

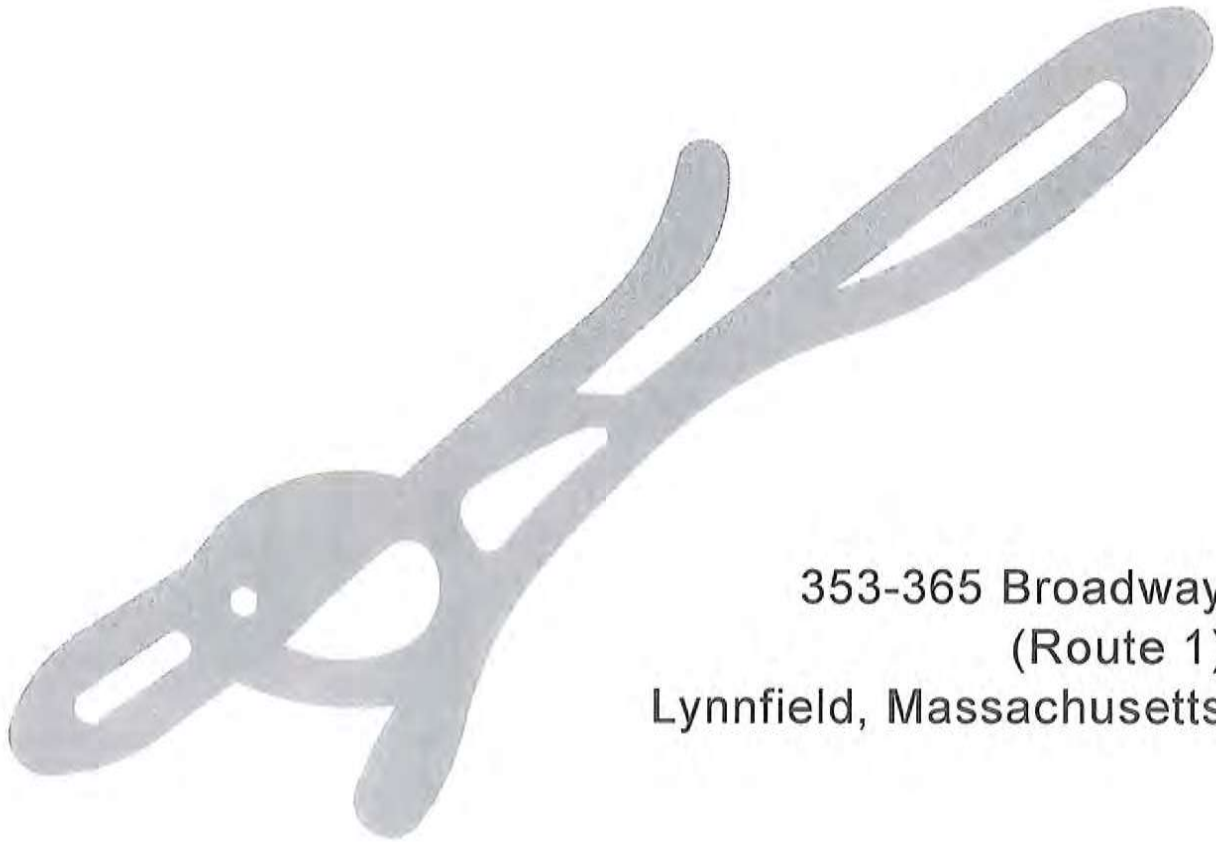


603 Salem Street
Wakefield, MA 01880
Tel: (781) 246-2800
Fax: (781) 246-7596

Nantucket, MA 02554
Tel: (508) 228-7909

Refer to File No. LYF-0347C

Storm Water Permit Application



353-365 Broadway
(Route 1)
Lynnfield, Massachusetts

April 11, 2022

Stormwater Report and Narrative
353-365 Broadway (Route 1)
Lynnfield, Massachusetts

April 11, 2022

As a result of the March 11, 2022, peer review from Linden Engineering Partners, which reviewed the Stormwater Permit Application, Plans and Documents for 353-365 Broadway (Route 1), Lynnfield, Massachusetts, the following response is designed to address concerns outlined in that report. The Stormwater Report and Narrative is designed to respond to Items 2, 3, 4, 5, 6 & 9 in that peer review report. Items 1, 7, 8, 10 & 11 will be responded to independently after the narrative.

Project Description

The proposed project consists of the demolition of the former Jeep Dealership it having been replaced by a new more modern facility just south of the subject site, regrading and repaving the site to serve as accessory use parking to the auto dealerships owned by various Kelly entities adjoining the site on Route 1.

Under the DEP regulations, the project is a redevelopment site, as it does not involve new impervious areas, but as such, must make improvements to the quality or quantity of runoff as a result of the project. Figures E1 & P1 show a comparison of land coverage of the existing site to the proposed. The existing site within the project boundary area consisted of 101,809 sq. ft. of imperviousness shown in dotted blue. Pervious areas of the site to be eliminated are shown in yellow and consists only of a couple of landscape islands and a porous paver area. Note that existing pervious areas of the site to remain in both the existing and proposed are designated in red.

The proposed site maintains most of the previous red landscaped areas, but adds numerous landscaped islands, designed to function as rain gardens or pervious river rock areas. In addition, these areas will be utilized to plant replacement trees which are required under the Town's tree by-law.

Drainage System

Site drainage – The existing site is currently serviced by a drainage system discharging northwesterly under Route 1. The proposed drainage system is designed to act in a similar fashion to the existing drainage system, incorporating a series of five catch basins to handle the surface flow. Note that the existing trench drain on the most northerly state highway entrance is designed to remain. Drainage patterns and watersheds to the drainage system remain similar to those already existing with flow capture and excess runoff unchanged. The Town of Lynnfield Stormwater Management Regulations encourage the use of LID measures. While many of those measures are not applicable to this redevelopment site due to underlying soil conditions and fill, it was agreed that islands within the parking lot could be vegetated primarily with the replacement trees required under the Town of Lynnfield Tree By-law and that small area drains could be placed in depressed islands to function somewhat as rain gardens. To that end, a few

islands have been shown and a detail added as how they typically should be graded and constructed from a drainage standpoint. Most importantly, however, is the addition of pervious river rock areas along the northwesterly retaining wall to be used as a tree planting area. River rock has also been added in the vehicle display area along Route 1.

Infiltration - The Town of Lynnfield's Stormwater Management By-law also encourages infiltration on redevelopment sites. In order to explore the possibility of infiltration, two (2) soil evaluator holes were dug in the area of THD1 and THD2 as shown on the site plan. The purpose of these holes was to determine the suitability of soils in that area. Note that the very front portion of the site is not suitable for infiltration due to a gravity sewer that runs in a 20-foot easement in that portion of the site. Areas north and east of that area were rejected as possible sites due to ledge in proximity of the surface for much of the area and the fact that the front portion of the site slopes generally downward from north to south along the Route 1 frontage. Both test holes (copy of logs are enclosed in the appendix of this report) showed similar soil cross-sections with approximately 8-feet of miscellaneous till, boulder, broken ledge, and concrete material overlaid by fine sand (glacial fluvial deposits) groundwater levels were 127.52 and 126.62 in test holes 1 and 2, respectively. While it is possible to excavate 8-feet of material, to accomplish infiltration there are a number of limiting factors in such a construction. First is cost, in that the excavation and disposal of 8-feet of unsuitable material and its replacement material of suitable permeability is expensive. The overriding factor, however, is that the drain grades are such that drainpipe flow lines in this area are between Elevation 130 and Elevation 130.62 with groundwaters in Test Hole 1 at 127.52 and in Test Hole 2 at 126.62 because the bottom of any leach must be below those drain inverts it leaves little hydraulic grade for storage and leach. In the alternative, however, the roof from the proposed future building could be easily leached into this area with a roof drain discharge as high as Elevation 136 leaving sufficient grade to the groundwater for deep contactors and bottom of leach separation. Because of this analysis, the applicant is willing to commit to the leach of the future building into an infiltration area as designated on the plan. Infiltration has been added in the river rock areas and rain gardens, as well.

Redevelopment Improvement

Stormwater management regulations require overall improvement for redevelopment of projects and this project is proposed to make water quality improvements in contained site runoff as follows:

- All new catch basins will be supplied with deep sumps and gas traps as required by the stormwater management policy and final discharge of the system will be through a properly sized water quality device. In addition, while no credit is being taken for the infiltration area rain gardens or river rock areas, their effect on water quality and quantity can only be positive.

The following are the responses to the other numbered paragraphs mentioned at the beginning of this report.

1. The green cards are attached to this report.

7. The books and pages were provided on the Stormwater Application at the bottom of the page and indicated by the asterisk and the phrase "See Below." I do not know where the Registered Land reference came from.
8. The proposed straw waddle cross section has been changed to a 12-inch diameter compost sock with a pea stone wedge on the uphill side as requested.
9. The stormwater narrative figures make clear what was being paved and not being paved. As far as what pavement is being replaced it is anticipated that all paving will be scarified and replaced whether the grades are changing or not.
10. Attached are the applicant's responses to the 10 stormwater standards.
11. A signed No Illicit Discharge Statement is attached.

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent Addressee
B. Received by (Printed Name) D C. Date of Delivery 3/2

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type
 Certified Mail® Priority Mail Express™
 Registered Return Receipt for Merchandise
 Insured Mail Collect on Delivery

4. Restricted Delivery? (Extra Fee) Yes No

7019 0700 0001 6435 2052
Domestic Return Receipt

PS Form 3811, July 2013

COMPLETE THIS SECTION ON DELIVERY

A. Signature Agent Addressee
B. Received by (Printed Name) Young C. Date of Delivery

D. Is delivery address different from item 1? Yes
If YES, enter delivery address below: No

3. Service Type
 Certified Mail® Priority Mail Express™
 Registered Return Receipt for Merchandise
 Insured Mail Collect on Delivery

4. Restricted Delivery? (Extra Fee) Yes No

7019 0700 0001 6435 2069
Domestic Return Receipt

PS Form 3811, July 2013

COMPLETE THIS SECTION

1. Article Addressed to:
HERB CHAMBERS OF LYNNFIEL
385 BROADWAY
LYNNFIELD, MA 01940
USPS

2. Article Addressed to:
GROTTO REALTY TRUST
GIUGLIANO SALVATORE-GILFR
1 GIUGLIANO TERRACE
LYNNFIELD, MA 01940

3. Article Addressed to:
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17. Article Addressed to:
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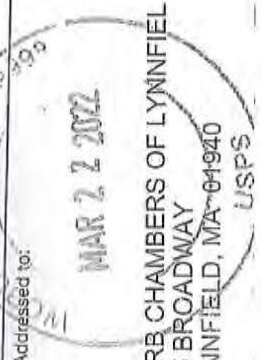
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22. Article Addressed to:
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23. Article Addressed to:
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24. Article Addressed to:
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1 GIUGLIANO TERRACE
LYNNFIELD, MA 01940

USPS provides the following services:
- Restricted delivery service, which provides delivery to the addressee specified by name, address, and provides delivery to the addressee's authorized agent.
- Adult signature service, which requires the signee to be at least 21 years of age (not available at retail).
- Adult signature restricted delivery service, which requires the signee to be at least 21 years of age and provides delivery to the addressee's authorized agent (not available at retail).
To ensure that your Certified Mail receipt is accepted as legal proof of mailing, it should bear a USPS postmark. If you would like a postmark on this Certified Mail receipt, please present your Certified Mail item at a Post Office™ for postmarking. If you don't need a postmark on this Certified Mail receipt, detach the barcoded portion of this label, affix it to the mailpiece, apply appropriate postage, and deposit the mailpiece.
IMPORTANT: Save this receipt for your records.



WF-0347C

WF-0347C

The applicant has reviewed the 10 Stormwater Management Standards in terms of compliance as follows:

1. No new stormwater conveyances will discharge untreated water directly to or to cause erosion in wetlands or waters of the Commonwealth. This redevelopment proposal includes no new outfalls and further adds a treatment train to the majority of the existing imperviousness as part of the project.
2. The proposal does not increase the rate of post-development peak discharge and in fact incorporates some mitigative measures such as flattening of slopes and the addition of rain garden and river rock areas to reduce runoff.
3. The loss of annual recharge to the groundwater will be eliminated or minimized through the infiltration of the roof runoff from the proposed structure when constructed, also the use of landscaped and river rock areas for infiltration.
4. The 80% TSS removal is being provided by a treatment train of deep sump catch basins followed by a proprietary treatment device.
5. The applicant believes that he is complying with the land uses for higher potential pollutant loads because this project does not result in new stormwater conveyances of untreated stormwater in compliance with Standard 1.
6. The project does not constitute a discharge within a Zone II or Interim Wellhead Protection Area of public water supply, nor is it a stormwater discharge to a Zone A based on a review of those zones shown on the Mass Mapper Database.
7. As a redevelopment project, we believe that the requirements of Standard 7 are met.
8. The amended erosion control detail, as well as for Stormwater Pollution Prevention Plan, is designed to address construction period erosion sedimentation and pollution prevention.
9. A long-term operation and maintenance plan is attached.
10. A No Illicit Discharge Statement is attached.

STORMWATER PERMIT APPLICATION

To: Lynnfield Conservation Commission
55 Summer Street
Lynnfield, MA 01940
(781) 334-9495
ecademartori@town.lynnfield.ma.us

The undersigned hereby submits a Stormwater Management Permit Application as defined in the Town of Lynnfield Charter and Bylaws, Chapter 4A - Stormwater Management Bylaw and requests a review and determination by the Authorized Enforcement Authority of the enclosed Stormwater Management Plan, Erosion and Sediment Control Plan, and Operation and Maintenance Plan. The applicant hereby authorizes the Authorized Enforcement Authority and/or its designees to inspect the property described below from time to time for the purpose of establishing compliance with any permit or order of the Authorized Enforcement Authority, pursuant to the said bylaw.

The Stormwater Management Permit involves property where owner's title to the land is derived under deed for 353-365 Broadway Realty Trust, dated 01/09/2012, and recorded in the Essex County Registry of Deeds, Book See Below, Page _____, or Land Court Certificate of Title No., Registered in 85063 District, Book _____, Page _____.

Give a brief summary of the nature of the project.
Demo existing dealership, regrade parking, install new drainage.

Total Parcel Size: 124,443 s. f. Proposed Area of Disturbance 110,000± s. f.

The property (building) is described as being located at 353 Broadway, Lynnfield, MA; it is currently used as vacant, and the changes proposed to be made are demo existing dealership, regrade parking, install new drainage.

The project is located on the parcel shown on Lynnfield Assessors Map _____, Parcel See Below*

Applicant's Signature *Peter J. Ogren* Owner's Signature(s) *Peter Almeida*
(if different than Applicant)
Applicant's Name (print) Peter J. Ogren Owner's Names(s) Peter Almeida
Applicant's Address 603 Salem St Owner's Address 155 Andover St
Wakefield MA Danvers, MA 01923

Date Received by Conservation Commission Office: _____
Signature _____

3/21/17	*BOOK	PG	*ASSESSORS PARCEL ID
	30993	275	0052 0000 2486
	33911	215	0052 0000 2468
	35390	589	

Please note:

- 1) An applicant for a Stormwater Management Permit Review must file with the Authorized Enforcement Authority; a completed application form with original signatures of all owners plus ten (10) copies thereof; one (1) copy of the abutters' list, certified by the Assessors' Office; ten (10) copies of the Stormwater Management Plan and project description as specified in Section 6 of these Rules and Regulations; ten (10) copies of the Erosion and Sediment Control Plan as required by Section 7 of these Rules and Regulations; ten (10) copies of the Operation and Maintenance Plan as required by Section 8 of these Rules and Regulations and payment of the application and review fees.
- 2) The date of receipt by the Conservation Commission Administrator shall be the official filing date.
- 3) The Application and Review Fee shall be dependent on the project size and is as follows: \$2500 for projects 1-2 acres in size; \$3,500 for projects 2-3 acres in size; and \$1,000 per acre for projects greater than 3 acres.
- 4) The Inspection Fee shall be in an amount equal to seven hundred and fifty dollars (\$750) per acre.
- 5) Legal ad prepared by the Conservation Administrator and printed at the applicant's expense in the Lynnfield Villager with the same submittal deadlines as Notices of Intent.
- 6) The applicant shall provide notification to all abutters and any property owner within 100 feet of the property line of the land where the activity is proposed, including if separated from that land by a public or private street. Notice must be made in writing by Certificates of Mailing or Certified Mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.



100 foot Abutters List Report

Lynnfield, MA
February 25, 2022

Subject Property:

Parcel Number: 0052-0000-2486
CAMA Number: 0052-0000-2486
Property Address: 353 BROADWAY

Mailing Address: 353-365 BROADWAY REALTY TRUST
KELLY BRIAN D, TR
155 ANDOVER STREET
DANVERS, MA 01923

Abutters:

Parcel Number: 0052-0000-2544
CAMA Number: 0052-0000-2544
Property Address: 379 BROADWAY

Mailing Address: HERB CHAMBERS OF LYNNFIELD INC
385 BROADWAY
LYNNFIELD, MA 01940

Parcel Number: 0052-0000-2599
CAMA Number: 0052-0000-2599
Property Address: 375 BROADWAY

Mailing Address: LYNNFIELD COMMONS II LLC
100 GRANDVIEW ROAD SUITE 203
BRAintree, MA 02184

Parcel Number: 0056-0000-0319
CAMA Number: 0056-0000-0319
Property Address: 325 BROADWAY

Mailing Address: KEL-ROUTE 1, LLC
155 ANDOVER STREET
DANVERS, MA 01923

Parcel Number: 0056-0000-0376
CAMA Number: 0056-0000-0376
Property Address: 307 BROADWAY

Mailing Address: GROTTO REALTY TRUST GIUGLIANO
SALVATORE-GILFR
1 GIUGLIANO TERRACE
LYNNFIELD, MA 01940

Parcel Number: 0056-0000-0469
CAMA Number: 0056-0000-0469
Property Address: REAR BROADWAY

Mailing Address: LYNNFIELD WATER DISTRICT
842 SALEM STREET
LYNNFIELD, MA 01940

Parcel Number: 0056-0000-0577
CAMA Number: 0056-0000-0577
Property Address: 385 REAR BROADWAY

Mailing Address: TOWN OF LYNNFIELD CONSERVATION
COMMISSION
55 SUMMER STREET
LYNNFIELD, MA 01940



www.cai-tech.com



353-365 Broadway-100 ft.

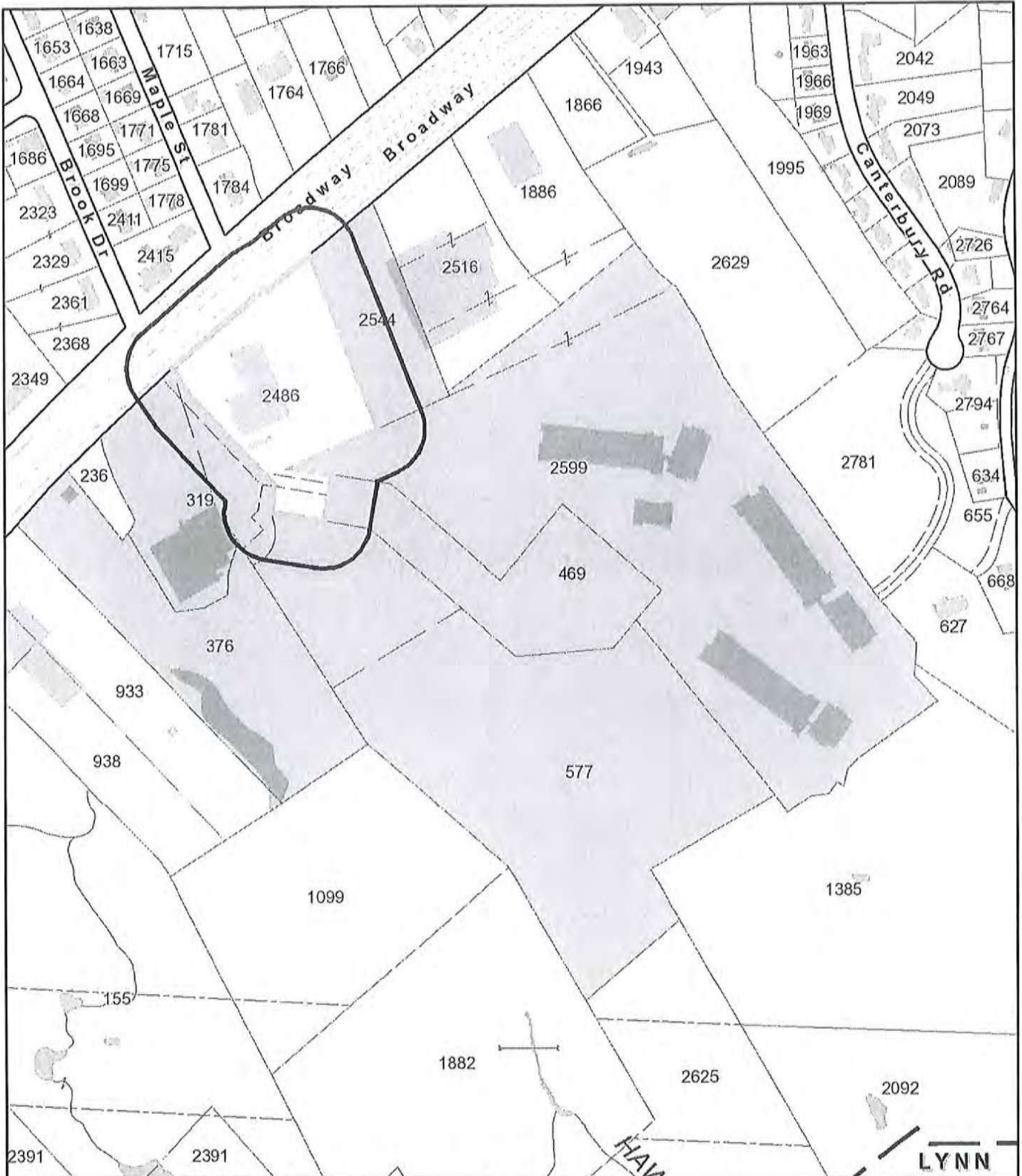
Lynnfield, MA



1 inch = 292 Feet

February 25, 2022

www.cai-tech.com



Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

**Notice of Hearing
Conservation Commission
Lynnfield, Massachusetts**

The Lynnfield Conservation Commission will hold a **Public Hearing at the Lynnfield Town Hall, 55 Summer Street, Lynnfield, Massachusetts on March 15th, 2022, 6:30pm** to review a Stormwater Management Permit Application as defined in the Town of Lynnfield Charter and Bylaws, Chapter 213, Regulation Chapter 320, Article 3. The application has been filed for property at:

**353 Broadway (next to Kelly Jeep Chrysler)
Lynnfield, Massachusetts**

The applicant proposes to demo the existing building, regrade parking and install new drainage.

BANK OF AMERICA
5-13/110

25164

KELCO MANAGEMENT INC.
155 ANDOVER STREET
DANVERS, MA 01923

2/22/2022

PAY TO THE ORDER OF Town of Lynnfield

\$ ****2,500.00**

Two Thousand Five Hundred and 00/100 ***** DOLLARS

PROTECTED AGAINST FRAUD



Town of Lynnfield
55 Summer Street
Lynnfield, MA 01940



Arthur P. Rummage



MEMO

Storm Water Permit

⑈0 25 166 ⑈ ⑆0 1 1000 138⑆ 004640588 137⑈

KELCO MANAGEMENT INC.

25164

Town of Lynnfield

2/22/2022

Town of Lynnfield-Storm Water Permit

2,500.00

LYF-0347C

CASH-BANK OF AME Storm Water Permit

2,500.00

DATE	INVOICE NO.	COMMENT	AMOUNT	NET AMOUNT
02/28/2022		Stomwater Permit Application LYF-0347C		1,000.00
DATE 02/28/22			VENDOR Town of Lynnfield	TOTAL 1,000.00

THIS CHECK HAS MICROPRINTING IN SIGNATURE AREA

HAYES ENGINEERING, INC.



Civil Engineering &
Land Surveying
603 Salem Street
Wakefield, MA 01880

EASTERN BANK 53-179
LYNN, MA 113

One Thousand and no/100

DATE	CHECK NO.	AMOUNT
02/28/22	87973	\$1,000.00

PAY
TO THE
ORDER
OF

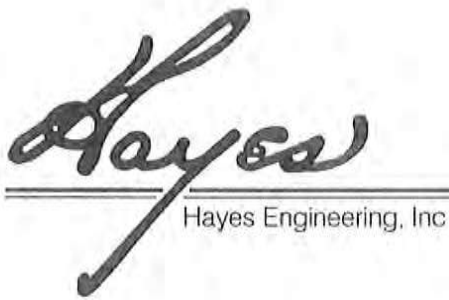
**TOWN OF LYNNFIELD
TOWN HALL
55 SUMMER STREET
LYNNFIELD MA 01940**

HAYES ENGINEERING, INC.

Amanda Noda MP

THIS DOCUMENT CONTAINS A TRUE WATERMARK - HOLD TO LIGHT TO VIEW

⑈087973⑈ ⑆011301798⑆ 12 113 4⑈



603 Salem Street
 Wakefield, MA 01880
 Tel: (781) 246-2800
 Fax: (781) 246-7596

Water Quality Flow Calculation Worksheet

Nantucket, MA 02554
 Tel: (508) 228-7909

Refer to File No. LYF-0347C

For First 1-inch of Runoff WQV:

Impervious Surfaces to Stormceptor:

Catchment	Time of Conc. (hours)	Impervious Area (acres)	Impervious Area (sq. mi.)
P2A	0.10	1.566	0.002446
Σ		1.566	0.002446

Time of Concentration:

Longest Catchment Tc: 0.10

q_u from Figure 2, attached: 774 csm/in

Water Quality Flow (WQF):

$$Q_{1.0} = (q_u)(A)(WQV)$$

Where:

Q_{0.5} = peak flow rate associated with the first inch of runoff;

q_u = the unit peak discharge, in cubic feet per second per square mile per inch;

A = impervious surface in drainage area, in square miles;

WQV = water quality volume, in inches (1.0 inches)

$$Q_{0.5} = \left(774 \frac{csm}{in}\right) (0.002446 sq. mi.) (1.0")$$

$$Q_{0.5} = 1.89 cfs$$

Water Quality Flow Calculation
 Kelly Jeep Phase 2, Lynnfield, MA
 October 5, 2020

The StormCeptor STC 4800 will provide a presumptive removal rate of 77% for water quality flows through 2.47 cfs. See Massachusetts sizing table below:

Massachusetts – Water Quality (Q) Flow Rate

Stormceptor STC Model	Inside Diameter	Typical Depth Below Inlet Pipe Invert	Water Quality Flow Rate Q ¹	Peak Conveyance Flow Rate ²	Hydrocarbon Capacity	Maximum Sediment Capacity
	(in)	(in)	(cfs)	(cfs)	(gallons)	(ft ³)
STC 450I	4	68	0.40	5.5	86	45
STC 900	6	83	0.89	22	351	89
STC 2400	8	104	1.58	22	840	305
STC 4800	10	140	2.47	22	909	543
STC 7200	12	148	3.56	22	1,059	839
STC 11000	2 x 10	142	4.94	48	2,792	1,086
STC 16000	2 x 12	148	7.12	48	3,055	1,577

¹Depth Below Pipe Inlet Invert to the Bottom of Base Slab, and Water Main Sediment Capacity May vary to accommodate specific site designs and pollutant loads. Depth can vary to accommodate specific site or site conditions. Contact your local representative for assistance.


²Water Quality Flow Rate (Q) is based on 30% annual average TSS removal of direct runoff (K) based on distribution.

³Peak Conveyance Flow Rate is based upon a velocity of 1.48 ft per second and outlet pipe diameters of 18-inch, 16-inch, and 14-inch diameters.

⁴Hydrocarbon & Sediment capacities can be modified to accommodate specific site design requirements, contact your local representative for assistance.

Water Quality Flow Calculation
 Kelly Jeep Phase 2, Lynnfield, MA
 October 5, 2020

Figure 4: for First 1-Inch Runoff, Table of qu values for Ia/P Curve = 0.034, listed by tc, for Type III Storm Distribution



Tc (Hours)	qu (csm/in)	Tc (Hours)	qu (csm/in)	Tc (Hours)	qu (csm/in)
0.01	835	2.7	197	7.1	95
0.03	835	2.8	192	7.2	94
0.05	831	2.9	187	7.3	93
0.067	814	3	183	7.4	92
0.083	795	3.1	179	7.5	91
0.1	774	3.2	175	7.6	90
0.116	755	3.3	171	7.7	89
0.133	736	3.4	168	7.8	88
0.15	717	3.5	164	7.9	87
0.167	700	3.6	161	8	86
0.183	685	3.7	158	8.1	85
0.2	669	3.8	155	8.2	84
0.217	654	3.9	152	8.3	84
0.233	641	4	149	8.4	83
0.25	628	4.1	146	8.5	82
0.3	593	4.2	144	8.6	81
0.333	572	4.3	141	8.7	80
0.35	563	4.4	139	8.8	79
0.4	536	4.5	137	8.9	79
0.416	528	4.6	134	9	78
0.5	491	4.7	132	9.1	77
0.583	460	4.8	130	9.2	76
0.6	454	4.9	128	9.3	76
0.667	433	5	126	9.4	75
0.7	424	5.1	124	9.5	74
0.8	398	5.2	122	9.6	74
0.9	376	5.3	120	9.7	73
1	356	5.4	119	9.8	72
1.1	339	5.5	117	9.9	72
1.2	323	5.6	115	10	71
1.3	309	5.7	114		
1.4	296	5.8	112		
1.5	285	5.9	111		
1.6	274	6	109		
1.7	264	6.1	108		
1.8	255	6.2	106		
1.9	247	6.3	105		
2	239	6.4	104		
2.1	232	6.5	102		
2.2	225	6.6	101		
2.3	219	6.7	100		
2.4	213	6.8	99		
2.5	207	6.9	98		
2.6	202	7	96		

INSTRUCTIONS:

1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Version 1, Automated: Mar. 4, 2008

Location: #353 Broadway Lynnfield, MA

B BMP ¹	C TSS Removal Rate ¹	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	0.25	1.00	0.25	0.75
Proprietary Treatment Practice	0.77	0.75	0.58	0.17
	0.00	0.17	0.00	0.17
	0.00	0.17	0.00	0.17
	0.00	0.17	0.00	0.17

Separate Form Needs to be Completed for Each Outlet or BMP Train

Total TSS Removal =

Project:	LYF-0347C
Prepared By:	EBL
Date:	2-Jan-22

83%

*Equals remaining load from previous BMP (E) which enters the BMP

Non-automated TSS Calculation Sheet must be used if Proprietary BMP Proposed
 1. From MassDEP Stormwater Handbook Vol. 1

A. Facility Information

Kelly Automotive Group

Owner Name 155 ANDOVER STREET Map/Lot # 01923
 Street Address DANVERS Ma 01923 Zip Code
 City

B. Site Information

- (Check one) New Construction Upgrade Repair
- Soil Survey Available? Yes No If yes: Source NRES Soil Map Unit 626B

MERRIMAC - URBAN LAND
Soil Name

GLACIOFLUVIAL DEPOSITS
Soil Parent material

- Surficial Geological Report Available? Yes No If yes: Year Published/Source _____ Map Unit _____

Description of Geologic Map Unit

- Flood Rate Insurance Map Within a regulatory floodway? Yes No
- Within a velocity zone? Yes No
- Within a Mapped Wetland Area? Yes No
- Current Water Resource Conditions (USGS): _____
 If yes, MassGIS Wetland Data Layer: _____
 Range: Above Normal Normal Below Normal
 Wetland Type
- Other references reviewed: _____
 Month/Day/Year _____



Commonwealth of Massachusetts
City/Town of LYNNFIELD

Form 11 - Soil Suitability Assessment

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Gordon Rogerson
Signature of Soil Evaluator

Gordon Rogerson SE 2014
Typed or Printed Name of Soil Evaluator / License #

Dec 21, 2021
Date

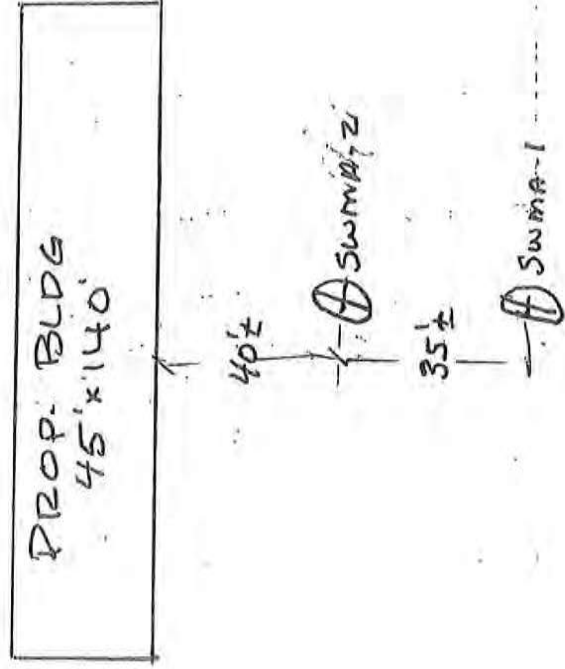
June 30, 2022
Expiration Date of License

Name of Approving Authority Witness

Approving Authority

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.

Field Diagrams: Use this area for field diagrams:



KEVIN
JEEP



Form 11 - Soil Suitability Assessment

C. On-Site Review

Deep Observation Hole Number: SWMA-1 Date: 12-21-21 Time: SUNNY 30 Weather: NONE Latitude: _____ Longitude: A

1. Land Use: CONSTRUCTION SITE (e.g., woodland, agricultural field, vacant lot, etc.)
 Description of Location: 353 BROADWAY Vegetation: NONE
 Surface Stones (e.g., cobbles, stones, boulders, etc.): _____ Slope (%): _____

2. Soil Parent Material: MERIMAC-URBAN LAND Landform: OUTWASH TERRACE
 Position on Landscape (SU, SH, BS, FS, TS): _____

3. Distances from: Open Water Body >100 feet
 Property Line _____ feet
 Drainage Way _____ feet
 Drinking Water Well _____ feet
 Wetlands 7100 feet
 Other _____ feet

4. Unsuitable Materials Present: Yes No, If Yes: Disturbed Soil Fill Material Weathered/Fractured Rock Bedrock

5. Groundwater Observed: Yes No
 If yes: 108 depth Weeping from Pit 160 Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-108	HTM	Till - BOULDERS									
108-168	C	fs	108" 10YR 6/8	5Y 7/1	0	0	0	m	mvfr		

Additional Notes:



Commonwealth of Massachusetts
City/Town of **LYNNFIELD**

Form 11 - Soil Suitability Assessment

C. On-Site Review

Deep Observation Hole Number: **SUM-2** Date: **12-21-21** Time: **SUNNY** Weather: **30°** Latitude: _____ Longitude: _____
 Hole # _____ Surface Stones (e.g., cobbles, stones, boulders, etc.): **NONE** Slope (%): **A**
 Land Use: **CONSTRUCTION SITE** Vegetation: **NONE**

Description of Location: **353 BROADWAY** Landform: **OUTWASH TERRACE**
 (e.g., woodland, agricultural field, vacant lot, etc.)
 Description of Location: **MERRIMAC-NEBAN LAND** Position on Landscape (SU, SH, BS, FS, TS): _____
 Soil Parent Material: **GLACIOFLUVIAL DEPOSITS** Landform: _____

Distances from: Open Water Body **2100** feet Drainage Way _____ feet Wetlands **2100** feet
 Property Line _____ feet Drinking Water Well _____ feet Other _____ feet
 4. Unsuitable Materials Present: Yes No If Yes: Disturbed Soil Fill Material Weathered/Fractured Rock Bedrock
 5. Groundwater Observed: Yes No If Yes: **120** Depth Weeping from Pit **140** Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon / Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones			
0-104	HTM	T1U	Boulders - Broken								
104-110	C1	fs	5Y 2/1 110" 10YR 6/5				0	0%	M	mfr	
110-144	C2	fs	2.5Y 5/3				0	0%	M	muf	

Additional Notes:



Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

- Depth observed standing water in observation hole
- Depth weeping from side of observation hole
- Depth to soil redoximorphic features (mottles)
- Depth to adjusted seasonal high groundwater (Sh) (USGS methodology)

Obs: Hole # 6 Obs: Hole # 2
160 inches 140 inches
108 inches 120 inches
108 inches 110 inches
 _____ inches _____ inches

Index Well Number _____ Reading Date _____

$S_h = S_c - [S_r \times (OW_c - OW_{max}) / OW]$

Obs. Hole/Well# _____ S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW _____ S_h _____

2. Estimated Depth to High Groundwater: _____ inches

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

- a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? Yes No
- b. If yes, at what depth was it observed (exclude A and C Horizons)?
 Upper boundary: _____ inches Lower boundary: _____ inches
- c. If no, at what depth was impervious material observed?
 Upper boundary: _____ inches Lower boundary: _____ inches

Commonwealth of Massachusetts
 City/Town of **LYNNFIELD**
 Form 11 - Soil Suitability Assessment

A. Facility Information

Owner Name **KELLY AUTOMOTIVE GROUP**

Street Address **155 ANDOVER STREET**

City **DANVERS**

Ma State

Map/Lot # **01923**

Zip Code

B. Site Information

1. (Check one) New Construction Upgrade Repair

2. Soil Survey Available? Yes No If yes:

MERRIMAC - URBAN LAND

Soil Limitations

GLACIOFLUVIAL DEPOSITS

Soil Parent material

OUTWASH TERRACE

Landform

3. Surficial Geological Report Available? Yes No

If yes:

Year Published/Source

Map Unit

NRCS

Source

626B

Soil Map Unit

Description of Geologic Map Unit:

4. Flood Rate Insurance Map Within a regulatory floodway? Yes No

5. Within a velocity zone? Yes No

6. Within a Mapped Wetland Area? Yes No

7. Current Water Resource Conditions (USGS):

8. Other references reviewed:

If yes, MassGIS Wetland Data Layer:

Range: Above Normal Below Normal

Wetland Type:

Normal Below Normal



Commonwealth of Massachusetts
City/Town of **LYNNFIELD**

Form 11 - Soil Suitability Assessment

F. Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through

15.107.

Gordon Rogerson
Signature of Soil Evaluator

Gordon Rogerson SE 2014
Typed or Printed Name of Soil Evaluator / License #

Dec 21, 2021
Date

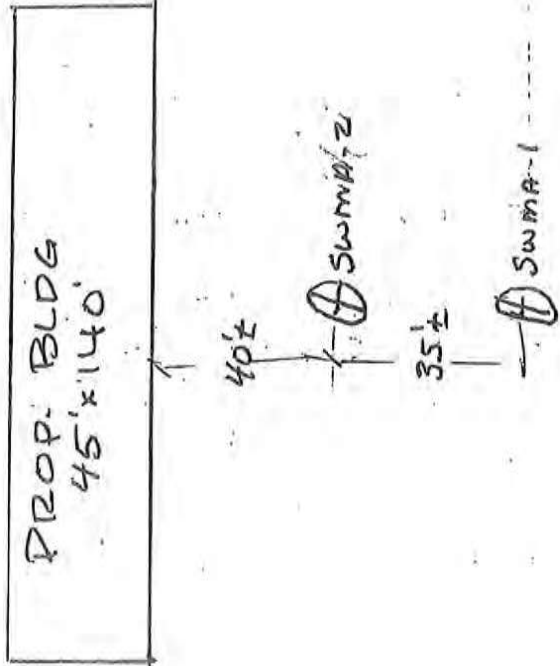
June 30, 2022
Expiration Date of License

Name of Approving Authority Witness

Approving Authority

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.

Field Diagrams: Use this area for field diagrams:



KEVIN
JEEP



Form 11 - Soil Suitability Assessment

C. On-Site Review

Deep Observation Hole Number: SWMA-1 12-21-21 Hole # SWM130 Date 12-21-21 Time _____ Latitude _____ Longitude _____

1. Land Use CONSTRUCTION SITE NONE NONE Weather _____ Slope (%) A
 (e.g., woodland, agricultural field, vacant lot, etc.) Vegetation _____ Surface Stones (e.g., cobbles, stones, boulders, etc.) _____

Description of Location: 353 BROADWAY
MERRIMAC-URBAN LAND
 2. Soil Parent Material: GLACIOFLUVIAL DEPOSIT OKTAWASA TERRACE Landform _____

3. Distances from: Open Water Body >100 feet Drainage Way _____ feet Wetlands 700 feet
 Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: Yes No, if Yes: Disturbed Soil Fill Material Weathered/Fractured Rock Bedrock

5. Groundwater Observed: Yes No If yes: 108 Depth Weeping from Pit _____ Depth Standing Water in Hole _____

Soil Log

Depth (in)	Soil Horizon /Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features		Coarse Fragments % by Volume		Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel			
<u>0-108</u>	<u>HTM</u>	<u>TILL - BOULDERS - CONCRETE ETC</u>								
<u>108-168</u>	<u>C</u>	<u>fs</u>		<u>108" 10YR 6/8</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>m</u>	<u>muf-r</u>	

Additional Notes:



Commonwealth of Massachusetts
City/Town of LYNNFIELD

Form 11 - Soil Suitability Assessment

C. On-Site Review

Deep Observation Hole Number: SWM-2 Date: 12-21-21 Time: SUNNY 30° Weather: SUNNY 30° Latitude: _____ Longitude: _____

1. Land Use: CONSTRUCTION SITE Hole # _____ Vegetation: NONE Surface Stones (e.g., cobbles, stones, boulders, etc.): NONE Slope (%): A

Description of Location: MERRIMAC-URBAN LAND Landform: OUTWASH TERRACE

2. Soil Parent Material: _____ Position on Landscape (SU, SH, BS, FS, TS): _____

3. Distances from: Open Water Body 2100 feet Wetlands 7100 feet
Property Line _____ feet Drinking Water Well _____ feet Other _____ feet

4. Unsuitable Materials Present: Yes No if Yes: Disturbed Soil Fill Material Weathered/Fractured Rock Bedrock

5. Groundwater Observed: Yes No If yes: 120 Depth Weeping from Pit 140 Depth Standing Water in Hole

Soil Log

Depth (in)	Soil Horizon / Layer	Soil Texture (USDA)	Soil Matrix: Color-Moist (Munsell)	Redoximorphic Features			Coarse Fragments % by Volume			Soil Structure	Soil Consistence (Moist)	Other
				Depth	Color	Percent	Gravel	Cobbles & Stones				
0-104	HTM	Till - Boulders	5Y 4/1	110"	10YR 6/8	5Y 7/1	0	0%	M	mfr		
104-110	C1	fs	5Y 4/1	110"	10YR 6/8	5Y 7/1	0	0%	M	mfr		
110-144	C2	fs	2.5Y 5/3				0	0%	M	mfr		

Additional Notes:



Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

- Depth observed standing water in observation hole
- Depth weeping from side of observation hole.
- Depth to soil redoximorphic features (mottles)
- Depth to adjusted seasonal high groundwater (Sh) (USGS methodology)

Obs. Hole # 1 Obs. Hole # 2
160 inches 140 inches
108 inches 120 inches
108 inches 110 inches
 _____ inches _____ inches

Index Well Number _____ Reading Date _____
 $Sh = Sc - [Sr \times (OW_c - OW_{max}) / OW_r]$
 Obs. Hole/Well# _____ Sc _____ Sr _____ OW_c _____ OW_{max} _____ OW_r _____ Sh _____

2. Estimated Depth to High Groundwater: _____ inches

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

- a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system? Yes No
- b. If yes, at what depth was it observed (exclude A and C horizons)?
 Upper boundary: _____ inches Lower boundary: _____ inches
- c. If no, at what depth was impervious material observed?
 Upper boundary: _____ inches Lower boundary: _____ inches

**LONG-TERM POLLUTION PREVENTION PLAN
#353 BROADWAY
LYNNFIELD, MASSACHUSETTS**

The Long-Term Pollution Prevention Plan (to be implemented and maintained by Kelly Automotive Group, owner of #353 Broadway):

- Good housekeeping practices: Pollutant runoff from the project will be controlled through the use of erosion controls.
- Provisions for storing materials and waste products inside or under cover: All materials stored on site shall be stored in a neat and orderly fashion in their appropriate containers and, if possible, under a roof or other secure enclosure. Waste products shall be placed in secure receptacles until they are emptied by a licensed solid waste management company in Massachusetts.
- Vehicle washing controls: Vehicle washing is prohibited on the site
- Requirements for routine inspections and maintenance of stormwater BMPs: Follow the guidelines outlined above.

- Spill prevention and response plans:

Prevention: All materials stored on site shall be stored in a neat and orderly fashion in their appropriate containers and, if possible, under a roof or other secure enclosure. Products should be kept in their original containers with the original manufacturer's label. Products should not be mixed with one another unless recommended by the manufacturer. If possible, all of the product should be used up before disposing of the container. The Manufacturer's recommendations for proper use and disposal should be followed.

Response: Manufacturer's recommended methods for cleanup shall be followed. Spills must be cleaned up immediately after discovery. The spill area shall be kept well ventilated and personnel shall wear appropriate protective clothing to prevent injury from contact with a hazardous substance. Spills of toxic or hazardous material shall be reported to the appropriate State and/or local authority in accordance with local and/or State regulations.

- Provisions for maintenance of lawns, gardens, and other landscaped areas: These activities shall be left up to the owner and designated property manager (if any) to schedule and perform.

- Requirements for storage and use of fertilizers, herbicides, and pesticides (Should any questions arise about these materials, the Order of Conditions for this project should be consulted):

Fertilizers: Fertilizers shall be applied in the minimum amounts recommended by the manufacturer. Once applied, fertilizers shall be worked into the soil to limit exposure to stormwater. Storage shall be stored under a roof or other secure enclosure. The

contents of any partially used bags of fertilizers shall be transferred to a sealable plastic bag or bin to avoid spills.

Herbicides and Pesticides: Store herbicides and pesticides in original containers that are closed and labeled, in a secure area out of reach of children and pets. Avoid storing in damp areas where containers may become moist or rusty. Herbicides and Pesticides should not be stored near food. Follow the label instructions strictly about where and how much to apply. Do not put herbicides and pesticides in the trash or down the drain. Use rubber gloves when handling and use an appropriate cartridge mask if using products extensively.

- Pet waste management provisions: Not applicable to this project.
- Provisions for operation and management of septic systems: Not applicable to this project.
- Provisions for solid waste management: Waste products must be placed in secure receptacles until they are emptied by a licensed solid waste management company in Massachusetts.
- Snow disposal and plowing plans relative to Wetland Resource Areas: Snow disposal should be in accordance with the Bureau of Resource Protection Snow Disposal Guidelines, Guideline No. BRPG01-01 effective March 8, 2001 and as depicted on the project plan.

- Winter Road Salt and/or Sand Use and Storage restrictions:

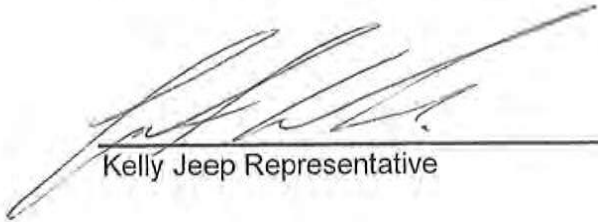
Road Salt: Road salt shall not be used on this site due to close proximity to Hawkes Brook.

Sand: Environmentally friendly alternatives, i.e. sand) for melting ice must be used instead of salt.

- Street sweeping schedules: Street / parking lot sweeping is not proposed for maintenance.
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from land uses with higher potential pollutant loads (LUHPPL): Spill control kit, including adequate amount of "Silt Sock" sufficient to block the inlet of the oil & grit separator will be provided and maintained on site.
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan: The responsibility lies with the property owner and manager.
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan: The responsibility lies with the owner and facility manager.

Standard #10: Illicit Discharge Statement

There are no proposed illicit discharges to the proposed stormwater management systems, as verified by the attached Hayes Engineering, Inc. site plan set for #353 Broadway, dated October 5, 2020 revised through January 1, 2022. Upon review of said plans, it is evident that there are no entries of illicit discharges into the stormwater management system. By definition, an illicit discharge does not include discharges from the following activities or facilities: firefighting, water line flushing, landscape irrigation, uncontaminated groundwater, potable water sources, foundation drains, air conditioning condensation, footing drains, individual resident car washing, flows from riparian habitats and wetlands, dechlorinated water from swimming pools, water used for street washing and water used to clean residential buildings without detergents Kelly Automotive Group, the stormwater management system manager, shall be responsible for verifying that there are no illicit discharges to the stormwater management system (discharges of water into the system other than stormwater) after the system has been constructed.



Kelly Jeep Representative

4-11-2022

Date

Stormwater Pollution Prevention Plan (SWPPP)

For Construction Activities At:

Kelly Jeep – Phase 2: Parking and Vehicle Storage
353 Broadway
Lynnfield, Massachusetts 01940
978.774.1000

SWPPP Prepared For:

Construction Source Management
Robby Craig
33 Commercial Street
Raynham, MA 02767
781.241.2646
rcraig@constructionsource.com

SWPPP Prepared By:

Hayes Engineering, Inc.
Anthony M. Capachietti, PE
603 Salem Street
Wakefield, MA 01880
781.246.2800
tcapachietti@hayeseng.com

SWPPP Preparation Date:

04/07/2022

Estimated Project Dates:

Project Start Date: 04/08/2022

Project Completion Date: 12/31/2022

Appendix

- I. Stormceptor Calculations
- II. TSS Removal Calculations
- III. Test Hole Logs
- IV. Long Term Pollution Prevention plan
- V. Illicit Discharge Statement
- VI. SWPPP (Available on request)

Prepared For:
 Kelly Automobile Group
 125 Andrew Street
 Danvers, MA 01923

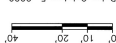
Prepared By:

 Hayes Engineering, Inc.
 100 South Street
 Danvers, MA 01923
 www.hayeseng.com



Design By: RJO
 Checked By: BJO
 Project No.: 19-0347C
 Project Name: Kelly Auto
 Date: 11-1-2020
 Standard For Permit
 Standard For Bid
 Not For Construction

Rev.	Description	Date
1	Issue for Bid	11-9-2020
2	Issue for Construction	11-9-2020
3	Issue for Construction	11-9-2020
4	Issue for Construction	11-9-2020
5	Issue for Construction	11-9-2020
6	Issue for Construction	11-9-2020
7	Issue for Construction	11-9-2020
8	Issue for Construction	11-9-2020
9	Issue for Construction	11-9-2020
10	Issue for Construction	11-9-2020

Date: October 5, 2020
 Scale: 1" = 20'


Drawing Title:
UTILITY PLAN
KELLY JEEP-PHASE 2
#353 BROADWAY
LYNNFIELD, MASS.

Drawing No.:
UTIL
 SHEET 3 OF 4



BROADWAY - NEWBURYPORT TURNPIKE - ROUTE ONE
 (1936 STATE HIGHWAY ALTERATION LAYOUT NO. 3199) (VARIABLE WIDTH)

CATCH BASINS WHICH RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES TO BE PROTECTED WITH SLOTTED.

