY ROUTES, INCLUDING ROUTES WITHIN THE PUBLIC RIGHTS OF WAY.

NORTH

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STATE OF CONNECTICUT
TRENT APOSTOLOS SUDDETH
37922
LICENSED PROFESSIONAL ENGINEER
07/01/2025

KHA PROJECT	112703002
DATE	05/13/2025
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DESIGNED BY:	TS
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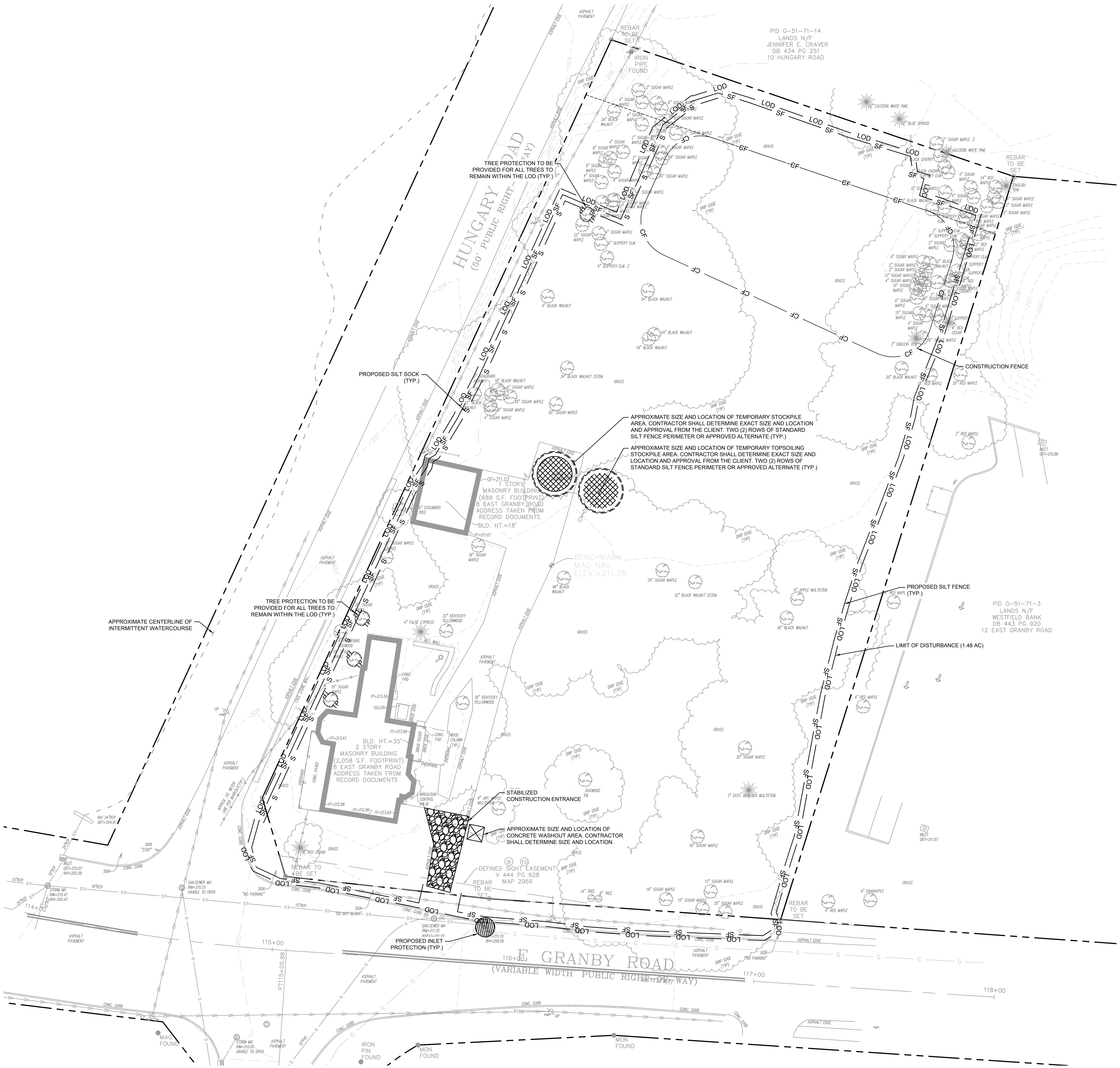
UTILITY PLAN

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY CONNECTICUT

SHEET NUMBER
C-4.0

k:\whp_civil\112703002_autozone ct10582_granby_ct\7. civil\2. cad\plansheets\C-5.0 EROSION AND SEDIMENT CONTROL.dwg



EROSION AND SEDIMENT CONTROL PLAN LEGEND

—— LOD ——	LIMIT OF DISTURBANCE (1.48 AC)
—— SF ——	PROPOSED SILT FENCE
—— S —— S ——	PROPOSED SILT SOCK
—— TP —— TP ——	PROPOSED TREE PROTECTION
—— CF ——	PROPOSED CONSTRUCTION FENCE
	PROPOSED CONSTRUCTION ENTRANCE
	PROPOSED SOIL STOCKPILE
	PROPOSED PERMANENT SEEDING
	PROPOSED INLET PROTECTION

EROSION AND SEDIMENT SCHEDULE AND SEQUENCING

I.	ROUGH GRADING	*CONSTRUCTION ENTRANCE/EXIT, SILT FENCE PROTECTION, AND CONCRETE WASHOUT SHALL BE INSTALLED PRIOR TO THE INITIATION OF ROUGH GRADING, AS NEEDED. TEMPORARY EROSION CONTROL MEASURES TO BE INSTALLED UPON COMPLETION OF ROUGH GRADING AND AS NECESSARY THROUGHOUT CONSTRUCTION.*
II.	UTILITY INSTALLATION	*ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING UTILITY INSTALLATION. STORM STRUCTURE INLET PROTECTION SHALL BE INSTALLED AS STORM DRAINAGE SYSTEM IS CONSTRUCTED.*
III.	BUILDING CONSTRUCTION	*ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING BUILDING CONSTRUCTION AND THROUGHOUT THE REMAINDER OF THE PROJECT.*
IV.	PAVING	*ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING PAVING AND THROUGHOUT THE REMAINDER OF THE PROJECT.*
V.	FINAL GRADING/SOIL STABILIZATION/ LANDSCAPING	*ALL TEMPORARY EROSION CONTROL MEASURES TO BE REMOVED AT THE CONCLUSION OF THE PROJECT AS DIRECTED BY THE LOCAL MUNICIPALITY.*

THE SEQUENCE OF CONSTRUCTION SHOWN ABOVE IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS INCLUDED IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER APPLICABLE LAWS.

NO.	REVISIONS	DATE	BY
1	IWWC COMMENTS REVISION	07/01/25	KH

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STATE OF CONNECTICUT
DEAN APOSTOLERIS
37922
LICENSED
PROFESSIONAL ENGINEER
07/01/2025

KHA PROJECT	112703002
DATE	05/13/2025
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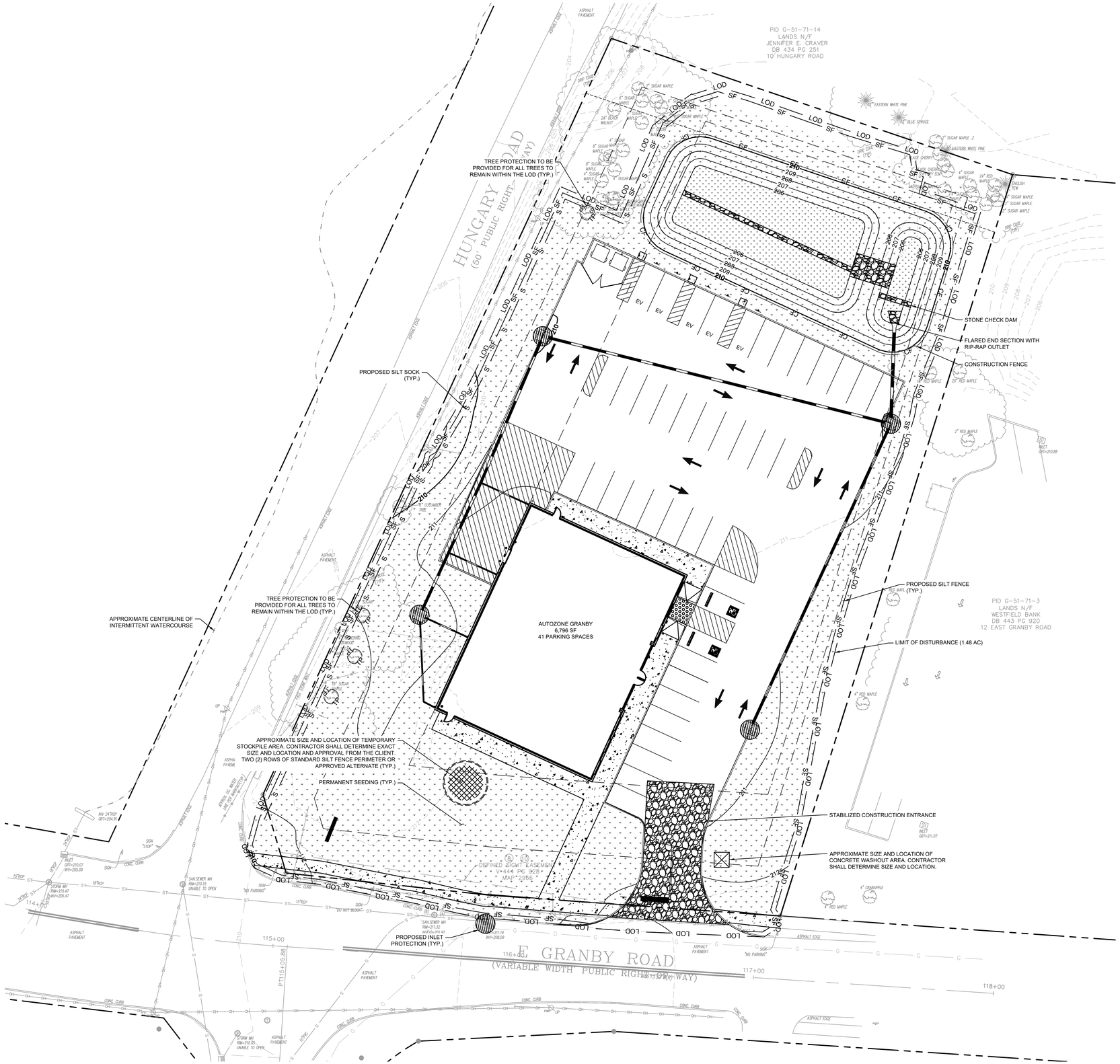
EROSION AND SEDIMENT CONTROL - PHASE 1

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035

TOWN OF GRANBY CONNECTICUT

SHEET NUMBER
C-5.0



EROSION AND SEDIMENT CONTROL PLAN LEGEND

LOD	LIMIT OF DISTURBANCE (1.48 AC)
SF	PROPOSED SILT FENCE
S S	PROPOSED SILT SOCK
TP TP	PROPOSED TREE PROTECTION
CF	PROPOSED CONSTRUCTION FENCE
	PROPOSED CONSTRUCTION ENTRANCE
	PROPOSED SOIL STOCKPILE
	PROPOSED PERMANENT SEEDING
	PROPOSED INLET PROTECTION
	PROPOSED CONCRETE WASHOUT AREA

EROSION AND SEDIMENT SCHEDULE AND SEQUENCING

I.	ROUGH GRADING	*CONSTRUCTION ENTRANCE/EXIT, SILT FENCE PROTECTION, AND CONCRETE WASHOUT SHALL BE INSTALLED PRIOR TO THE INITIATION OF ROUGH GRADING, AS NEEDED. TEMPORARY EROSION CONTROL MEASURES TO BE INSTALLED UPON COMPLETION OF ROUGH GRADING AND AS NECESSARY THROUGHOUT CONSTRUCTION.*
II.	UTILITY INSTALLATION	*ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING UTILITY INSTALLATION. STORM STRUCTURE INLET PROTECTION SHALL BE INSTALLED AS STORM DRAINAGE SYSTEM IS CONSTRUCTED.*
III.	BUILDING CONSTRUCTION	*ALL PRIOR EROSION CONTROL MEASURES INSTALLED ABOVE TO BE MAINTAINED AS NECESSARY DURING BUILDING CONSTRUCTION AND THROUGHOUT THE REMAINDER OF THE PROJECT.*
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THE SEQUENCE OF CONSTRUCTION SHOWN ABOVE IS A GENERAL OVERVIEW AND IS INTENDED TO CONVEY THE GENERAL CONCEPTS OF THE EROSION CONTROL DESIGN AND SHOULD NOT BE RELIED UPON FOR CONSTRUCTION PURPOSES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETAILED PHASING AND CONSTRUCTION SEQUENCING NECESSARY TO CONSTRUCT THE PROPOSED IMPROVEMENTS INCLUDED IN THESE PLANS. THE CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING IMMEDIATELY, PRIOR TO AND/OR DURING CONSTRUCTION IF ANY ADDITIONAL INFORMATION ON THE CONSTRUCTION SEQUENCE IS NECESSARY. CONTRACTOR IS SOLELY RESPONSIBLE FOR COMPLYING WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND ALL OTHER APPLICABLE LAWS.

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STATE OF CONNECTICUT · SEAN APOSTOLOU · 37922 · LICENSED PROFESSIONAL ENGINEER
07/01/2025

KHA PROJECT	112703002
DATE	05/13/2025
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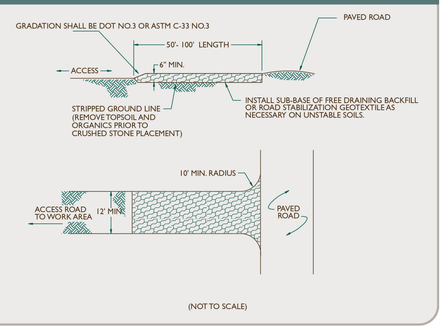
EROSION AND SEDIMENT CONTROL - PHASE 2

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY CONNECTICUT

SHEET NUMBER
C-5.1

Figure CE-2 Diagram of Typical Construction Entrance



CONSTRUCTION ENTRANCE

N.T.S. SOURCE: CTDEEP

INLET PROTECTION

DEFINITION

A SEDIMENT FILTER OR AN EXCAVATED IMPOUNDING AREA AROUND A STORM DRAIN, DROP INLET, OR CURB INLET.

PURPOSE

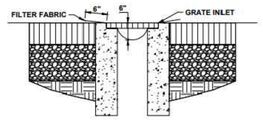
USED TO PREVENT SEDIMENT FROM ENTERING STORM DRAINAGE SYSTEMS DURING CONSTRUCTION..

INSTALLATION

FILTER FABRIC SHOULD BE ENOUGH TO REACH FROM SIDE TO SIDE OF THE INLET. ALLOW FABRIC TO BE SAG NO MORE THAN 6" FROM THE TOP OF THE GRATE. FILTER FABRIC SHOULD HAVE AT LEAST A 6"OVERHANG ALONG THE OUTSIDE OF THE GRATE.

MAINTENANCE

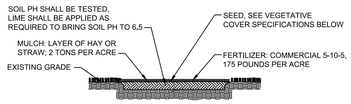
REMOVE AND REPLACE FILTER FABRIC WHEN SEDIMENT HAS COVERED A MAJORITY OF FILTER FABRIC IN THE INLET. CAUTION SHOULD BE USED IN ORDER TO MAKE SURE FABRIC DOES NOT DROP IN THE INLET BELOW WHEN REPLACING.



INLET PROTECTION
SCALE: N.T.S.

INLET PROTECTION

N.T.S. SOURCE: KIMLEY-HORN



NOTES:

1. REFER TO LANDSCAPE PLAN NOTES FOR TEMPORARY AND PERMANENT SEEDING SPECIFICATIONS.

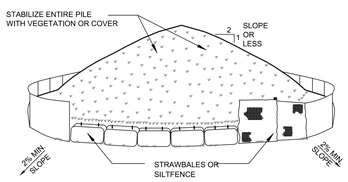
2. SEED BETWEEN SEPTEMBER 1ST AND NOVEMBER 15TH OR MARCH 1ST AND MAY 15TH. SEEDING MAY OCCUR BETWEEN MAY 15TH AND AUGUST 15TH IF ADEQUATE IRRIGATION IS PROVIDED.
5. REFER TO LANDSCAPE PLAN NOTES FOR TOPSOIL SPECIFICATION.

TOPSOIL, SEED, & MULCHING

N.T.S. SOURCE: KIMLEY-HORN

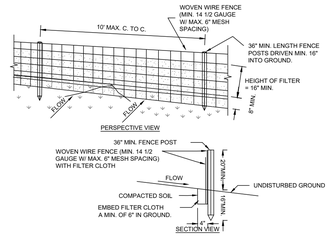
INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2:1.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING OR STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.
4. SEE SILT FENCE DETAIL ON THIS SHEET
5. TEMPORARILY STABILIZE AS NOTED IN SPECIFICATIONS



SOIL STOCKPILE AREA

N.T.S. SOURCE: KIMLEY-HORN



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.

2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.

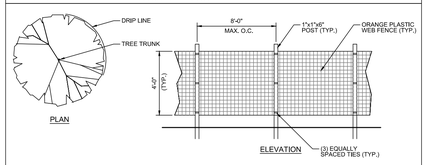
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.

4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.

5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SILT FENCE

N.T.S. SOURCE: KIMLEY-HORN

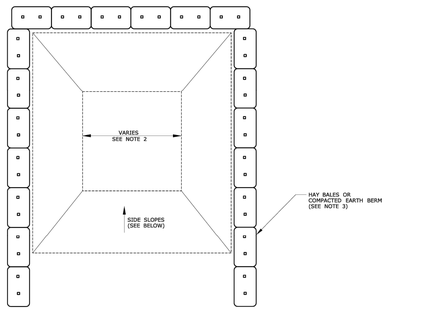


TREE PROTECTION NOTES:

1. EXISTING TREES TO REMAIN SHALL BE PROTECTED WITH TEMPORARY EROSION CONTROL FENCE AND HAY BALE BARRIER. ERECT BARRIER AT EDGE OF THE EARTHWORK CUT LINE PRIOR TO TREE CLEARING. LAY OUT THIS LINE BY FIELD SURVEY.
2. CONTRACTOR SHALL NOT OPERATE VEHICLES WITHIN THE TREE PROTECTION AREA. CONTRACTOR SHALL NOT STORE VEHICLES OR MATERIALS, OR DISPOSE OF ANY WASTE MATERIALS, WITHIN THE TREE PROTECTION AREA.
3. DAMAGE TO EXISTING TREES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY A CERTIFIED ARBORIST AT THE CONTRACTOR'S EXPENSE.
4. INSTALL TREE PROTECTION FENCE AT THE DRIP LINE OF EXISTING TREES.

TREE PROTECTION FENCE

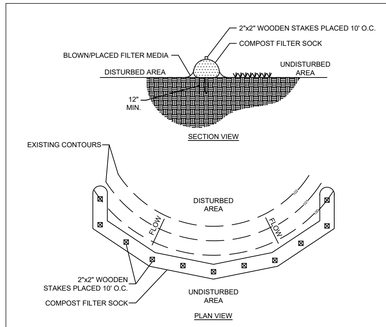
N.T.S. SOURCE: KIMLEY-HORN



CONCRETE WASHOUT AREA
NOT TO SCALE
(SEE NOTE 2)

CONCRETE WASHOUT AREA

N.T.S. SOURCE: KIMLEY-HORN



1. COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON TABLE 1. STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER.

2. TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS.

3. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

4. SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

5. BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

6. UPON STABILIZATION OF THE AREA TRIBUTART TO THE SOCKS, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

COMPOST FILTER SOCK

N.T.S.

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STATE OF CONNECTICUT — SEAN APOSTOLOROS — 37922 — LICENSED PROFESSIONAL ENGINEER
07/01/2025

KHA PROJECT	112703002
DATE	05/13/2025
SCALE:	AS SHOWN
DESIGNED BY:	TS
DRAWN BY:	AMA
CHECKED BY:	TS

EROSION AND SEDIMENT CONTROL DETAILS

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY — CONNECTICUT

SHEET NUMBER
C-5.2

EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION CONTROL MEASURES EMPLOYED DURING THE CONSTRUCTION PROCESS SHALL BE INSPECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE MAINTENANCE SCHEDULE PROVIDED ON THIS SHEET. ALL EROSION CONTROL STRUCTURES SHALL BE REPAIRED AND MAINTAINED AS NECESSARY BY THE CONTRACTOR.
2. ALL STORMWATER MANAGEMENT STRUCTURES (E.G., SWALES, CULVERTS) SHALL BE REGULARLY INSPECTED FOR SEDIMENT ACCUMULATIONS. SEDIMENT AND TRASH SHALL BE REMOVED, AS NECESSARY.
3. ALL EROSION CONTROL INSTALLATION AND MAINTENANCE MEASURES SHALL MEET THE REQUIREMENTS OF THE CONNECTICUT STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
4. ANY PILE OF POTENTIALLY EROSIVE MATERIAL TEMPORARILY STOCKPILED ON THE SITE DURING THE CONSTRUCTION PROCESS SHALL BE LOCATED IN AN AREA AWAY FROM STORM DRAINAGE AND SHALL BE PROPERLY PROTECTED FROM EROSION BY A SURROUNDING SILT FENCE.
5. PERMANENT SEEDED AREAS FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH DETAIL AND SPECIFICATIONS ON THE DETAIL SHEET.
6. AREAS UNDERGOING CLEARING OR GRADING AND WHERE WORK IS DELAYED OR COMPLETED AND IS LOCATED IN THE CTDEEP WATERSHED , THE APPLICATION OF SOIL STABILIZATION MEASURES MUST BE INITIATED BY THE END OF THE NEXT BUSINESS DAY AND COMPLETED WITHIN SEVEN (7) DAYS FROM THE DATE THE CURRENT SOIL DISTURBANCE ACTIVITY CEASED.
7. ON-SITE DUST CONTROL SHALL BE ACCOMPLISHED BY STANDARD METHODS OF LIGHTLY WATERING ALL EXPOSED SOIL AND RAPIDLY STABILIZING THE REGRADED AREAS WITH TOPSOIL, LOAM AND/OR SEEDING.
8. THE PROJECT ENGINEER SHALL BE NOTIFIED NO LESS THAN 48 HOURS PRIOR TO THE START OF ANY SITE WORK, AND BY SUCH NOTIFICATION, SHALL BE PROVIDED WITH THE NAME AND TELEPHONE NUMBER OF THE GENERAL CONTRACTOR RESPONSIBLE FOR SUCH WORK.
9. THE TOWN MAY INSPECT EROSION AND SEDIMENT CONTROL PRACTICES ON THE SITE DURING CONSTRUCTION AND RECOMMEND THAT THE CONTRACTOR INSTALL ADDITIONAL EROSION CONTROL MEASURES IF DEEMED NECESSARY TO PROTECT ANY UNDISTURBED AREAS OF THE SITE. ANY SUCH REQUESTS SHALL BE MADE DIRECTLY TO THE CONTRACTOR AND QUALIFIED PROFESSIONAL AND FOLLOWED UP WITH A WRITTEN NOTIFICATION TO THE DEVELOPER. IN ADDITION, THE TOWN SHALL BE CONSULTED ON ANY SPECIAL ADDITIONS OR DELETIONS OF EROSION CONTROL MEASURES WARRANTED BY CHANGING FIELD CONDITIONS. THE NOTICE OF INTENT (NOI) MAY NEED TO BE UPDATED AS A RESULT OF THE CHANGES.
10. THE CONTRACTOR/OWNER SHALL MAINTAIN A RECORD OF ALL EROSION AND SEDIMENT CONTROL INSPECTION REPORTS AT THE SITE IN A LOG BOOK. THE SITE LOG BOOK SHALL BE MAINTAINED ON SITE AND BE MADE AVAILABLE TO THE PERMITTING AUTHORITY. THE OWNER/CONTRACTOR SHALL, ON A MONTHLY BASIS, POST AT THE SITE A SUMMARY OF THE SITE INSPECTION ACTIVITIES IN A PUBLICLY ACCESSIBLE LOCATION.
11. IF GROUNDWATER IS ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL CONSTRUCT A DEWATERING PIT IN ACCORDANCE WITH CONNECTICUT STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL (AKA SUMP PIT) TO FILTER WATER FOR PUMPING TO A SUITABLE LOCATION.
12. UPON COMPLETION OF CONSTRUCTION, THE PARCEL OWNER(S) SHALL BE RESPONSIBLE FOR THE INSPECTION AND MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM. THE STORMWATER MANAGEMENT SYSTEM SHALL BE INSPECTED QUARTERLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT. THE OWNER(S) SHALL MAINTAIN A RECORD OF INSPECTION AND MAINTENANCE REPORTS AT THE SITE. REFER TO THE SWPPP FOR INSPECTION REQUIREMENTS AND FUTURE MAINTENANCE.
13. WITHIN 10 DAYS AFTER INSTALLATION OF ALL EROSION CONTROL PLAN MEASURES, THE APPLICANT SHALL SUBMIT TO THE ZONING ENFORCEMENT OFFICER INSPECTOR A LETTER FROM THE QUALIFIED PROFESSIONAL WHO DESIGNED THE PLAN FOR THE APPLICANT/LANDOWNER STATING THAT ALL EROSION CONTROL MEASURES HAVE BEEN CONSTRUCTED AND INSTALLED IN COMPLIANCE WITH THE APPROVED PLAN(S).
14. CONTRACTOR TO REMOVE ALL SEDIMENT AND EXCAVATE TO SUBGRADE ELEVATION ONLY AFTER SITE IS STABILIZED. DO NOT MECHANICALLY COMPACT THE SUBGRADE. INSTALL PLANTINGS AT THE END OF CONSTRUCTION. PROTECT AREA WITH PERIMETER CONTROL (SILT FENCE) UNTIL VEGETATION IS STABILIZED.

EROSION AND SEDIMENT CONTROL SEQUENCING NOTES

1. SCHEDULE A PRECONSTRUCTION CONFERENCE WITH THE SITE/CIVIL DESIGN ENGINEER, AUTOZONE PROJECT CONTACT, OWNER/OPERATOR, OR OWNER'S REPRESENTATIVE, TOWN STAFF, CONTRACTOR AND SUBCONTRACTORS INVOLVED IN SITE DISTURBANCE.
- LOCATE ALL EXISTING UTILITIES WITHIN PROJECT AREA (CT-811).
- THE OWNER OPERATOR SHALL AUTHORIZE THE QUALIFIED PROFESSIONAL TO PERFORM WEEKLY INSPECTIONS FOR EROSION AND SEDIMENT CONTROL ONCE CONSTRUCTION BEGINS.

2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE APPROVED PLAN. CLEAR ONLY AS NECESSARY TO INSTALL THESE DEVICES. SEED TEMPORARY DIVERSIONS, BERMS AND BASINS IMMEDIATELY AFTER CONSTRUCTION.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE.
- CLEAR ONLY THE AREAS NECESSARY TO INSTALL EROSION CONTROL MEASURES. GRUB ONLY AS NECESSARY TO INSTALL SILT FENCING, SILT SOCK AND OTHER E&SC MEASURES AS DESIGNATED WITHIN THIS PLAN. ANY ADJUSTMENT TO THE EROSION CONTROL MEASURES AS SHOWN TO ACCOMMODATE EXISTING UNFORESEEN FIELD CONDITIONS, MUST BE APPROVED BY THE ENGINEER OF RECORD. SILT FENCE SHALL BE INSTALLED PARALLEL TO THE CONTOUR, UNLESS SPECIFIED OTHERWISE ON THE PLAN.
- COMPOST FILTER SOCK MAY BE USED ALONG LONG SLOPES AND LAID PARALLEL TO THE CONTOUR IN ACCORDANCE WITH CONNECTICUT STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL. FILTER SOCKS MAY BE SUBSTITUTED FOR SLOPE BREAKS, CHECK DAMS, AND INLET PROTECTION. THE COMPOST SOCK MUST BE INSTALLED PER MANUFACTURER SPECIFICATIONS. THEY MUST BE SIZED TO PREVENT OVERTOPPING.
- INSTALL BASINS AND BARRIERS PRIOR TO CONSTRUCTION ACTIVITIES. ALL MEASURES TO BE INSTALLED CONSISTENT WITH THIS PLAN SET AND THE CONNECTICUT STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL. PRIOR TO INSTALLING A MEASURE, EVALUATE THE SURROUNDING AREA IN THE FIELD TO CONFIRM THAT THE SPECIFIED MEASURE AND BE CONSTRUCTED/INSTALLED AS TO FUNCTION PROPERLY. INSTALL ADDITIONAL TRAPS AND BARRIERS AS NEEDED DURING GRADING TO MAINTAIN SUFFICIENT SEDIMENT PROTECTION.
- ALL STOCKPILES, FUEL TANKS, AND CONCRETE WASHOUT AREAS SHOULD BE NO LESS THAT 50 FEET AWAY FROM ALL INLETS AND WATER.
- INSTALL, STABILIZE AND LINE CLEAN WATER DIVERSION DITCH AND SILT FENCE AND SEDIMENT TRAPPING DEVICES AFTER PRINCIPAL SEDIMENT TRAPS AND BEFORE LAND GRADING. INSTALL ADDITIONAL RUNOFF-CONTROL MEASURES DURING GRADING TO PROVIDE/MAINTAIN SUFFICIENT SEDIMENT PROTECTION.
- APPLY TEMPORARY OR PERMANENT STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS WHERE WORK IS DELAYED OR COMPLETE.

3. CALL THE QUALIFIED PROFESSIONAL FOR AN ONSITE INSPECTION PRIOR TO CLEARING AND GRUBBING.

4. BEGIN CLEARING AND GRUBBING. MAINTAIN DEVICES AS NEEDED. ROUGH GRADE SITE.
- BEGIN MAJOR CLEARING AND GRADING, IF NECESSARY, AFTER PRINCIPAL SEDIMENT AND KEY RUNOFF-CONTROL MEASURES ARE INSTALLED. CLEAR BORROW AND DISPOSAL AREAS ONLY AS NEEDED. INSTALL ADDITIONAL CONTROL MEASURES AS GRADING PROGRESSES.
- INSTALL NECESSARY EROSION AND SEDIMENTATION CONTROL PRACTICES AS WORK TAKES PLACE INCLUDING ADDITIONAL SILT FENCE AND SEDIMENT TRAPPING DEVICES.

5. INSTALL STORM DRAINAGE PIPES, AND PROTECT INLETS WITH BLOCK AND GRAVEL INLET CONTROLS, SEDIMENT TRAPS OR OTHER APPROVED MEASURES AS SHOWN ON THE PLAN. BEGIN CONSTRUCTION.

6. STABILIZE SITE AS AREAS ARE BROUGHT TO FINISH GRADE WITH VEGETATION, PAVING, DITCH LININGS, ETC. SEED AND MULCH DENUDED AREAS PER GROUND STABILIZATION TIME FRAMES.
- ESTABLISH GROUND COVER ON EXPOSED SLOPES WITHIN 7 CALENDAR DAYS FOLLOWING COMPLETION OF ANY PHASE OF GRADING, PERMANENT GROUND COVER FOR ALL DISTURBED AREAS LIMITED TO 14 DAYS FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
- COMPLETE ALL SITE IMPROVEMENTS
- PLANT/STABILIZE REMAINDER OF SITE.

7. WHEN CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED COMPLETELY, CALL QUALIFIED PROFESSIONAL FOR AN INSPECTION.

8. PRIOR TO REMOVAL OF SILT FENCE, REMOVE TEMPORARY DIVERSIONS, SEDIMENT BASINS, ETC., AND SEED OUT OR STABILIZE ANY RESULTING BARE AREAS. ALL REMAINING PERMANENT EROSION CONTROL DEVICES, SUCH AS VELOCITY DISSIPATERS, LEVEL SPREADERS, SHOULD NOW BE INSTALLED.
- THE QUALIFIED PROFESSIONAL MUST GRANT PERMISSION TO CONVERT THE SEDIMENT BASIN OVER TO STORMWATER USE PRIOR TO COMPLETING ANY RELATED WORK.

9. WHEN VEGETATION HAS BECOME ESTABLISHED, CALL FOR A FINAL SITE INSPECTION BY THE QUALIFIED PROFESSIONAL. FILE A NOTICE OF TERMINATION (NOT).

INSPECTION SCHEDULE & MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES

PERMANENT AND TEMPORARY VEGETATION:

INSPECT ALL AREAS THAT HAVE RECEIVED VEGETATION EVERY SEVEN DAYS AND AFTER EVERY MAJOR STORM EVENT. ALL AREAS DAMAGED BY EROSION OR WHERE SEED HAS NOT ESTABLISHED SHALL BE REPAIRED AND RESTABILIZED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE:

INSPECT THE ENTRANCE PAD EVERY SEVEN DAYS AND AFTER EVERY MAJOR STORM EVENT. CHECK FOR MUD, SEDIMENT BUILD-UP AND PAD INTEGRITY. MAKE DAILY INSPECTIONS DURING WET WEATHER. REGRADE PAD AS NEEDED FOR RUNOFF CONTROL. WASH AND REPLACE STONE AS NEEDED. THE STONE IN THE ENTRANCE SHOULD BE WASHED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF SITE BY VEHICLES. IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. REMOVE TEMPORARY CONSTRUCTION ENTRANCE AS SOON AS THEY ARE NO LONGER NEEDED TO PROVIDE ACCESS TO THE SITE AS DIRECTED BY PROJECT ENGINEER.

SILT FENCE & SILT SOCK:

INSPECT FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY MAJOR STORM EVENT. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE FENCE OR SOCK. IF FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF FENCE IMMEDIATELY.

SOIL STOCKPILE:

INSPECT SEDIMENT CONTROL BARRIERS (SILT FENCE) AND VEGETATION FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY MAJOR STORM EVENT. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE SEDIMENT CONTROL BARRIER BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO ONE-QUARTER THE HEIGHT OF THE SEDIMENT CONTROL BARRIER. IF SEDIMENT CONTROL BARRIER TEARS, BEGINS TO DECOMPOSE, OR IN ANY WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF SEDIMENT CONTROL BARRIER IMMEDIATELY. REVEGETATE DISTURBED AREA TO STABILIZE SOIL STOCKPILE. REMOVE THE SEDIMENT CONTROL BARRIER WHEN THE SOIL STOCKPILE HAS BEEN REMOVED.

DUST CONTROL:

SCHEDULE CONSTRUCTION OPERATIONS TO MINIMIZE THE AMOUNT OF DISTURBED AREAS AT ANY ONE TIME DURING THE COURSE OF WORKS. APPLY TEMPORARY SOIL STABILIZATION PRACTICES SUCH AS MULCHING, SEEDING, AND SPRAYING (WATER). STRUCTURAL MEASURES (MULCH, SEEDING) SHALL BE INSTALLED IN DISTURBED AREAS BEFORE SIGNIFICANT BLOWING PROBLEMS DEVELOP. WATER SHALL BE SPRAYED AS NEEDED. REPEAT AS NEEDED, BUT AVOID EXCESSIVE SPRAYING, WHICH COULD CREATE RUNOFF AND EROSION PROBLEMS.

STRAW BALE:

INSPECT FOR DAMAGE EVERY SEVEN DAYS AND AFTER EVERY MAJOR STORM EVENT. MAKE ALL REPAIRS IMMEDIATELY. REMOVE SEDIMENT FROM THE UP-SLOPE FACE OF THE FENCE BEFORE IT ACCUMULATES TO A HEIGHT EQUAL TO HALF THE HEIGHT OF THE STRAW BALE.

EROSION AND SEDIMENT CONTROL MEASURES

THE PURPOSES OF PROVIDING EROSION AND SEDIMENT CONTROL IS TO MINIMIZE TEMPORARY IMPACTS TO DOWNGRADIENT OPEN WATER DURING ANY CONSTRUCTION ACTIVITIES BY CONTROLLING RUNOFF AND RETAINING SEDIMENT AS MUCH AS POSSIBLE WITHIN THE SITE. REFER TO SITE PLAN FOR PROPOSED EROSION CONTROL PRACTICES AND DETAILS. THE EROSION AND SEDIMENT CONTROL PRACTICES SHALL COMPLY WITH REQUIREMENTS FROM THE LATEST CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

EROSION AND SEDIMENT CONTROL PRACTICES INCLUDES, BUT NOT LIMITING TO, PROVIDING THE FOLLOWING ACTIVITIES BY THE OWNER/OPERATOR:

A) SILT FENCE

A TEMPORARY BARRIER OF GEOTEXTILE FABRIC INSTALLED ON THE CONTOURS ACROSS A SLOPE USED TO INTERCEPT SEDIMENT LADEN RUNOFF FROM DRAINAGE AREA OF DISTURBED SOIL BY TEMPORARY PONDING THE SEDIMENT LADEN RUNOFF ALLOWING SETTLING TO OCCUR.

B) STRAW BALE

A TEMPORARY BARRIER OF STRAW USED TO INTERCEPT SEDIMENT LADEN RUNOFF FROM DRAINAGE AREA OF DISTURBED SOIL TO REDUCE RUNOFF VELOCITY AND EFFECT DEPOSITION OF THE TRANSPORTED SEDIMENT LOAD.

C) INLET PROTECTION

A TEMPORARY BARRIER WITH LOW PERMEABILITY, INSTALLED AROUND INLETS IN THE FORM OF FENCE, BERM, OR EXCAVATION AROUND AN OPENING, DETAINING WATER AND THEREBY REDUCING THE SEDIMENT CONTENT OF SEDIMENT LADEN WATER BY SETTLING THUS PREVENTING HEAVILY SEDIMENT LADEN WATER FROM ENTERING A STORM DRAINAGE SYSTEM.

D) DUST CONTROL

WATER SHALL BE STRAYED FROM WATER TRUCK DURING CONSTRUCTION ACTIVITY TO PREVENT DUST FROM FORMING AND MINIMIZE SEDIMENT TRANSPORT THAT MAY CAUSE OFF-SITE DAMAGE, HEALTH HAZARDS OR TRAFFIC SAFETY PROBLEM.

E) PAVEMENT SWEEPING

PAVEMENT SWEEPING WILL REMOVE SEDIMENTS FROM THE PAVED SURFACES DIRECTLY THUS PREVENTING SEDIMENT FROM STORMWATER RUNOFF.

F) CATCH BASIN CLEANING

SEDIMENTS THAT ARE NOT REMOVED BY PAVEMENT SWEEPING OR INLET PROTECTION PRACTICES WILL BE DRAINED BY STORMWATER RUNOFF INTO THE SITE'S CATCH BASIN SYSTEM. CATCH BASIN SHALL BE CLEANED ON A REGULAR BASIS TO MAKE SURE THE CATCH BASIN SYSTEM FUNCTION AS INTENDED.

G) STABILIZED CONSTRUCTION ENTRANCE

A STABILIZED PAD OF AGGREGATE UNDERLAIN WITH GEOTEXTILE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, OR PARKING AREA. THE PURPOSE OF STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE OR ELIMINATE THE TRACKING OF SEDIMENT ONTO PUBLIC RIGHT-OF WAY OR STREETS.

H) MULCHING

APPLYING COARSE PLANT RESIDUE OR CHIPS, OR OTHER SUITABLE MATERIALS, TO COVER THE SOIL SURFACE TO PROVIDE INITIAL EROSION CONTROL WHILE A SEEDING OR SHRUB PLANTING IS ESTABLISHING. MULCH WILL CONSERVE MOISTURE AND MODIFY THE SURFACE SOIL TEMPERATURE AND REDUCE FLUCTUATION OF BOTH. MULCH WILL PREVENT SOIL SURFACE CRUSTING AND AID IN WEED CONTROL.

I) CONCRETE TRUCK WASHOUT

A TEMPORARY EXCAVATED OR ABOVE GROUND LINED CONSTRUCTED PIT WHERE CONCRETE TRUCK MIXERS AND EQUIPMENT CAN BE WASHED AFTER THEIR LOADS HAVE BEEN DISCHARGED, TO PREVENT HIGHLY ALKALINE RUNOFF FROM ENTERING THE STORM DRAINAGE SYSTEMS OR LEACHING INTO SOIL.

J) LAND GRADING

RESHAPING OF THE EXISTING LAND SURFACE BY GRADING IN ACCORDANCE WITH AN ENGINEERING TOPOGRAPHIC PLAN AND SPECIFICATION TO PROVIDE FOR EROSION CONTROL AND VEGETATIVE ESTABLISHMENT ON DISTURBED, RESHAPED AREAS.

K) SEEDING

PROVIDING TEMPORARY EROSION CONTROL PROTECTION TO DISTURBED AREAS AND/OR LOCALIZED CRITICAL AREAS FOR AN INTERIM PERIOD BY COVERING ALL BARE GROUND THAT EXISTS BECAUSE OF CONSTRUCTION ACTIVITIES OR NATURAL EVENT. CRITICAL AREAS MAY INCLUDE BUT NOT LIMITED TO STEEP EXCAVATED CUT OR FILL SLOPES AND ANY DISTURBED, DENUDED NATURAL SLOPES SUBJECT TO EROSION.

L) TREE PROTECTION

FENCING SHOULD BE PROVIDED AROUND ALL TREES TO BE PROTECTED PER THE APPROVE PLANS AND DETAILS. CONTRACTOR TO ENSURE ALL TREES TO BE PROTECTED DURING CONSTRUCTION.

M) TOPSOILING

CONTRACTOR TO STRIP EXISTING TOPSOIL ONSITE TO UTILIZE FOR FINAL STABILIZATION, SEEDING, AND PLANTING. CONTRACTOR TO STOCKPILE TOPSOIL IN SEPARATE AREA FROM GENERAL SOIL.

STABILIZATION PRACTICES SHALL BE IMPLEMENTED AFTER COMPLETION, AS FINAL GRADES ARE REACHED, WITHIN SEVEN (7) DAYS. THE CONTRACTOR MAY ELECT TO UTILIZE OTHER CONTROLS IN CONFORMANCE WITH THE 2002 E&S GUIDELINES, AS APPROVED BY THE QUALIFIED INSPECTOR. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE THE NECESSARY DETAILS FOR ANY EROSION CONTROLS NOT SPECIFICALLY CALLED FOR ON THE PROJECT PLANS.

DURING CONSTRUCTION, ALL AREAS DISTURBED BY THE CONSTRUCTION ACTIVITY THAT HAVE NOT BEEN STABILIZED, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE SHALL BE INSPECTED AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF THE END OF A STORM THAT GENERATES A DISCHARGE. FOR STORMS THAT END ON A WEEKEND, HOLIDAY, OR OTHER TIME IN WHICH NORMAL WORKING HOURS WILL NOT COMMENCE WITHIN 24 HOURS, AN INSPECTION IS REQUIRED WITHIN 24 HOURS FOLLOWING ANY STORM IN WHICH 0.1 INCHES OR GREATER OF RAIN OCCURS. FOR LESSER STORMS, INSPECTION SHALL OCCUR IMMEDIATELY UPON THE START OF SUBSEQUENT NORMAL WORKING HOURS.

PROJECT NARRATIVE

1.1. PURPOSE AND DESCRIPTION OF PROJECT
THE PROJECT PROPOSES THE REDEVELOPMENT OF A 1.58-ACRE PARCEL CURRENTLY USED FOR RESIDENTIAL PURPOSES. THE EXISTING BUILDINGS WILL BE DEMOLISHED AND REPLACED WITH A 6,796 SF COMMERCIAL RETAIL STORE (AUTOZONE), WITH ASSOCIATED SITE IMPROVEMENTS INCLUDING PAVED PARKING AREAS, CURBS, SIGNAGE, LIGHTING, UTILITIES, AND STORMWATER MANAGEMENT INFRASTRUCTURE. THE DESIGN EMPHASIZES PRESERVING SITE HYDROLOGY AND INCLUDES AN INFILTRATION BASIN TO MANAGE RUNOFF AND IMPROVE WATER QUALITY. THERE ARE NO WETLANDS OR WATERCOURSES ON-SITE, THOUGH A NEARBY INTERMITTENT WATERCOURSE OFF HUNGARY ROAD IS WITHIN THE 200' UPLAND REVIEW AREA OF THE PROPERTY.

1.2. TOTAL AND DISTURBED AREA ESTIMATES
TOTAL PROJECT SITE AREA: 1.58 ACRES
TOTAL AREA TO BE DISTURBED: 1.48 ACRES
TOTAL DRAINAGE AREA STUDIED: 1.85 ACRES

1.3. SITE-SPECIFIC EROSION OR SEDIMENT CONTROL CONCERNS
PROXIMITY TO AN INTERMITTENT WATERCOURSE ~40 FEET FROM THE SITE
INCREASE IN IMPERVIOUS AREA FROM 0.17 ACRES TO 0.80 ACRES
NEED TO PROTECT SENSITIVE DOWNSTREAM AREAS VIA E&S MEASURES SUCH AS SILT FENCING, STABILIZED ENTRANCES, INLET PROTECTION, AND CONTROLLED SEQUENCING OF CONSTRUCTION

1.4. PHASES OF DEVELOPMENT
THE PROJECT PHASING IS DENOTED ON SHEETS C-5.0 AND C-5.1.

1.5. PLANNED START AND COMPLETION DATES
CONSTRUCTION DURATION: APPROX. 12 MONTHS
START DATE: TBD UPON PERMIT ISSUANCE (EXPECTED WINTER 2026)
COMPLETION DATE: 12 MONTHS POST-START (OR AS ADJUSTED DURING CONSTRUCTION)

1.6. REFERENCE TO DESIGN CRITERIA, CONSTRUCTION DETAILS, AND MAINTENANCE
1.6.1. DESIGN CRITERIA, CONSTRUCTION DETAILS, AND MAINTENANCE PROGRAMS FOR E&S MEASURES
DESIGN CRITERIA: E&S MEASURES TO BE INSTALLED ONSITE PER SHEETS C-5.0 & C-5.1
CONSTRUCTION DETAILS: SHEET C-5.2
MAINTENANCE PROGRAM: DETAILED ON THIS SHEET

1.6.2. SEQUENCE OF MAJOR OPERATIONS
PRECONSTRUCTION MEETING
E&S CONTROLS INSTALLED
CLEARING AND GRUBBING
TEMPORARY STABILIZATION
GRADING AND EXCAVATION
UTILITY INSTALLATION
BUILDING CONSTRUCTION
PERMANENT STABILIZATION
REMOVAL OF TEMPORARY E&S MEASURES

1.6.3. ESTIMATED TIME FOR MAJOR OPERATIONS
PRECONSTRUCTION AND E&S INSTALLATION: ~1-2 WEEKS
CLEARING, GRUBBING, AND EXCAVATION: ~2-3 WEEKS
UTILITY AND SITE WORK: ~2-3 MONTHS
BUILDING CONSTRUCTION: ~6-8 MONTHS
FINAL STABILIZATION AND LANDSCAPING: ~2-3 WEEKS
TOTAL DURATION: ~12 MONTHS

1.7. OTHER LOCAL, STATE, AND FEDERAL PERMITS REQUIRED
TOWN OF GRANBY INLAND WETLANDS & WATERCOURSE COMMISSION APPROVAL
TOWN OF GRANBY PLANNING & ZONING COMMISSION - SPECIAL USE PERMIT AND SITE PLAN APPROVAL
CTDEEP - GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES
CTDOT- ENCROACHMENT PERMIT

OPERATIONS AND MAINTENANCE SCHEDULE POST CONSTRUCTION

GENERAL ROUTINE MAINTENANCE

NO.	MAINTENANCE TASK	FREQUENCY OF TASK
1	SWEEP PARKING LOT AND OTHER PAVED AREAS	SPRING, AFTER SIGNIFICANT WINTER STORM WHERE SALT OR SAND HAS BEEN APPLIED, AS NECESSARY
2	MAINTAIN LANDSCAPING PROPERLY BY MOWING AND PRUNING	AS NECESSARY
3	REPLACE ANY DYING OR DISEASED PLANT SPECIES	AS NECESSARY
4	PICK UP TRASH AND LITTER ON-SITE BEFORE STORMWATER RUNOFF CAN TRANSPORT DEBRIS TO THE BMPs	ONGOING
5	WALK ENTIRE SITE TO INSPECT FOR EROSION, DRAINAGE PROBLEMS, AND DAMAGE TO THE STORMWATER MANAGEMENT PRACTICES.	BIANNUAL
6	INSPECT PAVEMENT FOR ANY SIGNS OF SETTLEMENT OR ABNORMAL CRACKING	BIANNUAL
7	REMOVE SNOW FROM SITE AS IT ACCUMULATES	AFTER SIGNIFICANT WINTER STORMS

ROUTINE MAINTENANCE ACTIVITIES FOR DRAINAGE PIPE NETWORKS

NO.	MAINTENANCE TASK	FREQUENCY OF TASK
1	VACUUM ACCUMULATED SEDIMENT FROM PIPES ONCE DEPTH IS GREATER THAN 3-INCHES AND DISPOSE OF IN AN APPROVED OFF-SITE LOCATION	AS NECESSARY

ROUTINE MAINTENANCE ACTIVITIES FOR INFILTRATION BASIN

NO.	MAINTENANCE TASK	FREQUENCY OF TASK
1	INSPECT FORE SEDIMENT ACCUMULATION, EROSION, AND VEGETATION HEALTH. INSPECT INLET STRUCTURES FOR BLOCKAGES OR DAMAGE.	QUARTERLY, AFTER SIGNIFICANT STORM EVENTS
2	REMOVE ACCUMULATED SEDIMENT WHEN DEPTH EXCEEDS 25% OF THE DESIGN VOLUME. REPAIR ERODED AREAS AND RE-ESTABLISH VEGETATION AS NEEDED.	AS NECESSARY

*AN ANNUAL MAINTENANCE REPORT DETAILING THE PREVIOUS YEARS COMPLETED MAINTENANCE ACTIVITIES HALL BE SUBMITTED TO THE ZONING ENFORCEMENT OFFICER AND TOWN ENGINEER BY JANUARY 31ST OF THE FOLLOWING YEAR

NO.	REVISIONS	DATE	BY
1	IWWG COMMENTS REVISION	07/01/25	KH

FOR PERMIT REVIEW

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
PHONE: 914-368-2000
WWW.KIMLEY-HORN.COM

AutoZone

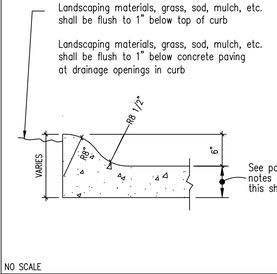
STATE OF CONNECTICUT — BRIAN APOSTOLOROS — 37922 — LICENSED PROFESSIONAL ENGINEER — 07/01/2025

KHA PROJECT	112703002
DATE	05/13/2025
SCALE:	AS SHOWN
DESIGNED BY:	TS
DRAWN BY:	AMA
CHECKED BY:	TS

EROSION AND SEDIMENT CONTROL DETAILS

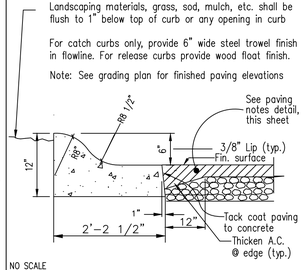
AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY — CONNECTICUT

SHEET NUMBER
C-5.3



NO SCALE

1 TYPICAL ROLL-OVER CURB

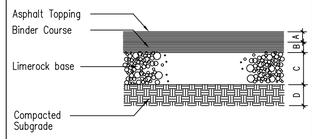


NO SCALE

2 ROLL-OVER CURB at ASPHALT PAVING

DIMENSION & TYPE

Paving Area	A	B	C	D
Drive Aisle	2"	2.5"	8"	6"
Parking	2"	2"	6"	6"



NOTE: CONTRACTOR TO REFERENCE GEOTECHNICAL REPORT FOR DIMENSIONS

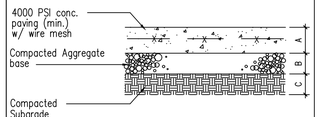
NO SCALE

3 ASPHALT PAVING SECTION

DIMENSION & TYPE

Concrete Section	A	B	C
Parking	6"	6"	see note
Loading/Dumpster	8"	6"	see note
Approaches	8"	6"	see note

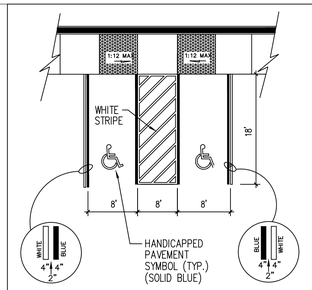
NOTE: Compacted subgrade should be as specified in soils report.



NOTE: CONTRACTOR TO REFERENCE GEOTECHNICAL REPORT FOR DIMENSIONS

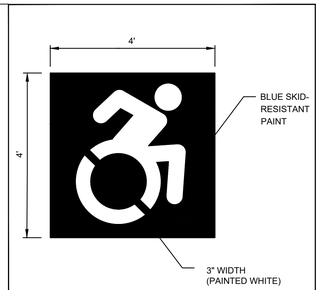
NO SCALE

4 CONCRETE PAVING SECTION

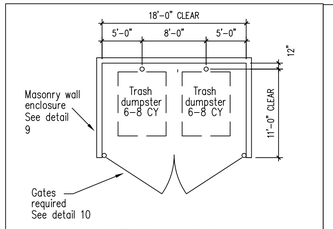


NO SCALE

6 HANDICAP PARKING DETAIL



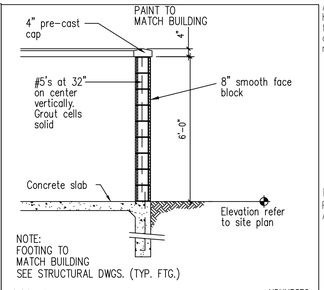
7 ADA PAVEMENT MARKING



NOTE: Bollards behind the dumpsters shall be 6'-0" tall above the pavement surface and extend 3'-0" into the ground.

NO SCALE SEC-C17M

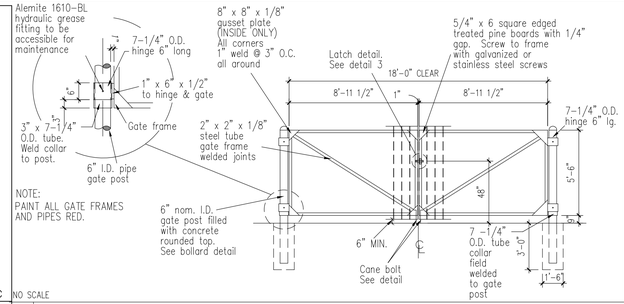
8 DUMPSTER LAYOUT



NOTE: FOOTING TO MATCH BUILDING SEE STRUCTURAL DWGS. (TYP. FTG.)

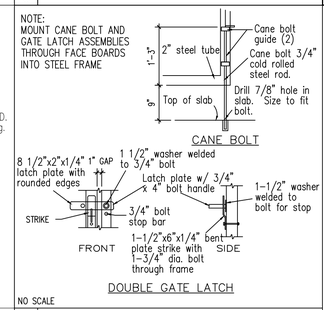
NO SCALE MDUMPSEC

9 DUMPSTER SECTION



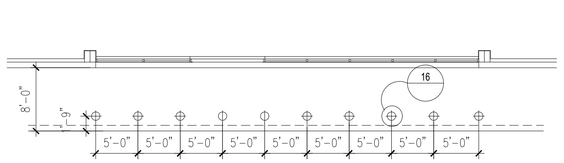
NO SCALE

10 GATE DETAIL FOR DUMPSTER ENCLOSURE



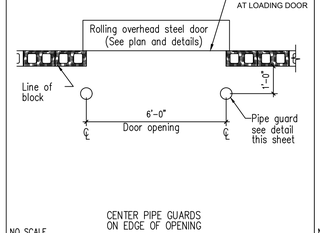
NO SCALE

11 GATE LATCH / BOLT DETAILS



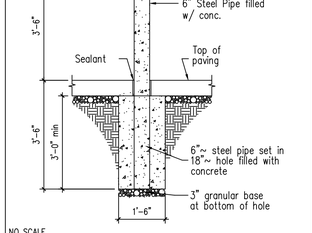
NO SCALE

14 BOLLARD LAYOUT PLAN



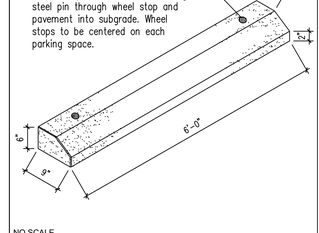
NO SCALE

15 PIPE GUARD @ SERVICE DOOR



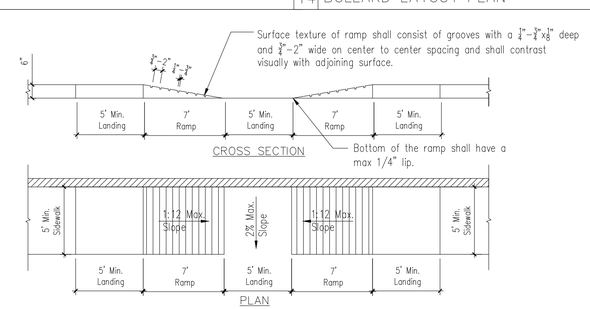
NO SCALE

16 TYPICAL PIPE GUARD SECTION

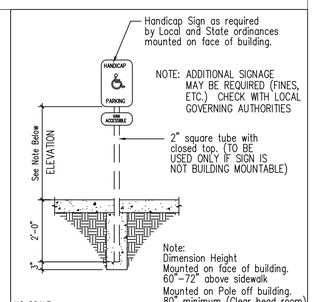


NO SCALE

17 WHEEL STOP DETAIL

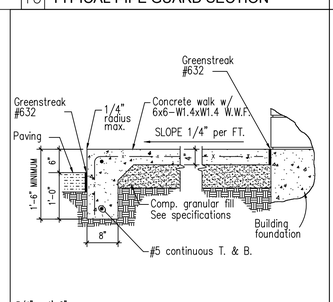


19 HANDICAP PARKING RAMP



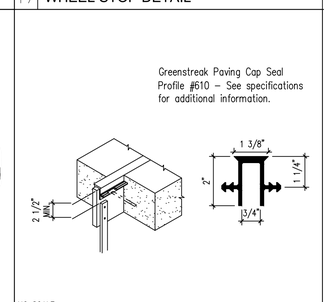
NO SCALE

20 TYPICAL HANDICAP SIGN



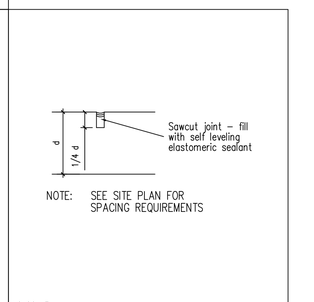
3/4" = 1'-0"

22 TYPICAL WALK SECTION



NO SCALE

23 TYPICAL EXPANSION JOINT

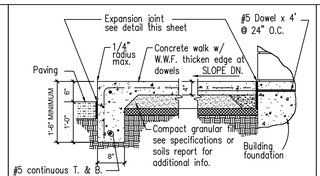


NO SCALE

24 TYPICAL CONTROL JOINT

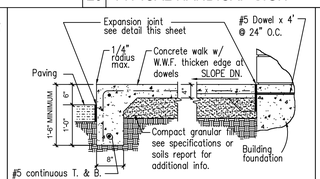
For all details on this sheet which call for a minimum depth of concrete, that depth shall be adjusted to the deeper of that called for in the detail or the frost depth shown in the Geotechnical Report.

25 FROST DEPTH NOTES



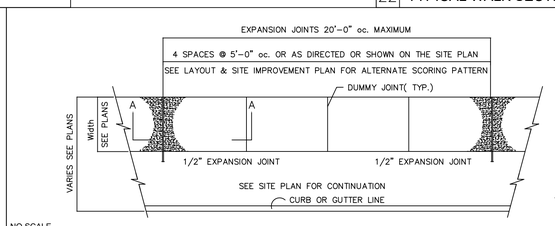
Where frost depth is 18" or greater but less than 24" extend walk turn down to frost depth and fill area under walk extending 24" beyond edge of door opening with 4" compacted granular fill over 2" of polystyrene rigid insulation.

26 WALK AT DOORS FROST DEPTH 18" TO 24"

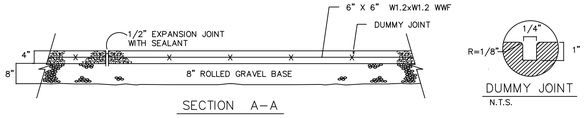


Where frost depth is greater than 24" extend walk turn down to frost depth and fill area under walk extending 24" beyond edge of door opening with compacted granular fill to one half the frost depth.

27 WALK AT DOORS FROST DEPTH 24"+



PLAN VIEW



SECTION A–A

DUMMY JOINT
N.T.S.

28 CONCRETE SIDEWALK

SOURCE: AUTOZONE

NO.	REVISIONS	DATE	BY
1	IWWG COMMENTS REVISION	07/01/25	KH

FOR PERMIT REVIEW

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
PHONE: 914-949-8000
WWW.KIMLEY-HORN.COM

AutoZone

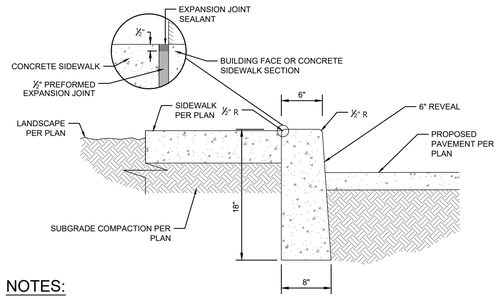
STATE OF CONNECTICUT · SEAN APOSTOLOPOULOS · 37922 · LICENSED PROFESSIONAL ENGINEER · 07/01/2025

KHA PROJECT	112703002
DATE	05/13/2025
SCALE:	AS SHOWN
DESIGNED BY:	TS
DRAWN BY:	AMA
CHECKED BY:	TS

AUTOZONE STANDARD CONSTRUCTION DETAILS

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY
CONNECTICUT

SHEET NUMBER
C-6.0

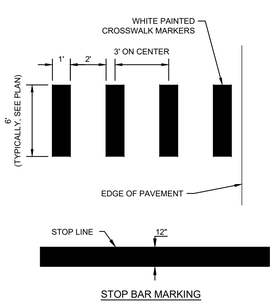


NOTES:

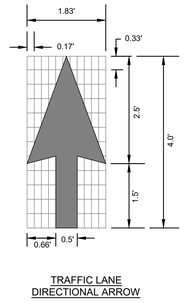
1. CONCRETE SHALL BE 4500 PSI.
2. CONSTRUCTION JOINTS SHALL BE SPACED AT 10' O.C.
3. EXPANSION JOINTS CONSISTING OF 1" DEEP SCORES SHALL BE PLACED AT 20' O.C.

CONCRETE CURB (CAST IN PLACE)

N.T.S. SOURCE: KIMLEY-HORN



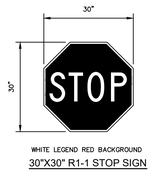
STOP BAR MARKING



TRAFFIC LANE DIRECTIONAL ARROW

PAVEMENT MARKINGS

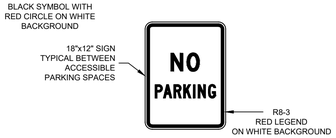
N.T.S. SOURCE: KHA



WHITE LEGEND RED BACKGROUND

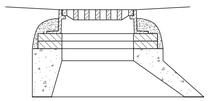
30"X30" R1-1 STOP SIGN

ACCESSIBLE PARKING SIGN (WALL MOUNTED)

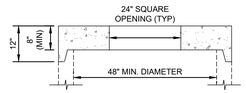


SITE SIGNAGE

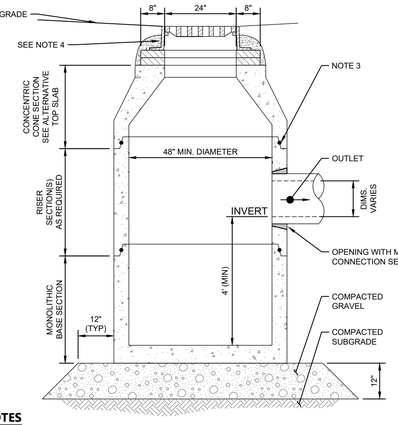
N.T.S. SOURCE: KIMLEY-HORN



ALTERNATIVE ECCENTRIC CONE SECTION



ALTERNATIVE TOP SLAB

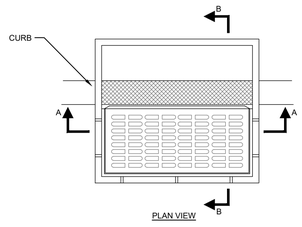


NOTES

1. ALL SECTIONS SHALL BE DESIGNED FOR HS-20 LOADING.
2. PROVIDE OPENINGS FOR PIPES WITH 2" MAX. CLEARANCE TO OUTSIDE OF PIPE. MORTAR ALL PIPE CONNECTIONS.
3. JOINT SEALANT BETWEEN PRECAST SECTIONS SHALL BE PREFORMED BUTYL RUBBER.
4. CATCH BASIN FRAME AND GRATE SHALL BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR (2 BRICK COURSES TYPICALLY, 5 BRICK COURSES MAXIMUM).

FIELD INLET (FI)

N.T.S. SOURCE: KIMLEY-HORN

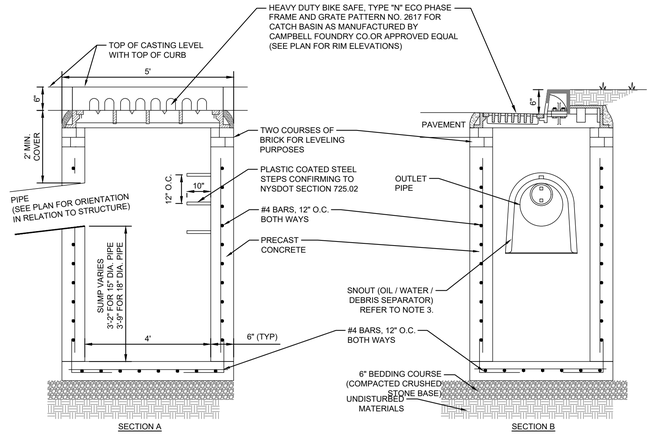


NOTES:

1. ALL STRUCTURES AND CASTINGS TO SUPPORT H-20 LOADING.
2. CONTRACTOR SHALL SUBMIT SITE-SPECIFIC FABRICATION SHOP DRAWINGS FOR APPROVAL.
3. FURNISH AND INSTALL SNOUT OIL WATER DEBRIS SEPARATOR IN ALL TYPE 1 CATCH BASINS. THESE ARE LOCATED WITHIN R.O.W. AREAS AND IN THE LAST PRIVATE CATCH BASIN, INLET, OR DRAIN PRIOR THE MUNICIPAL STORM DRAIN COLLECTION SYSTEM. 9SEE PLANS FOR LOCATIONS.)
4. EXTERIOR SURFACE TO BE MORTAR PARGED FOR BLOCK CONSTRUCTION. 1/4" SCRATCH COAT, AND 1/4" FINISH COAT.
5. HEAVY DUTY BICYCLE TYPE GRATE - CAMPBELL FOUNDRY No. 2617 OR APPROVED EQUAL W/ TYPE 'N-ECO' CURB PIECE. CURB PIECE SHALL INDICATE, "DRAINS TO WATERWAYS."
6. FRAME AND COVER SHALL BE SET IN FULL MORTAR BED.
7. MORTAR ALL PIPE CONNECTIONS.
8. CONTRACTOR SHALL SUBMIT SITE-SPECIFIC FABRICATION SHOP DRAWINGS FOR APPROVAL.
9. AS MANUFACTURED BY OLD CASTLE OR APPROVED EQUAL.

CATCH BASIN CURB TYPE (CB), TYPE 1

N.T.S. SOURCE: KIMLEY-HORN

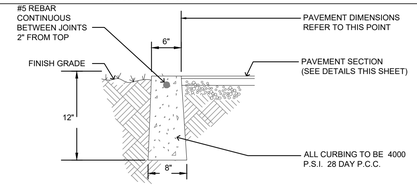


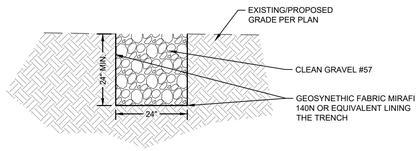
NOTES:

1. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE APPROVED BY THE TOWN ENGINEER PRIOR TO POURING.
2. EXPANSION JOINTS SHALL BE PROVIDED AT EQUAL DISTANCES OF NOT MORE THAN 20' AT ALL STORM SEWER INLETS. JOINTS SHALL BE FILLED WITH PREFORMED EXPANSION JOINT FILLER, 1/2" THICK. THE JOINT SHALL BE RECESSED 1/4" FROM THE TOP AND THE FRONT OF THE CONCRETE CURB.
3. PAVEMENT REPAIR TO BE PROVIDED AS NEEDED FOR CURB REPLACEMENT.
4. THE TOP OF CURB (AT THE OUTSIDE OR NON-EXPOSED FACE) SHALL NOT VARY MORE THAN 0.01 FT. FROM A 10 FT. STRAIGHT EDGE PLACED LONGITUDINALLY ALONG THE CURB OR AT THE FLOW LINE OF THE GUTTER.
5. THE FACE OF CURB SHALL NOT VARY MORE THAN 0.03 FT. FROM A 10 FT. STRAIGHT EDGE PLACED LONGITUDINALLY ALONG THE FLOW LINE.
6. THE ELEVATION OF THE TOP OF CURB OR FLOW LINE OF GUTTER SHALL NOT VARY MORE THAN 0.02 FT. FROM THE TRUE ELEVATION LAID OUT IN THE FIELD BY THE ENGINEER.

FLUSH CONCRETE CURB

N.T.S. SOURCE: KIMLEY-HORN





NOTES:

1. STONE TRENCH TO BE INSTALLED IN INFILTRATION BASIN TO PROMOTE INFILTRATION DURING FROZEN PERIODS.

STONE TRENCH DETAIL

SCALE: NTS

NO.	REVISIONS	DATE	BY
1	IWWC COMMENTS REVISION	07/01/25	KH

FOR PERMIT REVIEW

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
PHONE: 914-368-9000
WWW.KIMLEY-HORN.COM

AutoZone

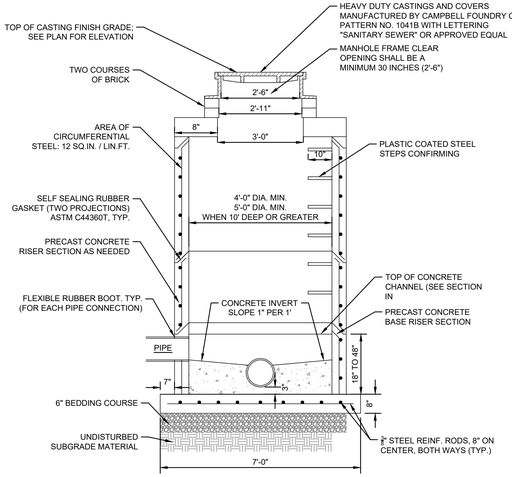
STATE OF CONNECTICUT · DEAN APOSTOLES · 27922 · LICENSED PROFESSIONAL ENGINEER
07/01/2025

KHA PROJECT	112703002
DATE:	05/13/2025
SCALE:	AS SHOWN
DESIGNED BY:	TS
DRAWN BY:	AMA
CHECKED BY:	TS

CONSTRUCTION DETAILS

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY CONNECTICUT

SHEET NUMBER
C-6.1



NOTES:

1. ALL STRUCTURES AND CASTINGS TO SUPPORT H-20 LOADING.
2. CONTRACTOR SHALL SUBMIT SITE-SPECIFIC FABRICATION SHOP DRAWINGS FOR APPROVAL.
3. AS MANUFACTURED BY OLD CASTLE OR APPROVED EQUAL

SANITARY SEWER MANHOLE

N.T.S. SOURCE: KIMLEY-HORN

SANITARY SEWER MAIN NOTES

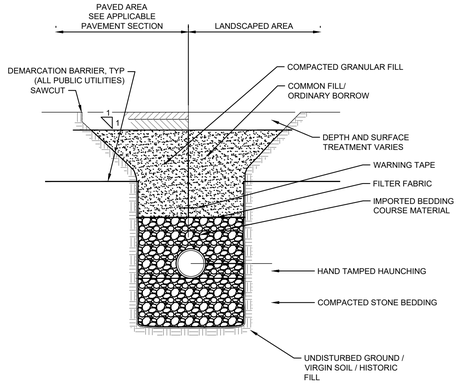
1. ALL SANITARY SEWER MAIN PIPING SHALL BE 6" PVC AS SHOWN ON THE PLANS.
2. ALL INDIVIDUAL SEWER SERVICES SHALL BE 6" PVC PIPE UP TO 5 FEET OF THE BUILDING FOUNDATION. WITHIN 5 FEET OF THE BUILDING FOUNDATION THE SEWER SERVICE PIPE SHALL BE PER LOCAL BUILDING CODES. CLEANOUTS WILL BE REQUIRED AT ALL CHANGES IN DIRECTION AND EVERY 50 FEET.
3. SANITARY SEWER MANHOLES SHALL HAVE LETTERS "SEWER" CAST ON THE COVERS.
4. THE PRECAST STRUCTURE SHALL COMPLY WITH ASTM SPECIFICATION C-478. ALL NECESSARY PATCHING SHALL BE ACCOMPLISHED WITH NON-SHRINK CEMENT GROUT EQUAL TO "SIKA-SET" AS MANUFACTURED BY SIKA CHEMICAL COMPANY.
5. THE PROPOSED SEWER MAINS WILL BE INSTALLED AT MINIMUM 10 FEET HORIZONTALLY AND 18 INCHES VERTICALLY FROM ALL WATER MAINS.
6. ALL SEWER MANHOLES ARE TO BE CONSTRUCTED WITH COMPRESSION TYPE RESILIENT SEAL ASSEMBLY.
7. GASKETS OR COLLARS FOR SANITARY SEWER PIPE CONNECTIONS TO MANHOLES SHALL BE WATER TIGHT AND COMPATIBLE WITH THE TYPE OF PIPING BEING USED.
8. THE LENGTH OF SANITARY SEWER PIPES ENTERING OR LEAVING ANY MANHOLE SHALL BE GREATER THAN 2 FEET AND LESS THAN 6 FEET.
9. EXFILTRATION/INFILTRATION TESTS: LEAKAGE SHALL NOT EXCEED 100 GALLONS PER INCH OF PIPE DIAMETER PER MILE PER DAY. WATER TESTS SHALL BE PERFORMED UNDER A MINIMUM POSITIVE HEAD OF TWO (2) FEET [FIVE (5) FEET FOR WCDEF SEWERS]. LOW PRESSURE AIR TESTING IS PERMITTED FOR PIPE LINES AND SHOULD CONFORM TO ASTM C-828. VACUUM TESTING IS PERMITTED FOR MANHOLES, BUT IS NOT PERMISSIBLE FOR PIPELINES.
10. UPON COMPLETION AND PRIOR TO USE, TWO SETS OF AS-BUILT PLANS MUST BE SUBMITTED TO THE CWPCA TOGETHER WITH A CT LICENSED PROFESSIONAL ENGINEER'S CERTIFICATION OF CONSTRUCTION AND ACCEPTABLE RESULTS OF AIR OR WATER TESTING OF THE SEWER PIPES AND MANHOLES. THE SURVEY SHALL BE SIGNED BY A LICENSED CT SURVEYOR.
11. A MINIMUM OF 48 HOUR ADVANCED NOTIFICATION TO THE CWPCA (860-432-3430) IS REQUIRED FOR ANY LEAKAGE TESTING OF THE SEWER MAIN AND MANHOLES.
12. IN DEEPER UTILITY EXCAVATIONS NEAR THE ANTICIPATED GROUNDWATER TABLE ADDITIONAL CORROSION PROTECTION OF DUCTILE IRON PIPE WILL BE REQUIRED. THIS PROTECTION SHOULD CONSIST OF A POLYETHYLENE WRAP AROUND THE DUCTILE IRON PIPE. GROUNDWATER IS EXPECTED TO BE ENCOUNTERED AT OR BELOW APPROXIMATE EL. 6.0 BASED ON FIELD TESTING. THE GEOTECHNICAL ENGINEER WILL MAKE A FIELD DETERMINATION AS TO IF CORROSION PROTECTION IS WARRANTED BASED ON ACTUAL FIELD CONDITIONS ENCOUNTERED DURING CONSTRUCTION.

ADDITIONAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 4 DAYS NOTICE TO THE LICENSED PROFESSIONAL ENGINEER PRIOR TO ANY TESTING SO THAT THE LICENSED PROFESSIONAL ENGINEER CAN PROVIDE THE REQUIRED MINIMUM 48 HOUR NOTICE TO THE CWPCA PRIOR TO ANY TESTING.
2. SANITARY SEWER PIPES SHALL BE AIR TESTED IN ACCORDANCE WITH ASTM C 828.
3. SANITARY SEWER MANHOLES SHALL BE AIR TESTED IN ACCORDANCE WITH ASTM C 1244.
4. THE MINIMUM SEWER INSTALLATION DEPTH SHALL BE AT LEAST 4 FEET BELOW THE FINISHED GROUND SURFACE (MEASURED FROM THE TOP OF THE PIPE). THE MINIMUM SEPARATION BETWEEN WATER MAIN AND SANITARY SEWER/STORM DRAIN PIPING SHALL BE 18 INCHES VERTICALLY AND 10 FEET HORIZONTALLY. SEPARATION IS ALSO APPLICABLE BETWEEN WATER MAINS AND SANITARY SEWER MANHOLES, STORM DRAIN MANHOLES AND CATCH BASINS.

SANITARY SEWER NOTES

N.T.S. SOURCE: KIMLEY-HORN



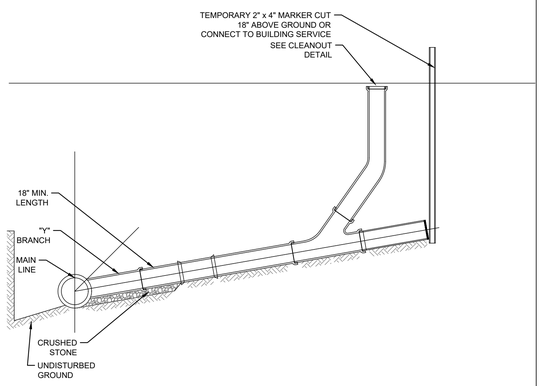
FOR 48" HDPE PIPE AND SMALLER MINIMAL GRAVEL DEPTH FROM THE TOP OF THE PIPE TO BOTTOM OF BITUMINOUS IS 12 INCHES.

UTLITY TRENCH DETAIL (STORM / SANITARY / WATER)

N.T.S. SOURCE: KIMLEY-HORN

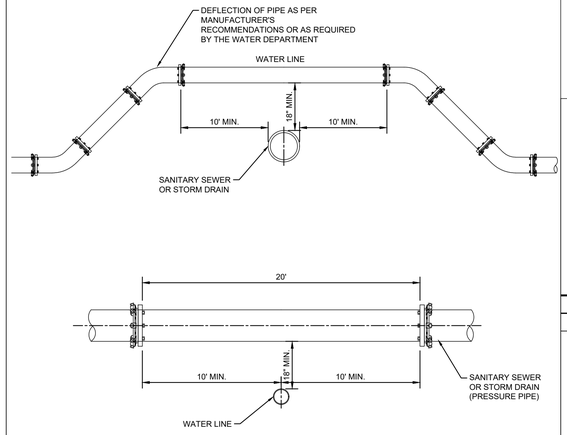
NOTES:

1. MINIMUM SLOPE OF LATERAL IS ¼" PER FOOT, EXCEPT WHERE NOTED OTHERWISE ON THE UTILITY PLAN.
2. MAXIMUM SLOPE OF LATERAL IS DETERMINED BY GRADES OF MAIN LINE AND HOUSE ELEVATION.
3. NO CHIMNEY TYPE CONSTRUCTION SHALL BE PERMITTED. LATERALS MUST REST ON UNDISTURBED GROUND.
4. CLEANOUTS TO BE INSTALLED EVERY 50 FEET OR WHERE SHOWN ON THE PLANS OR AS DIRECTED.
5. SEE CLEANOUT DETAIL FOR MORE INFORMATION.



SANITARY SERVICE LINE

N.T.S. SOURCE: KIMLEY-HORN



NOTES:

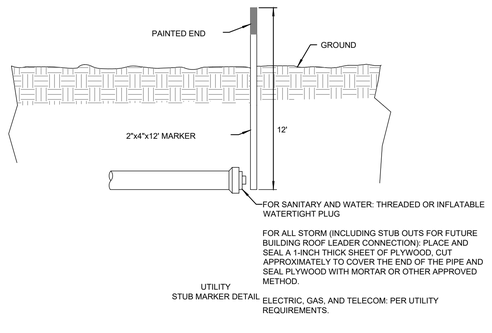
1. FOR ANY CONDITIONS OTHER THAN SHOWN AT RIGHT, THE FOLLOWING REQUIREMENTS SHALL BE MET. THE JOINTS OF THE SANITARY SEWER OR STORM DRAIN SHALL BE A MINIMUM OF 10 FEET FROM THE POINT OF CROSSING. THE SANITARY SEWER SHALL BE CLASS 150 PRESSURE PIPE AND THE STORM DRAIN SHALL BE LOCK JOINT PRESSURE PIPE. WHERE THE ABOVE CONDITIONS CANNOT BE MET, THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH WILL BE NOTIFIED AND THEIR APPROVAL REQUIRED.
2. WHERE THE WATER LINE CROSSES BENEATH THE SANITARY SEWER OR STORM DRAIN, THE JOINTS OF THE PIPE SHALL BE A MINIMUM OF 10 FEET FROM THE POINT OF CROSSING. SANITARY SEWER PIPE SHALL BE CLASS 150 PRESSURE PIPE AND THE STORM DRAIN SHALL BE LOCK JOINT PRESSURE PIPE.
3. REQUIREMENTS AS STATED IN THE ABOVE CONDITIONS WILL ALSO APPLY WHEN HORIZONTAL SEPARATION BETWEEN THE SANITARY SEWER AND WATER IS LESS THAN 10 FEET AND VERTICAL SEPARATION IS LESS THAN 18 INCHES. WHERE THE ABOVE CONDITIONS CANNOT BE MET, THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH WILL BE NOTIFIED AND THEIR APPROVAL REQUIRED.
4. WHERE SEPARATION IS LESS THAN 18 INCHES VERTICALLY OR 10 FEET HORIZONTALLY, CONCRETE ENCASE A MINIMUM OF 10 FEET IN EACH DIRECTION

CROSSING OF WATER LINE AND STORM / SANITARY SEWER

N.T.S. SOURCE: KIMLEY-HORN

NOTES:

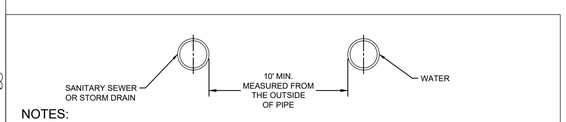
1. THE END OF ALL LATERALS SHALL BE PLUGGED WATERTIGHT AND MARKED BY A TWELVE (12) FOOT LONG 2X4 PIECE OF LUMBER. THE LENGTH SHALL BE EXACT SO THAT THE DEPTH OF THE LATERAL CAN BE DETERMINED BY THE LENGTH OF THE 2X4 PROTRUDING FROM THE SURFACE. SANITARY SERVICE SHALL HAVE GREEN PAINT, WATER BLUE PAINT, STORM RED PAINT ON THE END OF THE 2X4, AND "SAN, WATER, OR STM" STENCILED IN 2.5" LETTERS. THE 2X4 SHALL BE EVEN WITH THE INVERT AND PLUMB.
2. PIPES THAT ARE CAPPED SHALL REMAIN CAPPED UPSTREAM UNTIL FUTURE CONNECTION (TO THE BUILDING OR FUTURE PHASES) IS ESTABLISHED.



NOT TO SCALE

CAPPING OF FUTURE UTILITY AND STUB MARKER

N.T.S. SOURCE: KIMLEY-HORN



NOTES:

1. REQUIREMENTS AS STATED IN THE ABOVE CONDITIONS WILL ALSO APPLY WHEN HORIZONTAL SEPARATION BETWEEN THE SANITARY SEWER AND WATER IS LESS THAN 10 FEET AND VERTICAL SEPARATION IS LESS THAN 18 INCHES. WHERE THE ABOVE CONDITIONS CANNOT BE MET, THE WESTCHESTER COUNTY DEPARTMENT OF HEALTH WILL BE NOTIFIED AND THEIR APPROVAL REQUIRED.
2. WHERE SEPARATION IS LESS THAN 18 INCHES VERTICALLY OR 10 FEET HORIZONTALLY, CONCRETE ENCASE A MINIMUM OF 10 FEET IN EACH DIRECTION.

MIN. HORIZONTAL SEPARATION BETWEEN WATER AND STORM/SANITARY PIPES

N.T.S. SOURCE: KIMLEY-HORN

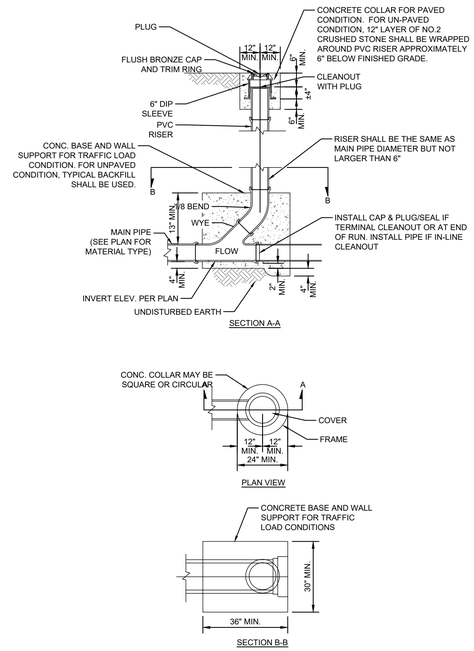
FILL NOTES

1. TYPICAL CLEAN FILL SIEVE ANALYSIS REQUIREMENTS FOR ALL UTILITY AND PIPING BACKFILL REQUIREMENTS.
2. ENGINEERED FILL MATERIAL SHALL BE WELL-TO-MODERATELY WELL-GRADED GRANULAR SOILS AS EXCAVATED, IMPORTED, SCREENED, OR BLENDED, OR PROCESSED ROCK FROM ON-SITE SOURCES MEETING THE FOLLOWING REQUIREMENTS:

TRENCH BACKFILL REQUIREMENTS	
SIEVE OPENING	TOTAL PERCENT PASSING BY WEIGHT
4 INCH	100
3/4 INCH	70-100
NO. 4	40-100
NO. 10	20-100
NO. 40	5-40
NO. 100	0-30
NO. 200	0-12

TRENCH FILL MATERIAL SPECIFICATIONS

N.T.S. SOURCE: KIMLEY-HORN



STORM AND SANITARY SEWER CLEANOUT (TYPICAL)

N.T.S. SOURCE: KIMLEY-HORN

NO.	REVISIONS	DATE	BY
1	IWWC COMMENTS REVISION	07/01/25	KH

FOR PERMIT REVIEW

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
PHONE: 914-368-9000
WWW.KIMLEY-HORN.COM

AutoZone

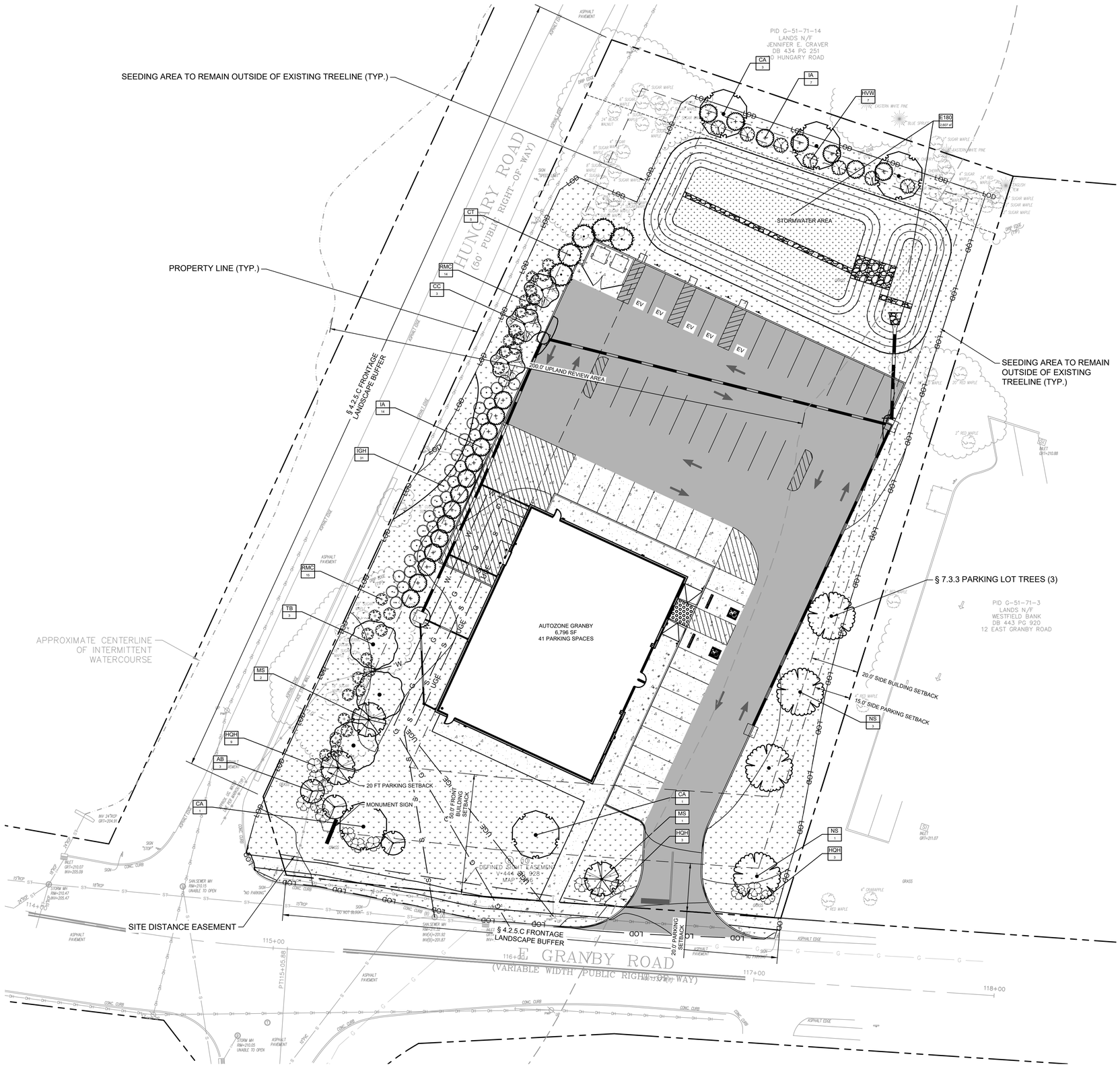
STATE OF CONNECTICUT · SEAN APOSTOLOS · 37922 · LICENSED PROFESSIONAL ENGINEER
07/01/2025

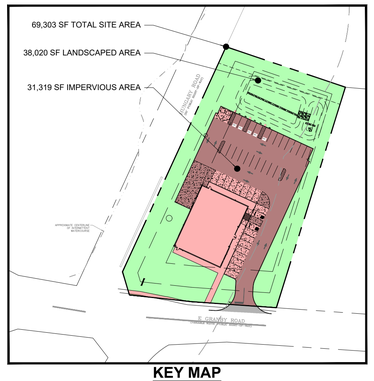
KHA PROJECT	112703002		
DATE	05/13/2025		
SCALE:	AS SHOWN	DESIGNED BY:	TS
		DRAWN BY:	AMA
		CHECKED BY:	TS

CONSTRUCTION DETAILS

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY CONNECTICUT

SHEET NUMBER
C-6.2





KEY MAP
1" = 100'

LANDSCAPE ZONING REQUIREMENTS			
CODE	**REQUIREMENT**	**PROPOSED**	**COMPLIES**
§ 4.2.5.B SITE LANDSCAPE AREA	MINIMUM OF 20% OF SITE AREA LANDSCAPED 69,303 SF x 20% = 13,861 SF LANDSCAPING REQUIRED	38,020 SF (55%) LANDSCAPE AREA PROVIDED	YES *SEE KEY PLAN ON SHEET C-7.1*
§ 4.2.5.C FRONTAGE LANDSCAPE BUFFER	20 FT WIDE LANDSCAPE BUFFER ALONG SITE FRONTAGE 1 TREE PER 25 LF MASSINGS OF NATIVE SHRUBS 586 LF FRONTAGE / 25 = 24 TREES 24 TREES REQUIRED	27 TREES 75 SHRUBS	YES
§ 7.3.3 PARKING LOT TREES	1 TREE PER 15 SPACES 41 SPACES / 15 = 3 TREES REQUIRED	3 TREES	YES

PLANT KEY

SEE FULL PLANT SCHEDULE ON SHEET L-1.1 - LANDSCAPE NOTES AND DETAILS

SYMBOL CODE BOTANICAL / COMMON NAME

DECIDUOUS TREES

- CA — Carpinus caroliniana — American Hornbeam
- NS — Nyssa sylvatica — Sour Gum
- TB — Tilia americana 'Boulevard' — Boulevard American Linden

EVERGREEN TREES

- CT — Chamaecyparis thyoides — Atlantic White Cypress
- IA — Ilex opaca — American Holly

ORNAMENTAL TREES

- AB — Amelanchier canadensis 'Autumn Brilliance' — Canadian Serviceberry
- CC — Cercis canadensis — Eastern Redbud
- MS — Magnolia virginiana — Sweetbay Magnolia

DECIDUOUS SHRUBS

- HVW — Hamamelis virginiana — Common Witch Hazel
- HQH — Hydrangea quercifolia — Oakleaf Hydrangea

EVERGREEN SHRUBS

- IGH — Ilex glabra — Inkberry Holly
- RMC — Rhododendron maximum 'Compacta' — Compact Rosebay Rhododendron

GROUND COVERS

- E136 — ERNST-136 — ERNST SEED THREE-WAY TALL FESCUE MIX
- E180 — ERNST-180 — ERNST RAIN GARDEN SEED MIX

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

NO.	REVISIONS	DATE	BY
1	IWWC COMMENTS REVISION	07/01/25	KH

FOR PERMIT REVIEW

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© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
PHONE: 914-368-8000
WWW.KIMLEY-HORN.COM

AutoZone

STATE OF CONNECTICUT — FRANK J. I. MASER — LICENSED LANDSCAPE ARCHITECT — NO. 1116
07/01/2025

KHA PROJECT 112703002
DATE: 05/13/2025
SCALE: AS SHOWN
DESIGNED BY: TS
DRAWN BY: AMA
CHECKED BY: TS

LANDSCAPE PLAN

SHEET NUMBER
L-1.0

PERFORMANCE SPECIFICATION

I. PLANTS

A. General

1. Live healthy plants free of dead branches and parts
2. Free of disease, insect, injury and damage
3. Unbroken, intact, dense and solid rootballs and containers, without cracks, flat sides or previously repaired damage.
4. Free of girdling roots or rootbound/circling container conditions
5. Plants of consistent in growth habit and healthy character
6. Free of compromising growth conditions such as weak crotch connections, crossed branches, snags and scars
7. Point of origin growing location within 100 miles of project site
8. Graded, standards, caliper, sizes and stock consistent with *ANSI Z60.1, American Standard for Nursery Stock* most current edition
9. Species identified consistent with the most current editions of: *Hortus Third: Concise Dictionary of Plants Cultivated in the United States and Canada*, and *Manual of Woody Plants: Their Identification, Ornamental Characteristics, Culture, Propagation and Uses*
10. All disturbed areas shall be grass seed unless otherwise identified on landscape plans

B. Trees:

1. Deciduous Single Trunk
- a. Full, straight and upright with consistent symmetrical natural branching pattern throughout
- b. Branching Height-seven (7) feet to lowest branch in two years unless otherwise required by local jurisdiction

2. Deciduous Multi-Trunk
- a. Full and upright with straight consistent symmetrical natural branching pattern throughout
- b. Canes evenly spaced and of similar growth habit
- c. Free of suckers and extraneous branching

3. Evergreen Single-Trunk
- a. Full and upright with continuous symmetrical dense natural habit
- b. Clear branching height twelve (12) inches above top of rootball
- c. Free of suckers and extraneous branching
- d. Do not shear or otherwise prune to shape plantings

C. Evergreen and Deciduous Shrubs
1. Full, dense and naturally symmetrical.
2. Consistent with container and/or balled and burlapped size
3. Free of suckers and extraneous branching
4. Do not shear or otherwise prune or shape plantings

D. Evergreen and Deciduous Groundcover
1. Full and dense in pots or flats

E. Perennials and Seasonal Color
1. Full and dense in pots or flats

F. Turf Grass

1. Subgrade
- a. Soil Mix-10% Compost, 90% topsoil by volume
- b. Preparation-loosen subgrade to a minimum depth of four (4) inches. Remove all non-natural materials including litter, stones, sticks and all items greater than ¾ inch in any dimension
- c. Preparation-spread soil mix at a depth of four (4) inches continuously to meet grade elevations shown on drawings. Allow for thickness of sod when applicable

2. Grass Sod
- a. Install not longer than twenty-four (24) hours from harvest
- b. Grass bed not less than two (2) inches in continuous thickness
- c. 100% continuous live sod coverage after first growing season and at end of warranty period.
- d. Of uniform non-varying density and continuous texture quality capable of growth and development immediately upon installation. Weed and noxious plant free
- e. Stagger installation rows and place aligned parallel to contours
- f. Fill joints solidly with planting bed preparation soil
- g. Provide anchor pins at twenty-four (24) inches on center for slopes greater than 4:1

3. Grass Seed
- a. Mix approved by the Landscape Architect
- b. Provide first and new of year seed crops in mix free of weed seeds and deleterious matter
- c. Provide seed mix not greater than 15% annual or perennial rye
- d. Coverage 85% continuous coverage live stand after first growing season and at end of warranty
- e. Replacement or overseeding mixes consistent with original application/installation
- f. Provide erosion blankets or other slope retention methods as noted on drawings

II. Materials and Appurtenances

A. Testing
1. Materials testing information/certificates/dated labels shall be current to the project and performed/certified not greater than 120 calendar previous days from current date of submittal for review

B. Top Soil
1. Neutral Ph balance 5.5 -7.5. Friable and containing 2.0-5.0% organic matter by dry weight. Continuously free of non-soil items such as stones, debris, sticks, trash, and deleterious matter greater than ¾ inch in any direction. Clay content shall not exceed 25%.Gravel content shall not exceed 10%. Silt shall not exceed 25%

C. Use of Existing Topsoil
1. Existing topsoil on-site may be repurposed with prior Owner approval. Contractor shall provide soil testing and additive program that demonstrates consistent performance and characteristics and composition as identified herein. Owner shall approve soil testing and soil amendment/additive methods and procedures

D. Shredded Hardwood Mulch
1. 100% organic shredded first year hardwood free of deleterious matter, rock, gravel and weed seed. Neutral Ph balance 5.5-7.5

E. Compost Ph
1. Balanced 5.0-8.5 mature, stable and weed free produced by natural aerobic decomposition. Free of visible contaminants and toxic substances. Not greater than 5% sand, silt, clay or rock by dry weight. Consistent with US-EPA CFR Title 40 Part 503 Standards for Class A biosolids

G. Compost Testing
1. Prior to delivery on-site, the following items are required for approval by Owner: Feedstock percentage in final compost product; statement that the products meets federal, state and local health safety requirements
2. Provide copy of lab analysis less than 120 calendar days old verifying that the product meets described physical requirements; chemical contaminants; Ph; physical contaminants; biological contaminants (including a statement that fecal coliform and salmonella testing and results comply with requirements of the US Composting Council Seal of Testing approval programs

H. Planting Mix
1. 85% topsoil and 15% Compost

I. Fertilizer
1. Granular 10% nitrogen, 6% Phosphorous, 4% Potassium granular form with 50% Nitrogen in organic form. Product and Material Safety Data as approved by Owner

J. Herbicide
1. Product and Material Safety Data as approved by Owner

K. Water
1. Potable only unless otherwise approved by Owner

L. Hardwood Stakes
1. 2 x 2 x 48 inch square of sound hardwood, painted flat black on all sides

M. Tree Ties
1. Villa Non-Abrasive Rubber Tree Ties or approved equal

N. Filter Fabric
1. Mirafi 140-N or approved equal

O. Steel Edging
1. 1/8-inch x 4-inch in full sections. Ryerson, Timec or approved equal with integral stakes. No open corners. Corners shall be formed and trued to compliant angle or welded closed

P. River Stone
1. Locally sourced, river rounded, unfaceted river stone/cobbles.
2. Size shall not exceed 3 total inches in any dimension.
3. Color and texture approved by Owner
4. When placed in concrete or mortar setting bed, tamp to secure and brush clear joints.
5. Concrete or mortar as approved by owner.

III. Execution

A. Site Conditions
1. Inspect site and notify Owner in writing of acceptance with indication that project conditions are acceptable are suitable to proceed with work. Notify Owner of any existing damage and/or other conflicting conditions.
2. Do not proceed with work until unsatisfactory conditions have been satisfactorily remedied. Notify Owner of acceptance prior to commencement of work.
3. Notify Owner in writing of any conditions that may preclude successful completion of work including items such as coordination with other trades, incomplete work, drainage, soil temperature and/or composition, access to storage/work areas, damage to conditions, etc.
4. Notify Owner in writing immediately of any items that may influence work schedule, timing of tasks, materials delivery and/or installation and warranty responsibilities.
5. Coordinate and cooperate with other trades working in and adjacent to work areas. Examine drawings of other trades which show development of the entire project and become familiar with the scope of required work by others.

B. Planting Seasons

Recommended seasons are a general guide based on historical climatic data and typical performance of plantings, and which vary dependent on project-specific environmental conditions. Due to construction schedules, recommended planting seasons may/may not coincide with request(s) for certificate of occupancy for projects. Coordination of planting installation and seasons shall be reviewed with Owner on an individual project basis.

1. Deciduous and Evergreen Trees

Do not install/plant the following trees between September 15 and March 15
1. Oaks (Quercus Sp., Such as Q. rubra, Q. alba, Q. phellos, Q. coccinnea)
2. Dogwood (Cornus Sp.)
3. Sweetgum (Liquidambar Sp.)
4. All Conifers and Evergreens except White Pine (Pinus strobus Sp.)

2. Deciduous and Evergreen Shrubs
- a. Install/plant between March 15 and June 15 and/or September 15 and November 30

3. Perennials
- a. Install/plant between March 15 and June 15 and/or September 15 and November 30

4. Spring Flowering Bulbs
- a. Install/plant between September 15 and December 15

5. Seasonal Annuals
- a. Install/plant in season per approved schedule

6. Turf Grass
- a. Install/plant between March 15 and May 15 and/or September 15 and November 30
- b. Do not install/plant seed or sod turf grass areas when ambient air temperature is below forty (40) degrees Fahrenheit, or forecast for a twelve (12) hour period after completion of work

7. No Plant Installation
- a. Do not install plantings or turf grass between June 15 and September 15, without approval by Owner

C. Positioning & Location of Plantings
1. Position plants to show the most-prominent and well-formed face to most-public view
2. Field locate plants and location/spacing/dimension of planting beds on project site prior to beginning installation
3. Verify location of individual plants and plant beds prior to beginning installation. Do not proceed without Owner approval

D. Implementation
1. Pursue work continuously without delay or interruption until completion unless notified otherwise by Owner
2. Provide project submittals ahead of commencement of work. Landscape Architect requires a minimum of ten (10) working days from date of receipt for review of submittals and response to Owner and Contractor. Plan accordingly for procurement of materials
3. Continuously update implementation schedule and notify Owner of progress. Delays related to material availability are not cause for non-completion of scheduled delivery of work.
4. Report delays due to weather or site conditions immediately upon finding. Provide recommendation for remedy of schedule delays. Do not work, place or modify frozen soil
5. Report delays due to extraordinary natural or other conditions beyond control of Contractor

E. Clean Up
1. Remove trash, debris and work materials from site prior to request for substantial completion. Thoroughly clean surfaces impacted by work including building, parking areas, roadways, sidewalks, signs, lights, site furnishings, etc.
2. Repair any damage to existing conditions that occurred during execution of work.
3. All clean-up and demobilization procedures shall be performed to satisfaction of the Owner and Landscape Architect.

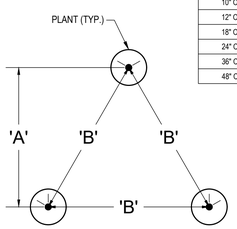
GENERAL NOTES

1. Plants shall be healthy, vigorous material, free of pests and diseases and are subject to approval/rejection of the Landscape Architect prior to, during and after installation.
2. Contractor shall identify all materials at growing location prior to purchase and submit digital photographs, and source list to the Landscape Architect for approval at a minimum of six (6) calendar weeks prior to installation. Plants not approved shall be resourced and resubmitted.
3. Planting beds and individual tree plantings shall be mulched continuously as specified.
4. Prior to construction the contractor shall be responsible for locating underground utilities and execute work in a manner that avoids damage to utilities during the course of work. Contractor shall be responsible or remedy of any damage to utilities, structures, site appurtenances that occur as a result of landscape related work.
5. Contractor is responsible for verifying quantities shown on documents. Field adjustments shall be approved by Landscape Architect prior to installation. Quantities indicated on drawings are for reference. It is the Contractor's responsibility to ensure full coverage of plants at the indicated spacing.
6. Contractor is responsible for maintenance of all plantings including, but not limited to watering, mowing, edging, spraying, mulching, fertilizing, of plantings, stormwater basin seed areas, and turf grass areas for one (1) calendar year from date of certificate of occupancy. Contractor is responsible for warranty of all plant material for a period of one (1) calendar year from date of certificate of occupancy. Warranty replacement planting shall meet or exceed the original specification identified on drawings. Replacement planting shall extend the same warranty as originally installed materials. Plantings and grass areas shall be flourishing and fully thriving at end of warranty period.
7. Plants identified for replacement by Owner, Landscape Architect shall be replaced immediately by the Contractor unless otherwise agreed upon. Plantings (trees, shrubs, groundcover) subject to replacement by warranty shall exhibit characteristics of 30% dead-per individual plant, non-contributing or disease compromised. Grass areas suitable for acceptance shall demonstrate 85% sustained/consistent and continuous, densely established coverage. Contractor shall perform a site review at end of warranty period and provide the Owner with written documentation of the site, including plant health, warranty replacement items, and conditions that may be influencing plant health. Contractor shall remove from plants and site, all staking and guying material at end of warranty period.
8. Contractor shall comply with all local, state and federal requirements, codes and regulations related to the work undertaken.
9. All material including planting operation appurtenances shall be of domestic origin manufacture and sourced within 100 miles of the project site.
10. Contractor is responsible for coordination among trades operating on site. Coordination and if necessary resulting modifications to schedules are responsibility of the Contractor.

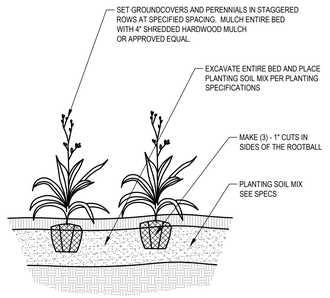
INVASIVE SPECIES REMOVAL NOTES

1. DURING TREE CLEARING, THE CONTRACTOR WILL REMOVE AND ERADICATE ANY NOXIOUS WEEDS OR INVASIVE SPECIES WITHIN TEN (10) FEET OUTSIDE OF THE LIMIT OF DISTURBANCE. THE LIMIT OF DISTURBANCE IS LABELED ON THE LANDSCAPE PLAN.
2. REFER TO THE CONNECTICUT INVASIVE PLANT SPECIES LIST FOR GUIDANCE REGARDING IDENTIFICATION OF ALL INVASIVE SPECIES OF VEGETATION AND NOXIOUS WEEDS. REFER TO CONNECTICUT INVASIVE PLANTS COUNCIL AND CONNECTICUT GENERAL STATUTES §22A-381A THROUGH §22A-381D.
3. INVASIVE SPECIES REMOVAL SHALL OCCUR AT TIME OF TREE CLEARING. SIX (6) MONTHS AFTER INITIAL INVASIVE SPECIES CLEARING THE SITE WILL BE EVALUATED AGAIN FOR ANY NECESSARY INVASIVE CLEARING.
4. ALL INVASIVE SPECIES CLEARING SHALL INCLUDE FULL REMOVAL OF HERBACEOUS AND WOODY VEGETATION, ROOT MATERIAL, AND ANY NEW GROWTH OR SEEDLINGS. ALL REMOVAL SHALL BE CONDUCTED BY MECHANICAL OR CHEMICAL MEANS AS PERMITTED BY THE TOWN OF GRANBY OR STATE AND FEDERAL LAW.
5. ALL INVASIVE SPECIES CLEARING SHOULD BE CONDUCTED USING PROPER PERSONAL PROTECTIVE EQUIPMENT TO PROTECT AGAINST ANY POTENTIAL BODILY HARM FROM NOXIOUS WEED EXPOSURE AS REQUIRED BY STATE AND FEDERAL LAW.

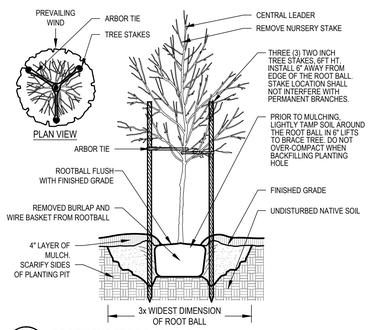
NOTE: GROUNDCOVERS AND PERENNIALS TO BE INSTALLED WITH TRIANGULAR SPACING	
SPACING 'B'	ROW 'A'
8" O.C.	6.9" O.C.
10" O.C.	8.6" O.C.
12" O.C.	10.4" O.C.
18" O.C.	15.6" O.C.
24" O.C.	20.8" O.C.
36" O.C.	30.0" O.C.
48" O.C.	31.5" O.C.



1 GROUNDCOVER SPACING
NOT TO SCALE

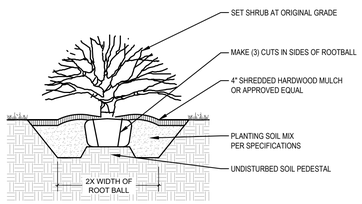


2 GROUNDCOVER PLANTING
NOT TO SCALE

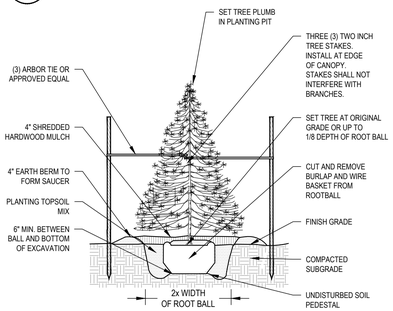


3 DECIDUOUS TREE PLANTING
NOT TO SCALE

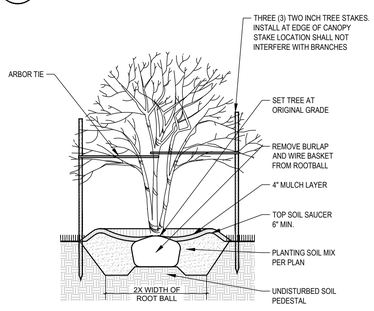
NOTE: SHRUBS INSTALLED IN CONTINUOUS SUCCESSION SHALL BE PLACED IN ONE CONTINUOUS BED



5 SHRUB PLANTING
NOT TO SCALE



4 EVERGREEN TREE PLANTING
NOT TO SCALE



6 MULTI TRUNK TREE PLANTING
NOT TO SCALE

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE AT PLANTING	ROOT
DECIDUOUS TREES					
CA	5	Carpinus caroliniana	American Hornbeam	2" Cal. DBH	B&B
NS	4	Nyssa sylvatica	Sour Gum	2" Cal. DBH	B&B
TB	3	Tilia americana 'Boulevard'	Boulevard American Linden	2" Cal. DBH	B&B
EVERGREEN TREES					
CT	5	Chamaecyparis thyoides	Atlantic White Cypress	6' Ht.	B&B
IA	21	Ilex opaca	American Holly	6' Ht.	B&B
ORNAMENTAL TREES					
AB	3	Amelanchier canadensis 'Autumn Brilliance'	Canadian Serviceberry	2" Cal. DBH	B&B
CC	3	Cercis canadensis	Eastern Redbud	2" Cal. DBH	B&B
MS	3	Magnolia virginiana	Sweetbay Magnolia	2" Cal. DBH	B&B

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE AT PLANTING	CONTAINER
DECIDUOUS SHRUBS					
HVW	7	Hamamelis virginiana	Common Witch Hazel	5' Ht.	CONT.
HQH	15	Hydrangea quercifolia	Oakleaf Hydrangea	24" - 36" ht.	10 gal.
EVERGREEN SHRUBS					
IGH	31	Ilex glabra	Inkberry Holly	24" - 36" ht.	10 gal.
RMC	29	Rhododendron maximum 'Compacta'	Compact Rosebay Rhododendron	24" - 36" ht.	10 gal.

SYMBOL	CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE / TYPE	QTY / RATE
GROUND COVERS						
	E136	28,975 sf	ERNST-136	ERNST SEED THREE-WAY TALL FESCUE MIX	SEED	PER MANUFACTURER
	E180	2,607 sf	ERNST-180	ERNST RAIN GARDEN SEED MIX	SEED	PER MANUFACTURER

ERNST SEEDS

Ernst Conservation Seeds
8884 Mercer Pike
Meadville, PA 16335
(800) 873-3321 Fax (814) 336-5191
www.ernstseed.com

Date: June 24, 2025

Rain Garden Mix - ERNMX-180

	Botanical Name	Common Name	Price/Lb
25.60 %	*Schizachyrium scoparium, Fort Indiantown Gap-PA Ecotype*	Little Bluestem, Fort Indiantown Gap-PA Ecotype	18.06
20.00 %	*Elymus virginicus, Madison-NY Ecotype*	Virginia Wildrye, Madison-NY Ecotype	11.22
9.00 %	*Carex vulpinoidea, PA Ecotype*	Fox Sedge, PA Ecotype	33.80
8.00 %	*Echinacea purpurea*	Purple Coneflower	46.80
7.80 %	*Chasmanthium latifolium, WV Ecotype*	River Oats, WV Ecotype	104.00
6.80 %	*Panicum rigidulum, PA Ecotype*	Redtop Panicgrass, PA Ecotype	78.00
3.00 %	*Coreopsis lanceolata*	Lanceleaf Coreopsis	31.20
3.00 %	*Rudbeckia hirta*	Blackeyed Susan	33.80
2.50 %	*Verbena hastata, PA Ecotype*	Blue Vervain, PA Ecotype	41.60
2.00 %	*Chamaecrista fasciculata, PA Ecotype*	Partridge Pea, PA Ecotype	13.00
2.00 %	*Panicum clandestinum, Tioga*	Deertongue, Tioga	23.87
1.50 %	*Asclepias incarnata, PA Ecotype*	Swamp Milkweed, PA Ecotype	192.40
1.50 %	*Heliopsis helianthoides, PA Ecotype*	Oxeye Sunflower, PA Ecotype	36.40
1.30 %	*Penstemon digitalis, PA Ecotype*	Tall White Beardtongue, PA Ecotype	182.00
1.20 %	*Zizia aurea, PA Ecotype*	Golden Alexanders, PA Ecotype	78.00
0.70 %	*Pycnanthemum tenuifolium*	Narrowleaf Mountainmint	260.00
0.50 %	*Aster novae-angliae*	New England Aster	390.00
0.50 %	*Baptisia australis, Southern WV Ecotype*	Blue False Indigo, Southern WV Ecotype	104.00
0.50 %	*Juncus effusus*	Soft Rush	52.00
0.50 %	*Juncus tenuis, PA Ecotype*	Path Rush, PA Ecotype	52.00
0.50 %	*Senna hebecarpa, VA & WV Ecotype*	Wild Senna, VA & WV Ecotype	31.20
0.50 %	*Veronia noveboracensis, PA Ecotype*	New York Ironweed, PA Ecotype	286.00
0.30 %	*Monarda fistulosa, Fort Indiantown Gap-PA Ecotype*	Wild Bergamot, Fort Indiantown Gap-PA Ecotype	104.00
0.20 %	*Aster ideriflorus*	Calico Aster	364.00
0.20 %	*Solidago nemoralis, PA Ecotype*	Gray Goldenrod, PA Ecotype	312.00
0.10 %	*Aster pilosus, PA Ecotype*	Heath Aster, PA Ecotype	286.00
0.10 %	*Eupatorium perfoliatum, PA Ecotype*	Boneset, PA Ecotype	208.00
0.10 %	*Mimulus ringens, PA Ecotype*	Square Stemmed Monkeyflower, PA Ecotype	260.00
0.10 %	*Solidago juncea, PA Ecotype*	Early Goldenrod, PA Ecotype	364.00

100.00 % **Mix Price/Lb Bulk: $46.71**

Seeding Rate: 20 lb per acre with a cover crop. For sites that drain within 24 hours of a rain event use one of the following cover crops:Oats (1 Jan to 31 Jul; 30 lbs/acre), Japanese Millet (1 May to 31 Aug; 10 lbs/acre), or grain rye (1 Aug to 31 Dec; 30 lbs/acre).

Grasses & Grass-like Species - Herbaceous Perennial; Herbaceous Flowering Species - Herbaceous Perennial; Stormwater Management; Uplands & Meadows

The native perennial forbs and grasses provide food and cover for rain garden biodiversity. Mix formulations are subject to change without notice depending on the availability of existing and new products. While the formula may change, the guiding philosophy and function of the mix will not.

Price quotes guaranteed for 30 days.
All prices are FOB Meadville, PA.
Please check our web site at www.ernstseed.com for current pricing when placing orders.

NO.	DATE	BY
1	07/01/25	KH
	REVISIONS	
	IWWG COMMENTS REVISION	

FOR PERMIT REVIEW

Kimley»Horn
© 2025 KIMLEY-HORN AND ASSOCIATES, INC.
1 NORTH LEXINGTON AVENUE, SUITE 505
WHITE PLAINS, NY 10601
PHONE: (914) 368-9000
WWW.KIMLEY-HORN.COM

AutoZone

STATE OF CONNECTICUT — FRANK J. I. KNAPP — LICENSED LANDSCAPE ARCHITECT — NO. 1116

07/01/2025

KHA PROJECT	112703002			
DATE	05/13/2025			
SCALE:	AS SHOWN	DESIGNED BY:	TS	AMA
		DRAWN BY:		AMA
		CHECKED BY:		TS

LANDSCAPE NOTES AND DETAILS

AUTOZONE GRANBY
8 E GRANBY ROAD
GRANBY, CT 06035
TOWN OF GRANBY — CONNECTICUT

SHEET NUMBER
L-1.1

Granby IWWC Meeeting
July 9, 2025

Comments on Autozone Application

Toxic & Combustible Products Stored by Autozone Stores

- **Batteries:** Lead acid and Lithium Batteries
- **Motor Oil:** Various brands and grades of motor oil.
- **Transmission Fluid:** Fluids for automatic and manual transmissions.
- **Brake Fluid:** Fluids for brake systems.
- **Coolant:** Antifreeze and coolant for cooling systems.
- **Other Fluids:** Power steering fluid, additives, and other fluids.
- **Cleaning & Detailing Supplies:** Car washes, waxes, interior cleaners, and detailing tools.

Autozone Sells Lithium Ion Batteries

Example of lithium ion batteries sold by Autozone

Example of lithium fire from bike and motorcycle batteries

Autozone would increase Granby's exposure to lithium fires in addition to:

- Key Capture Energy
- Broadleaf Solar

Note: Broadleaf has file with ISO New England an interconnection request for 100 megawatts of batteries

Lithium fire control efforts would wash toxic products into the Salmon Brook

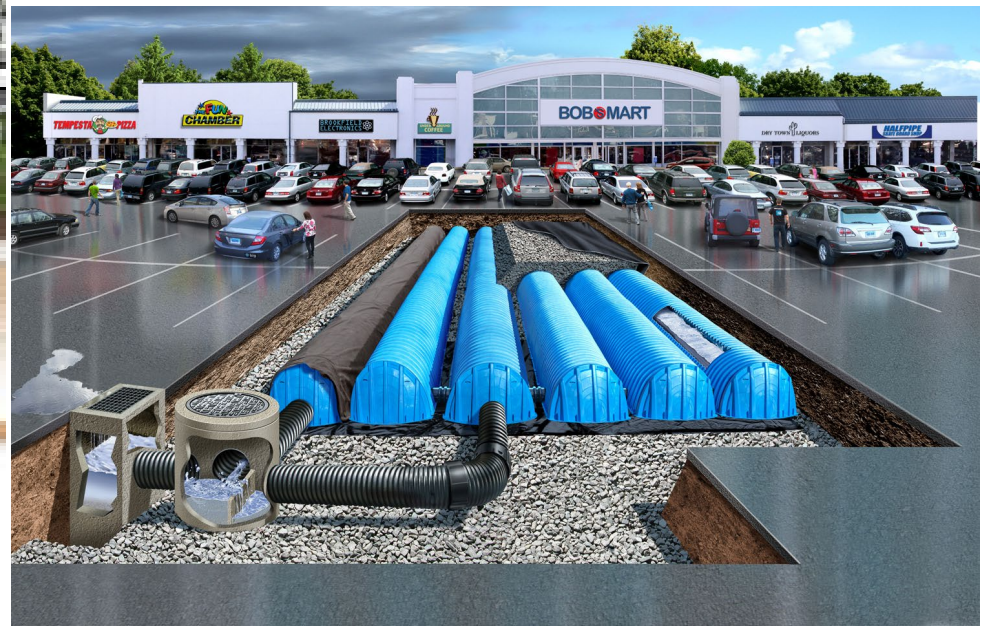
Auto Stores are Subject to Spills From Supplier Bulk Handling & Customers

Autozone previous track record:

SACRAMENTO – California Attorney General Xavier Becerra today announced an $11 million settlement against AutoZone, Inc. (AutoZone) to resolve allegations that the company **violated state laws governing hazardous waste, hazardous materials, and confidential consumer information**.Jun 18, 2019

Storm Water Control Best Management Practices

Best management practice is to employ oil – water separator in conjunction with a water retention and discharge system



Autozone Financial Status

- “By the time we entered business rescue, the need to rebalance our debt had become critical,” says Dion De Graaff, CEO of AutoZone. “Business rescue gave us the legislative space to stabilise and find a buyer who could set us on the right trajectory.” That buyer was **Metair, which acquired the business in December 2024**.May 27, 2025
- Metair is focused on achieving a sustainable capital structure and profitability. The company's future success depends on its ability to manage its debt, optimize its cost base, and capitalize on opportunities in the automotive and energy storage sectors. The company is also anticipating a debt restructuring exercise.

TOWN OF GRANBY

Incorporated 1786
15 North Granby Road
Granby, Connecticut 06035-2102
860-844-5318

July 9, 2025

Richard Marr
66 Claire Hill Road
Burlington, CT 06013

Re: 15 Peck Orchard Road – R. Marr – Permit request to modify an existing permit to construct a brook crossing, driveway and associated improvements within a regulated area, to include test borings on both brook banks as part of a geotechnical review.

Dear Mr. Marr:

Please be advised that on July 9, 2025, the Inland Wetlands and Watercourses Commission (IWWC) approved the subject application in accordance with the following documentation:

1. Brook Crossing Plan; 15 Peck Orchard Road; Prepared by F.A. Hesketh & Associates, Inc.; Prepared for Richard Marr; Dated 2/18/25; Revised 5/13/25; 12 Sheets
2. Brook Crossing Plan and Alternatives Analysis Statement; Prepared by Jackson Environmental, LLC; dated 4/7/25
3. Hydrology Report; Prepared by F.A. Hesketh & Associates, Inc.; dated 2/18/25; Revised 3/28/25
4. Soils and Wetlands/Watercourse Delineation Report; Prepared by Jackson Environmental, LLC; dated 4/12/22
5. Jurisdictional Wetland Delineations Report; Prepared by REMA Ecological Services, LLC; dated 2/17/25
6. Original application dated 2/19/25 and all other corresponding materials
7. Archaeological Reconnaissance Survey; Prepared by Marc Banks; dated 6/27/25
8. Field Visit Report; Prepared by DEEP; dated 6/6/25
9. Geotechnical Boring Plan; Prepared by Richard Marr; dated 6/4/25; revised 6/22/25; 2 Sheets
10. Request for modification dated 6/4/25; revised 6/22/25 and all other corresponding materials

The following are the conditions of this approval.

1. All construction activities shall be coordinated through the Office of Community Development.

2. The Office of Community Development shall be notified:
   a. At least 48 hours prior to the start of any activities and when barrier erosion controls have been installed prior to earth disturbance activities.
   b. With notification of the anticipated date that the bridge footing will be installed.
   c. Prior to final temporary stabilization of the slopes within the IWWR review area; and
   d. Upon completion of construction and site stabilization, the IWWC shall be notified in writing that work is complete, and a final inspection may be completed at that time.

3. The applicant shall reimburse the Town of Granby for all payments made to the Town Wetlands Officer for monitoring the development for compliance with this approval. The applicant will reimburse

the Town at a rate of $100 per hour for the services of the Town Wetlands Officer or other designated expert. The applicant shall deposit with the Town of Granby the sum of $5,000 to be applied to the costs as described herein. Should the costs exceed this amount, the applicant will be billed for the difference. Any funds not used for the project will be remitted to the applicant at the conclusion of the project. As used in this context, the term "Town Wetlands Officer" includes any person or firm so designated by the Director of Community Development for the purposes of monitoring the development activities to assure compliance with this approval and the IWWC Regulations.

4. All work shall be in conformance with the approval and application materials as submitted for this Permit Approval. Any modifications to the approved plans must be reviewed and approved by the Granby Inland Wetlands and Watercourses Commission or their designated Agent.

5. Erosion controls shall be maintained until the site has achieved permanent stabilization. Permanent stabilization is defined as 70% permanent vegetation covering over 90% of the area. A stockpile of erosion controls shall remain on site to prepare controls as necessary. The IWWC shall be notified in writing at least 48 hours in advance of erosion controls being removed.

6. Excavated soil shall not be brought off-property without the notification and approval of the Office of Community Development. The applicant shall supply the destination in writing for any excavated soil removed from the property.

7. Vegetative plantings and invasive species shall be treated according to the Vegetative Stabilization Provisions included on Sheet NT-1 of the permitted plan set referenced above. The procedures are noted below:

    a. The Granby IWWC will require the applicant post a landscape bond to ensure effective stabilization/restoration of disturbed areas. Prior to the release of the bond, the successful restoration shall be determined by the town's wetlands officer during a joint inspection with the Applicant, based on the following parameter:
        i. For establishment of vegetative cover (i.e., New England Conservation Mix): 70% stabilization over 90% of the area after one growing season.
        ii. For woody plantings: 80% survival over two (2) post-installation growing seasons.
        iii. Invasive species control: successful control for a minimum of two (2) years after post-installation growing seasons.

8. Only clean fill, free of invasive species shall be brought on-site. Utilizing on-site fill will reduce, if not eliminate the potential for the introduction and potential colonization of new invasive species into this area of the watershed.

9. The proposed access route will be restored so that all wetland resource areas maintain the pre-access grades, elevations, banks, substrate, and remain stabilized with native, non-invasive vegetation post project completion for 1-full growing season.

10. This permit is valid for a period of 5 years from the date of issuance.

Please provide a Mylar copy of the approved maps to the Office of Community Development for the signature of the Inland Wetlands and Watercourses Commission's Chair at your earliest convenience. Once the approved Mylars are signed by the Commission's Chair, you will need to file it in the office of the Town Clerk.

If you have any questions, please call the Office of Community Development at your earliest convenience.

Sincerely,

John Laudati
Granby IWWC Chairman

CC: F.A. Hesketh & Associates, Inc., Applicant Representative
File

TOWN OF GRANBY
Office of Community Development, Inland Wetlands and Watercourses Commission
Telephone: (860) 844-5318, www.granby-ct.gov

Application for Inland Wetlands & Watercourses Activity

Application For: ☐Permit ☐Extension ☑Modification (Existing Permit/Application #): _____
☐Wetlands Map Amend. ☐Request for Review ☐Other: _____

Property Location and Nearest Intersection: North Granby, Route 189
Size of Parcel: 18.31 Zone: RA-2 Map/Lot: Parcel 3329 Current Use: Vacant

Applicant's Name: Richard Marr
Complete Address: 66 Claire Hill Road, Burlington, CT 06013
Daytime Phone: 860-970-7386 Evening Phone: (same) Fax: (na)
Email: richard-marr1@comcast.net

Owner's Name: (same as Applicant and Owner)
If the owner is a corporation, or other non-individual entity, include the primary contact information
Complete Address: _____
Phone Daytime Phone: _____ Evening Phone: _____ Fax: _____

Applicant's Representative: (na)
Complete Address: _____
Daytime Phone: _____ Evening Phone: _____ Fax: _____

**********PLEASE ATTACH ADDITIONAL SHEET IF NECESSARY**********

Project Name and Brief Description (i.e. residential, agricultural, commercial, number of lots, etc.): The bridge company requires a geotechnical report for both brook banks, so we need to get a 5 ton boring machine to the West bank. A proposal involving crossing the brook was given at the June 11th meeting. This is an alternative proposal to create a log bridge to minimize the impact on wetlands.

Is any portion of the property located within 500 feet of an adjoining municipality? Yes, East Hartland on West border
Wetlands Located on Property (in square feet (sq. ft.)): 42,778 Wetlands to be impacted (sq. ft.): ~~2102 sq ft~~ 2222 sq ft
Watercourses Located on Property? yes Name or Type of Watercourse: Fox Brook
Are Proposed Activities Located within the 100-Year Floodplain? yes Floodway? yes
Are there slopes with grades in excess of 15% located on the property? yes
Do Proposed Activities Require Review by the PZC? no

*********SEE APPLICATION CHECKLIST ON BACK for MINIMUM APPLICATION REQUIREMENTS**********

The applicant understands that this application is to be considered complete only when all information and documents required by the Commission have been submitted. The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief. Permission is granted to the Town of Granby, Inland Wetlands & Watercourses Commission, and its agent (s) to inspect the subject land, at reasonable times, during the pendency of an application and for the life of the permit.

☞ Applicant's Signature: _____ Date: June 19, 2025
Owner's Signature: _____ Date: _____

FOR OFFICE USE

Application #:	*Date Submitted:*
Fee amt./Check or Cash:	*Date of Receipt:*
Agent Ruling:	*Date Approved/Denied:*

See Reverse Side for Conditions of Approval or Reason for Denial

Granby Inland Wetlands and Watercourses Commission Application Checklist

N/A	Appl.	Documents Required
☐	☑	Applications and revised materials must be submitted to the Office of Community Development no later than 5 pm eight (8) days prior to the IWWC meeting to be fully reviewed by the IWWC, otherwise applications may only be received.
☐	☑	An original of the completed application form and site plan and two (2) full size copies of the set of site plans and any reports.
☐	☑	Seven (7) 11X17 (or full size) sets copies of site plans and complete application, including one (1) complete digital copy of submission.
☐	☑	Application Fee (see following page for calculation)
☑	☐	Pre and post development stormwater drainage calculations, with drainage area map, except for single-family homes, etc.
☑	☐	Report on soil types and characteristics from Professional Soil Scientist who delineated wetlands. Report shall include a minimum of one field soil profile for each wetland soil type within project area. Profile shall be presented in data sheet format.
☑	☐	The applicant must certify whether any portion of the property is within 500 feet of an adjoining municipality, whether streets from an adjoining municipality will be used for entering or exiting the site, whether sewer or water drainage will flow through or impact an adjoining municipality or whether water run-off will impact streets or adjoining municipal or private property within an adjoining municipality. If the project falls within any of the above mentioned definitions, then a letter must be sent by certified mail to the adjoining municipalities Inland Wetlands Agency along with a copy of the application and site plan being submitted to this Commission. Evidence of submission shall be submitted to the Granby IWWC.
☑	☐	For proposed wetland impacts, a wetland assessment report from a soil scientist or other qualified individual. Mitigation activities shall also be described.

N/A	Appl.	Site Plan Requirements
☑	☐	Stamped by a Professional Engineer registered in the State of Connecticut.
☐	☑	Property boundaries, north arrow, name of project, date and type of drawing, subsequent dates of revision with description, names and addresses of engineers and surveyors (when appropriate), location map, property owners(s) and adjacent property owners.
☐	☑	Existing and proposed topography, structures, utilities, roadways and buildings. Plan/profile sheets shall be included for roads and all off road pipelines.
☑	☐	Soil types as mapped by the National Resource Conservation Service.
☑	☐	Wetlands or watercourses located on adjacent properties when proposed activities may be located in the Upland Review Area.
☑	☐	Alternatives considered and rejected to be either shown on a site plan or explained in narrative form.
☑	☐	Soil and Erosion Control Measures including Narrative, per 2002 CT E&S Control Guidelines at a minimum.
☐	☑	Wetland boundaries delineated by a Professional Soil Scientist whose signatures is required on site plan.
☐	☑	Limits of Upland Review Areas.
☑	☐	Cuts and fill volumes indicating source and type of fill, destination of removed fill, except for single-family homes or similar.
☑	☐	Limits of woody vegetation clearing.
☑	☐	Well locations and setbacks from septic systems and drainage swales.
☑	☐	Septic system locations including reserve areas, existing and proposed grading, spot grades and setbacks from wetland areas.
☑	☐	Stormwater drainage systems.
☑	☐	All existing and proposed pipe sizes, lengths and inverts.
☑	☐	Test pit and soil profile locations.
☐	☑	Acreages of wetlands/watercourses on the site and the acreages presented separately of wetlands, watercourses or upland review areas to be altered.
☑	☐	Boundaries of 100-year floodplain or floodways as determined by FEMA.
☑	☐	Erosion and sediment control details along with a sequence plan.
☑	☐	Test pit logs
☑	☐	Details of all proposed site improvements (i.e. drainage structures, pipes, footing drains, curtain drains, dewatering, cross section of septic system or sewer connection, cross section of detention, retention, or sediment basins, etc.)
☐	☑	Construction sequence specifications.

N/A	Appl.	Public Hearing (If Required)
☐	☑	The Town of Granby Office of Community Development is responsible for publishing the legal notice.

THE GRANBY IWWC MAY REQUEST ADDITIONAL INFORMATION DURING THE PERMIT PROCESS AS NECESSARY.

SECTION 19
FEES

19.5 Fee Schedule. Application fees shall be based on the following schedule.

ACTIVITY	FEE/ AREA / #	APPLIED
State of Connecticut Land Use Fee	$60.00	$ 60.00 +
Permitted Uses As-of-Right & Non-Regulated Uses	None	None
CATEGORY 1 - RESIDENTIAL/SINGLE-FAMILY RESIDENCES (INCLUDING 2-LOT SUBDIVISIONS)		
I. Base Fee		
a. General Application	$150.00 + II	$ 150.00 +
b. Accessory to Existing Primary Structure	$80.00 + II	$ +
c. Modification to Existing Approval	$30.00 + II	$ 30.00 +
II. Activity Fee		
a. $100.00 per Watercourse Crossing	(#)	$ 100.00 +
b. $0.02 per sq. ft. of Wetland Disturbance	~~2102~~ SF	$ ~~42.05~~ +
Within Upland Review Area…	2222 SF	44.43
c. $100.00 per Structure (greater than 200 sq. ft.)	(#)	$ +
d. $0.01 per sq. ft. of Impervious Surface	SF	$ +
e. $250.00 per Stormwater Management Basin	(#)	$ +
f. $100.00 per Storm Drain Outfall	(#)	$ +
g. $0.01 per sq. ft. of Steep Slope Disturbance (Slopes Greater than 2:1 – Define Area on Plan)	SF	$ +
h. $0.005 per sq. ft. of Woody Vegetation Clear-Cut	SF	$ +
➢ **TOTAL FEE – CATEGORY 1**		**$** ~~$322.05~~ 324.43
CATEGORY 2 - SUBDIVISIONS (GREATER THAN 2-LOTS)/CONDOMINIUMS, MULTI-FAMILY UNITS/COMMERCIAL		
I. Base Fee		
a. General Application Per Primary Structure (up to 5)	$300.00/(+II)	$ +
i. Fee Per Each Primary Structure Beyond 5	$20.00 (+II)	$ +
b. Accessory to Existing Primary Structure	$150.00 (+II)	$ +
c. Modification to Existing Approval	$60.00 (+II)	$ +
II. Activity Fee*		
a. $200.00 per Watercourse Crossing	(#)	$ +
b. $0.04 per sq. ft. of Wetland Disturbance	SF	$ +
Within Upland Review Area…		
c. $100.00 per Structure	(#)	$ +
d. $0.02 per sq. ft. of Impervious Surface	SF	$ +
e. $250.00 per Stormwater Management Basin	(#)	$ +
f. $100.00 per Storm Drain Outfall	(#)	$ +
g. $0.02 per sq. ft. of Steep Slope Disturbance (Slopes Greater than 2:1 – Defined Area on Plan)	SF	$ +
h. $0.01 per sq. ft. of Woody Vegetation Clear-Cut	SF	$ +
➢ **TOTAL FEE – CATEGORY 2**		**$**

ACTIVITY	FEE/ AREA / #	APPLIED
CATEGORY 3 – ALL OTHER APPLICATIONS		
I. Base Fee		
a. General Application	$200.00 (+II)	$ _____ +
b. Modification to Existing Approval	$60.00 (+II)	$ _____ +
II. Activity Fee*		
a. $200.00 per Watercourse Crossing	_____(#)	$ _____ +
b. $0.04 per sq. ft. of Wetland Disturbance	_____SF	$ _____ +
Within Upland Review Area…		
c. $100.00 per Structure	_____(#)	$ _____ +
d. $0.02 per sq. ft. of Impervious Surface	_____SF	$ _____ +
e. $250.00 per Stormwater Management Basin	_____(#)	$ _____ +
f. $100.00 per Storm Drain Outfall	_____(#)	$ _____ +
g. $0.02 per sq. ft. of Steep Slope Disturbance (Slopes Greater than 2:1 – Defined Area on Plan)	_____SF	$ _____ +
h. $0.01 per sq. ft. of Woody Vegetation Clear-Cut	_____SF	$ _____ +
➢ **TOTAL FEE – CATEGORY 3**		**$** _____
III. Significant Activity Fee	$300.00	$ _____ +
IV. Permit Extension Fee		
a. Residential Uses	$40.00	$ _____ +
b. Commercial/Industrial/Other Uses	$80.00	$ _____ +
V. Map and Regulation Amendments	$250.00	$ _____ +
➢ **APPLICATION FEE SUBTOTAL**		324.43 **$** ~~$322.05~~ **+**
VI. Post Activity Application Fee	20% of Fee Subtotal	$ _____ +
➢ **TOTAL APPLICATION FEE:**		324.43 **$** ~~$322.~~05

Boards, Commissions, Agencies and Departments of the Town of Granby are exempt from all fee requirements.

VII. Complex Application Fee – Section 22a-42a of the Connecticut General Statutes states that an applicant shall pay a fee equal to the Town's expenditures in hiring outside consultants and experts to analyze, review and report on issues requiring such experts. Such fee may include, but not be limited to, the cost of retaining experts to analyze, review, and report on issues requiring such experts. The Commission or the duly authorized agent shall estimate the complex application fee which shall be paid pursuant to section 19.1 of these regulations within 10 days of the applicant's receipt or notice of such estimate. Any portion of the complex application fee in excess of the actual cost shall be refunded to the applicant no later than 30 days after publication of the Commission's decision.

Letter Report

Archaeological Reconnaissance Survey: Proposed Brook Crossing and Access Drive 15 Peck Orchard Road, North Granby, CT

Prepared for:

Richard Marr
66 Claire Hill Road
Burlington, Connecticut

Submitted by:

Marc L. Banks
Marc L. Banks, Ph.D., LLC
11 Lincoln Lane
Weatogue, CT 06089
860-658-7482
860-874-4021 cell

June 27, 2025

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LIST OF FIGURES

LIST OF APPENDICES

ACKNOWLEDGEMENTS

I am very grateful to Richard Marr, his daughter Heather Marr and grandson Owen Hunter-Marr for assisting with the survey set up and during the survey testing. Beyond this, Richard provided site information, project plans and environmental reports. I also appreciate all the help I received from SHPO staff archaeologist and reviewer Cory Atkinson during the reconnaissance survey. Last but not least, I would like to thank my field crew, Elizabeth Reed and Charles Capute, for their meticulous work during the survey.

PROJECT DESCRIPTION

Richard Marr ("RM"), 66 Claire Hill Road, Burlington, Connecticut, contracted Marc L. Banks, Ph.D., LLC ("MLB") to conduct an archaeological reconnaissance survey for a proposed brook crossing and access drive on his property at 15 Peck Orchard Road in North Granby, Connecticut (Figures 1-4). The principal of this firm, Dr. Marc L. Banks, is an archaeologist on the list of qualified consultants maintained by the Connecticut State Historic Preservation Office ("SHPO"). The wooded property encompasses approximately 18.31 acres and is located on the south side of Peck Orchard Road approximately 1,050 feet from its intersection of Granville Road (RT 189). The proposed project requires a permit from both the United States Army Corps of Engineers and the Connecticut Department of Energy and Environmental Protection ("DEEP"); therefore, it is subject to review by SHPO pursuant to Section 106 of the National Historic Preservation Act. SHPO has requested a professional archaeological reconnaissance survey based on environmental characteristics often associated archaeological deposits within the project area that elevate the potential for significant archaeological resources. The Area of Potential Effect ("APE"), approximately 2.5 acres, was the focus of this survey. The archaeological reconnaissance survey was conducted as prescribed in the SHPO's manual *Environmental Review Primer for Connecticut's Archaeological Resources* (Poirier 1987).

DATA PRESENTATION

The Peck Orchard Road project area lies within the Southwick Quadrangle of the USGS Topographic Map (Figure 3) in the region known as the Western Uplands. In addition to Fox Brook over which the proposed bridge would be built, the Eastern Branch of Salmon Brook and associated wetlands are approximately 850 feet east of the project area.

The NRCS Web Survey map (Figure 5) shows Merrimac Fine Sandy Loam (34B) with 3-8% slope and Gloucester Gravelly Sandy Loam, extremely stony (59D) with slopes of 15-35% in the vicinity of the proposed bridge and access drive (USDA/NRCS 2019). A letter from Jackson Environmental, LLC (4/12/22) to Richard Marr regarding the Soils and Wetlands / Watercourse Delineation Report for the 15 Peck Orchard Road noted that

“Piles of fieldstone composed of cobbles and boulders along the brook channel provide evidence that the terrace adjacent to the eastern side of Fox Brook, between the brook and Peck Orchard Road, was historically cultivated. The stone was observed during the archaeological survey. An examination of the 1934 Fairchild Aerial Survey photo (Figure 6) depicts cleared land across this portion of the project area. The Merrimac soils are classified as prime farmland and additional statewide important farmland soils (DEP 2003). Historically cleared areas with Merrimac soils have been used for tobacco, potatoes, silage and other cultivated crops, as well as hay and pasture. The steeper slopes with Gloucester soils are subject to rapid runoff and erosion along unprotected slopes. These areas are primarily used for pasture or left idle (Shearin 1962; USDA/NRCS 2006-2013). The underlying bedrock within the project area consists of Hornblende gneiss member of the Collinsville Formation (OCG): dark, fine to medium grained amphibolite and hornblende gneiss (Rodgers 1985).

RESEARCH DESIGN

The reconnaissance survey was based on a review of the USGS Topographic Map (Southwick Quadrangle), a discussion about the project with SHPO staff archaeologist Cory Atkinson on April 11, 2025, an examination the Brook Crossing Plan (Figure 4) prepared for Richard Marr, 15 Peck Orchard Road, Granby, Connecticut GR-1 dated 2-18-2025 (rev. 3-7-2025) by F.A. Hesketh & Associates, Inc., a meeting with RM at the project area on April 15, 2025 and many archaeological surveys conducted across Connecticut. The DECD/ Connecticut State Historic Preservation Office’s ConnCRIS web site (https://ctmaps-hub.maps.arcgis.com) showed no recorded archaeological sites, historic districts or buildings in the vicinity of the project area.

Archaeological Assessment (Phase 1A)

The archaeological assessment involved, but not limited to the following: a review of the historic and prehistoric site files maintained by SHPO, photographs, maps and aerial survey photos, Google Earth images, pertinent reports, publications and Hartford County soil maps.

The assessment also included a walkover and surficial inspection of the Area of Potential Effect ("APE") to help identify archaeologically sensitive areas and areas that precluded testing due to severe ground disturbances, steep slopes and obstructions (i.e., trees, boulders). The assessment survey was conducted by Dr. Marc L. Banks during the April 15th meeting at the site with RM. No artifacts, cultural features other than the above mentioned cobbles and boulders attributed to field clearing or extant or remnants of buildings were encountered during the walkover. The locations for the archaeological reconnaissance test pits were staked following the walkover and are shown in Figure 7.

Archaeological Reconnaissance Survey (Phase 1B)

Archaeological testing involved test pits dug along the north and south banks of Fox Brook near the proposed bridge crossing and along portions of the access drive that would be subject to ground disturbance associated with construction as discussed with Cory Atkinson prior to the survey. On May 20, 2025 a total of eleven (11) test pits were dug at intervals of 10- to15-meters (33- to 50-feet) across undisturbed and unobstructed locations within the APE (Figure 7).

Subsurface testing consisted of 50-centimeters ("cm")^2 (20-inches^2) shovel-dug test pits dug in 10-cm (4-inches) arbitrary levels following the natural soil stratigraphy. The matrix of all test pits was screened through one-quarter inch mesh hardware cloth to recover any cultural materials that might be present. Soil stratigraphy and descriptions were recorded for each test unit. The test units were terminated upon reaching glacial sediments, rock obstructions, rocks and other impediments, the water table, or after a minimum of twenty-centimeters/ eight-inches of sterile subsoil. All test pits were filled in immediately upon completion. The test pit descriptions and profiles, site photos and SHPO's review letter are included at the end of this report.

SUMMARY OF SURVEY RESULTS

A total of eleven (11) test pits (PO-1 through PO11) were dug during the reconnaissance survey conducted on May 20, 2025. This total includes five (5) test pits (PO-1 through PO5) dug on the north side of the water crossing and along the proposed access drive to Peck Orchard Road and six (6) test pits (PO-6 through PO-11) dug on the south side of

the crossing as shown on Figure 7. The C-horizon was reached in six tests. Refusal due to rock prevented further digging in four tests. Gravel and/or cobbles were encountered in a number of test pits. The water table was observed at or just below the interface of the B and C soil horizons in two test pits. Buried A and B soil horizons, apparently due slope wash, were observed in the two southern most test pits PO-7 and PO-8 which were at the bottom of a steep slope. The buried A-horizon Test Pit PO-8 was buried under 77-cm of fine to medium sand and silt mottled with medium to coarse sand. The two test pits were dug to 80-cm (refusal, rock at this depth) and 112-cm respectively.

The only materials recovered during the survey were recover from the A-horizon included a balloon fragment in Test Pit PO-2 and modern bottle glass with charcoal fragments in Test Pit PO-10. No cultural features were encountered during testing.

RECOMMENDATIONS

The archaeological reconnaissance testing conducted by MLB across the 15 Peck Orchard Road APE recovered only a small amount of modern trash. No Native American artifacts or cultural features were encountered during the assessment or reconnaissance survey.

Based on the survey results, it appears unlikely that further archaeological testing will identify intact archaeological components that will provide new information on pre-contact or historic Native American settlement or subsistence. No archaeological resources were identified that meet the criteria for eligibility to the National Register of Historic Places. The proposed brook crossing and access drive at the 15 Peck Orchard Road property in North Granby, as presently planned, should not impact any significant archaeological resources and no further archaeological work appears warranted.

REFERENCES

Bell, Michael
1997 *The Face of Connecticut, People, Geology, and the Land*, Fourth Printing, Original printing 1985, Bulletin 110. State Geological and Natural History Survey of Connecticut, Department of Environmental Protection, Hartford, CT.

Connecticut Department of Environmental Protection
2003 GIS Data for Connecticut, Bulletin 37, 75 Elm Street, Hartford.

DECD, CT Historic Preservation Office
ConnCRIS, https://ctmaps-hub.maps.arcgis.com.

Connecticut State Library
1934 *Fairchild Aerial Survey*, State Archives Group Records 089:11a, Records of the Department of Transportation, Dates of Photography April 1934, https://libguides.ctstatelibrary.org/hg/aerialphotos/1934, Hartford, Connecticut.

DuFore Surveying, LLC
2023 Property Survey- Lot Line Revisions, #15 & #25 Peck Orchard Road, Granby, Connecticut, Prepared for Richard Marr, 4/18/2023, Job No. 2214, 575 North Main Street, Bristol, CT.

F.A. Hesketh & Associates, Inc.
2025 Brook Crossing Plan prepared for Richard Marr, 15 Peck Orchard Road, Granby, Connecticut GR-1 dated 2-18-2025 (rev. 3-7-2025) by F.A. Hesketh & Associates, Inc., Creamery Brook, East Granby, CT.

Google Earth
2024 Image of 15 Orchard Road, North Granby, Connecticut and vicinity, image date 9/15/2024.
2016 Image of 15 Orchard Road, North Granby, Connecticut and vicinity, image date 4/20/2016.

Jackson, William A.
2022 Letter to Richard Marr 4/12/22), Soils and Wetlands / Watercourse Delineation Report for the 15 Peck Orchard Road, Jackson Environmental, LLC, Kensington, CT

Poirier, David A.
1987 *Environmental Review Primer for Connecticut's Archaeological Resources*. Connecticut Historical Commission/State Historic Preservation Office, Hartford, Connecticut.

Rodgers, John
1985 *Bedrock Geological Map of Connecticut. Connecticut Geological and Natural History Survey, Department of Environmental Protection.*

Shearin, Arthur E.
1962 Soil survey, Hartford County, Connecticut. U.S. Soil Conservation Service, U.S. Government Printing Office, Washington, D.C.

SHPO
2025 Review Letter dated April 10, 2025 regarding the proposed water crossing and access drive at 15 Peck Orchard Road, Granby from SHPO to Richard Marr.

Trimble
1997 USGS Topographic Map, Southwick Quadrangle, Connecticut-Hartford County. Trimble, Terrain Navigator Pro, Billings, MT.

United States Department of Agriculture Natural Resources Conservation Service
2024 Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm, Peck Orchard Road, N. Granby, CT, Survey Area Date 9/30/24, Area Details photographed 9/27/2016- 10/21/2020.

United States Department of Agriculture Natural Resources Conservation Service
2006-2013 Official Soil Series Description Name, https//soilseries.s.c.egov.usda.gov/osdname.aspx.

Figure 1. Google Earth Image of project area and vicinity (9/15/24).

Figure 2. Google Earth Image showing 15 Peck Orchard Road APE and vicinity (4/20/2016).

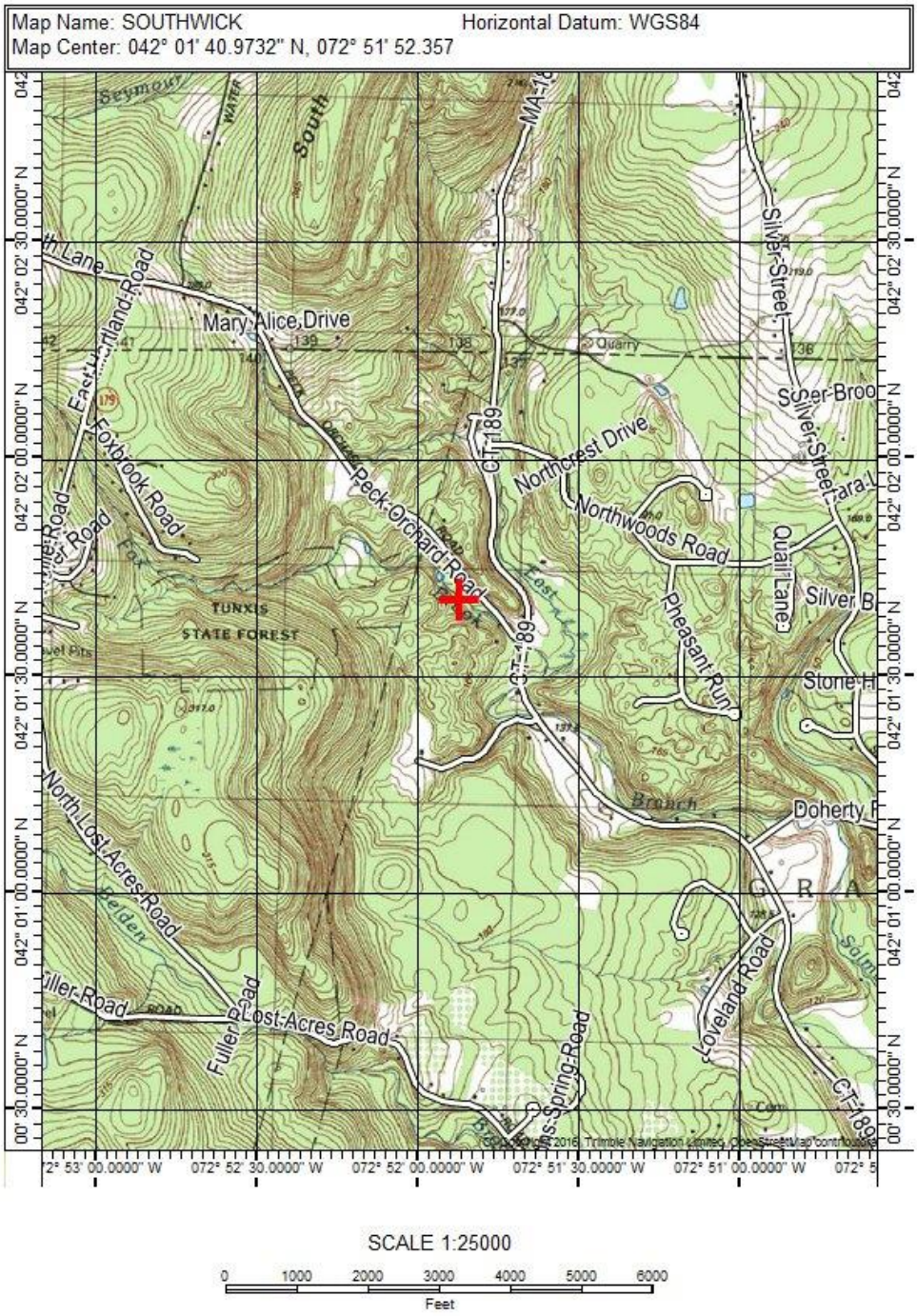


Figure 3. Detail from Southwick Quadrangle of the USGS topographic map showing the project area (+) and vicinity (Trimble 1997).

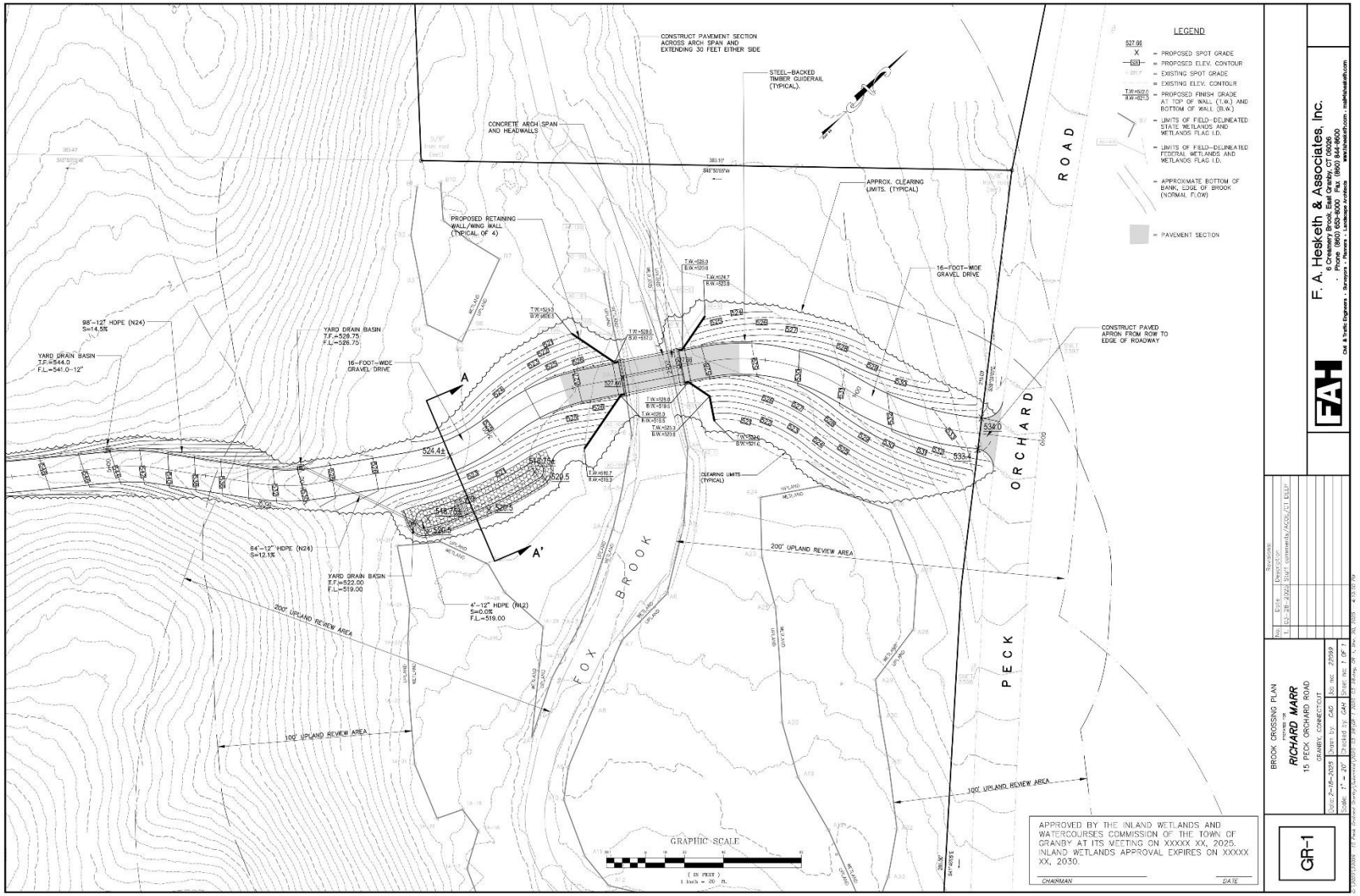


Figure 4. F.A. Hesketh Brook Crossing Plan GR-1, 15 Peck Orchard Road, North Granby.

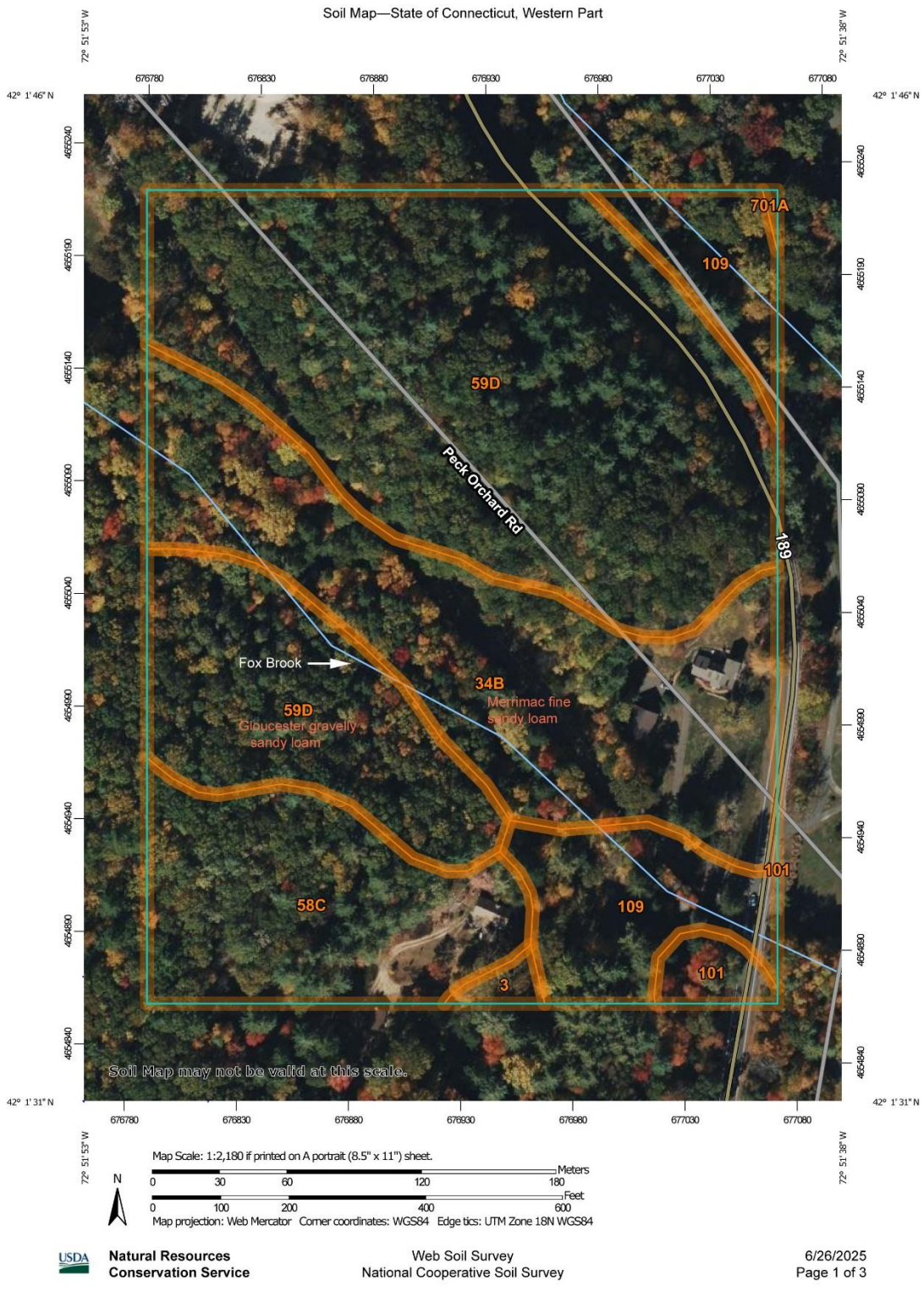
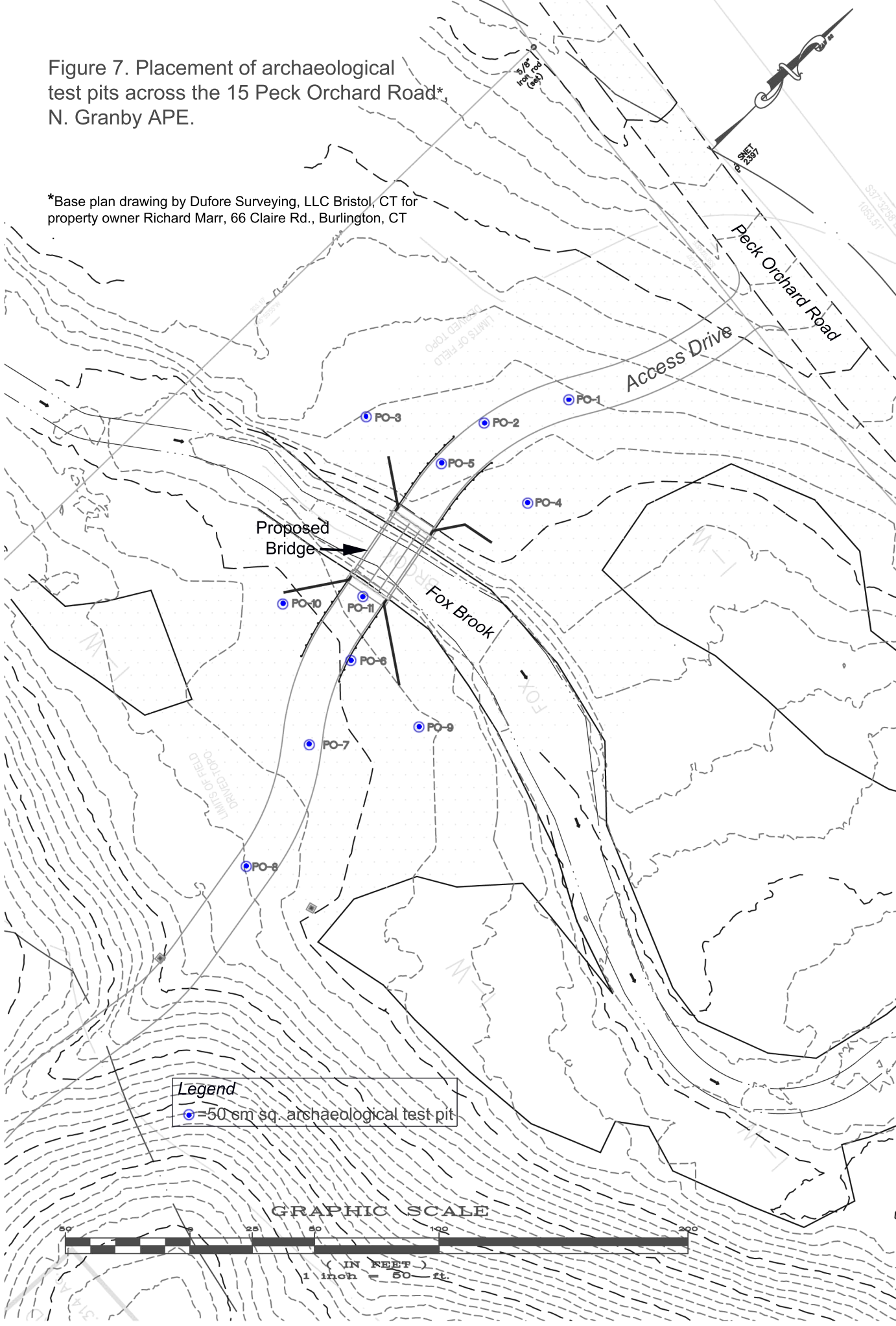


Figure 5. NRCS Soil Survey Map 15 Peck Orchard Road and vicinity.

Figure 6. Detail from the 1934 Fairchild Aerial Survey Photo showing the project area and vicinity.

Figure 7. Placement of archaeological test pits across the 15 Peck Orchard Road*, N. Granby APE.

*Base plan drawing by Dufore Surveying, LLC Bristol, CT for property owner Richard Marr, 66 Claire Rd., Burlington, CT



Archaeological Test Pit Data 15 Orchard Road, North Granby

Test Pit #	Description (final depth in bold)	Comments, Materials Recovered
PO1	**Ao 0-9 cmbs**	**NCM, large cobble at approx. 30 cmbs**
	Ap 9-30 cmbs Bn SiL	
	B 30-62 cmbs YBn SdL	
	C 62 cmbs LtBn S, terminated at 63 cmbs water table	
PO2	**Ao 0-6 cmbs**	**NCM, Soil was damp throughout,**
	A 6-23 cmbs 10YR4/3 Bn SiFSd	**balloon fragment, 0-10 cmbs**
	B 23-37 cmbs 10YR5/6 YBn SiMSd	
	C 37-44 cmbs 2.5Y5/4 LtOlBn MdSdsi	
PO3	**Ao 0-6 cmbs**	**NCM**
	Ap 6-38 cmbs 10YR4/3 Bn SiFSd	**Rock impasse at 65 cmbs**
	B 38-65 cmbs 10YR5/6 YBn SiFSd	
PO4	**Ao 0-5 cmbs**	**NCM, large rocks at ~50 cmbs,**
	AP 5-30 cmbs Bn SiL	**terminated at 73 cmbs - water table**
	B 30-71 cmbs DkYBn SdL	
	C 71-73 cmbs LtBn FSd	
PO5	**Ao 0-9 cmbs**	**NCM, rock impasse at 70 cmbs,**
	A 9-41 cmbs Bn SiL	
	B 41-67 cmbs DkYBn SiL	
	C 67-70 cmbs LtBn LSd	
PO6	**Ao/A 0-19 cmbs VDkBn SdL**	**NCM, large cobble at 40 cmbs, small-medium cobbles**
	B 19-60 cmbs DkYBn SdL	**in B horizon**
	Impasse at 60-rock	
PO7	**Ao/A 0-10 cmbs 10YR2/2 VDkBn SiL**	**NCM, medium cobble in B, large cobble starting at ~65**
	B 10-54 cmbs DkBn 10YR3/4 DkBn SiL	**cmbs, terminated at 80 cmbs- rocks,**
	Buried A 54-60 cmbs 10YR2/2 Blk SiL	**buried horizons due to slope wash**
	Buried B 60-80 cmbs 10YR3/3 DkBn SiL	
PO8	**Ao 0-5 cmbs**	**NCM, soil became increasingly damp with depth,**
	Slope wash 5-77 cnbs 10YR4/3 Bn F-MS & Si, mottled	**pockets of grey SiSd present in Buried B**
	with 2.5YR5/6 OlBn M-CSd	
	Buried A 77-82 cmbs 10YR2/2 VDkBn SiL	
	Buried B 82-112 cmbs 10YR4/6 DkYBn SiFSd	
PO9	**Ao 0-9 cmbs**	**NCM, numerous cobbles in the B and C soil**
	A 9-24 cmbs 10YR3/6 DkYBn LFSd	
	B 24-59 cmbs 10YR4/6 DkYBn LF-MSd w/gravel & cobbles	
	C 59-72 cmbs 10YR4/6 DkYBn M-CSd with patches of	
	oxidized soil, gravel and cobbles	
PO10	**Ao/A 0-19 cmbs VDkBn SdL**	**Glass and charcoal in A, cobble starting at ~50 cmb**
	B 19-64 cmbs DkYBn SdL	
	64 cmbs impasse-rocks	
PO11	**Ao o-5 cmbs**	**NCM, ~2 meters from bank of Fox Brook**
	A 5-48 cmbs 10YR3/3 DkBn LMSd	
	B 24-59 cmbs 10YR4/6 DkYBn LF-MSd w/gravel	
	C 48-58 cmbs 10YR6/6 BnY M-CSd w/gravel	

Abbreviations: Ao=Organic Horizon; A(Ap)=A-Horizon (plowzone); B=B-Horizon; C=C-Horizon; Bn=Brown(ish); Ol=Olive; YBn=Yellowish Brown; Dk=dark; V=Very; F= Fine; M=Medium; ; C=coarse; Lt-Light; L=loam(y); Sd=sand (y); Si=silt(y); cmbs= cm below surface; NCM=no cultural material

15 Peck Orchard Road archaeological reconnaissance survey photos

15 Peck Orchard Road, view to southeast towards intersection with Granville Road, IMG_3902.jpg.

15 Peck Orchard Road, view to northwest, near proposed access drive, IMG_4060.jpg.

View southwest from Peck Orchard Road across the APE towards the brook crossing, IMG_4070.jpg.

Proposed crossing at Fox Brook, view to southeast, IMG_3908.jpg.

Cobbles and boulders from field clearing along bank of Fox Brook near the proposed water crossing, view to southeast, IMG_4067.jpg.

15 Peck Orchard Road archaeological reconnaissance survey photos

Slope beyond Test Pit PO-8, view to southeast, IMG_3906.

Test Pit PO-8, view southeast, IMG_3905.jpg.

View north towards Peck Orchard Road and slope on opposite side of the road, IMG_4058.

Test Pit PO-7, view southwest towards IMG_3907.jpg.

Proposed brook crossing view to southeast, IMG_4071.

State Historic Preservation Office
Department of Economic and Community Development

CONNECTICUT

April 10, 2025

Richard Marr
66 Claire Hill Road
Burlington CT, 06013
(sent via email only to richard-marr1@comcast.net)

Subject: Brook Crossing and Access Drive
15 Peck Orchard Road
North Granby, Connecticut

Dear Richard Marr,

The State Historic Preservation Office (SHPO) has reviewed the potential effects of the referenced project on historic properties. SHPO understands that the proponent proposes to construct a brook crossing and access road at the referenced address. The crossing will provide access to the western portion of the existing undeveloped lot. The proposed project will require a permit from the United States Army Corps of Engineers as well as a permit from the Connecticut Department of Energy and Environmental Protection; therefore, it is subject to review by this office pursuant to Section 106 of the National Historic Preservation Act.

There are no previously reported archaeological sites or properties listed on the National Register of Historic Places recorded within the Area of Potential Effects (APE) for this project. The lack of archaeological sites in the vicinity is likely due to the lack of prior professional survey. However, the project parcel exhibits environmental characteristics associated with significant archeological deposits. As a result, it is SHPO's opinion that well-drained soils in the project area have the potential to contain significant archaeological resources. Therefore, SHPO is requesting that a professional archaeological reconnaissance survey be completed prior to construction to ensure due diligence. Subsurface testing should be completed in all areas of proposed ground disturbance unless sufficient research or fieldwork documents that this level of effort is unwarranted. All work should be in done in compliance with our *Environmental Review Primer for Connecticut's Archaeological Resources* and no construction or other project-related ground disturbance should be initiated until SHPO has had an opportunity to review and comment upon the requested survey. A list of qualified consultants is attached for your convenience.

This office appreciates the opportunity to review and comment upon this project. Do not hesitate to contact Cory Atkinson, Staff Archaeologist and Environmental Reviewer, for additional information at (860) 500-2458 or cory.atkinson@ct.gov.

Sincerely,

Jonathan Kinney
State Historic Preservation Officer

Cc (via email): Hasketh, F.A. Hasketh & Associates

450 Columbus Boulevard, Suite 5
Hartford, CT 06103
860-500-2300

State Historic Preservation Office
Department of Economic and Community Development

CONNECTICUT

July 2, 2025

Richard Marr
66 Claire Hill Road
Burlington CT, 06013
(sent via email only to richard-marr1@comcast.net)

Subject: Phase I Cultural Resources Reconnaissance Survey
15 Peck Orchard Road
North Granby, Connecticut

Dear Richard Marr:

The State Historic Preservation Office (SHPO) received the technical report prepared by Marc L. Banks, Ph.D., LLC (Consultant) titled *Archaeological Reconnaissance Survey: Proposed Brook Crossing and Access Drive, 15 Peck Orchard Road, North Granby, CT* dated June 27, 2025. The completed investigation meets the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*. SHPO understands that the proponent proposes to construct a brook crossing and access road at the referenced address. The crossing will provide access to the western portion of the existing undeveloped lot. The proposed project will require a permit from the United States Army Corps of Engineers as well as a permit from the Connecticut Department of Energy and Environmental Protection; therefore, it is subject to review by this office pursuant to Section 106 of the National Historic Preservation Act.

During survey, 11 shovel tests were excavated at 10 to 15-meter intervals throughout portions of the Area of Potential Effect (APE) for the project determined to retain archaeological sensitivity. The field effort resulted in the identification of small amounts of modern refuse. No precontact cultural material or features were identified. The report recommended no further examination prior to construction. Based on the information submitted to this office, it is the opinion of SHPO that no historic properties will be affected by the proposed stream crossing and no additional archaeological investigation is warranted. Finally, SHPO requests two copies of the completed technical memorandum to append to the prior survey materials for permanent archiving and public accessibility.

This office appreciates the opportunity to review and comment upon this project. For additional information, please contact Cory Atkinson, Staff Archaeologist and Environmental Reviewer, at (860) 500-2458 or cory.atkinson@ct.gov.

Sincerely,

Jonathan Kinney
State Historic Preservation Officer

Cc: Banks, Consultant (via email)

450 Columbus Boulevard, Suite 5
Hartford, CT 06103
860-500-2300

Connecticut
Department of Energy &
Environmental Protection

Field Visit to the Marr property at 15 Peck Orchard Rd in Granby, CT
Post Visit Report

Present Parties: Heather, Richard and Owen; and David Beers (Western District Service Forester) on 6/6/2025 from 9-11

Stewardship Objectives

1. Improve forest health
2. Improve wildlife habitat
3. Improve aesthetics
4. Minimize wildfire risk to the house

PROPERTY OVERVIEW

The property has public road frontage on Peck Orchard Road to the east. It is surrounded by a mix of residential development, forest and farmland. Protected State Forest abuts the property to the west. This is a rural landscape.

This forest is part of a large core forest block having more than 500 acres of contiguous forest. Core forests are large tracts of unbroken forest that provide a much more stable home for plant and animal species, thereby protecting biodiversity. They are forested areas surrounded by more forested areas.

The CT DEEP Natural Diversity Database (NDDB) does **not** have occurrences of threatened or endangered species on or near this property. Maps showing farmland soils are attached to this report. Fox Brook runs through the property. This property is in the Salmon Brook and Farmington River watersheds.

In the attached 1934 air photo, most of the current forest was forested. Areas that were forested in 1934 were likely pastured over 100 years ago – the barbed wire is evidence of pasturing. There was a small field between the brook and the road back in 1934. There is evidence of past timber harvesting many decades ago, as evidenced by old stumps, skid trails, bumper tree scars and an old roadside log landing.

Please see the attached appendix for more information about your forest's history, future, and general recommendations. It also includes an appendix of Latin names for the tree and shrub species.

Old Stump

Tree Cover

Most Common	Common	Less Common
Red Oak	White Pine	Scarlet Oak
Hemlock	Chestnut Oak	White Oak
	Black Birch	Tulip Poplar
	Red Maple	Paper Birch
		Yellow Birch
		Beech
		Hickory
		Sassafras
		Aspen

This forest has a diverse mix of tree species and sizes growing on site conditions that vary with slope position and soil type. The forest is mature, with full canopy closure. There are patches of a hemlock midcanopy. The flat floodplain along Fox Brook has glaciofluvial sand and gravel deposits that differentiate this growing site from the upland glacial till soils. You find more understory hemlock trees and overstory tulip poplar trees along the brook.

Understory
There are a few red maple, hemlock, black birch, American chestnut and beech saplings. There are also some mountain laurel, striped maple, witch hazel, and maple leaf viburnum shrubs, with some lowbush blueberry shrubs in the drier uplands. Some areas have thick patches of hemlock saplings or mountain laurel shrubs in the understory.

Ground Cover
There is a thick, healthy leaf litter. There is a good amount of woody material throughout the forest floor.

Forest Health
Beech leaf disease has infected the beech trees. This microscopic nematode from Asia has recently begun to spread throughout the state, and the long-term prognosis for infected beech trees is still unclear. The emerald ash borer has killed the ash trees within the past ten years. Some hemlock trees appeared to have thin crowns from past outbreaks of the hemlock wooly adelgid.

The canopy structural diversity and the good tree and shrub species diversity make this forest more resilient to future disturbances (weather, climate, pests). The large deer herd in Connecticut makes growing certain preferred browse of deer, like oak and hickory seedlings, difficult.

Besides a few patches of bittersweet vine growth along the sunny roadside, this forest appeared free of exotic invasive vegetation. Please see the appendix for more information about exotic invasives and their control.

Wildlife Habitat
The many mature oak and hickory trees in your forest are an excellent wildlife habitat asset, especially the acorns and nuts they produce. Your forest provides adequate food, water, shelter, cover, and space for much of the wildlife in the area. Please see the appendix for more information about wildlife habitat.

Carbon and Climate Resilience
This mature forest stores a large amount of carbon while sequestering more. Any forest products you produce will help mitigate climate change. Some recommendations are below to make forests more resilient and adaptive to climate change. More information about forest carbon and the forest's ecological services is in the appendix.

Forest Vegetation - Potential Recommendations

Create wildlife brush piles with any excess woody debris. Wildlife brush pile specifications are attached to this report.

Please see the attached information about minimizing wildfire risk to your house.

CONCLUSION

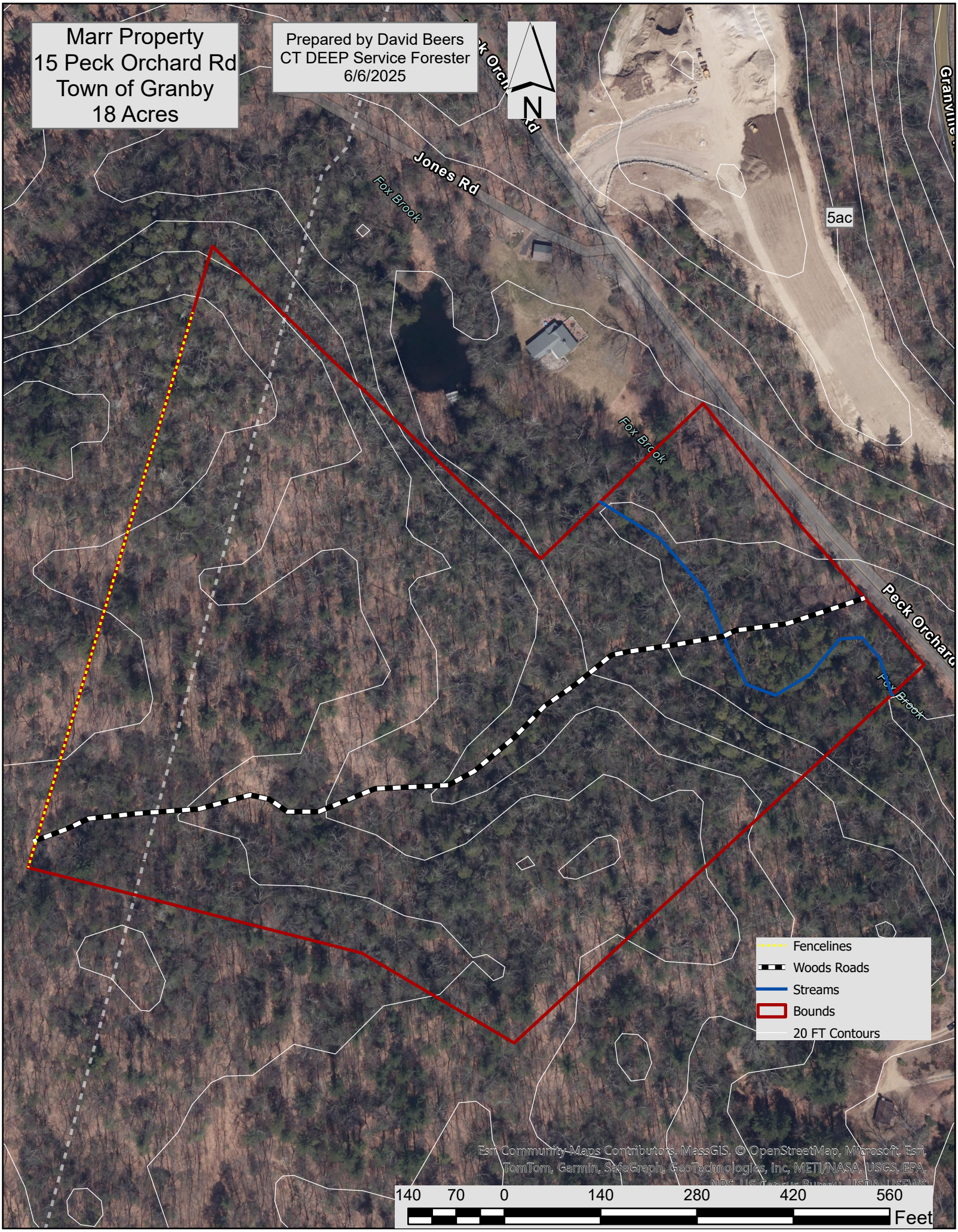
Here are some possibilities for your forest:

- Contact NRCS and a private forester about doing a forest stewardship plan*
- Update your PA490 Open Space classification status with the town to maximize savings on property taxes
- Properly locate and mark your property boundaries (see appendix)
    - An annual property inspection that includes property boundaries
- Build wildlife brush piles with woody debris (see attached specs)
- Improve wildfire safety: NFPA - Preparing homes for wildfire
    - Remove more flammable evergreens near structures, especially hemlock (see attached specs)
    - Have your local fire marshal inspect your property to ensure access to firefighting equipment.
- Enjoy your forest!

*Please consider hiring a forester to help you implement any of the recommendations in this report (see appendix). Funding for projects on your land trust property might be available. Cost-share monies might be collected through the Natural Resource Conservation Service (NRCS). Please get in touch with Todd Bobowick at **475-355-3864**. Please feel free to share this report.

It is pertinent to note that this is not a stewardship plan or intended as a substitute for one. It is a recap report based on a brief tour of the property without collecting any data, as is needed for proper planning.

Left to right: Richard, Owen, Heather


Marr Property
15 Peck Orchard Rd
Town of Granby
18 Acres
Prepared by David Beers
CT DEEP Service Forester
6/6/2025
N
Jones Rd
Fox Brook
5ac
Peck Orchard
Fencelines
Woods Roads
Streams
Bounds
20 FT Contours
Esri Community Maps Contributors, MassGIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
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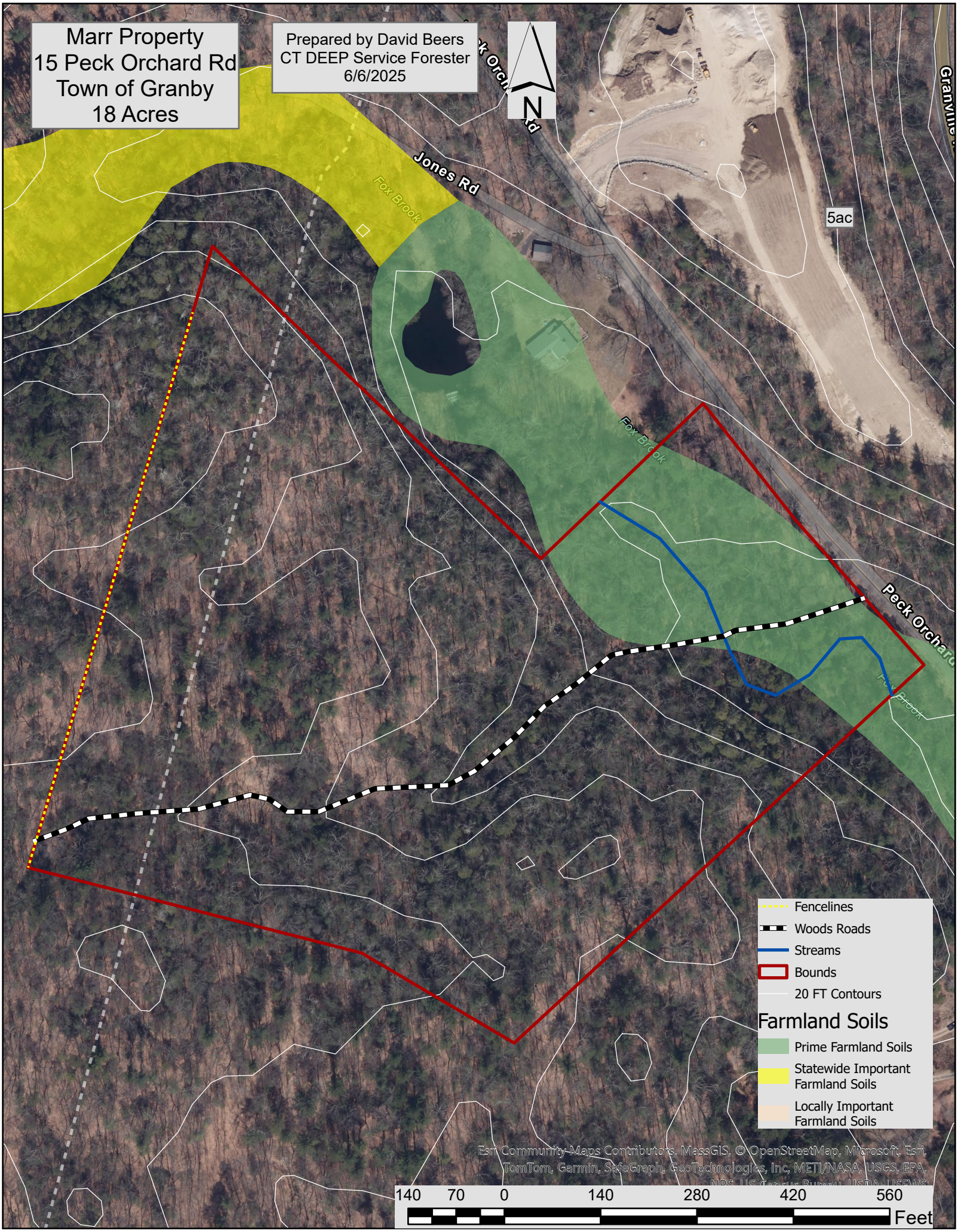
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Farmland Soils
Prime Farmland Soils
Statewide Important Farmland Soils
Locally Important Farmland Soils
Esri Community Maps Contributors, MassGIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
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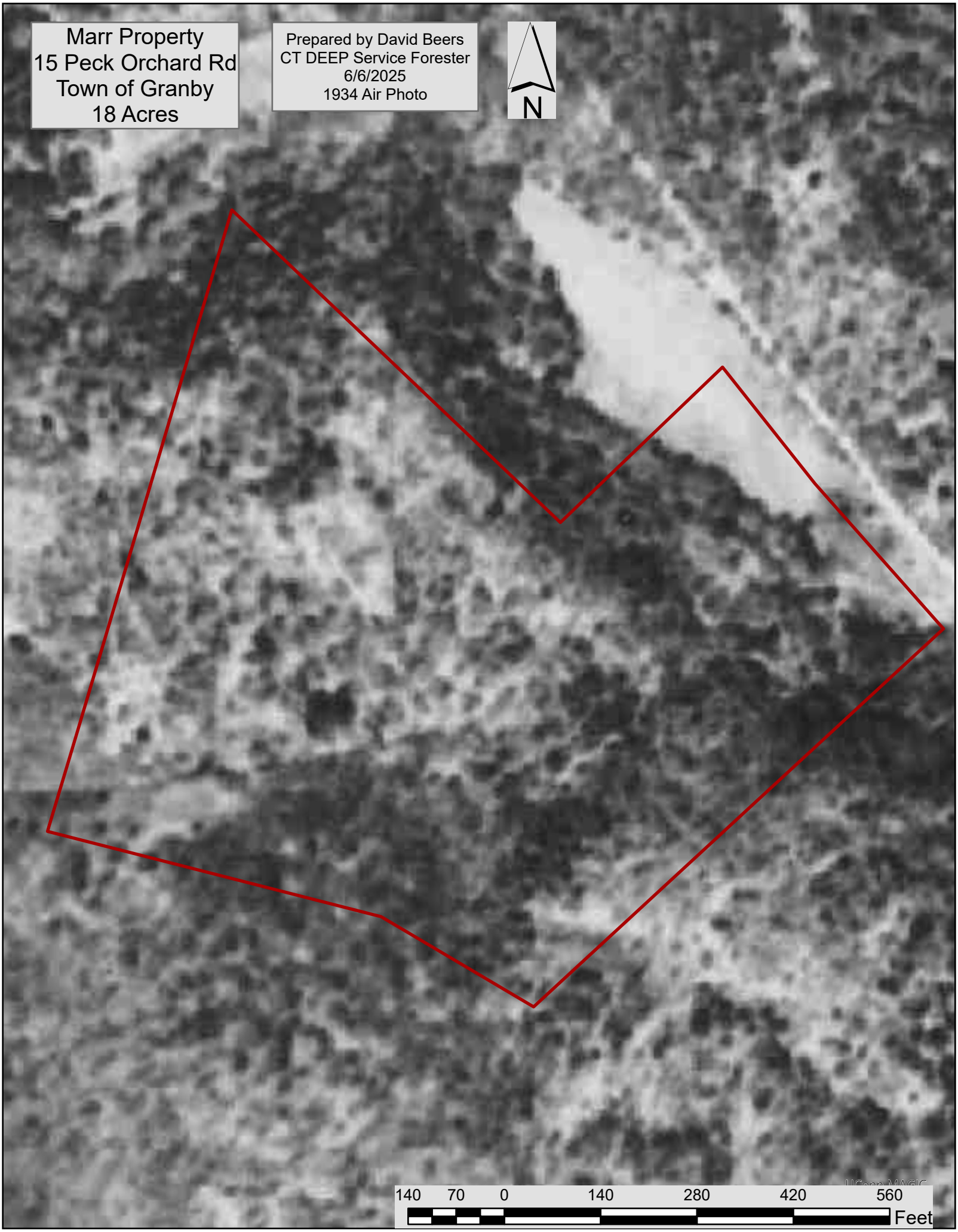
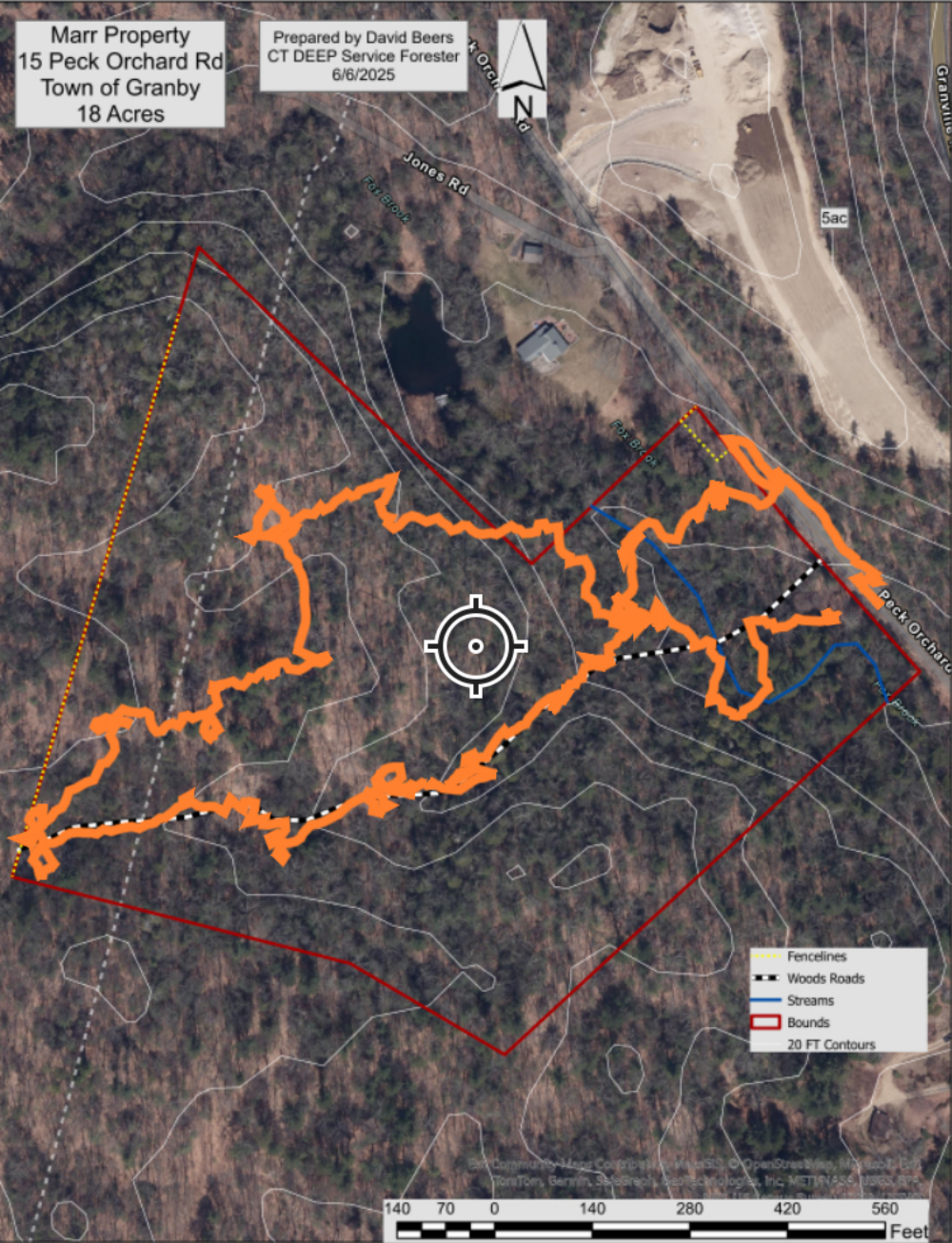

Marr Property
15 Peck Orchard Rd
Town of Granby
18 Acres
Prepared by David Beers
CT DEEP Service Forester
6/6/2025
1934 Air Photo
N
140 70 0 140 280 420 560
Feet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N
Jones Rd
Fox Brook
5ac
Peck Orchard
Fencelines
Woods Roads
Streams
Bounds
20 FT Contours
140 70 0 140 280 420 560
Feet

Connecticut
Department of Energy &
Environmental Protection

APPENDIX

FOREST HISTORY

Between the eighteenth-century colonial settlement and the mid-nineteenth century, most of Connecticut was cleared for agriculture, with only a few small patches of forest remaining by the mid-nineteenth century. Only 25% of Connecticut was forested in 1830. Under these conditions, a muskrat was the largest animal in the woods. Turkeys, deer, bobcats, beavers, and bears were either rare or gone. Most of the land was used for livestock pasture, with only the best soils used for hay or tilled crops. Imagine a very open agricultural landscape.

During this farming period, the stonewalls were built to keep livestock out of crops and the neighbor's property. Most of these walls were topped off with piled wood and stumps to make them taller. Stonewalls were also a depository for rocks removed from cultivated land. A stonewall with many fist-sized rocks means that one side of that wall had tilled crops, where the winter freeze of bare ground would push rocks to the surface. After barbed wire became widely available in 1875, many of these walls were supplemented with wire. Barbed wire was used to corral cows and goats, but not sheep (barbs did not hurt the sheep). Sheep pasture used smooth-wire rectangular page fencing.

Most Connecticut hill farms were abandoned between the mid-nineteenth and early twentieth centuries. The farmers either moved west for better farming soils or headed to the cities for work. Immediately after this farm abandonment, the forest began to take over again. Much of the young forestlands were then cut down repeatedly to make charcoal, which was used to fuel industrialization. Charcoal was used in metal blast furnaces and by blacksmiths.

Small trees were cut into 4' lengths and carried by hand to make a circular pile about 30' wide and 10' high for charcoal making. A ditch was dug around the circumference of the pile, and the soil from the ditch covered the pile to limit the amount of oxygen in the smoldering pile. Once the low-oxygen burn was completed in two weeks, the almost pure carbon charcoal was removed for transport to market. Charcoal produces the hot fire needed for metalworking.

While this charcoal-making process had occurred since settlement, it came to a crescendo between 1880 and 1920. At that time, much of the landscape was cut multiple times, with patches of smoke rising from active charcoal mounds across the hills. By about 1925, less expensive coal had ended charcoal making, and the forest again began growing back. The repetitive cutting of young trees for charcoal encouraged the proliferation of oak trees. Of all the tree species, oak responded best to the repetitive cutting. This, along with frequent wildfires, helped give rise to the oak-dominated forest we see today.

The 1934 map is attached. Please remember that you need to mentally adjust the map because the map scale projection does not exactly match what we use today. To see what ancestral homeland existed on your property before settlement, please visit Native-Land.ca, and type in your address.

FOREST FUTURE

Active forest management can nudge a forest in different directions by manipulating which trees continue to grow and how much the forest floor is exposed to sunlight by creating canopy openings of various sizes and shapes. For example, we can nudge the future forest towards oak by leaving oaks to grow and produce acorns, creating canopy openings of sufficient size to bring in the sunlight young oaks need to grow, and hunting the deer that eat young oak trees. Without these manipulations and significant natural disturbances (wind, ice, pests), the forest will gradually transition to shade-tolerant trees not eaten by deer (hemlock, beech, black birch and red maple).

Forest Protection

For more long-term protection, a conservation easement on part of the property could be donated to a local land trust to prevent development in perpetuity. The easement's value might be income tax-deductible over many years, as well as estate tax benefits.

1. Please contact your local land trusts for more information using this link: Find A Land Trust - Connecticut Land Conservation Council (ctconservation.org).
2. Please contact NRCS about HFRP (Healthy Forest Reserve Program) for conservation easement funding using this link: NRCS Accepting Applications for HFRP Program | Natural Resources Conservation Service (usda.gov).
3. Another good link is Estate Planning Resources and the Forest Legacy Program (ct.gov).

Diversity

A healthy forest has a large diversity of native plant species, particularly trees that support a diverse array of fungi and wildlife (animals, insects, microbes). A healthy forest also has multiple layers of native vegetation to maximize biodiversity and structural complexity. This means having trees of different ages, diameters, and heights. A healthy forest has standing dead trees (snags) and dead downed wood as essential habitat elements, and to hold moisture during droughts. A healthy forest is resilient because it can better recover from diseases, pests, and extreme weather events. Increasing species and structural diversity of this forest provides multiple recovery pathways from disturbance.

To improve forest landscape diversity, consider establishing some patches of young forest. With over 89 birds, mammals, and reptiles that need young forest habitats, the young forest is nature's pantry for wildlife due to its abundance of insects and berries. It also provides our mature woodland wildlife with important food and cover at critical times of the year. Ideally, 5-10% of our landscape should be young forest. Unfortunately, our landscape rarely has this much young forest because we prevent such forests from forming naturally via beaver activity, fires and floods. We can mimic natural disturbances with well-planned forest stewardship activities to create patches of young forest. Please visit YoungForest.org| a fresh way to create wildlife habitat.

Invasives/vines

Invasive species are typically from another part of the world, and when established here, they have no native enemies to hold their population in check. When left uncontrolled, they out-compete what would grow naturally, including tree regeneration and other native understory vegetation. Native understory growth has many more native insects and arthropods that wildlife needs to forage on. It also provides more nutrient-rich berries for birds. Exotic invasive understory growth can provide a better habitat for ticks and associated pathogens while significantly reducing biodiversity. Please see: Home | Connecticut Invasive Plant Working Group (uconn.edu) and https://www.conservect.org/wp-content/uploads/2021/06/Invasive_guide_2020_web.pdf

Control methods include mechanical and chemical processes. In a shady forest, cutting a vine is enough to kill it. Invasive shrubs are not so easy. Pulling the invasives out by the roots can be effective, but extremely difficult and labor-intensive. Yearly cutting back of the aboveground stems, during the growing season, will keep the invasives under control, and perhaps kill them after a few years. The most effective control method is applying herbicide to the green foliage. You can also cut the invasive shrubs and treat the fresh stumps with herbicides to prevent resprouting.

Buckthorn Blaster herbicide applicator for vine and invasive shrub eradication

Lawns and fields

Fields provide an opportunity to help pollinators and native insects. Insects, pollinators (bees, butterflies, moths,

beetles, flies, wasps, hummingbirds), and the many birds that depend on them, are severely declining. By delaying annual mowing until after the first hard frost in October and before the beginning of plant growth in the spring, you will allow pollinators to use your fields for food and habitat during the growing season. Another habitat management strategy is to mow one-third to one-half each year on a rotational schedule. This allows some insects to overwinter in the uncut plant stalks and provides birds with much-needed winter food. For this reason, late winter mowing is best. Please remember that healthy meadows store more than double the carbon of a mowed lawn.

There are also many opportunities to create pollinator-friendly habitats/food by adding native plantings, allowing lawn areas to go natural, and leaving leaves and needles to cover the ground. Insects will overwinter in leaf litter and uncut plant stalks. Birds will pick through the winter leaves for insects. For more information, please visit: Pollinator Pathway (pollinator-pathway.org). And here is an excellent link regarding native plantings: https://www.audubon.org/native-plants.

Boundaries

Boundaries must be well-marked to protect the property from trespass and encroachment. Painted blazes are typically used to mark property boundaries. A blaze is a hand-sized shallow scrape in the bark. This scrape will last decades and not harm the tree if done correctly. When painted, this blaze is quite visible and long-lasting. Trees within arm's length of the boundaries are blazed, with the blazes facing the boundary line. Use only paint marks on the neighbor's side of the line, without blazes. The blazes should be given a new coat of paint at least every ten years. Custom signs can also be hung about every 100 feet using galvanized steel or aluminum nails. Keep the nails sticking out an inch from the tree so that the tree has room to grow without pushing out the signs. Understory vegetation and debris can be cleared from boundary lines to traverse the lines for inspection easily. Please consider hiring a forester to locate and mark property boundaries.

Wildlife

Your forest, and the State of Connecticut in general, is lucky to have a significant and diverse component of mature oak trees (mature trees have reached maximum height). Oak trees are considered a wildlife keystone species because of the large amount and diversity of life they support, more than any other tree. Acorns, especially white oak acorns, provide the most nutritious plant-based protein for almost 90 wildlife species. Oaks overwhelmingly host the most moth and butterfly caterpillars (over 500), which anchor a biodiverse food web. Oak forests have more bird abundance and diversity compared to other forest types. Oaks produce the thickest, most ecologically beneficial, and longest-lasting leaf litter with the most abundant and diverse soil biology. This top-of-the-line leaf litter can keep out invasive exotic stilt grass and jumping worms. It also purifies and holds the most water. For these reasons, preserving and encouraging oak growth and health in your forest is important.

Parts of this forest have legacy trees, also known as old field trees or wolf trees. These trees were growing in open pastures as a source of shade for livestock before the current forest started growing. They are much older than the surrounding forest. Because they used to be open-grown, they have large spreading crowns and large branches low on the trunk. When the pastures were abandoned, they became a significant seed source for the present forest. These large old trees are structurally complex, with many cavities, hollows, fat branches, and thick, rough bark. They are also prolific seed producers, including acorns and nuts. This structural complexity and prolific seed production attract an enormous number and diversity of insects, birds, and mammals. Underground, the old trees are also the hub and source of the complex fungal soil mycorrhizal growth that all trees depend on for water and nutrients. To make them healthier and more vigorous, such legacy trees could be protected and perhaps even given more sunlight by cutting some surrounding trees. These agrarian vestiges have become the ecological hubs in your forest. They are also a great source of future large snags and large dead, downed wood.

Ecological Services and Climate Change Mitigation

Forests remove carbon dioxide from the atmosphere (called sequestration), create oxygen, and remove many pollutants from the air and water. Forests absorb heavy rains and release that water to streams and underground aquifers during droughts. Forests regulate temperature and moisture levels. Your forest contributes to these valuable services with carbon stored in the below-ground roots/soil and in the above-ground vegetation, dead wood, and fallen leaves. These services are enhanced by having a diverse mix of native tree species of different sizes and varied arrangements. Sustainable, scientifically based forest management to remove forest products and promote young forests or regeneration of desired species has no long-term adverse effect on your forest's ability to provide these vital ecological services. When trees are young and growing fast, they sequester carbon at high rates, and once they are large (over 18" in diameter and often older), they store the most carbon. Whether you choose to manage your forest actively or not, your forest does an excellent service to our planet's health just by being a healthy forest.

Forests store carbon in different pools, and the amount of carbon in these pools changes over time. The pools are the live aboveground (trees, shrubs and other plants), live belowground (roots and fungi), deadwood (standing dead trees [snags] and downed logs, litter (leaves, needles and small branches) and soil organic matter. Sequestration is the process by which forests remove carbon dioxide from the atmosphere, primarily via tree photosynthesis. A younger forest (10-60 years old) stores relatively little carbon but is likely at or near its peak sequestration rate. An older, more mature forest (60+ years old) stores more carbon, with a gradually slowing sequestration rate. A mix of sequestration and storage in multi-aged forests creates a resilient carbon profile. Please remember that using and harvesting local wood is an integral part of climate mitigation and a vital tool to improve the resiliency of our forests to climate change.

Mapping

Attached to this report is a geo-referenced map that the landowner can use with mapping apps. This digital map shows the landowner's location on the property, and the landowner can also record tracks and waypoints.

1. To get map layers and to view maps, please visit CT ECO Home (cteco.uconn.edu).
2. To get soil maps, and associated soil descriptions, please visit Web Soil Survey - Home (usda.gov) and follow the instructions on the first page of this website.
3. For instruction, please see Tutorials | Center for Land Use Education and Research (uconn.edu).

Getting Assistance

Here is a link to a list of private foresters in the state:
https://www.ctwoodlands.org/master-woodland/ct-forestry-services-directory

Here is a list of every licensed forester in CT:https://www.depdata.ct.gov/forestry/ForestPractitioner/directry.pdf

Also, we are looking for applicants for the Master Woodland Manager certification (MWM). Here is a link for MWM:
Connecticut Master Woodland Manager Program | Connecticut Forest & Park Association (ctwoodlands.org)

To learn more about the NRCS EQIP funding Program, click NRCS EQIP Program Help

Visit CT DEEP's grants website: Grants and Financial Assistance

Wildlife habitat projects: Partners for Fish and Wildlife | U.S. Fish & Wildlife Service

To prevent erosion and water quality issues: Best Management Practices Manual

Connecticut
Department of Energy &
Environmental Protection

APPENDIX OF LATIN NAMES

TREES

Red Oak	Quercus rubra	Eastern Hemlock	Tsuga canadensis
Tulip-Poplar	Liriodendron tulipifera	Aspen	Populus sp.
Red Maple	Acer rubrum	Blackgum	Nyssa sylvatica
Black Birch	Betula lenta	Yellow Birch	Betula alleghaniensis
White Oak	Quercus alba	Chestnut Oak	Quercus montana
Hickory	Carya Sp.	Black Cherry	Prunus serotina
Black Oak	Quercus velutina	White Pine	Pinus strobus
Scarlet Oak	Quercus coccinea	Sassafras	Sassafras albidum
American Beech	Fagus grandifolia	Paper Birch	Betula papyrifera
Sugar Maple	Acer saccharum	White Ash	Fraxinus americana
Sycamore	Platanus occidentalis	Eastern Redcedar	Juniperus virginiana
Slippery Elm	Ulmus rubra	Basswood	Tilia americana
Pitch Pine	Pinus rigida	Gray Birch	Betula populifolia

NATIVE UNDERSTORY

Eastern Hophornbeam	Ostrya virginiana	Spicebush	Lindera benzoin
Musclewood	Carpinus caroliniana	Witch Hazel	Hamamelis virginiana
Serviceberry	Amelanchier Sp	Mountain Laurel	Kalmia latifolia
Lowbush blueberry	Vaccinium angustifolium	Huckleberry	Gaylussacia baccata
Highbush Blueberry	Vaccinium corymbosum	Sweet Pepperbush	Clethra alnifolia
Striped Maple	Acer pensylvanicum	Holly	Smilax
Hobblebush	Viburnum lantanoides	Greenbrier	Ilex
Maple-leaf Viburnum	Viburnum acerifolium		

EXOTIC INVASIVES

Barberry	Berberis Sp.	Burning Bush	Euonymus alatus
Multi-flora Rose	Rosa multiflora	Bittersweet	Celastrus orbiculatus
Privet	Ligustrum Sp	Honeysuckle	Lonicera Sp
Russian Olive	Elaeagnus angustifolia	Tree-of-Heaven	Ailanthus altissima

For Connecticut homeowners, the following steps are suggested to protect your family members and home:

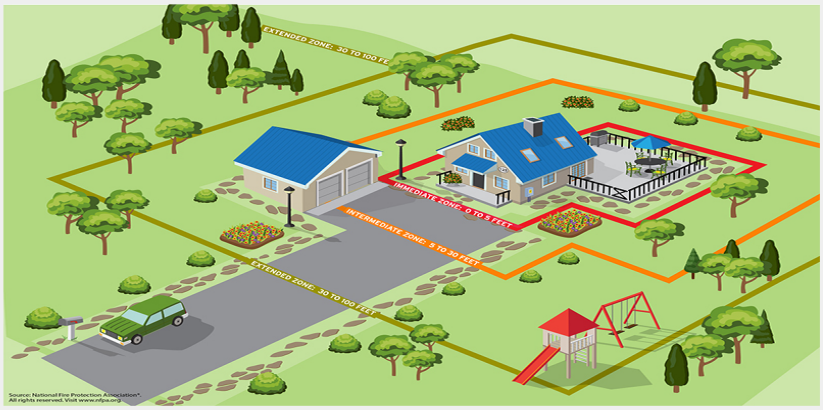
- Make a fire safe zone around your house. Clean flammable vegetation and debris from at least 30 feet around the house and any outbuildings.
- Prune away the lower limbs of evergreens that are within the fire safe zone. Evergreens catch fire easily during dry periods and burn quickly.
- Remove any limbs which overhang the roof or chimney.
- Regularly remove leaves and needles from gutters.
- Do not store firewood in the fire safe zone.
- Use fire resistant roofing materials.
- Make sure firefighters can find and access your home. Mark your house and roads clearly, and prune away limbs and trees along your driveway which do not allow fire truck access.
- Have an **escape plan**-- and practice it.
- Follow state and local **open burning laws**.
- Stay with outside fires until they are completely safe and dead out.
- Dispose of wood ashes in a metal bucket, soaking them with water before dumping them.

The above is an excerpt from our Forest Protection Program website. Also, see Firewise advice below:

Link: NFPA - Preparing homes for wildfire

What is the Home Ignition Zone?

The concept of the home ignition zone was developed by retired USDA Forest Service fire scientist Jack Cohen in the late 1990s, following some breakthrough experimental research into how homes ignite due to the effects of radiant heat. The HIZ is divided into three zones.



Immediate zone

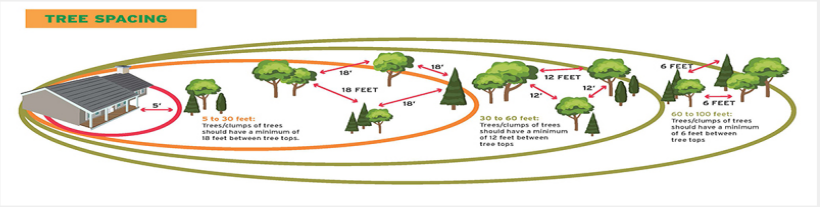
The home and the area 0-5' from the furthest attached exterior point of the home; defined as a non-combustible area. Science tells us this is the most important zone to take immediate action on as it is the most vulnerable to embers. START WITH THE HOUSE ITSELF then move into the landscaping section of the Immediate Zone.

- Clean roofs and gutters of dead leaves, debris and pine needles that could catch embers.
- Replace or repair any loose or missing shingles or roof tiles to prevent ember penetration.
- Reduce embers that could pass through vents in the eaves by installing 1/8 inch metal mesh screening.
- Clean debris from exterior attic vents and install 1/8 inch metal mesh screening to reduce embers.
- Repair or replace damaged or loose window screens and any broken windows Screen or box-in areas below patios and decks with wire mesh prevent debris and combustible materials from accumulating.
- Move any flammable material away from wall exteriors – mulch, flammable plants, leaves and needles, firewood piles – anything that can bur Remove anything stored underneath decks or porches.

Intermediate zone

5-30' from the furthest exterior point of the home. Landscaping/hardscaping- employing careful landscaping or creating breaks that can help influence and decrease fire behavior

- Clear vegetation from under large stationary propane tanks.
- Create fuel breaks with driveways, walkways/paths, patios, and decks.
- Keep lawns and native grasses mowed to a height of four inches.
- Remove ladder fuels (vegetation under trees) so a surface fire cannot reach the crowns. Prune trees up to six to ten feet from the ground; for shorter trees do not exceed 1/3 of the overall tree height.
- Space trees to have a minimum of eighteen feet between crowns with the distance increasing with the percentage of slope.
- Tree placement should be planned to ensure the mature canopy is no closer than ten feet to the edge of the structure.
- Tree and shrubs in this zone should be limited to small clusters of a few each to break up the continuity of the vegetation across the landscap

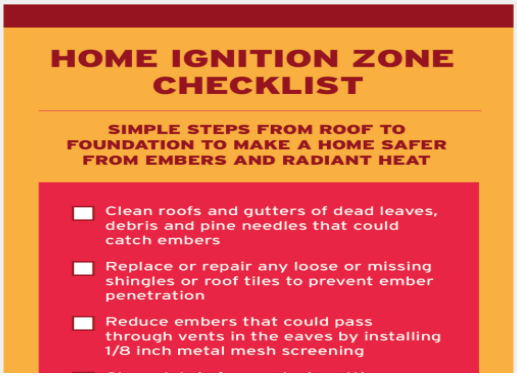


Extended zone

30-100 feet, out to 200 feet. Landscaping – the goal here is not to eliminate fire but to interrupt fire's path and keep flames smaller and on the grou

- Dispose of heavy accumulations of ground litter/debris.
- Remove dead plant and tree material.
- Remove small conifers growing between mature trees.
- Remove vegetation adjacent to storage sheds or other outbuildings within this area.
- Trees 30 to 60 feet from the home should have at least 12 feet between canopy tops.*
- Trees 60 to 100 feet from the home should have at least 6 feet between the canopy tops.*

**The distances listed for crown spacing are suggested based on NFPA 1144. However, the crown spacing needed to reduce/prevent crown fire potentia could be significantly greater due to slope, the species of trees involved and other site specific conditions. Check with your local forestry professional to get advice on what is appropriate for your property.*

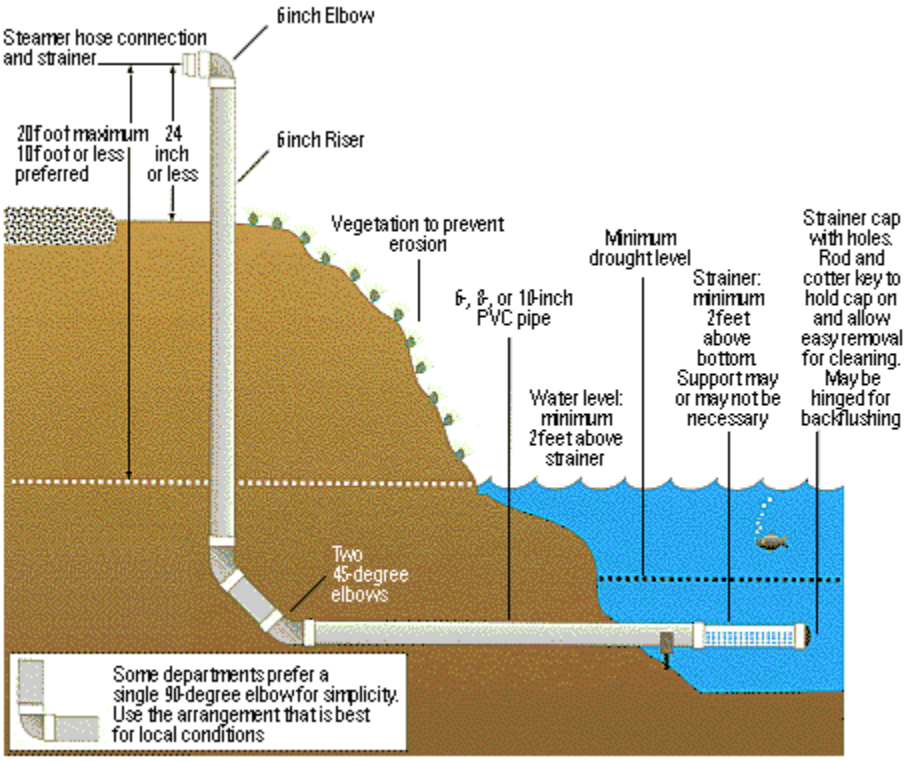


Dry Hydrants

The success of fire suppression operations hinges on having a readily available water source. In most rural areas of the state, there is not a pressurized fire hydrant system. In many cases, this requires water to be shuttled by tanker from the closest available source, usually a town pressurized system, and it can be difficult for firefighters to maintain an uninterrupted water source at the scene.

A dry fire hydrant is a non-pressurized pipe system permanently installed in a water source such as lakes, streams or ponds that permits water withdrawal by drafting from a fire truck to provide a reliable fire source for fire suppression close to the incident.

Below is a diagram of a typical dry hydrant installation:



Connecticut Wildlife Brush Piles - Structures for Wildlife 649

Conservation Practice Job Sheet *Lifespan – 5 Years*

Definition

A mound or pile of appropriate woody material, fashioned by piling brush and loose branches on top of a base comprised of larger logs, or other natural materials, to provide cover for wildlife where cover is limited.

Purpose

This practice is used to create cover for many songbirds, small mammals, reptiles, and amphibians when natural cover is limited; such as after clear-cutting. It provides areas for nesting, resting, escape from predators, and protection from harsh weather conditions.

Criteria, Considerations, and Specifications

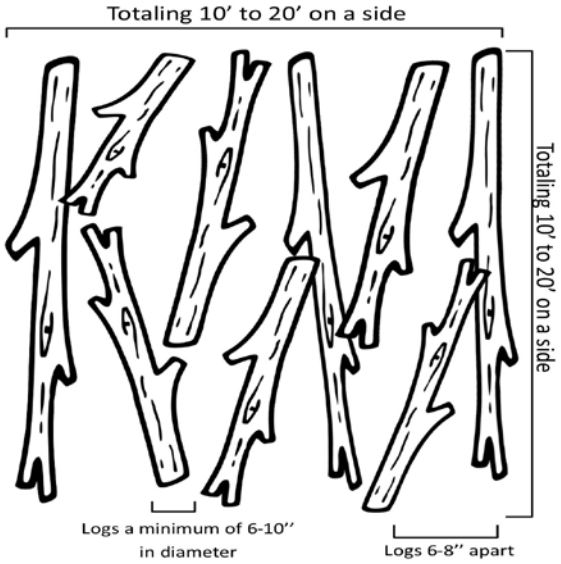
Brush piles may be built to various dimensions based on the size of available material; however, the size should range between 10 to 20 feet on a side and 4 to 8 feet high.

Materials

Brush piles can be constructed using a variety of materials. Commonly, materials left from timber harvesting or any tree-cutting activity are utilized. Natural features, such as rocks, boulders, and stumps may also be incorporated.

Construction

1. Base Layer:
   a. Logs at a minimum of 6-10 inches in diameter are laid at various angles, leaving small openings (6 to 8 inches wide) between base logs for easy wildlife access. Alternate logs to create varying heights and avoid creating parallel runways through the base layer.
   b. Logs of various lengths (that add up to 10 to 20 feet on a side) can be staggered throughout the foundation, with breaks, creating a maze-like environment.
   c. Outer logs should be closer to 20 feet in length to provide stability for the brush pile.



2. A second layer of smaller diameter logs should be laid on top and roughly perpendicular to the first base layer, in the same fashion, and repeated with increasingly smaller logs, building 1-3 additional layers.

3. The foundation should be covered with 3-6 feet of brush, using small limbs, saplings, loose brush, and pine boughs. Larger branches should cover the foundation, with smaller branches placed on top.

4. Brush should loosely drape over the edges, with openings (6 to 8 inches in diameter) left on the sides in several places for easy wildlife access and escape. Brush should cover the pile sufficiently so the base is mostly covered. If available on site, add pine boughs, as the needles will persist after deciduous leaves fall off. You should not be able to see through the brush pile even after leaves have dropped from the branches.

NOTE: *When constructing brush piles using mechanized forestry equipment, it is not possible to construct piles exactly as described. It is suitable if larger logs are crisscrossed on the base and covered with increasingly smaller logs and finally brush, so long as adequate spaces are left for wildlife to enter and exit the pile.*

Placement

Several considerations should be made when placing brush piles:

- Multiple brush piles are better than one large pile, providing more opportunities for cover and escape from predators.
- Good locations include adjacent to forest openings, pastures or hay fields; within shrub thickets or fencerows; in field corners; near stonewalls and wetlands.
- On lands with little natural cover, such as recently cleared areas, begin brush piles within 25 feet of woodland edges, and build in towards the center of the habitat patch, resulting in 1- 3 brush piles per acre, evenly distributed across the project site.
- Place near wildlife food sources, such as mast and fruit trees.
- Avoid placing brush piles on existing high quality food or cover sources.
- Avoid placing brush piles near homes, lawns, or gardens, to prevent situations where wildlife could become a nuisance.
- Keep away from buildings due to flammability.
- Cultural resources such as stone walls can be incorporated into a brush pile, however stones should not be moved. Review potential impacts prior to incorporating stone walls.

Variations for Brush Pile Base

- Tree stumps still in place can be incorporated into your brush pile base. Several logs (6 to 10 inches in diameter and 5 to 6 feet long) are placed on top of and around the stump.

- Small rock piles - these should be staggered about 12 inches apart with each pile about 10 inches high and 12 inches across to support next layer of limbs. Existing boulders and rocks on the landscape can be piled together to provide additional den sites; start with the largest rocks on the bottom of the stack to create hiding places between the rocks, and stack brush on top for additional cover.

Other Types of Cover *(do not meet criteria for reimbursement through NRCS program)*

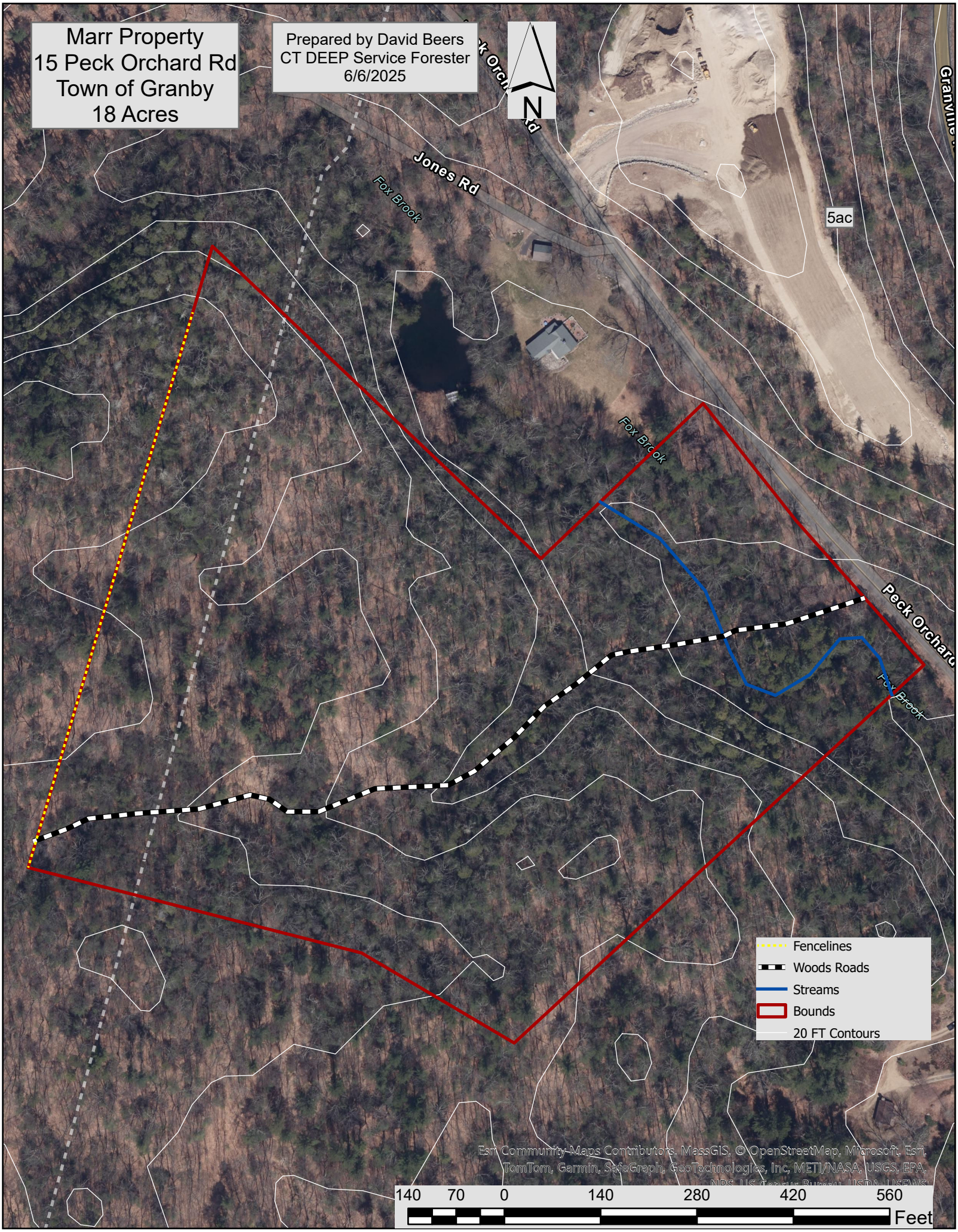
- Living brush pile - in a cluster of small diameter trees, cut each tree half way through at a height of 12-18 inches above the ground; fold treetops inwards towards other trees in groups so they rest on the ground or on top of the other half-cut trees.
- Stonewalls - may be incorporated into the brush piles base; brush should be placed against the wall with similar dimensions and distribution to brush piles created in an open space.
- When harvesting trees, leave the crowns of the largest trees (e.g. an oak treetop) for wildlife cover.
- Windrowed brush piles - typically these linear brush piles can best be created following a forestry or tree removal operation. As with other brush pile creation, larger materials should be placed on the bottom at various angles with subsequently smaller material on top. Avoid packing the logs tightly, as this will eliminate any openings for wildlife to enter and exit the linear pile. Windrows should range from 10 to 20 feet on a side and 6 to 8 feet high. Windrows should have breaks built into them every 50 to 100 feet to provide travel lanes for wildlife.

Operation and Maintenance

- Monitor condition and/or usage of the structure
- Conduct needed maintenance of the structure, such as periodically adding new material to the top of the pile

Additional Notes

- Brush piles are not permanent; new brush needs to be added over time or new piles may need to be constructed. Rot and decay is a natural process and may attract more insects, providing additional food sources.
- Do not use materials that contain toxic substances (i.e. pressure treated lumber/posts, creosote railroad ties, lead painted surfaces, tires, etc.). These substances can cause wildlife mortality either through contact, consumption, or inhalation.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140 70 0 140 280 420 560
Feet

June 22, 2025

To: Granby Inland Wetlands and Watercourses Commission:
John Laudati, Chairman
Kate Bednaz, IWWC Agent
cc: Abigail Kenyon
Director of Community Development

From: Christie Levandowski
34 Peck Orchard Road
North Granby, Connecticut

Re: Modification of existing permit for 15 Peck Orchard Road, North Granby, Conn.

In my March 21, 2025, memo regarding the original application, I expressed environmental and wildlife concerns with a bridge crossing over Fox Brook in North Granby. I am now expressing dismay at this request to modify the existing IWWC permit to allow a *second crossing* that has the potential to further damage Fox Brook. Geotechnical boring is a prerequisite to building the primary structure presented to IWWC. How it is done and how it impacts the site is a prerequisite to an informed IWWC ruling!

I find this "afterthought" request to clear additional trees and vegetation in the wetland along 200' of Fox Brook unfathomable! This creates a second crossing for heavy equipment that will disturb the banks and the brook bed to facilitate drilling 80' deep core samples. A detail that should have been documented in the original permit package as a part of the site prep work — and the possibility of this being an alternative access point. Now it is an addendum!

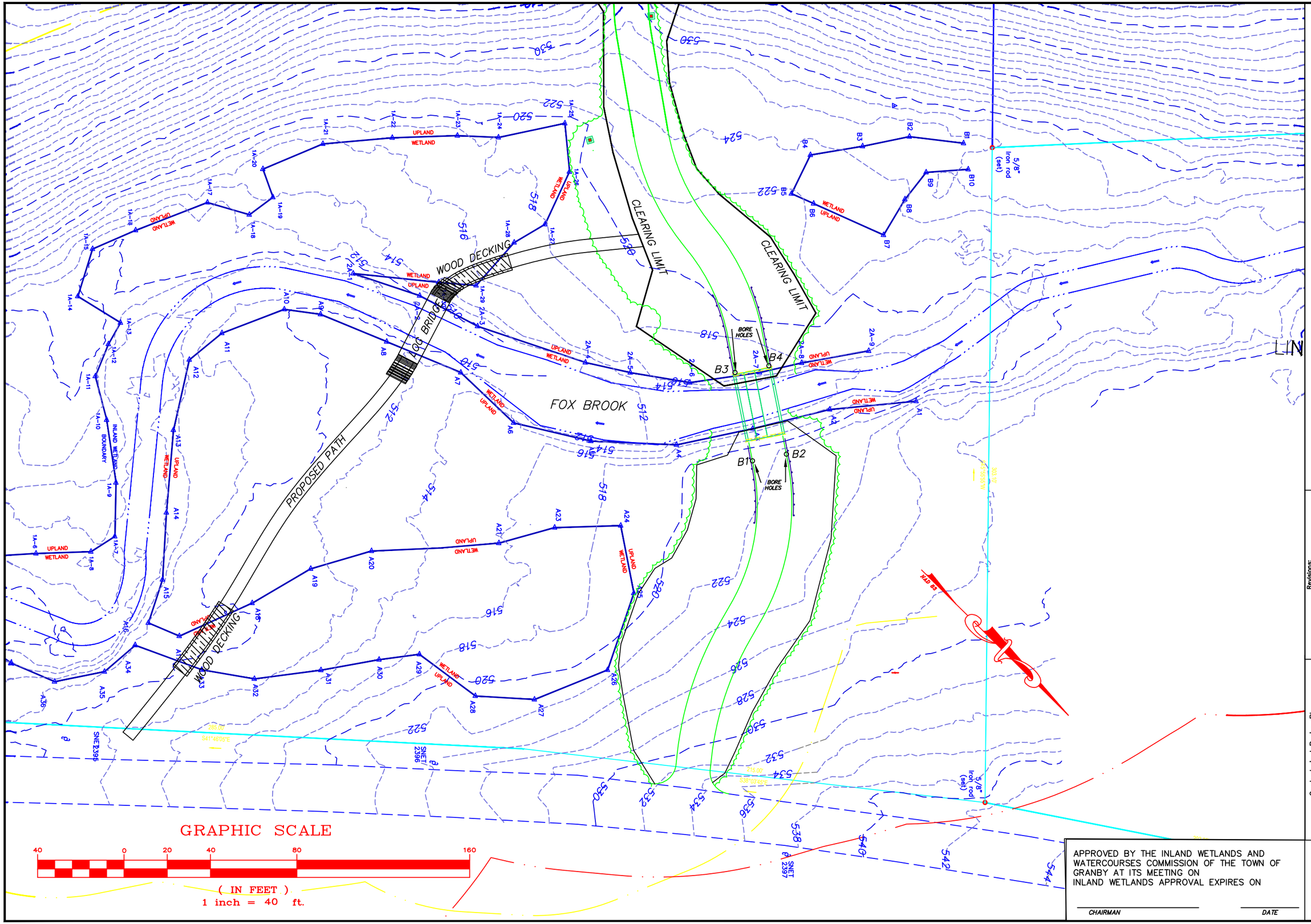
My research of "geotechnical borings" to guide calculations for footings appropriately sized for the weight of a bridge, was enlightening. Among other data these borings provide is the strength and density of soil layers (known fact: it's beach/septic sand to a depth of at least 150 feet), and potential hazards such as a highwater table (a given where standing water is common after a rain event). Boring results are always part of the bridge engineering package.

Extensive discussions of the bridge design, runoff controls and engineering requirements were presented by the project's engineer, Guy Hesketh, but not the borings crucial to its design and safety. Why didn't it even receive a passing mention by Hesketh?

This is not an easily repaired "oops". It constitutes a much larger invasion of the wetland, the brook, the surrounding landscape and subsequently, possible water quality and flow damage to the brook. And that doesn't mention the tree-shaded beauty of the brook that will be lost for decades!

An aside: Will the ACOE and DEEP be advised of this postscript and have opportunity to comment?

Regards,
Christie Levandowski
34 Peck Orchard Road
cdl@macwhiz.com / 860-653-2929



APPROVED BY THE INLAND WETLANDS AND WATERCOURSES COMMISSION OF THE TOWN OF GRANBY AT ITS MEETING ON

INLAND WETLANDS APPROVAL EXPIRES ON

CHAIRMAN DATE

Richard Marr
66 Claire Hill Road, Burlington CT, 06013
Phone (860) 970-7386
richard-marr1@comcast.net

No.	Date	Description

Revisions:

Geotechnical Boring Plan

Richard Marr

15 Peck Orchard Road

Granby, Connecticut

Date: 06/22/2025 | Drawn by: RM | Job no: 1

Scale: 1" = 40' | Checked by:. | Sheet no: 1 OF 2

BB-1

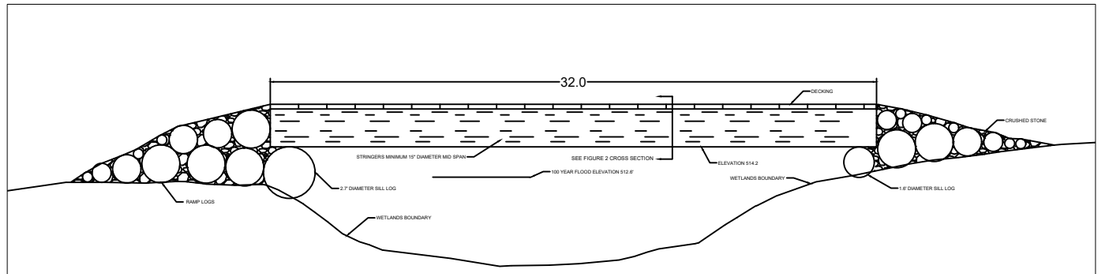


FIGURE 1: LOG BRIDGE SIDE VIEW

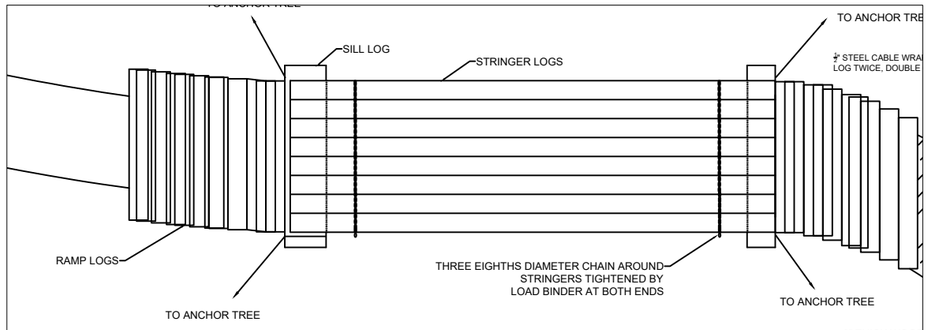


FIGURE 2: LOG BRIDGE TOP VIEW

DECKING, BUMPER OMITTED FOR CLARITY

WHY THIS PLAN?
THE OBJECTIVE IS TO MOVE A 5 TON GEOBORING MACHINE TO THE WEST BANK OF FOX BROOK WHILE MINIMIZING WETLANDS IMPACT. THIS PLAN DISTURBS 2222 SQUARE FEET OF WETLANDS PLUS WETLANDS REVIEW, WHILE THE PROPOSAL SUBMITTED ON JUNE 11 DISTURBED 3680 SQUARE FEET. WE WILL NEED TO MOVE MACHINERY TO THE WEST BANK AGAIN WHEN DIGGING AND CASTING THE BRIDGE FOOTING ON THAT SIDE. THE APPROVED PLAN IS TO DRIVE THE MACHINES ACROSS THE BROOK AFTER THE BANKS ARE CUT BACK TO A 3/1 SLOPE. HAVING THIS LOG BRIDGE NEGATES THOSE WET CROSSINGS

PROPOSED LOG BRIDGE LOCATION
DAVID BEERS OF THE CONNECTICUT FOREST SERVICE TOURED THE SITE ON JUNE 6, POINTING OUT SIGNS THAT TREE HARVESTING TOOK PLACE ABOUT 20 YEARS AGO BASED ON THE BARK SCARRING CAUSED BY LOGS DRAGGED DOWN THE NATURAL NOTCH IN THE TERRAIN. THE LOCATION WHERE HE BELIEVED THEY HAD A 'SKIDDER'S BRIDGE' IS WHERE WE PROPOSE OUR TEMPORARY LOG BRIDGE, THE BANKS ARE CLOSE TO BEING AT THE SAME ELEVATION AND ARE INLINE WITH THE NOTCH.

LOG BRIDGE DESIGN
WE SELECTED A DESIGN LOAD OF 15 TONS TO BE CONSERVATIVE. THE MAIN STRUCTURAL COMPONENT OF A LOG BRIDGE ARE THE 'STRINGERS'. A LOG STRINGER REFERS TO A LONGITUDINAL TIMBER OR LOG THAT SUPPORTS THE DECK OR FLOORING OF A BRIDGE. A 32 FOOT STRINGER SPAN WAS SELECTED TO PLACE THE SILL LOGS OUTSIDE OF THE BROOK'S WETLAND'S BOUNDARIES.

USING THE FORESTRY FORUM'S "UNIFORMLY LOADED SIMPLE BEAM MID SPAN LOG DIAMETER", A SINGLE STRINGER OF #2 OAK, 15" IN DIAMETER, SPANNING 32', HAS A MAXIMUM ALLOWABLE LOAD OF 4000 POUNDS UNDER THE L/360 DEFLECTION STANDARD (DEFLECTION LIMITED TO 1/360TH OF SPAN LENGTH). EIGHT STRINGERS TOGETHER BRINGS THE ALLOWABLE LOAD TO 32,000 POUNDS.

IF THE BRIDGE CONSISTED SOLELY OF STRINGERS WITHOUT DECKING, A MACHINE CROSSING IT WOULD PLACE ALL OF ITS' WEIGHT ON THE STRINGERS DIRECTLY BELOW THE WHEELS OR TRACKS. TO RESOLVE THIS, FILLER STRINGERS ARE PLACED BETWEEN THE LOG CURVATURES TO FILL THE VOIDS. THE STRINGER/FILLER BUNDLE IS TIGHTENED USING A CHAIN AND BINDER AT EACH END TO KEEP THEM FROM MOVING APART. CRUSHED STONE IS ADDED TO FILL VOIDS AND LEVEL THE SURFACE, THEN 3" THICK DECKING RUNNING PERPENDICULAR TO THE STRINGERS IS ADDED. THE DESIGN ADDS SOME DEAD LOAD, BUT SPREADS THE LIVE LOAD ACROSS ALL STRINGERS UNIFORMLY.

UNDER THE STRINGERS, AT EACH END, ARE "SILL" LOGS. DIFFERENT DIAMETER SILL LOGS COMPENSATE FOR THE SLIGHT DIFFERENCE IN BANK ELEVATIONS, AND PROVIDE A LEVEL SURFACE FOR THE STRINGERS TO REST ON. THE SILL LOGS ARE PLACED ON SLOPES, SECURED FROM ROLLING BY STEEL CABLES ANCHORED TO NEARBY TREES.

STEP LOGS PROVIDE A TRANSITION FROM BANKS TO THE HIGHER ELEVATION OF THE BRIDGE DECK. CRUSHED STONE FILLS THE VOIDS BETWEEN THESE LOGS AND STABILIZES THEM AS WELL. BUMPER SAFETY RAILS ARE ADDED TO EACH SIDE OF THE DECK, HELD IN PLACE WITH REBAR HAMMERED INTO HOLES AUGURED IN THE BUMPER, STRINGER, AND DECKING.

100 YEAR FLOOD ANALYSIS
HYDROLOGIC MODELING USING HEC-RAS SOFTWARE INDICATES THE BROOK LEVEL RISING TO ELEVATION 512.6 AT THE PROPOSED LOG BRIDGE LOCATION IN A 100 YEAR EVENT, WELL BELOW THE BOTTOMS OF THE STRINGERS AT ELEVATION 514.2. THE MODEST RISE IN STORM WATER LEVEL AT THIS LOCATION IS DUE TO THE LOWER ELEVATION OF THE EAST BANK, ALLOWING THE FLOOD TO SPREAD OVER A LARGE AREA.

CONSTRUCTION SEQUENCE
THE LOGS WILL BE SOURCED FROM THE PROPERTY, SPECIFICALLY THE AREAS ALREADY SELECTED TO BE CLEARED FOR THE PERMANENT BRIDGE AND DRIVEWAY. UPON APPROVAL, THE ROUGH CUT WOOD DECKING IS LAID DOWN OVER THE WETLANDS AREA NEAR THE ROAD. TREE LOGS ARE TRANSPORTED FROM THE CLEAR AREA OF THE APPROVED DRIVEWAY PATH, DOWN PECK ORCHARD ROAD FOR 260 FEET VIA TRAILER, THEN UNLOADED ON THE PROPERTY NEXT TO THE PROPOSED PATH. THE SILL LOGS ARE POSITIONED VIA CABLES, AND STRINGERS PLACED ON TOP. AFTER ADDING THE FILL STRINGERS, THE BUNDLE IS SECURED AT EACH END VIA CHAIN. THE STEP LOGS ARE POSITIONED, AND LEVELED WITH CRUSHED STONE. AFTER THE SAME CRUSHED STONE IS ADDED TO THE STRINGERS, THE SLAB DECKING AND BUMPER LOGS ARE ADDED.

LOG BRIDGE REMOVAL
WE PROPOSE REMOVING THE LOG BRIDGE ONCE MACHINERY CAN PASS OVER THE PERMANENT BRIDGE. THE REMOVAL PROCESS IS THE REVERSE OF INSTALLATION.

WETLANDS IMPACT = 525 SQ FT
UPLANDS REVIEW IMPACT 1696 SQ FT
TOTAL WETLANDS AND REVIEW AREA DISTURBANCE = 2222 SQ FT

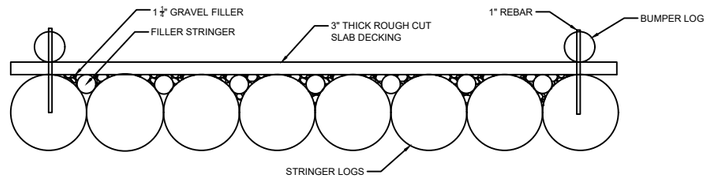


FIGURE 3: LOG BRIDGE CROSS SECTION

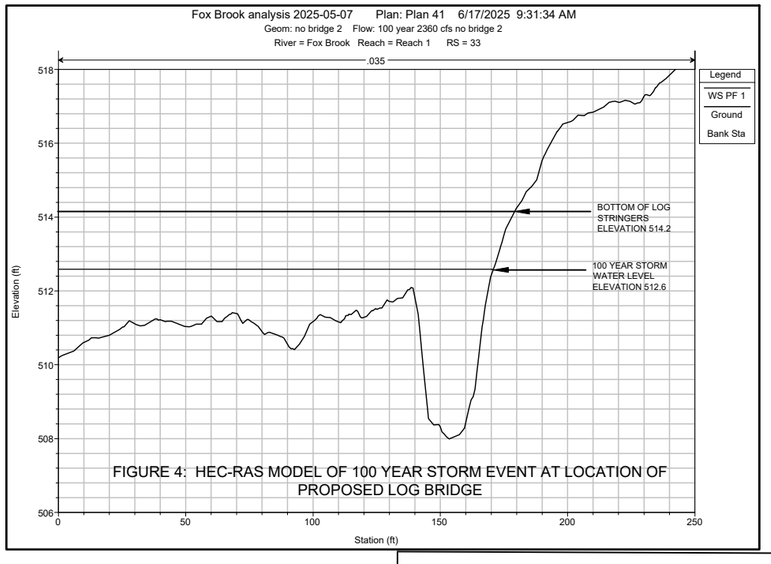


FIGURE 4: HEC-RAS MODEL OF 100 YEAR STORM EVENT AT LOCATION OF PROPOSED LOG BRIDGE

APPROVED BY THE INLAND WETLANDS AND WATERCOURSES COMMISSION OF THE TOWN OF GRANBY AT ITS MEETING ON
INLAND WETLANDS APPROVAL EXPIRES ON

CHAIRMAN DATE

Richard Marr
66 Cabins Hill Road, Burlington CT, 06013
Phone (860) 670-7986
richard-marr1@comcast.net
Consultant and General Contractor at 15 Peck Orchard Road

Revisions:

No.	Date	Description

Geotechnical Boring Plan
prepared for
Richard Marr
15 Peck Orchard Road
Granby, Connecticut

Job no: 1
Sheet no: 2 OF 2
Drawn by: RM
Checked by: HCM
Date: 06/22/2025
Scale: 1" = 40'

BB-2

TOWN OF GRANBY

Incorporated 1786
15 North Granby Road
Granby, Connecticut 06035-2102

July 9, 2025

Martin Christian
7 Juniper Drive
Granby, CT 06035

RE: 7 Juniper Drive – M. Christian – Permit request to place a new 392 sq. ft. prefabricated shed on crushed stone within a regulated area.

Dear Mr. Christian:

Please be advised that on July 9, 2025, the Inland Wetlands and Watercourses Commission (IWWC) approved the subject application in accordance with the application and supporting documentation received to date.

The following are the conditions of this approval.

1. The Office of Community Development shall be notified at least 48 hours prior to the start of any construction activities.

2. Town staff shall inspect installed erosion controls prior to the start of any work that results in earth disturbance activities, this includes, but is not limited to, grubbing and stump removal.

3. All work shall be in conformance with this approval and application materials as submitted for this Permit Approval. Any modifications to the approved plans must be reviewed and approved by the Granby Inland Wetlands and Watercourses Commission or their designated Agent.

4. Erosion controls shall be maintained until the site has achieved permanent stabilization. Permanent stabilization is defined as 70% permanent vegetation covering over 90% of the area. A stockpile of erosion controls shall remain on site to be installed, as necessary. The IWWC shall be notified in writing at least 48 hours in advance of erosion controls being removed.

5. Excavated soils shall not be brought off-property without the notification and approval of the Office of Community Development. The applicant shall supply the destination in writing for any excavated soil to be removed from the property.

6. This permit is valid for a period of 5-years from the date of issuance.

7. Upon completion of construction and site stabilization, the IWWC shall be notified in writing that work is complete, and a final inspection may be completed at that time.

If you have any questions, please call me at your earliest convenience.

Sincerely,

John Laudati
Granby IWWC Chairman

TOWN OF GRANBY
Office of Community Development, Inland Wetlands and Watercourses Commission
Telephone: (860) 844-5318, www.granby-ct.gov

Application for Inland Wetlands & Watercourses Activity

Application For: ☒ Permit ☐ Extension ☐ Modification (Existing Permit/Application #): _____
☐ Wetlands Map Amend. ☐ Request for Review ☐ Other: _____

Property Location and Nearest Intersection: 7 Juniper Drive
Size of Parcel: 2.42 acres Zone: R50 Map/Lot: E-30/41/31 Current Use: Single Family Home

Applicant's Name: Martin D Christian
Complete Address: 7 Juniper Dr Granby CT 06035
Daytime Phone: 860 653 4737 Evening Phone: _____ Fax: _____
Email: MartyChristian1229@Gmail.com

RECEIVED
JUN 02 2025
Granby Building Department

Owner's Name: Martin + Susan Christian
If the owner is a corporation, or other non-individual entity, include the primary contact information
Complete Address: 7 Juniper Dr Granby CT 06035
Phone Daytime Phone: _____ Evening Phone: _____ Fax: _____

Applicant's Representative: _____
Complete Address: _____
Daytime Phone: _____ Evening Phone: _____ Fax: _____

**********PLEASE ATTACH ADDITIONAL SHEET IF NECESSARY**********

Project Name and Brief Description (i.e. residential, agricultural, commercial, number of lots, etc.):
14 x 28 Pre Fab Garage on 3-5" of 3/4" crushed stone base with future electricity run from house underground; area is currently maintained lawn

Is any portion of the property located within 500 feet of an adjoining municipality? _____
Wetlands Located on Property (in square feet (sq. ft.)): unknown Wetlands to be impacted (sq. ft.): 392 ☑
Watercourses Located on Property? Yes Name or Type of Watercourse: unknown
Are Proposed Activities Located within the 100-Year Floodplain? No Floodway? No
Are there slopes with grades in excess of 15% located on the property? No
Do Proposed Activities Require Review by the PZC? No
**********SEE APPLICATION CHECKLIST ON BACK for MINIMUM APPLICATION REQUIREMENTS**********

The applicant understands that this application is to be considered complete only when all information and documents required by the Commission have been submitted. The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief. Permission is granted to the Town of Granby, Inland Wetlands & Watercourses Commission, and its agent (s) to inspect the subject land, at reasonable times, during the pendency of an application and for the life of the permit.

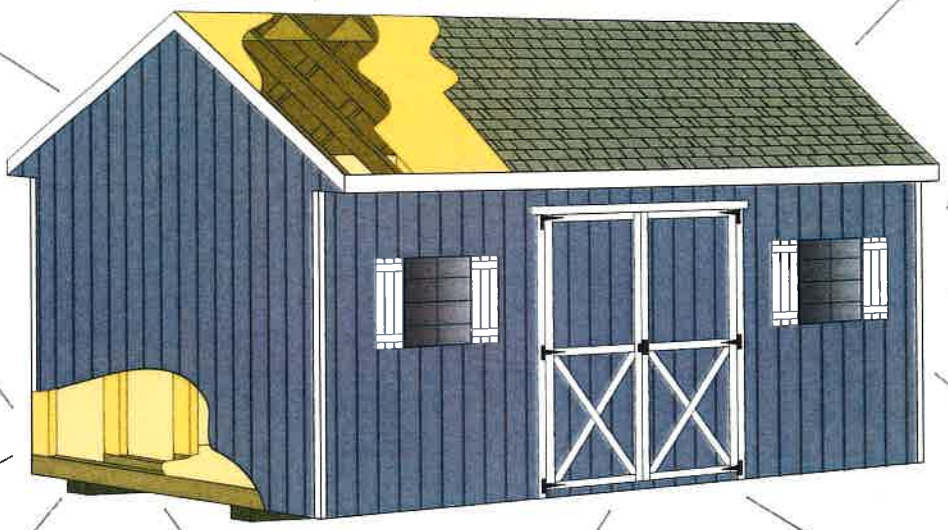
☞ Applicant's Signature: Martin D Christian Date: 6/3/25
Owner's Signature: _____ Date: _____

FOR OFFICE USE

Application #: n/a	*Date Submitted:* 6/2/25
Fee amt./Check or (Cash) $140.00	*Date of Receipt:* 6/11/25
Agent Ruling:	*Date Approved/Denied:*

See Reverse Side for Conditions of Approval or Reason for Denial

CONSTRUCTION DETAILS



Collar ties are used on all buildings over 18' long.

Double top plates are used on all 4 walls except on Mini-Barn and Townhouse sheds.

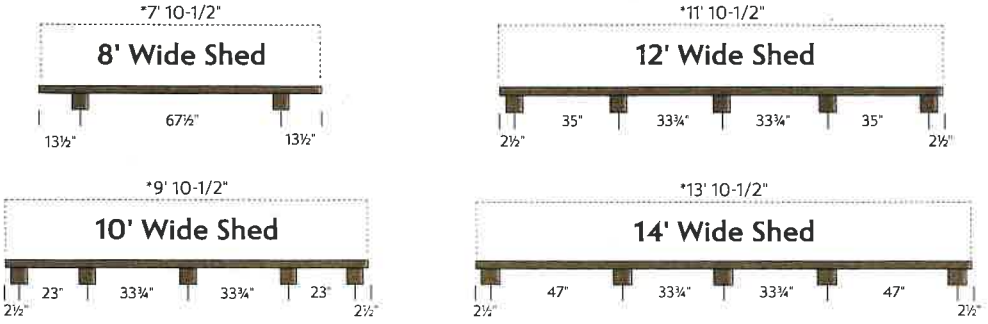
Doors are reinforced with 2" x 4" bracing.

All buildings are fully assembled and delivered to your prepared site. Kits are available if your location is not accessible by truck and trailer.

Accurate machine cut rafters make a tight joint for maximum strength and precise construction.

Pressure Treated 4X4 Skids

*Width measurements are the width of the wood floor



For sheds without wood floors, concrete slab should measure 2" less than the width of your shed. And be 1" less than the length of your shed. A 10x16 shed slab needs to be 9' 10" wide by 15' 11" long. The only exception to this rule is the doublewide garages.

1" = 40'

RECEIVED
JUN 02 2025
Granby Building Department

RECEIVED
JUN 18 2025
Granby Building Department

TOWN OF GRANBY
Office of Community Development, Inland Wetlands and Watercourses Commission
Telephone: (860) 844-5318, www.granby-ct.gov

Application for Inland Wetlands & Watercourses Activity

Application For: ☑ Permit ☐ Extension ☐ Modification (Existing Permit/Application #): _____
☐ Wetlands Map Amend. ☐ Request for Review ☐ Other: _____

Property Location and Nearest Intersection: 129 Barndoors Hill Rd
Size of Parcel: 11 acres Zone: R2A Map/Lot: H-30/69/15 Current Use: Residential SFH

Applicant's Name: Damon Weiss
Complete Address: PO Box 503 Manchester CT 06045
Daytime Phone: 917-747-1918 Evening Phone: _____ Fax: _____
Email: damon@sdsolarsolutions.com

Owner's Name: Derell Campbell
If the owner is a corporation, or other non-individual entity, include the primary contact information
Complete Address: _____
Phone Daytime Phone: 860-597-6832 Evening Phone: _____ Fax: _____

Applicant's Representative: _____
Complete Address: _____
Daytime Phone: _____ Evening Phone: _____ Fax: _____

**********PLEASE ATTACH ADDITIONAL SHEET IF NECESSARY**********

Project Name and Brief Description (i.e. residential, agricultural, commercial, number of lots, etc.): residential ground mount solar. 40 solar panels. 1072 square feet maximum 9' height. L=67' W=15'. No cement. Helical screws. System has rapid shutdown

Is any portion of the property located within 500 feet of an adjoining municipality? no
Wetlands Located on Property (in square feet (sq. ft.)): 1.904 acres Wetlands to be impacted (sq. ft.): _____
Watercourses Located on Property? No Name or Type of Watercourse: n/a
Are Proposed Activities Located within the 100-Year Floodplain? no Floodway? no
Are there slopes with grades in excess of 15% located on the property? no
Do Proposed Activities Require Review by the PZC? Yes

**********SEE APPLICATION CHECKLIST ON BACK for MINIMUM APPLICATION REQUIREMENTS**********

The applicant understands that this application is to be considered complete only when all information and documents required by the Commission have been submitted. The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief. Permission is granted to the Town of Granby, Inland Wetlands & Watercourses Commission, and its agent (s) to inspect the subject land, at reasonable times, during the pendency of an application and for the life of the permit.

☞ Applicant's Signature: _____ Date: 6/18/25
Owner's Signature: _____ Date: _____

FOR OFFICE USE

Application #: n/a *Date Submitted:* 6/18/25
Fee amt./Check or Cash: $140.00 check # 3610 *Date of Receipt:* 7/9/25
Agent Ruling: _____ *Date Approved/Denied:* _____

See Reverse Side for Conditions of Approval or Reason for Denial

SECTION 19
FEES

19.5 Fee Schedule. Application fees shall be based on the following schedule.

ACTIVITY	FEE/ AREA / #	APPLIED
State of Connecticut Land Use Fee	$60.00	$ 60.00 +
Permitted Uses As-of-Right & Non-Regulated Uses	None	None
CATEGORY 1 - RESIDENTIAL/SINGLE-FAMILY RESIDENCES (INCLUDING 2-LOT SUBDIVISIONS)		
I. Base Fee		
a. General Application	$150.00 + II	$ +
b. Accessory to Existing Primary Structure	$80.00 + II	$ 80.00 +
c. Modification to Existing Approval	$30.00 + II	$ +
II. Activity Fee		
a. $100.00 per Watercourse Crossing	(#)	$ +
b. $0.02 per sq. ft. of Wetland Disturbance	SF	$ +
Within Upland Review Area…		
c. $100.00 per Structure (greater than 200 sq. ft.)	(#)	$ +
d. $0.01 per sq. ft. of Impervious Surface	SF	$ +
e. $250.00 per Stormwater Management Basin	(#)	$ +
f. $100.00 per Storm Drain Outfall	(#)	$ +
g. $0.01 per sq. ft. of Steep Slope Disturbance (Slopes Greater than 2:1 – Define Area on Plan)	SF	$ +
h. $0.005 per sq. ft. of Woody Vegetation Clear-Cut	SF	$ +
➢ **TOTAL FEE – CATEGORY 1**		$
CATEGORY 2 - SUBDIVISIONS (GREATER THAN 2-LOTS)/CONDOMINIUMS, MULTI-FAMILY UNITS/COMMERCIAL		
I. Base Fee		
a. General Application Per Primary Structure (up to 5)	$300.00/(+II)	$ +
i. Fee Per Each Primary Structure Beyond 5	$20.00 (+II)	$ +
b. Accessory to Existing Primary Structure	$150.00 (+II)	$ +
c. Modification to Existing Approval	$60.00 (+II)	$ +
II. Activity Fee*		
a. $200.00 per Watercourse Crossing	(#)	$ +
b. $0.04 per sq. ft. of Wetland Disturbance	SF	$ +
Within Upland Review Area…		
c. $100.00 per Structure	(#)	$ +
d. $0.02 per sq. ft. of Impervious Surface	SF	$ +
e. $250.00 per Stormwater Management Basin	(#)	$ +
f. $100.00 per Storm Drain Outfall	(#)	$ +
g. $0.02 per sq. ft. of Steep Slope Disturbance (Slopes Greater than 2:1 – Defined Area on Plan)	SF	$ +
h. $0.01 per sq. ft. of Woody Vegetation Clear-Cut	SF	$ +
➢ **TOTAL FEE – CATEGORY 2**		$

ACTIVITY	FEE/ AREA / #	APPLIED
CATEGORY 3 – ALL OTHER APPLICATIONS		
I. Base Fee		
a. General Application	$200.00 (+II)	$ _____ +
b. Modification to Existing Approval	$60.00 (+II)	$ _____ +
II. Activity Fee*		
a. $200.00 per Watercourse Crossing	_____(#)	$ _____ +
b. $0.04 per sq. ft. of Wetland Disturbance	_____SF	$ _____ +
Within Upland Review Area...		
c. $100.00 per Structure	_____(#)	$ _____ +
d. $0.02 per sq. ft. of Impervious Surface	_____SF	$ _____ +
e. $250.00 per Stormwater Management Basin	_____(#)	$ _____ +
f. $100.00 per Storm Drain Outfall	_____(#)	$ _____ +
g. $0.02 per sq. ft. of Steep Slope Disturbance (Slopes Greater than 2:1 – Defined Area on Plan)	_____SF	$ _____ +
h. $0.01 per sq. ft. of Woody Vegetation Clear-Cut	_____SF	$ _____ +
➢ **TOTAL FEE – CATEGORY 3**		$ _____
III. Significant Activity Fee	$300.00	$ _____ +
IV. Permit Extension Fee		
a. Residential Uses	$40.00	$ _____ +
b. Commercial/Industrial/Other Uses	$80.00	$ _____ +
V. Map and Regulation Amendments	$250.00	$ _____ +
➢ **APPLICATION FEE SUBTOTAL**		$ _____ +
VI. Post Activity Application Fee	20% of Fee Subtotal	$ _____ +
➢ **TOTAL APPLICATION FEE:**		$ 140.00

Boards, Commissions, Agencies and Departments of the Town of Granby are exempt from all fee requirements.

VII. Complex Application Fee – Section 22a-42a of the Connecticut General Statutes states that an applicant shall pay a fee equal to the Town's expenditures in hiring outside consultants and experts to analyze, review and report on issues requiring such experts. Such fee may include, but not be limited to, the cost of retaining experts to analyze, review, and report on issues requiring such experts. The Commission or the duly authorized agent shall estimate the complex application fee which shall be paid pursuant to section 19.1 of these regulations within 10 days of the applicant's receipt or notice of such estimate. Any portion of the complex application fee in excess of the actual cost shall be refunded to the applicant no later than 30 days after publication of the Commission's decision.

Datasheet

IRONRIDGE

Ground Mount System

All-Terrain Mounting

The IronRidge Ground Mount System combines our XR100 or XR1000 rails with locally-sourced steel pipes or mechanical tubing, to create a cost-effective structure capable of handling any site or terrain challenge.

Installation is simple with only a few structural components and no drilling, welding, or heavy machinery required. In addition, the system works with a variety of foundation options—including concrete piers, ground screws, helical or driven piles, and above-ground ballast blocks.

Rugged Construction

Engineered steel and aluminum components ensure durability.

PE Certified

Pre-stamped engineering letters available in most states.

UL 2703 Listed System

Meets newest effective UL 2703 standard.

Design Software

Online tool generates engineering values and bill of materials.

Flexible Architecture

Multiple foundation and array configuration options.

25-Year Warranty

Products guaranteed to be free of impairing defects.

Datasheet

360° Product Tour
Visit ironridge.com

Substructure

Top Caps

Connect vertical and cross pipes.

Bonded Rail Connectors

Attach and bond Rail Assembly to cross pipes.

Diagonal Braces

Optional Brace provides additional support.

Cross Pipe & Piers

Steel pipes or mechanical tubing for substructure.

Rail Assembly

XR100/XR1000 Rails

Curved rails increase spanning capabilities.

UFOs

Universal Fastening Objects bond modules to rails.

Stopper Sleeves

Snap onto the UFO to turn into a bonded end clamp.

CAMO

Bond modules to rails while staying completely hidden.

Resources

Design Assistant
Go from rough layout to fully engineered system. For free.
Go to ironridge.com/design

NABCEP Certified Training
Earn free continuing education credits, while learning more about our systems.
Go to ironridge.com/training

Notes for Tables 1 & 2:

1. Shaded region denotes the requirement of (3) three XR100 rails.
2. Cross pipe splices not permitted in outer 2/3 of end spans, or the middle 1/3 of interior spans based on the installed attachment spacing ($L_{install}$). See Figure A
3. End cantilever span of pipe rails (max) = 0.40 x maximum span (L_{max}) from above tables. See Figure A
4. When installations occur on a N-S grade, the design slope of the array shall be determined as the slope relative to level ground. Code required topographic effects have not been considered. Topographic (Wind) Factor = 1.0 (no topographic effects)
5. Dead Load (Weight) = 3 psf
6. Maximum PV Module Dimension = 80" (1A – 2C)
   86" (1D – 2F)
   92.5" (1G – 2I)

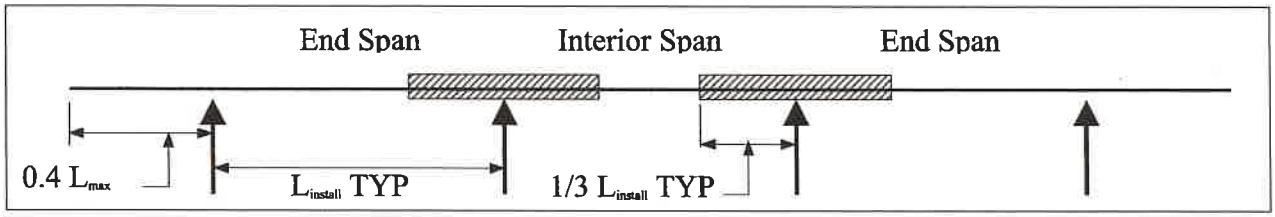


Figure A

L_{max} = Maximum pier spacing provided in the tables above for the project design criteria

$L_{install}$ = Actual installed pier spacing

= Indicates region of the pipe rail where splice may be installed

To avoid potential problems from the effects of thermal expansion, a maximum total continuous cross pipe length of 100 ft is recommended.

Notes for CAMO module clamp installation:

1. Single module installation ("orphan modules") shall not be permitted with the ground mount system when CAMO clamp is used. Reference Figure 1 on following page for "Orphan Module" installation.

2. CAMO clamps will function within a module's design load ratings. Be sure the specific module being used with the CAMO clamp meets the dimensional requirements shown in Figure 2 on the following page, is a module listed in IronRidge's installation manual, and that the module selected is suitable for the environmental conditions of a particular project.

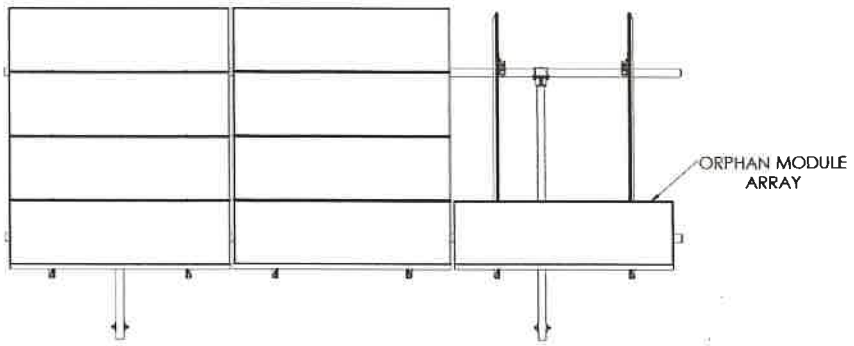


Figure 1: Orphan Module Installation

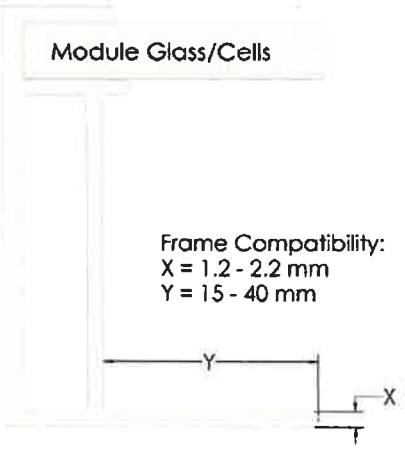


Figure 2: CAMO Clamp Module Frame Dimensional Requirements

Foundation Requirements

The 2" and 3" Schedule 40 pipe frame shall be utilized with either the American Ground Screw products or Krinner North America products. The approved American Ground Screw products shall either be the Model 3 76mm system or the 102mm system and the approved Krinner North America products shall either be the KSF G76 system or the KSF G114 system. The ground screws have been tested for the use in soil class 4 and 5 conditions where the lesser capacity values were used for the analysis. The tables are based on the piers being installed at their maximum allowable spacing. For spacing values less than maximum and for loads cases with snow > 0 psf, the requirements can be determined by using the online Design Assistant at IronRidge.com.

Ground Screw Notes:

1. 2" Schedule 40 Pipe Compatible with:

	American Ground Screw Model 3 76mm x 3(+)mm	Krinner North America KSF G76
Screw Diameter:	2.99"	2.99"
Sleeve Diameter:	2.375"	2.375"
Minimum Screw Length:	51" or 63"	51" or 63"

2. 3" Schedule 40 Pipe Compatible with:

	American Ground Screw Model 3 102mm x 3.75(+)mm	Krinner North America KSF G114
Screw Diameter:	4.016"	4.488"
Sleeve Diameter:	3.5"	3.5"
Minimum Screw Length:	63"	63"

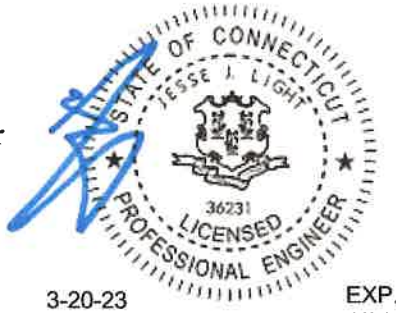
3. Tested Soil Class 4 Soil Properties: Friction Angle = 28-32 (deg), Total Unit Weight = 120-130pcf
4. Tested Soil Class 5 Soil Properties: Cohesion = 1000-2000psf, Total Unit Weight = 120-130pcf
5. Snow Load = 0 psf – tabulated values are conservative for Snow Loads > 0 psf
6. Soil classification is to be determined and verified by the end user of this certification letter.

The analysis assumes that the array, including the connections and associated hardware, are installed in a workmanlike manner in accordance with the IronRidge Ground Mount Installation Manual, the American Ground Screw Installation Manual, the Krinner Foundations Systems Installation Manual, and generally accepted standards of construction practice. Verification of PV Module capacity to support the loads associated with the given array shall be the responsibility of the Contractor or Owner and not IronRidge or Starling Madison Lofquist.

Please feel free to contact me at your convenience if you have any questions.

Respectfully yours,

Jesse Light, P.E.
Principal / Sr. Structural Engineer



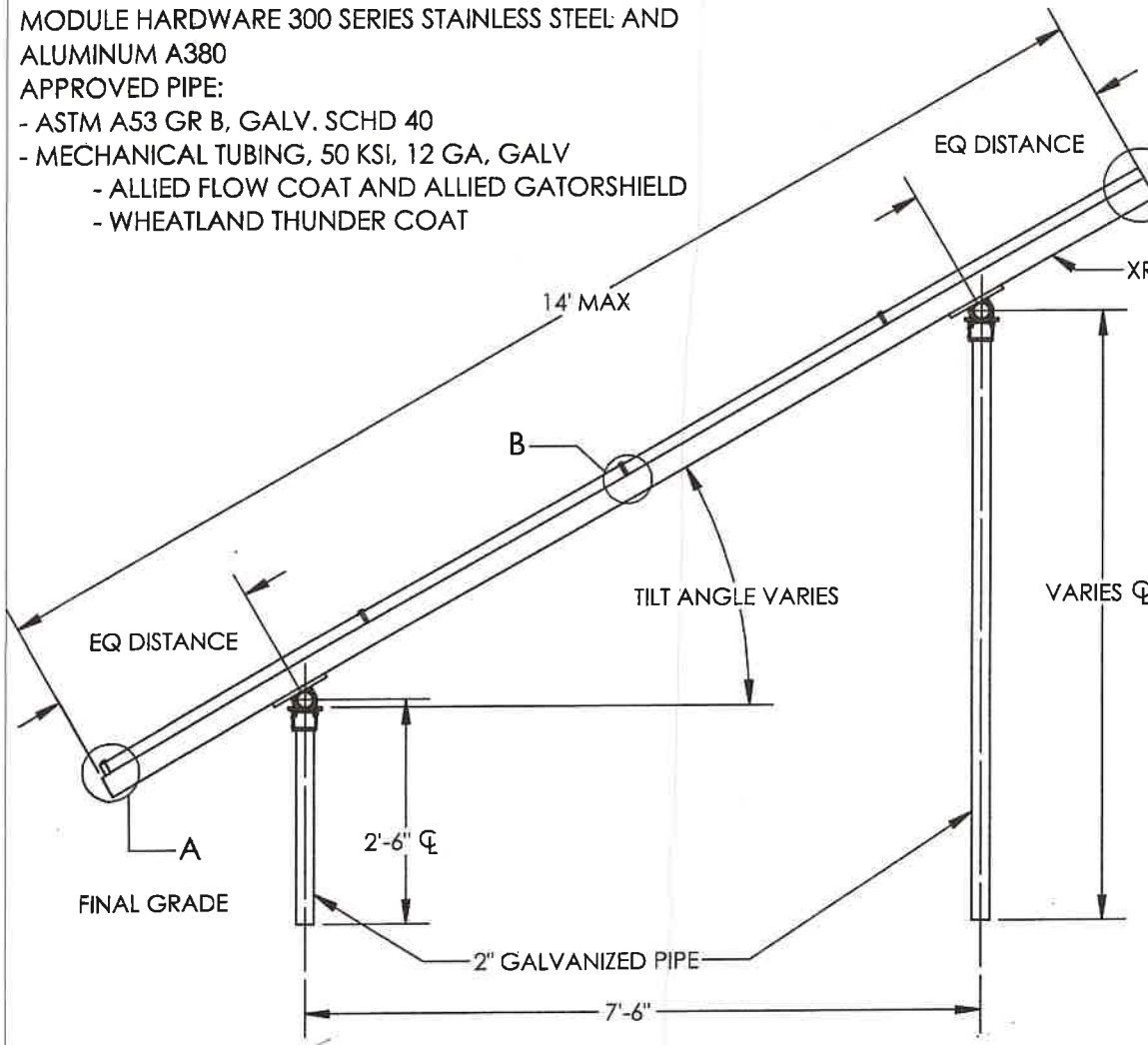
3-20-23 EXP. 1/31/24

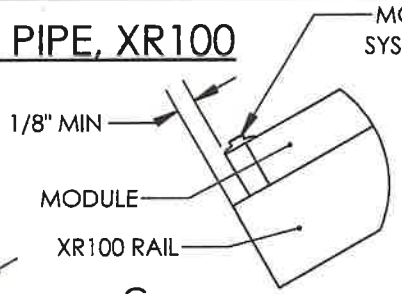
EXHIBIT: EX-0020

4 MODULE ROWS, 2" PIPE, XR100

4/19/2021

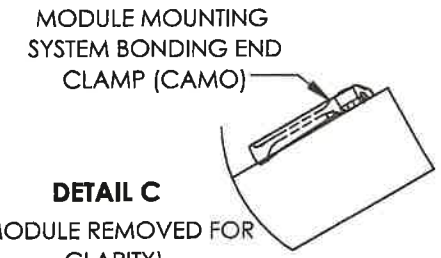
DESIGN CRITERIA & MATERIAL SPECIFICATIONS:
PER ASCE 7-10 AND ASCE 7-16/WIND LOADING
MAXIMUM MODULE WEIGHT IS 3 psf
ALUMINUM XR1000 RAIL
MODULE HARDWARE 300 SERIES STAINLESS STEEL AND ALUMINUM A380
APPROVED PIPE:
- ASTM A53 GR B, GALV. SCHD 40
- MECHANICAL TUBING, 50 KSI, 12 GA, GALV
  - ALLIED FLOW COAT AND ALLIED GATORSHIELD
  - WHEATLAND THUNDER COAT



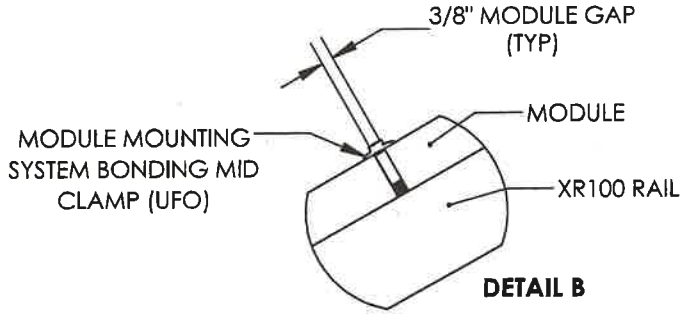


DETAIL A

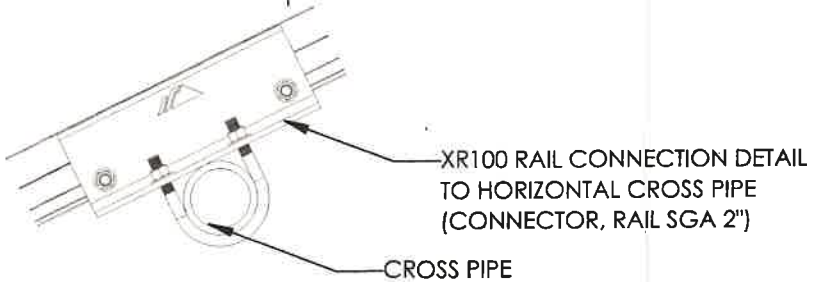
OR



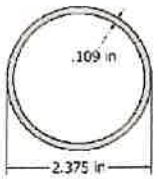
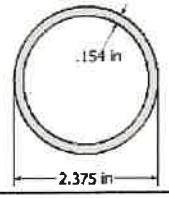
DETAIL C
(MODULE REMOVED FOR CLARITY)



DETAIL B



APPROVED 2" PIPE

MECHANICAL TUBING - 50 ksi YIELD STRENGTH - GALVANIZED (ALLIED FLOCOAT, ALLIED GATORSHIELD, OR WHEATLAND THUNDER COAT) TOP CAP SET SCREW INSTALL TORQUE: 11 ft*lbs	**MECH. TUBING, 12 GA** 
- ASTM A53 GR B - 35 ksi YIELD STRENGTH - HOT DIPPED GALVANIZED TOP CAP SET SCREW INSTALL TORQUE: 20 ft*lbs	**SCHD. 40 PIPE** 

DRAWN	TC	10/16/2018
CHECKED	–	–
ENG APPR.	–	–
MFG APPR.	–	–
Q.A.	–	–

DIMENSIONS ARE IN INCHES
TOLERANCES:
.XX: +/- .030
XXX: +/- .010
ANGLES: +/- 1°

IRONRIDGE

GROUND MOUNT SYSTEM 2" PIER, 4 SOLAR MODULE ROWS

SIZE	DWG. NO.	REV.
A	EX-0020	A

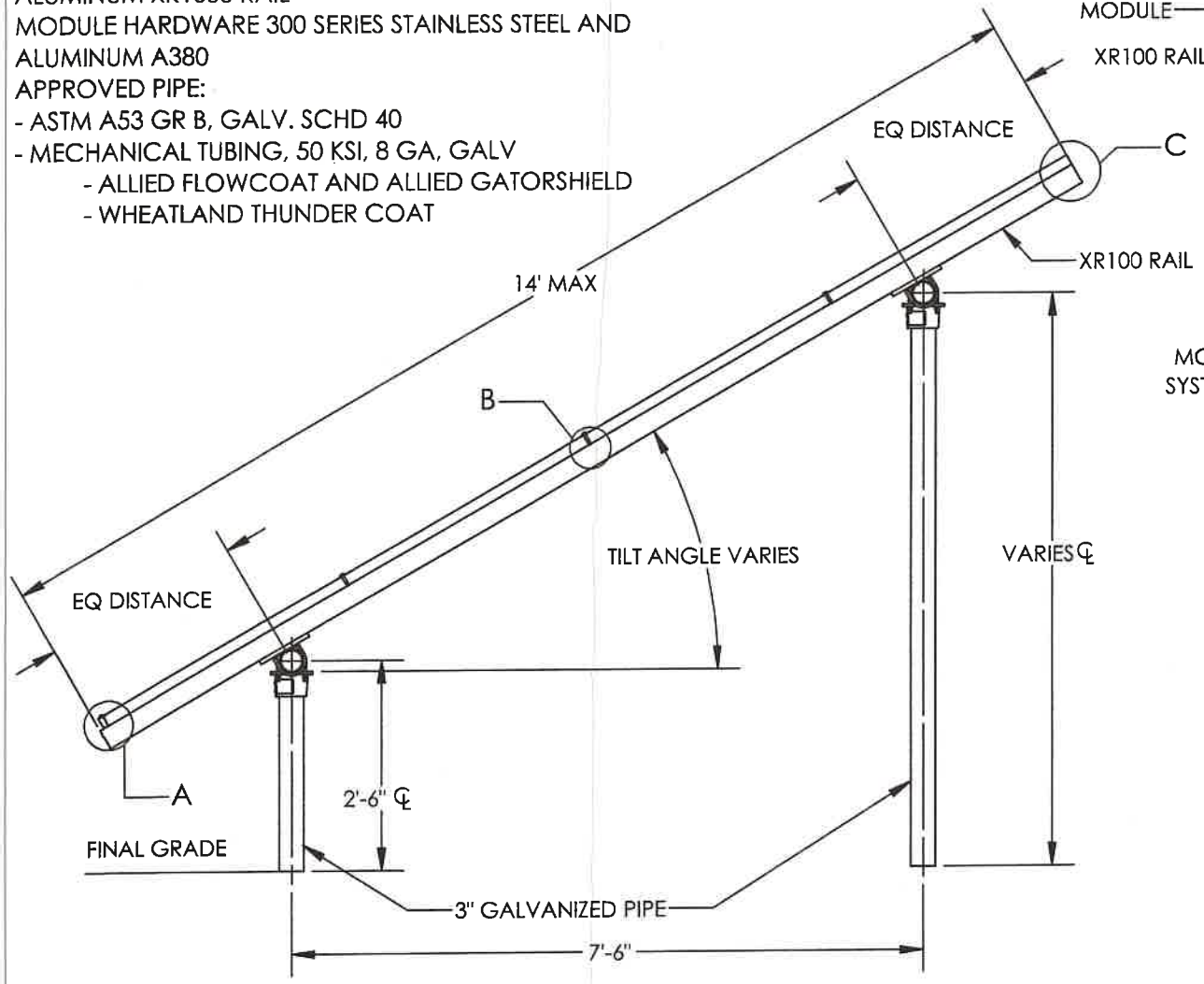
SCALE: 1:25 | WEIGHT: | SHEET 1 OF 6

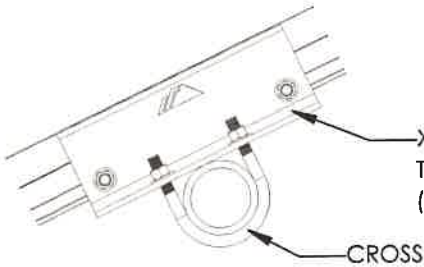
EXHIBIT: EX-0020

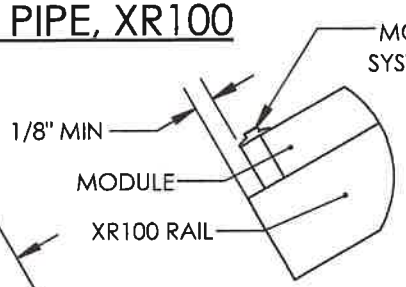
4 MODULE ROWS, 3" PIPE, XR100

4/19/2021

DESIGN CRITERIA & MATERIAL SPECIFICATIONS:
PER ASCE 7-10 AND ASCE 7-16/WIND LOADING
MAXIMUM MODULE WEIGHT IS 3 psf
ALUMINUM XR1000 RAIL
MODULE HARDWARE 300 SERIES STAINLESS STEEL AND ALUMINUM A380
APPROVED PIPE:
- ASTM A53 GR B, GALV. SCHD 40
- MECHANICAL TUBING, 50 KSI, 8 GA, GALV
  - ALLIED FLOWCOAT AND ALLIED GATORSHIELD
  - WHEATLAND THUNDER COAT



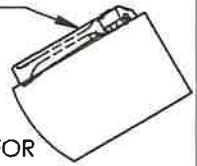




DETAIL A

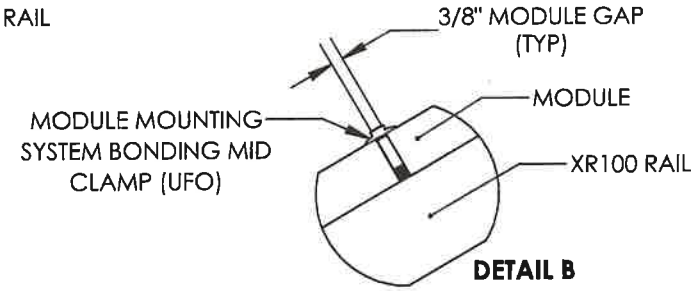
OR

MODULE MOUNTING SYSTEM BONDING END CLAMP (CAMO)

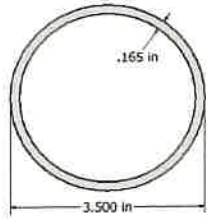
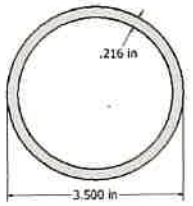


DETAIL C

(MODULE REMOVED FOR CLARITY)



DETAIL B

APPROVED 3" PIPE	
MECHANICAL TUBING - 45 ksi YIELD STRENGTH - GALVANIZED (ALLIED FLOCOAT, ALLIED GATORSHIELD, OR WHEATLAND THUNDER COAT) TOP CAP SET SCREW INSTALL TORQUE: 16 ft*lbs	**MECH. TUBING, 8 GA** 
- ASTM A53 GR B - 35 ksi YIELD STRENGTH - HOT DIPPED GALVANIZED TOP CAP SET SCREW INSTALL TORQUE: 20 ft*lbs	**SCHD. 40 PIPE** 

IRONRIDGE

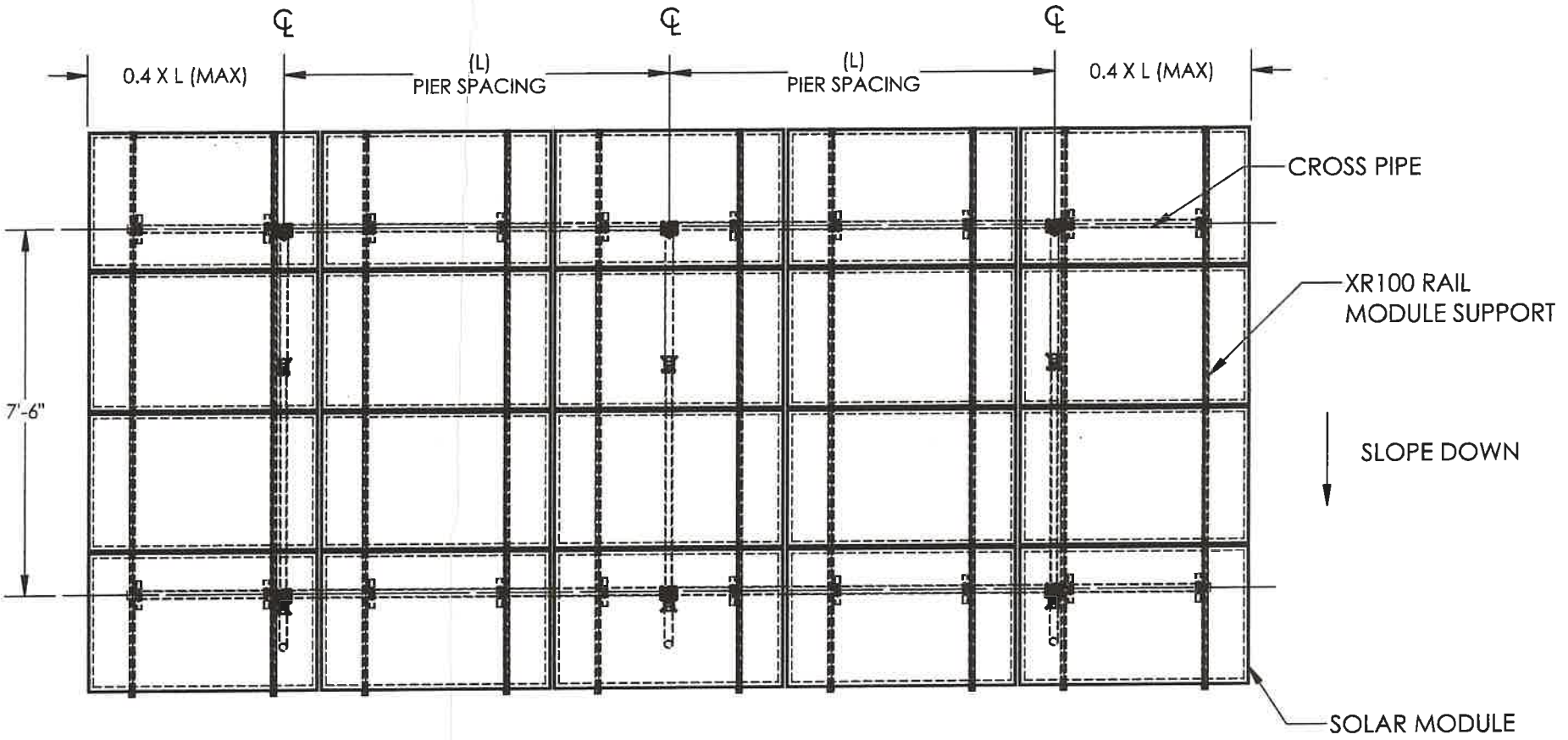
GROUND MOUNT SYSTEM 3" PIER, 4 SOLAR MODULE ROWS

SIZE	DWG. NO	REV.
A	EX-0020	A
SCALE: 1:35	WEIGHT:	SHEET 2 OF 6

EXHIBIT: EX-0020

4/19/2021

PLAN VIEW (6 PIER LAYOUT SHOWN)



IRONRIDGE

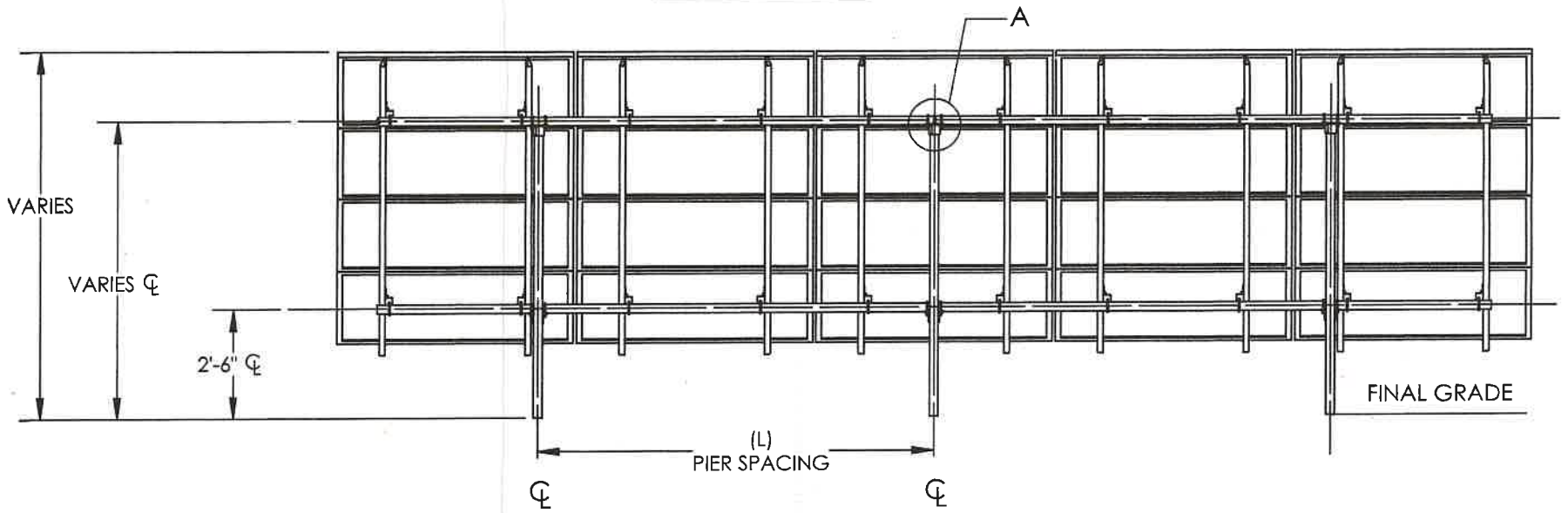
GROUND MOUNT SYSTEM, 4 SOLAR MODULE ROWS

SIZE	DWG NO	REV
A	EX-0020	A
SCALE:1:25	WEIGHT:	SHEET 3 OF 6

EXHIBIT: EX-0020

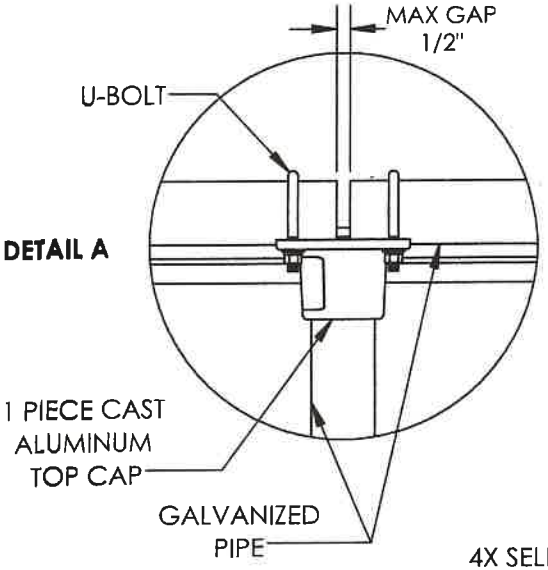
4/19/2021

NORTH VIEW



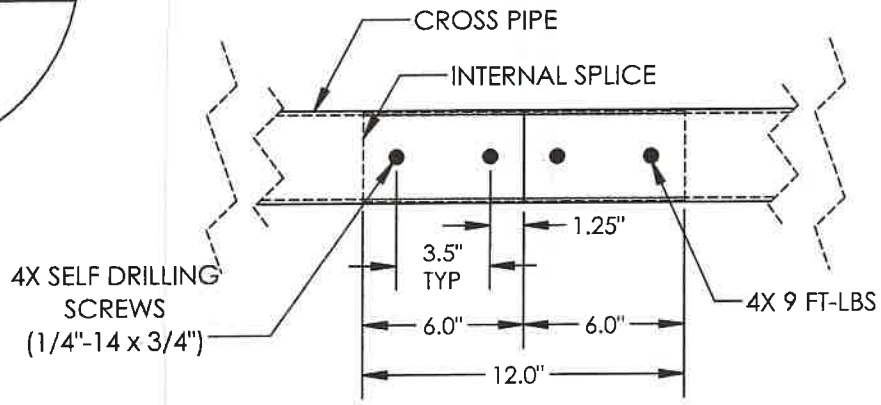
SPLICING CROSS PIPE

MECHANICAL TUBING (ALLIED OR WHEATLAND), OR SCH. 40 PIPE SPLICE

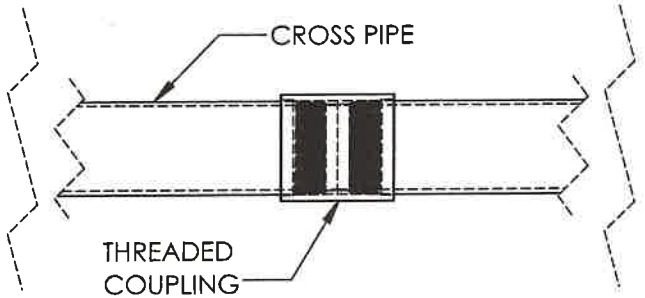


Mechanical Tube Size of the Structure	Splice Tube Size
2.375" OD, 12 Gauge	2.000" OD, 9 Gauge, Minimum 12" Long
3.500" OD, 8 Gauge	3.000" OD, 12 Gauge, Minimum 12" Long

MECHANICAL TUBE SPLICE



SCH. 40 PIPE SPLICE



IRONRIDGE

GROUND MOUNT SYSTEM, 4 SOLAR MODULE ROWS

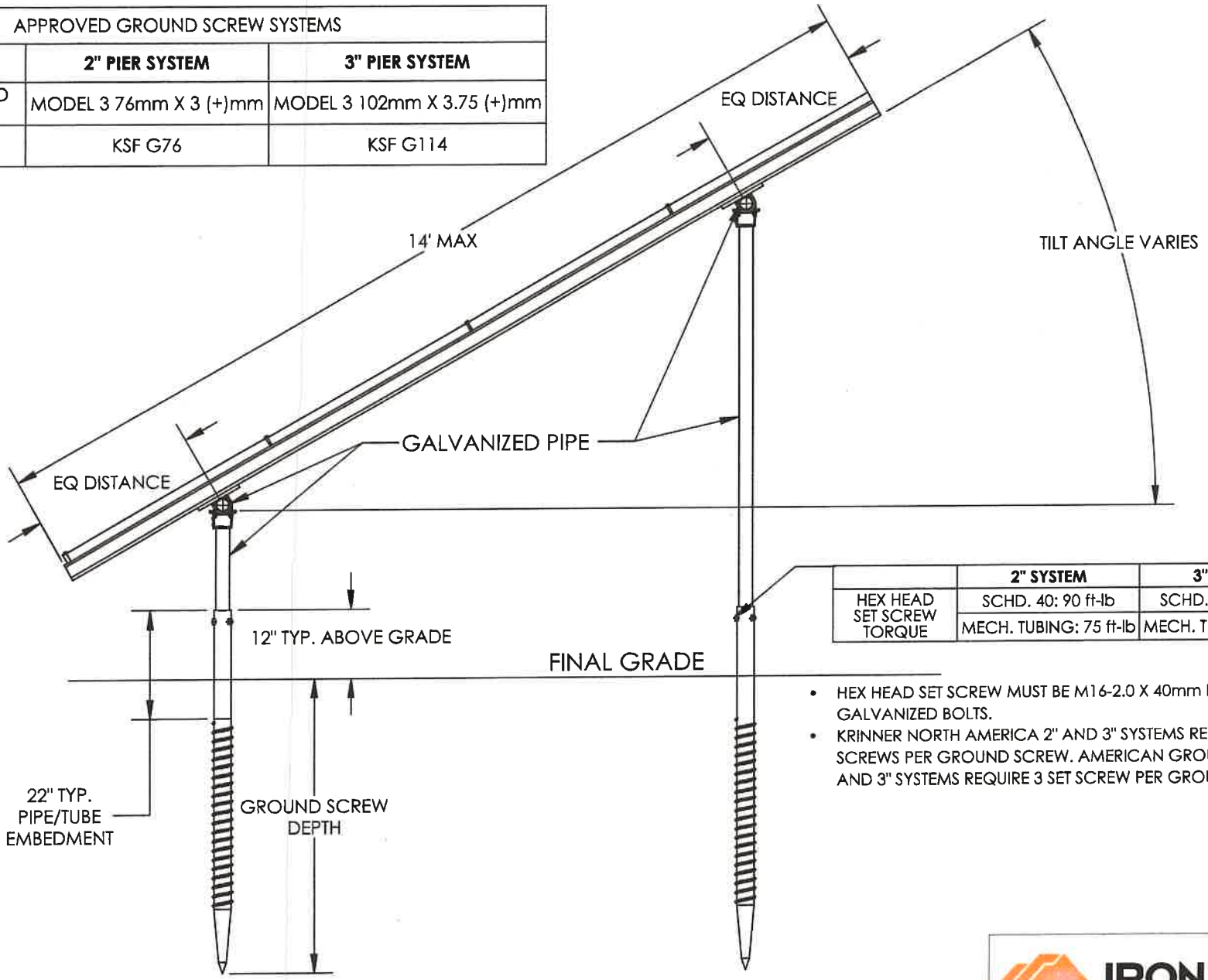
SIZE	DWG. NO.	REV.
A	EX-0020	A
SCALE: 1:25	WEIGHT:	SHEET 4 OF 6

EXHIBIT: EX-0020

GROUND SCREW FOUNDATION DETAILS

4/19/2021

APPROVED GROUND SCREW SYSTEMS		
MANUFACTURER	**2" PIER SYSTEM**	**3" PIER SYSTEM**
AMERICAN GROUND SCREW	MODEL 3 76mm X 3 (+)mm	MODEL 3 102mm X 3.75 (+)mm
KRINNER NORTH AMERICA	KSF G76	KSF G114



	2" SYSTEM	**3" SYSTEM**
HEX HEAD SET SCREW TORQUE	SCHD. 40: 90 ft-lb	SCHD. 40: 120 ft-lb
	MECH. TUBING: 75 ft-lb	MECH. TUBING: 90 ft-lb

- HEX HEAD SET SCREW MUST BE M16-2.0 X 40mm HOT-DIP GALVANIZED BOLTS.
- KRINNER NORTH AMERICA 2" AND 3" SYSTEMS REQUIRE 4 SET SCREWS PER GROUND SCREW. AMERICAN GROUND SCREW 2" AND 3" SYSTEMS REQUIRE 3 SET SCREW PER GROUND SCREW.

NOTE:
THE ATTACHED SPAN TABLES ARE BASED ON USING A DRILLED GROUND SCREW FOUNDATION SYSTEM. OTHER FOUNDATION SYSTEMS (EG. HELICAL PILES, DRIVEN PIERS) ARE PERMISSIBLE BUT MAY REQUIRE ADDITIONAL BRACING AND/OR REDUCED SPAN.
PLEASE CONTACT IRONRIDGE FOR MORE INFORMATION.

IRONRIDGE

GROUND MOUNT SYSTEM, 4 SOLAR MODULE ROWS

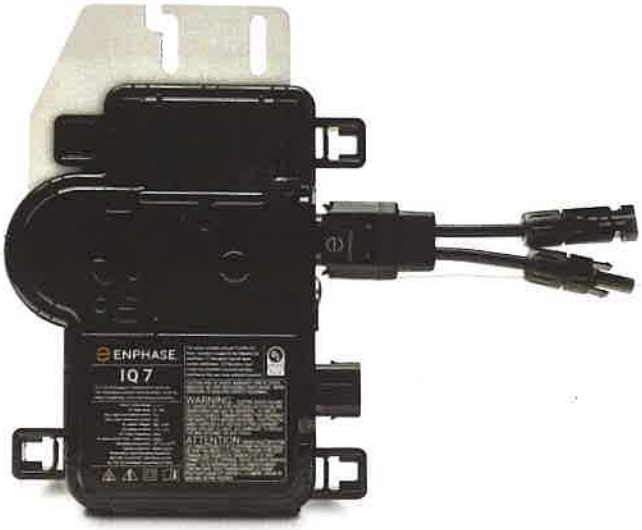
SIZE	DWG. NO	REV.
A	EX-0020	A
SCALE: 1:25	WEIGHT:	SHEET 4 OF 6

Enphase IQ 7 and IQ 7+ Microinverters

The high-powered smart grid-ready Enphase IQ 7 Micro™ and Enphase IQ 7+ Micro™ dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7 and IQ 7+ Microinverters integrate with the Enphase IQ Envoy™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analysis software.

IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.



Easy to Install

- Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014 & 2017)

Productive and Reliable

- Optimized for high powered 60-cell/120 half-cell and 72-cell/144 half-cell* modules
- More than a million hours of testing
- Class II double-insulated enclosure
- UL listed

Smart Grid Ready

- Complies with advanced grid support, voltage and frequency ride-through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (UL 1741-SA)

* The IQ 7+ Micro is required to support 72-cell/144 half-cell modules.

UL CERTIFIED

To learn more about Enphase offerings, visit **enphase.com**

ENPHASE

Enphase IQ 7 and IQ 7+ Microinverters

INPUT DATA (DC)	IQ7-60-2-US	IQ7PLUS-72-2-US
Commonly used module pairings[1]	235 W - 350 W +	235 W - 440 W +
Module compatibility	60-cell/120 half-cell PV modules only	60-cell/120 half-cell and 72-cell/144 half-cell PV modules
Maximum input DC voltage	48 V	60 V
Peak power tracking voltage	27 V - 37 V	27 V - 45 V
Operating range	16 V - 48 V	16 V - 60 V
Min/Max start voltage	22 V / 48 V	22 V / 60 V
Max DC short circuit current (module Isc)	15 A	15 A
Overvoltage class DC port	II	II
DC port backfeed current	0 A	0 A
PV array configuration	1 x 1 ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit	

OUTPUT DATA (AC)	IQ 7 Microinverter		IQ 7+ Microinverter	
Peak output power	250 VA		295 VA	
Maximum continuous output power	240 VA		290 VA	
Nominal (L-L) voltage/range[2]	240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V	208 V / 183-229 V
Maximum continuous output current	1.0 A (240 V)	1.15 A (208 V)	1.21 A (240 V)	1.39 A (208 V)
Nominal frequency	60 Hz		60 Hz	
Extended frequency range	47 - 68 Hz		47 - 68 Hz	
AC short circuit fault current over 3 cycles	5.8 Arms		5.8 Arms	
Maximum units per 20 A (L-L) branch circuit[3]	16 (240 VAC)	13 (208 VAC)	13 (240 VAC)	11 (208 VAC)
Overvoltage class AC port	III		III	
AC port backfeed current	18 mA		18 mA	
Power factor setting	1.0		1.0	
Power factor (adjustable)	0.85 leading ... 0.85 lagging		0.85 leading ... 0.85 lagging	

EFFICIENCY	@240 V	@208 V	@240 V	@208 V
Peak efficiency	97.6 %	97.6 %	97.5 %	97.3 %
CEC weighted efficiency	97.0 %	97.0 %	97.0 %	97.0 %

MECHANICAL DATA	
Ambient temperature range	-40°C to +65°C
Relative humidity range	4% to 100% (condensing)
Connector type	MC4 (or Amphenol H4 UTX with additional Q-DCC-5 adapter)
Dimensions (HxWxD)	212 mm x 175 mm x 30.2 mm (without bracket)
Weight	1.08 kg (2.38 lbs)
Cooling	Natural convection - No fans
Approved for wet locations	Yes
Pollution degree	PD3
Enclosure	Class II double-insulated, corrosion resistant polymeric enclosure
Environmental category / UV exposure rating	NEMA Type 6 / outdoor

FEATURES	
Communication	Power Line Communication (PLC)
Monitoring	Enlighten Manager and MyEnlighten monitoring options. Both options require installation of an Enphase IQ Envoy.
Disconnecting means	The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690.
Compliance	CA Rule 21 (UL 1741-SA) UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer's instructions.

1. No enforced DC/AC ratio. See the compatibility calculator at https://enphase.com/en-us/support/module-compatibility.
2. Nominal voltage range can be extended beyond nominal if required by the utility.
3. Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

To learn more about Enphase offerings, visit **enphase.com**

ENPHASE

Enphase IQ 7 and IQ 7+ Microinverters

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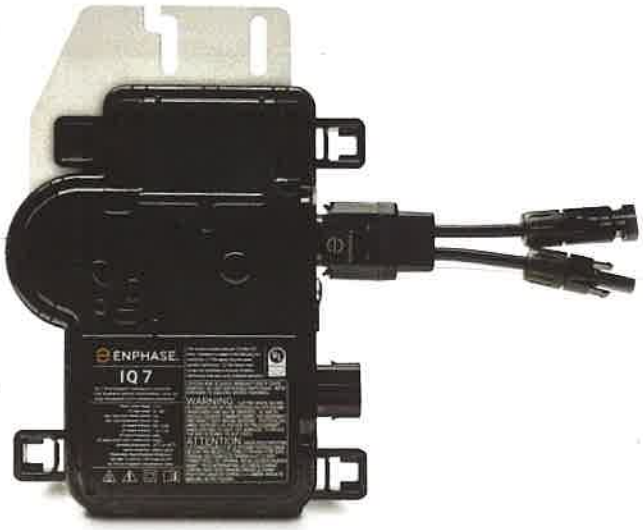

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UL CERTIFIED

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ENPHASE

Enphase IQ 7 and IQ 7+ Microinverters

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Maximum input DC voltage	48 V	60 V
Peak power tracking voltage	27 V - 37 V	27 V - 45 V
Operating range	16 V - 48 V	16 V - 60 V
Min/Max start voltage	22 V / 48 V	22 V / 60 V
Max DC short circuit current (module Isc)	15 A	15 A
Overvoltage class DC port	II	II
DC port backfeed current	0 A	0 A
PV array configuration	1 x 1 ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit	

OUTPUT DATA (AC)	IQ 7 Microinverter		IQ 7+ Microinverter	
Peak output power	250 VA		295 VA	
Maximum continuous output power	240 VA		290 VA	
Nominal (L-L) voltage/range[2]	240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V	208 V / 183-229 V
Maximum continuous output current	1.0 A (240 V)	1.15 A (208 V)	1.21 A (240 V)	1.39 A (208 V)
Nominal frequency	60 Hz		60 Hz	
Extended frequency range	47 - 68 Hz		47 - 68 Hz	
AC short circuit fault current over 3 cycles	5.8 Arms		5.8 Arms	
Maximum units per 20 A (L-L) branch circuit[3]	16 (240 VAC)	13 (208 VAC)	13 (240 VAC)	11 (208 VAC)
Overvoltage class AC port	III		III	
AC port backfeed current	18 mA		18 mA	
Power factor setting	1.0		1.0	
Power factor (adjustable)	0.85 leading ... 0.85 lagging		0.85 leading ... 0.85 lagging	

EFFICIENCY	@240 V	@208 V	@240 V	@208 V
Peak efficiency	97.6 %	97.6 %	97.5 %	97.3 %
CEC weighted efficiency	97.0 %	97.0 %	97.0 %	97.0 %

MECHANICAL DATA	
Ambient temperature range	-40°C to +65°C
Relative humidity range	4% to 100% (condensing)
Connector type	MC4 (or Amphenol H4 UTX with additional Q-DCC-5 adapter)
Dimensions (HxWxD)	212 mm x 175 mm x 30.2 mm (without bracket)
Weight	1.08 kg (2.38 lbs)
Cooling	Natural convection - No fans
Approved for wet locations	Yes
Pollution degree	PD3
Enclosure	Class II double-insulated, corrosion resistant polymeric enclosure
Environmental category / UV exposure rating	NEMA Type 6 / outdoor

FEATURES	
Communication	Power Line Communication (PLC)
Monitoring	Enlighten Manager and MyEnlighten monitoring options. Both options require installation of an Enphase IQ Envoy.
Disconnecting means	The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690.
Compliance	CA Rule 21 (UL 1741-SA) UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01 This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC 2014, NEC 2017, and NEC 2020 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer's instructions.

1. No enforced DC/AC ratio. See the compatibility calculator at https://enphase.com/en-us/support/module-compatibility.
2. Nominal voltage range can be extended beyond nominal if required by the utility.
3. Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

To learn more about Enphase offerings, visit **enphase.com**

ENPHASE

Hi-MO 5

LR5-54HABB
390~415M

- Suitable for distributed projects
- Advanced module technology delivers superior module efficiency
  - M10 Gallium-doped Wafer
  - Integrated Segmented Ribbons
  - 9-busbar Half-cut Cell
- Globally validated bifacial energy yield
- High module quality ensures long-term reliability

25 25-year Warranty for Materials and Processing

30 30-year Warranty for Extra Linear Power Output

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730
ISO9001:2015: ISO Quality Management System
ISO14001: 2015: ISO Environment Management System
ISO45001: 2018: Occupational Health and Safety
IEC62941: Guideline for module design qualification and type approval

LONGi

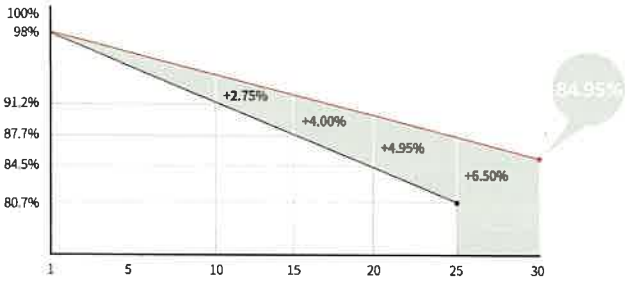
Hi-MO 5

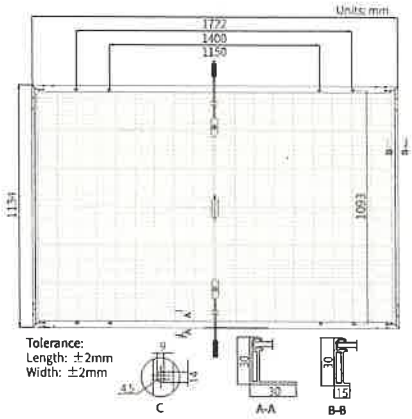
LR5-54HABB 390~415M

21.3%	0~3%	<2%	0.45%	HALF-CELL
MAX MODULE EFFICIENCY	POWER TOLERANCE	FIRST YEAR POWER DEGRADATION	YEAR 2-30 POWER DEGRADATION	Lower operating temperature

Additional Value

30-Year Power Warranty





Mechanical Parameters

Cell Orientation	108 (6×18)
Junction Box	IP68, three diodes
Output Cable	4mm², ±1200mm length can be customized
Glass	Dual glass, 2.0+1.6mm heat strengthened glass
Frame	Anodized aluminum alloy frame
Weight	22.5kg
Dimension	1722×1134×30mm
Packaging	36pcs per pallet / 216pcs per 20' GP / 936pcs or 792pcs(Only for USA) per 40' HC

Electrical Characteristics

STC : AM1.5 1000W/m² 25°C NOCT : AM1.5 800W/m² 20°C 1m/s Test uncertainty for Pmax: ±3%

Module Type	LR5-54HABB-390M		LR5-54HABB-395M		LR5-54HABB-400M		LR5-54HABB-405M		LR5-54HABB-410M		LR5-54HABB-415M	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	390	291.5	395	295.2	400	299.0	405	302.7	410	306.5	415	310.2
Open Circuit Voltage (Voc/V)	36.58	34.39	36.81	34.61	37.05	34.84	37.29	35.06	37.53	35.29	37.77	35.51
Short Circuit Current (Isc/A)	13.57	10.95	13.65	11.01	13.72	11.07	13.79	11.13	13.87	11.19	13.94	11.25
Voltage at Maximum Power (Vmp/V)	30.47	28.43	30.70	28.64	30.94	28.86	31.18	29.09	31.42	29.31	31.66	29.54
Current at Maximum Power (Imp/A)	12.80	10.26	12.87	10.31	12.93	10.36	12.99	10.41	13.05	10.45	13.11	10.50
Module Efficiency(%)	20.0		20.2		20.5		20.7		21.0		21.3	

Electrical characteristics with different rear side power gain (reference to 400W front)

Pmax /W	Voc/V	Isc /A	Vmp/V	Imp /A	Pmax gain
420	37.05	14.41	30.94	13.58	5%
440	37.05	15.09	30.94	14.22	10%
460	37.15	15.78	31.04	14.87	15%
480	37.15	16.46	31.04	15.52	20%
500	37.15	17.15	31.04	16.16	25%

Operating Parameters

Operational Temperature	-40°C ~ +85°C
Power Output Tolerance	0 ~ 3%
Voc and Isc Tolerance	±3%
Maximum System Voltage	DC1500V (IEC/UL)
Maximum Series Fuse Rating	30A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Bifaciality	70±5%
Fire Rating	UL Similar type 38 * IEC Class C

*Reference Standard: UL61730 Second Edition, Dated October 28, 2022

Mechanical Loading

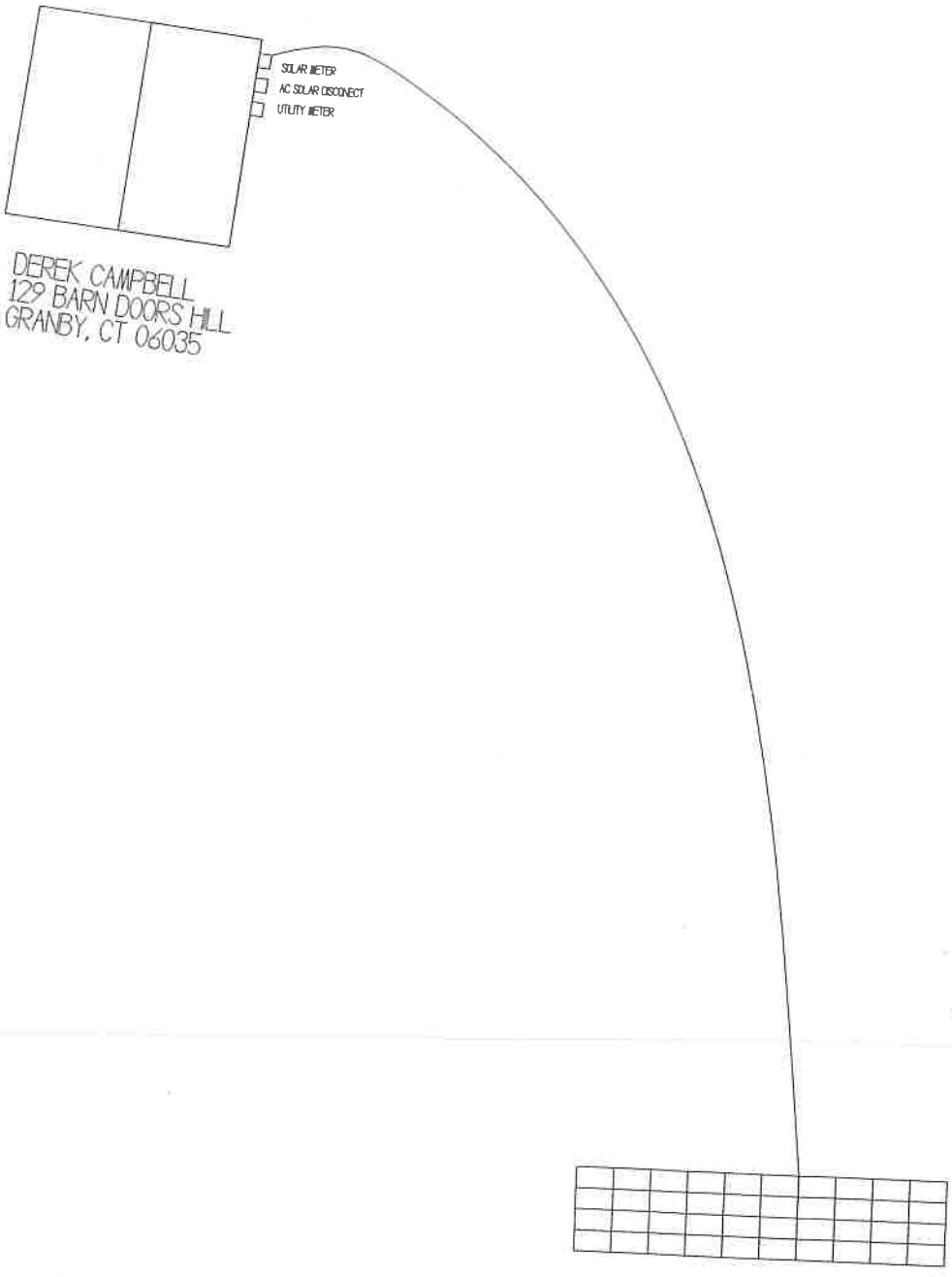
Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

Temperature Ratings (STC)

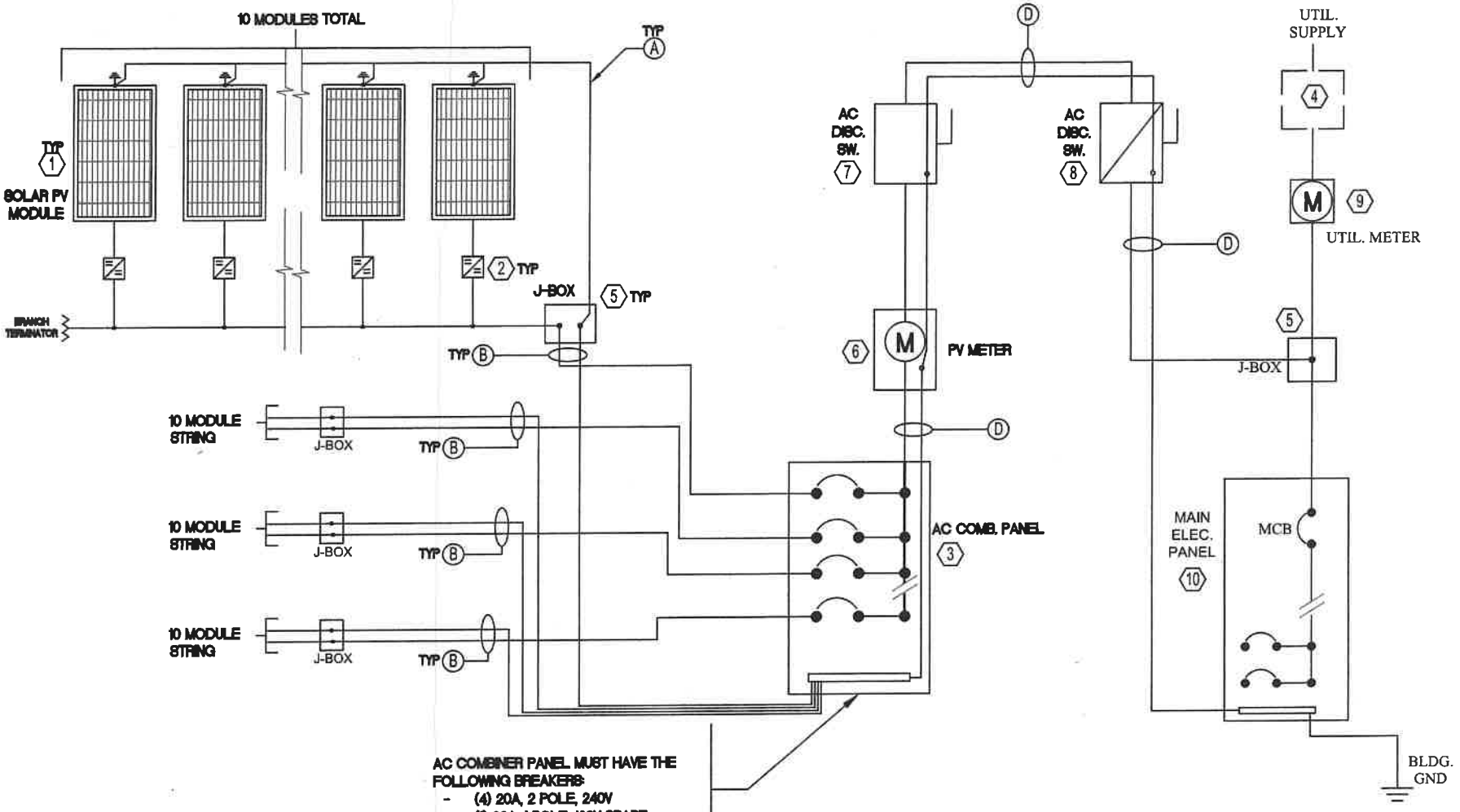
Temperature Coefficient of Isc	+0.050%/°C
Temperature Coefficient of Voc	-0.265%/°C
Temperature Coefficient of Pmax	-0.340%/°C

LONGi

No.8369 Shangyuan Road, Xi'an Economic And Technological Development Zone, Xi'an, Shaanxi, China.
Web: www.longi.com



DEREK CAMPBELL
129 BARN DOORS HILL
GRANBY, CT 06035



ryan soames engineering
49 W. 45TH STREET
New York, NY 10036
Tel: 917-720-3696

Utility Account #: –			
Meter #: –			
Project Title: 129 BARN DOORS HILL ROAD, GRANBY, CT 06035			
Drawing Title: GRID TIED PHOTOVOLTAIC SYSTEM			
By: PS	Date: 07/17/2024	Scale: NTS	Sketch No.: PV-001

EQUIPMENT SCHEDULE

TAG	COMPONENT	TYPE	DESCRIPTION
1	LONGI	LR5 395W	40 MODULES (SEE MODULE RATING BELOW)
2	ENPHASE IQ7+	IQ7+	40 INVERTERS (SEE INVERTER RATINGS BELOW)
3	AC COMBINER PANEL	DETERMINED BY INSTALLER	100 A MIN BUS SIZE REQUIRED (SEE TECHNICAL NOTES #3)
4	UTILITY POWER SUPPLY	EXISTING	-
5	JUNCTION BOX	DETERMINED BY INSTALLER	SHOULD BE NEMA 3R FOR OUTDOOR INSTALLATIONS
6	PV METER	EVERSOURCE METER	NETTING METER CONFIGURATION PROVIDED BY EVERSOURCE
7	UNFUSED AC DISCONNECT SWITCH	DETERMINED BY INSTALLER	100AS, 240V, 1ϕ UNFUSED
8	FUSED AC DISCONNECT SWITCH	DETERMINED BY INSTALLER	100AS/50AF, 240V, 1ϕ FUSED
9	UTILITY METER	EXISTING	-
10	MAIN DISTRIBUTION PANEL	EXISTING	MAIN ELEC PANEL 400 A, 120/240V, 1ϕ

CONDUCTOR SCHEDULE & AMPACITY CALCULATIONS

TAG	DESCRIPTION OR CONDUCTOR TYPE	CONTINUOUS CURRENT	CONTINUOUS CURRENT X 125%	WIRE SIZE	WIRE QTY	DE-RATED WIRE AMPACITY	COMMENTS
Ⓐ	BARE COPPER EGC	-	-	10 AWG	1	30 A	-
Ⓑ	INSTALLER DETERMINED DC WIRE	12.1 A	15.2 A	10 AWG	2	30 A	-
	INSULATED EGC/GEC	-	-	10 AWG	1	30 A	
Ⓒ	INSTALLER DETERMINED AC WIRE	-	-	-	-	-	INVERTERS OUTPUT
	INSULATED EGC/GEC	-	-	-	-	-	
Ⓓ	INSTALLER DETERMINED AC WIRE	48.5 A	60.5 A	4 AWG	2	70 A	SIZED AS SERVICE ENTRANCE CONDUCTORS (SEE NOTE #6)
	INSULATED EGC/GEC	-	-	10 AWG	1	100 A	"DO NOT TAP" RESTRICTIONS REQUIRED (SEE NOTE #5) 1 SET OF (2#6 AWG + 1#10 AWG GND IN 1-1/4" CONDUIT)

PV MODULE RATINGS @ STC

MANUFACTURER	LONGI
MODEL	LR5 395W
MAX POWER-POINT CURRENT (Imp)	12.87 A
MAX POWER-POINT VOLTAGE (Vmp)	30.7 V
OPEN CIRCUIT VOLTAGE (Voc)	36.8 V
SHORT CIRCUIT CURRENT (Isc)	13.7 A
MAX SERIES FUSE (OCPD)	30 A
MAX POWER (Pmax)	395 W
MAX POWER (PTC)	360.1 W
Voc TEMPERATURE COEFFICIENT	-0.265% PER ℃

INVERTER RATINGS

MANUFACTURER	ENPHASE
MODEL	IQ7+
QUANTITY	40
CEC EFFICIENCY RATING	97.5 %
MAX DC VOLTAGE RATING	22 / 60 V
NOMINAL AC VOLTAGE	240 V
MPPT VOLTAGE WINDOW	60 V
MAX AC CURRENT	1.21 A
INTEGRATED DC DISCONNECT	NO
INTEGRATED AC DISCONNECT	NO

SYSTEM SUMMARY

SYSTEM SIZE DC STC (W)	15,800 W
SYSTEM SIZE AC (W)	11,800 W
# OF PARALLEL CIRCUITS	4
TOTAL MODULE QUANTITY	40

TECHNICAL NOTES

1. CIRCUIT BREAKERS WITHOUT "LINE" & "LOAD" MARKINGS ARE GENERALLY APPROPRIATE FOR BACKFED APPLICATIONS AS PER NEC 690.64(B)(5).
2. MODULE WIRING AMPACITY BASED ON CONDUCTOR IN FREE AIR AS PER NEC TABLE 310.17.
3. MINIMUM BUS OR CONDUCTOR SIZE BASED ON SUM OF RATINGS OF ALL SOURCE OVER-CURRENT DEVICES AS PER NEC 690.64(B)(2).
4. PV BACKFED BREAKER IN CLIENT'S MAIN ELECTRICAL PANEL TO BE LOCATED AT OPPOSITE END OF BUS FROM UTILITY SUPPLY FEED AND REQUIRED "DO NOT RELOCATE" MARKING AS PER NEC 690.64(B)(7).
5. AC DISCONNECT TO HAVE "DO NOT TAP" OR "NO OTHER LOADS ALLOWED" RESTRICTION AND MARKING. THIS REQUIRES AN ALTERNATE METHODS & MATERIALS CODE EXCEPTION APPROVAL FROM LOCAL AHJ AS PER NEC 690.64(B)(2).
6. SERVICE ENTRANCE CONDUCTOR SIZED PER NEC 230.42.
7. UNFUSED DISCONNECT IS TYPICALLY RATED AND SIZED FOR 100% CONTINUOUS CURRENT LOAD
8. SEE EQUIPMENT DETAILS SHEET FOR DETAILED SYSTEM INFORMATION.
9. ALL WIRE MUST BE 75 DEGREES AND COOPER.

AMBIENT TEMPERATURE ASSUMPTIONS

INSTALLATION ZIP CODE	06035
LOWEST EXPECTED TEMP.	-20 C°
AVERAGE HIGHEST TEMP.	32 C°
NEC TABLE 310.16/310.17 - 75 C° TEMP. CORRECTION FACTOR	0.94

SIGN FOR AC POINT OF CONNECTION

SOLAR PV SYSTEM AC POINT OF CONNECTION	
AC OUTPUT	48.5 A
NOMINAL AC VOLTAGE	240V
THIS PANEL IS FED BY MULTIPLE SOURCES (UTILITY & SOLAR)	

ryan soames engineering
49 W. 45TH STREET
New York, NY 10036
Tel: 917-720-3696

Utility Account #: –

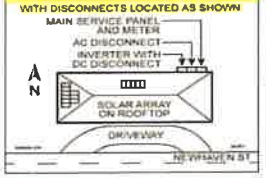
Meter #: –

Project Title: 129 BARN DOORS HILL ROAD, GRANBY, CT 06035

Drawing Title: GRID TIED PHOTOVOLTAIC SYSTEM

By	Date	Scale	Sketch No.
PS	07/17/2024	NTS	PV-002

2020 NEC Labeling Requirements

NEC Section	Location of Label	Label Text and Appearance
690.54	All interactive system(s) points of interconnection with other sources shall be marked at an accessible location at the disconnecting means as a power source and with the rated ac output current and the nominal operating ac voltage.	PHOTOVOLTAIC AC DISCONNECT
690.56(B) 690.4(D) 705.10	A permanent plaque or directory shall be installed at each service equipment location, or at an approved readily visible location. The plaque or directory shall denote the location of each power source disconnecting means for the building or structure and be grouped with other plaques or directories for other on-site sources. The plaque or directory shall be marked with the wording "CAUTION: MULTIPLE SOURCES OF POWER." Any posted diagrams shall be correctly oriented with respect to the diagram's location. The marking shall comply with 110.21(B).	Caution: MULTIPLE SOURCES OF POWER WITH DISCONNECTS LOCATED AS SHOWN 
690.13(B) 690.15 705.20	Each PV system disconnecting means shall plainly indicate whether in the open (off) or closed (on) position and be permanently marked: "PV SYSTEM DISCONNECT" Or equivalent.	MAIN PHOTOVOLTAIC SYSTEM DISCONNECT PHOTOVOLTAIC DC DISCONNECT PHOTOVOLTAIC AC DISCONNECT
690.53	A permanent readily visible label indicating the highest maximum dc voltage in a PV system, calculated in accordance with 690.7, shall be provided by the installer at one of the three locations.	MAXIMUM DC VOLTAGE OF PV SYSTEM
690.31 (D)(2)	Unless the purpose is evident, the following wiring methods and enclosures that contain PV system dc circuit conductors shall be marked: (1) Exposed raceways, cable trays, and other wiring methods (2) Covers or enclosures of pull boxes and junction boxes (3) Conduit bodies in which any of the available conduit openings are unused	SOLAR PV DC CIRCUIT PHOTOVOLTAIC POWER SOURCE

NEC Section	Location of Label	Label Text and Appearance
690.13(B) 690.15(C)	Where all terminals of the disconnecting means may be energized in the open position, a warning sign shall be mounted on or adjacent to the disconnecting means.	⚠ WARNING ELECTRICAL SHOCK HAZARD
705.12 (B)(3)(2)	A permanent warning label shall be applied to the distribution equipment adjacent to the back-fed breaker from the inverter.	⚠ WARNING INVERTER OUTPUT CONNECTION. DO NOT RELOCATE THIS OVERCURRENT DEVICE.
705.12 (B)(3)(3)	Permanent warning labels shall be applied to distribution equipment	⚠ WARNING THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR.
690.56 (C)	Buildings with PV systems shall have a permanent label located at each service equipment location to which the PV systems are connected or at an approved readily visible location and shall indicate the location of rapid shutdown initiation devices. The label shall include a simple diagram of a building with a roof and shall include the following words: The title "SOLAR PV SYSTEM IS EQUIPPED WITH RAPID SHUTDOWN" shall utilize capitalized characters with a minimum height of 3/8 in. in black on yellow background, and the remaining characters shall be capitalized with a minimum height of 3/16 in. in black on white background.	SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN 
	(2) A rapid shutdown switch shall have a label located on or no more than 3 ft from the switch that includes this wording. The label shall be reflective, with all letters capitalized and having a minimum height of 3/8 in., in white on red background.	RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM
	(1) Buildings with More Than One Rapid Shutdown Type. For buildings that have PV systems with both rapid shutdown types or a PV system with a rapid shutdown type and a PV system with no rapid shutdown, a detailed plan view diagram of the roof shall be provided showing each different PV system and a dotted line around areas that remain energized after the rapid shutdown switch is operated.	

ryan soames engineering
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Tel: 917-720-3696

Utility Account #: –

Meter #: –

Project Title: 129 BARN DOORS HILL ROAD, GRANBY, CT 06035

Drawing Title: GRID TIED PHOTOVOLTAIC SYSTEM

By	Date	Scale	Sketch No.
PS	07/17/2024	NTS	PV-003

129 Barn Doors Hill Rd Granby
15.8 KW Ground mount Solar
40 Solar Panels, total 1,072 sq ft
NO Cement, helical Screws
max Height 9'
W = 15'
L = 67'

WETLAND AREA TWO	1.778 AC
• WATERCOURSES	0.000 AC
• WETLANDS	1.778 AC
• UPLAND REVIEW AREA	2.834 AC
• WETLANDS TO BE ALTERED	0.007 AC
• UPLAND REVIEW AREA TO BE ALTERED	0.790 AC

SALMON BROOK

ASSESSORS LOT 104
#127 BARN DOOR HILLS ROAD
N/F TOWN OF GRANBY
VOL 173 P 631

200' WATERCOURSE SETBACK

OFF-SITE WATERCOURSE LIMIT

FLAGGED WETLAND BOUNDARY

100' WETLAND SETBACK (UPLAND REVIEW AREA)

200' WATERCOURSE SETBACK (UPLAND REVIEW AREA)

WETLAND AREA TO BE ALTERED

FLAGGED WETLAND BOUNDARY

100' WETLAND SETBACK (UPLAND REVIEW AREA)

ASSESSORS LOT 100
REAR OF HILLYER WAY
N/F TOWN OF GRANBY
VOL 232 P 287

WOODED AREA (SELECTIVE CUTTING PER RFR DETERMINATION DATED APRIL 22, 2022)

LIMIT OF INLAND WETLANDS SEE NOTE #9

Trench Conduit

55ft

SOLAR

WOODED AREA (SELECTIVE CUTTING PER RFR DETERMINATION DATED APRIL 22, 2022)

PROPOSED RESIDENCE

GARAGE

PROPOSED BARN

WOODED AREA

WOODED AREA

WOODED AREA

WOODED AREA

100' WETLAND SETBACK

25' SIDE YARD

50' REAR YARD

LIMIT OF INLAND WETLANDS SEE NOTE #9

ASSESSORS LOT 16
#131 BARN DOOR HILLS ROAD
N/F KAREN J. LU ERKELENS
+ LAUREN ERKELENS
VOL 445 P 223

FLAGGED WETLAND BOUNDARY

100' WETLAND SETBACK (UPLAND REVIEW AREA)

EXIST WELL

ASSESSORS LOT 91
#15 HILLYER WAY
N/F CHRISTOPHER J. + JENNIFER W. MACKOWSKI
VOL 361 P 604

ASSESSORS LOT 90
#11 HILLYER WAY
N/F JUSTIN R. + IDA M. GILMORE
VOL 341 P 1250

ASSESSORS LOT 89
#9 HILLYER WAY
N/F NATALIE L. KYLE + RAFAEL GONZALEZ PEREZ
VOL 432 P 426

BARN DOOR HILLS ROAD

WETLAND AREA ONE	0.126 AC
• WATERCOURSES	0.000 AC
• WETLANDS	0.126 AC
• UPLAND REVIEW AREA	1.772 AC
• WETLANDS TO BE ALTERED	0.000 AC
• UPLAND REVIEW AREA TO BE ALTERED	0.514 AC

RECEIVED
JUN 18 2025
Granby Building Department

AREA QUANTITIES

	TOTAL SITE AREA	**11.000 AC**
	TOTAL WETLAND AREA	**1.904 AC**
	WATERCOURSES	0.000 AC
	WETLAND AREA ONE	0.126 AC
	WETLAND AREA TWO	1.778 AC
	TOTAL WETLANDS TO BE ALTERED	**0.007 AC**
	TOTAL UPLAND REVIEW AREA	**4.606 AC**
	WETLAND AREA ONE	1.772 AC
	WETLAND AREA TWO	2.834 AC
	TOTAL UPLAND REVIEW AREA TO BE ALTERED	**1.304 AC**

0 25 50 100'
SCALE: 1" = 50' - 0"

LANDSCAPE ARCHITECT
Richter & Cegan Inc.
8B CANAL COURT P.O. BOX 567
AVON, CT 06001
PHONE: 860-678-0669
CONTACT NAME: MICHAEL A. CEGAN
EMAIL: mcegan@richtercegan.com

CIVIL ENGINEER
R.R. HILTBRAND ENGINEERS & SURVEYORS, LLC
575 NORTH MAIN STREET
BRISTOL, CT 06010
PHONE: 860-582-4548
CONTACT NAME: THOMAS D. GRIMALDI
EMAIL: tdgrimaldi@gmail.com

WETLAND/SOIL SCIENTIST
DAVISON ENVIRONMENTAL, LLC
10 MAPLE STREET
CHESTER, CT 06412
PHONE: 860-803-0938
CONTACT NAME: ERIC DAVISON
EMAIL: eric@davisonenvironmental.com

SURVEYOR
DUFOUR SURVEYING LLC
575 NORTH MAIN STREET
BRISTOL, CT 06010
PHONE: 860-314-0502
CONTACT NAME: CARMINE J. MATRASCIA
EMAIL: dufour.surveying@yahoo.com

CAMPBELL RESIDENCE

GRANBY, CONNECTICUT

129 BARN DOOR HILLS ROAD

MARK	DATE	DESCRIPTION
02	11/30/22	REVISE PER TOWN REVIEW
01	11/01/22	IWWC SUBMISSION

PROJECT NO: 2022009
CAD FILE: 22009L1-6.dwg
DRAWN BY: WRW/REM
CHECKED BY: MAC

SHEET TITLE:
REGULATED ACTIVITIES PLAN

L1-6

W:\2022009\3DESDEV\Main\22009L1-6.dwg 12/06/2022 1:35:16 PM RMeier

TOWN OF GRANBY

Incorporated 1786
15 North Granby Road
Granby, Connecticut 06035-2102

July 3, 2025

Michelle Blanchard Vargas
170 Silver Street
North Granby, CT 06060

RE: 170 Silver Street – M. Vargas – Permit request to place a new 288 sq. ft. prefabricated garage on an existing crushed stone pad within a regulated area.

Dear Ms. Vargas:

Please be advised that on July 3, 2025, the Inland Wetlands and Watercourses Agent approved the subject application in accordance with the application and supporting documentation received to date.

The following are the conditions of this approval.

1. The Office of Community Development shall be notified at least 48 hours prior to the start of any construction activities.

2. Town staff shall inspect installed erosion controls prior to the start of any work that results in earth disturbance activities, this includes, but is not limited to, grubbing and stump removal.

3. All work shall be in conformance with this approval and application materials as submitted for this Permit Approval. Any modifications to the approved plans must be reviewed and approved by the Granby Inland Wetlands and Watercourses Commission or their designated Agent.

4. Erosion controls shall be maintained until the site has achieved permanent stabilization. Permanent stabilization is defined as 70% permanent vegetation covering over 90% of the area. A stockpile of erosion controls shall remain on site to be installed, as necessary. The IWWC shall be notified in writing at least 48 hours in advance of erosion controls being removed.

5. Excavated soils shall not be brought off-property without the notification and approval of the Office of Community Development. The applicant shall supply the destination in writing for any excavated soil to be removed from the property.

6. This permit is valid for a period of 5-years from the date of issuance.

7. Upon completion of construction and site stabilization, the IWWC shall be notified in writing that work is complete, and a final inspection may be completed at that time.

If you have any questions, please call me at your earliest convenience.

Sincerely,

Katie Bednaz
Town of Granby
IWWC Wetlands Agent

CC: Building Department / IWWC File

TOWN OF GRANBY
Office of Community Development, Inland Wetlands and Watercourses Commission
Telephone: (860) 844-5318, www.granby-ct.gov

RECEIVED JUN 13 2025 Granby Building Department

Application for Inland Wetlands & Watercourses Activity

Application For: ☒Permit ☐Extension ☐Modification (Existing Permit/Application #): _____
☐Wetlands Map Amend. ☐Request for Review ☐Other: _____

Property Location and Nearest Intersection: 170 Silver Street
Size of Parcel: 8.6 Zone: R2A Map/Lot: B-30/7/1 Current Use: Single Family Home

Applicant's Name: Michelle Blanchard Vargas
Complete Address: 170 Silver Street North Granby CT 06060
Daytime Phone: 301 807 5206 Evening Phone: same Fax: _____
Email: MBLANCH811@HOTMAIL.COM

Owner's Name: same
If the owner is a corporation, or other non-individual entity, include the primary contact information
Complete Address: _____
Phone Daytime Phone: _____ Evening Phone: _____ Fax: _____

Applicant's Representative: N/A
Complete Address: _____
Daytime Phone: _____ Evening Phone: _____ Fax: _____

**********PLEASE ATTACH ADDITIONAL SHEET IF NECESSARY**********

Project Name and Brief Description (i.e. residential, agricultural, commercial, number of lots, etc.): Placement of a prefabricated detached shed/garage 12x24 on an existing crush stone pad and future electrical

Is any portion of the property located within 500 feet of an adjoining municipality? _____
Wetlands Located on Property (in square feet (sq. ft.)): _____ Wetlands to be impacted (sq. ft.): 0
Watercourses Located on Property? Yes Name or Type of Watercourse: n/a
Are Proposed Activities Located within the 100-Year Floodplain? no Floodway? no
Are there slopes with grades in excess of 15% located on the property? no
Do Proposed Activities Require Review by the PZC? no

**********SEE APPLICATION CHECKLIST ON BACK for MINIMUM APPLICATION REQUIREMENTS**********

The applicant understands that this application is to be considered complete only when all information and documents required by the Commission have been submitted. The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of his/her knowledge and belief. Permission is granted to the Town of Granby, Inland Wetlands & Watercourses Commission, and its agent (s) to inspect the subject land, at reasonable times, during the pendency of an application and for the life of the permit.

☞ Applicant's Signature: Michelle Blanchard Vargas Date: 13 June 2025
Owner's Signature: Michelle Blanchard Vargas Date: 13 June 2025

FOR OFFICE USE

Application #:	*Date Submitted:* 6/13/25
Fee amt/Check or Cash: $140.00	*Date of Receipt:* 7/9/25
Agent Ruling:	*Date Approved/Denied:*

See Reverse Side for Conditions of Approval or Reason for Denial

SECTION 19
FEES

19.5 Fee Schedule. Application fees shall be based on the following schedule.

ACTIVITY	FEE/ AREA / #	APPLIED
State of Connecticut Land Use Fee	$60.00	$ 60.00 +
Permitted Uses As-of-Right & Non-Regulated Uses	None	None
CATEGORY 1 - RESIDENTIAL/SINGLE-FAMILY RESIDENCES (INCLUDING 2-LOT SUBDIVISIONS)		
I. Base Fee		
a. General Application	$150.00 + II	$ +
b. Accessory to Existing Primary Structure	$80.00 + II	$ 80.00 +
c. Modification to Existing Approval	$30.00 + II	$ +
II. Activity Fee		
a. $100.00 per Watercourse Crossing	(#)	$ +
b. $0.02 per sq. ft. of Wetland Disturbance	SF	$ +
Within Upland Review Area...		
c. $100.00 per Structure (greater than 200 sq. ft.)	(#)	$ +
d. $0.01 per sq. ft. of Impervious Surface	SF	$ +
e. $250.00 per Stormwater Management Basin	(#)	$ +
f. $100.00 per Storm Drain Outfall	(#)	$ +
g. $0.01 per sq. ft. of Steep Slope Disturbance (Slopes Greater than 2:1 – Define Area on Plan)	SF	$ +
h. $0.005 per sq. ft. of Woody Vegetation Clear-Cut	SF	$ +
➢ **TOTAL FEE – CATEGORY 1**		$
CATEGORY 2 - SUBDIVISIONS (GREATER THAN 2-LOTS)/CONDOMINIUMS, MULTI-FAMILY UNITS/COMMERCIAL		
I. Base Fee		
a. General Application Per Primary Structure (up to 5)	$300.00/(+II)	$ +
i. Fee Per Each Primary Structure Beyond 5	$20.00 (+II)	$ +
b. Accessory to Existing Primary Structure	$150.00 (+II)	$ +
c. Modification to Existing Approval	$60.00 (+II)	$ +
II. Activity Fee*		
a. $200.00 per Watercourse Crossing	(#)	$ +
b. $0.04 per sq. ft. of Wetland Disturbance	SF	$ +
Within Upland Review Area...		
c. $100.00 per Structure	(#)	$ +
d. $0.02 per sq. ft. of Impervious Surface	SF	$ +
e. $250.00 per Stormwater Management Basin	(#)	$ +
f. $100.00 per Storm Drain Outfall	(#)	$ +
g. $0.02 per sq. ft. of Steep Slope Disturbance (Slopes Greater than 2:1 – Defined Area on Plan)	SF	$ +
h. $0.01 per sq. ft. of Woody Vegetation Clear-Cut	SF	$ +
➢ **TOTAL FEE – CATEGORY 2**		$

ACTIVITY		FEE/ AREA / #	APPLIED
CATEGORY 3 – ALL OTHER APPLICATIONS			
I.	Base Fee		
	a. General Application	$200.00 (+II)	$ _____ +
	b. Modification to Existing Approval	$60.00 (+II)	$ _____ +
II.	Activity Fee*		
	a. $200.00 per Watercourse Crossing	_____(#)	$ _____ +
	b. $0.04 per sq. ft. of Wetland Disturbance	_____SF	$ _____ +
	Within Upland Review Area...		
	c. $100.00 per Structure	_____(#)	$ _____ +
	d. $0.02 per sq. ft. of Impervious Surface	_____SF	$ _____ +
	e. $250.00 per Stormwater Management Basin	_____(#)	$ _____ +
	f. $100.00 per Storm Drain Outfall	_____(#)	$ _____ +
	g. $0.02 per sq. ft. of Steep Slope Disturbance (Slopes Greater than 2:1 – Defined Area on Plan)	_____SF	$ _____ +
	h. $0.01 per sq. ft. of Woody Vegetation Clear-Cut	_____SF	$ _____ +
	➢ **TOTAL FEE – CATEGORY 3**		**$** _____
III.	Significant Activity Fee	$300.00	$ _____ +
IV.	Permit Extension Fee		
	a. Residential Uses	$40.00	$ _____ +
	b. Commercial/Industrial/Other Uses	$80.00	$ _____ +
V.	Map and Regulation Amendments	$250.00	$ _____ +
	➢ **APPLICATION FEE SUBTOTAL**		**$** _____ **+**
VI.	Post Activity Application Fee	20% of Fee Subtotal	$ _____ +
	➢ **TOTAL APPLICATION FEE:**		$ 140.00

Boards, Commissions, Agencies and Departments of the Town of Granby are exempt from all fee requirements.

VII. Complex Application Fee – Section 22a-42a of the Connecticut General Statutes states that an applicant shall pay a fee equal to the Town's expenditures in hiring outside consultants and experts to analyze, review and report on issues requiring such experts. Such fee may include, but not be limited to, the cost of retaining experts to analyze, review, and report on issues requiring such experts. The Commission or the duly authorized agent shall estimate the complex application fee which shall be paid pursuant to section 19.1 of these regulations within 10 days of the applicant's receipt or notice of such estimate. Any portion of the complex application fee in excess of the actual cost shall be refunded to the applicant no later than 30 days after publication of the Commission's decision.

qPublic.net™ Town of Granby, CT

Overview

Legend

- Parcels
- Roads
- Hydrology

Parcel ID 2376
Location 170 SILVER ST
View Assessor website

Date created: 6/16/2025
Last Data Uploaded: 6/16/2025 5:19:57 AM

Developed by SCHNEIDER GEOSPATIAL

Blanchard Vargas application for 12x24 garage/shed

Off the main drive on a crushed stone pad. Circled area is the proposed location.

Blanchard Vargas application for 12x24 garage/shed

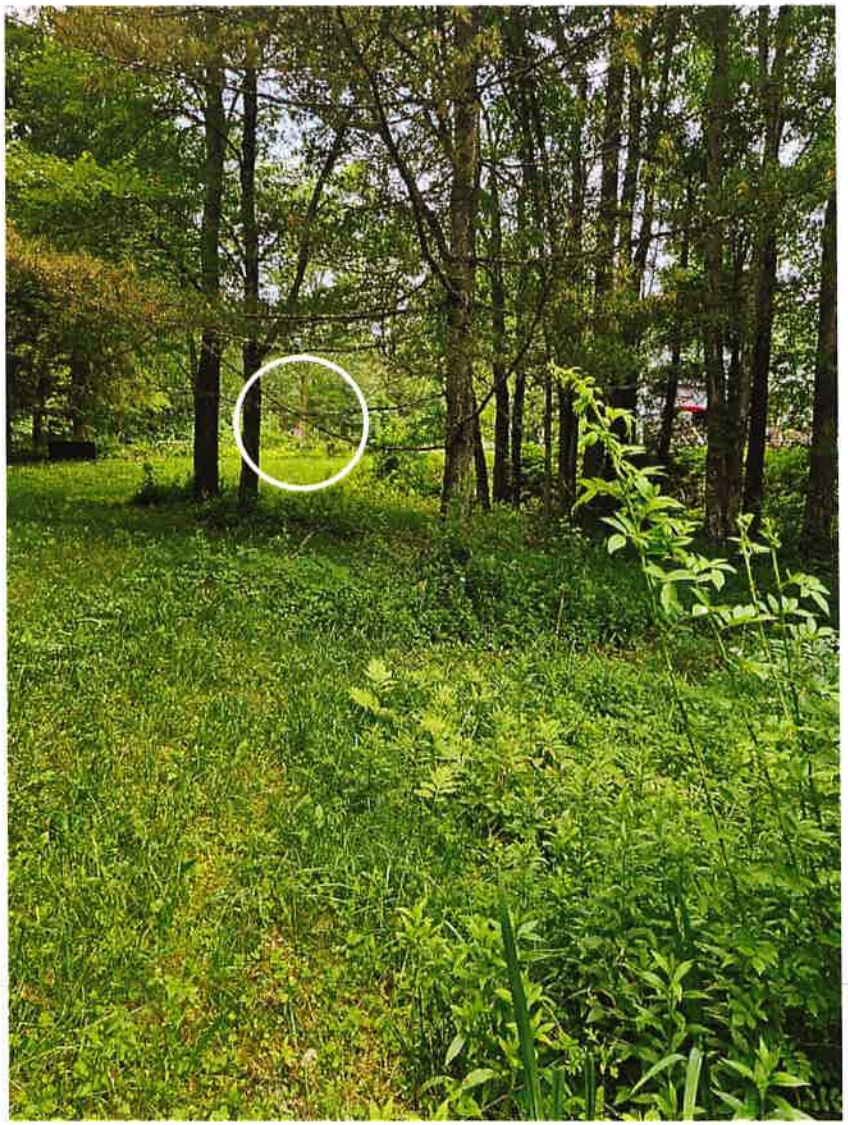
Blanchard Vargas application for 12x24 garage/shed

Crushed stone has been overgrown and would be cleaned up

Blanchard Vargas application for 12x24 garage/shed

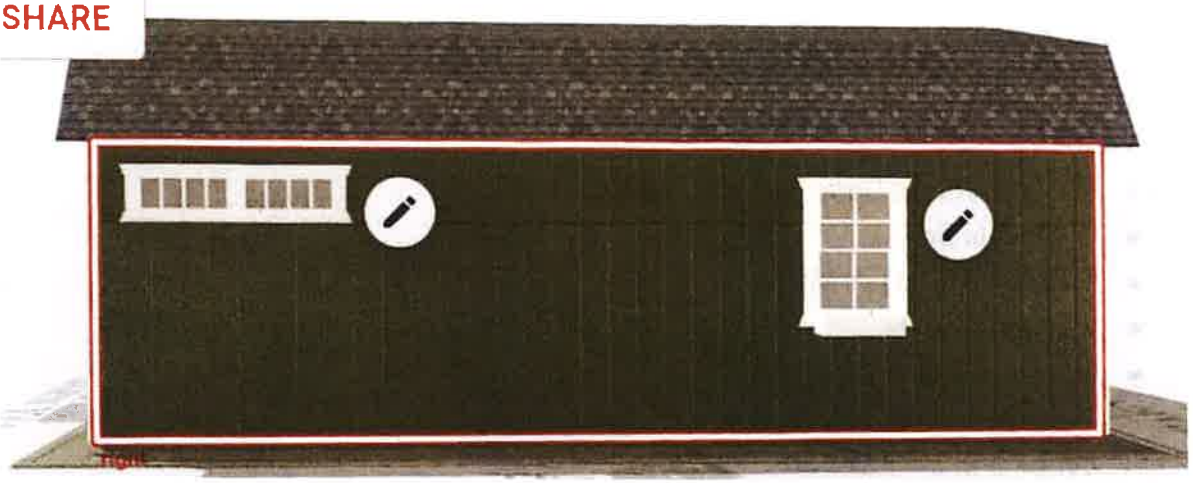
Immediately at the bottom of the hill beyond the crushed stone pad and before going down to the pond. Circled area is a person standing in the middle of the proposed location.

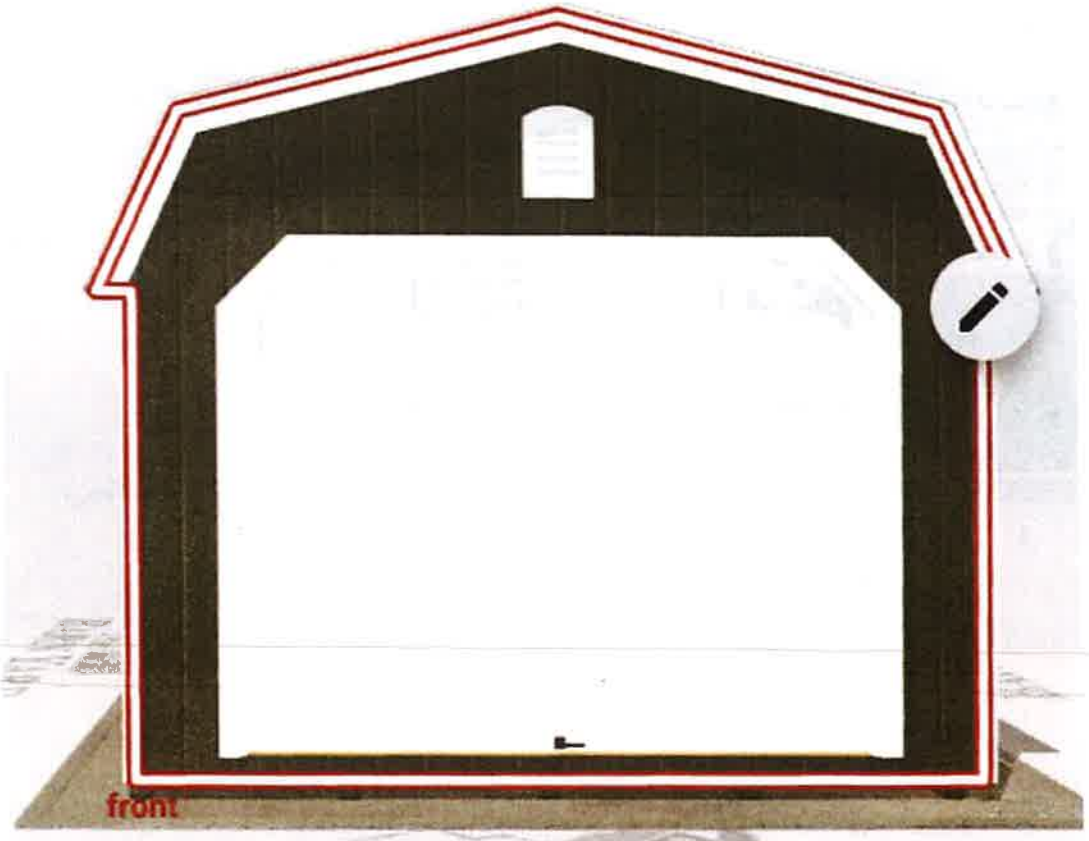
Blanchard Vargas application for 12x24 garage/shed



Looking from the area of the pond. Circled area is a person standing in the middle of the proposed location.

SHARE





Classic Dutch Garage - 12X24

Classic Dutch Garage/Shed 12x24

Home Search Results Report