JOB FILE : LF-0347C

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 85363 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 _____ Owner's Signature(s) _____
(if different than Applicant)

Applicant's Name (print) Peter J Ogren PE Owner's Names(s) Peter Almeida

Applicant's Address 603 Salem St
Wakefield MA

Owner's Address 155 Andover St
Danvers, MA 01923

Date Received by Conservation Commission Office: _____
Signature _____

	*BOOK	PG	*ASSESSORS PARCEL ID
3/21/17	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	Mailing Address:	353-365 BROADWAY REALTY TRUST
CAMA Number:	0052-0000-2486		KELLY BRIAN D, TR
Property Address:	353 BROADWAY		155 ANDOVER STREET
			DANVERS, MA 01923

Abutters:

Parcel Number:	0052-0000-2544	Mailing Address:	HERB CHAMBERS OF LYNNFIELD INC
CAMA Number:	0052-0000-2544		385 BROADWAY
Property Address:	379 BROADWAY		LYNNFIELD, MA 01940
Parcel Number:	0052-0000-2599	Mailing Address:	LYNNFIELD COMMONS II LLC
CAMA Number:	0052-0000-2599		100 GRANDVIEW ROAD SUITE 203
Property Address:	375 BROADWAY		BRAINTREE, MA 02184
Parcel Number:	0056-0000-0319	Mailing Address:	KEL-ROUTE 1, LLC
CAMA Number:	0056-0000-0319		155 ANDOVER STREET
Property Address:	325 BROADWAY		DANVERS, MA 01923
Parcel Number:	0056-0000-0376	Mailing Address:	GROTTO REALTY TRUST GIUGLIANO
CAMA Number:	0056-0000-0376		SALVATORE-GILFR
Property Address:	307 BROADWAY		1 GIUGLIANO TERRACE
			LYNNFIELD, MA 01940
Parcel Number:	0056-0000-0469	Mailing Address:	LYNNFIELD WATER DISTRICT
CAMA Number:	0056-0000-0469		842 SALEM STREET
Property Address:	REAR BROADWAY		LYNNFIELD, MA 01940
Parcel Number:	0056-0000-0577	Mailing Address:	TOWN OF LYNNFIELD CONSERVATION
CAMA Number:	0056-0000-0577		COMMISSION
Property Address:	385 REAR BROADWAY		55 SUMMER STREET
			LYNNFIELD, MA 01940

353-365 Broadway-100 ft.

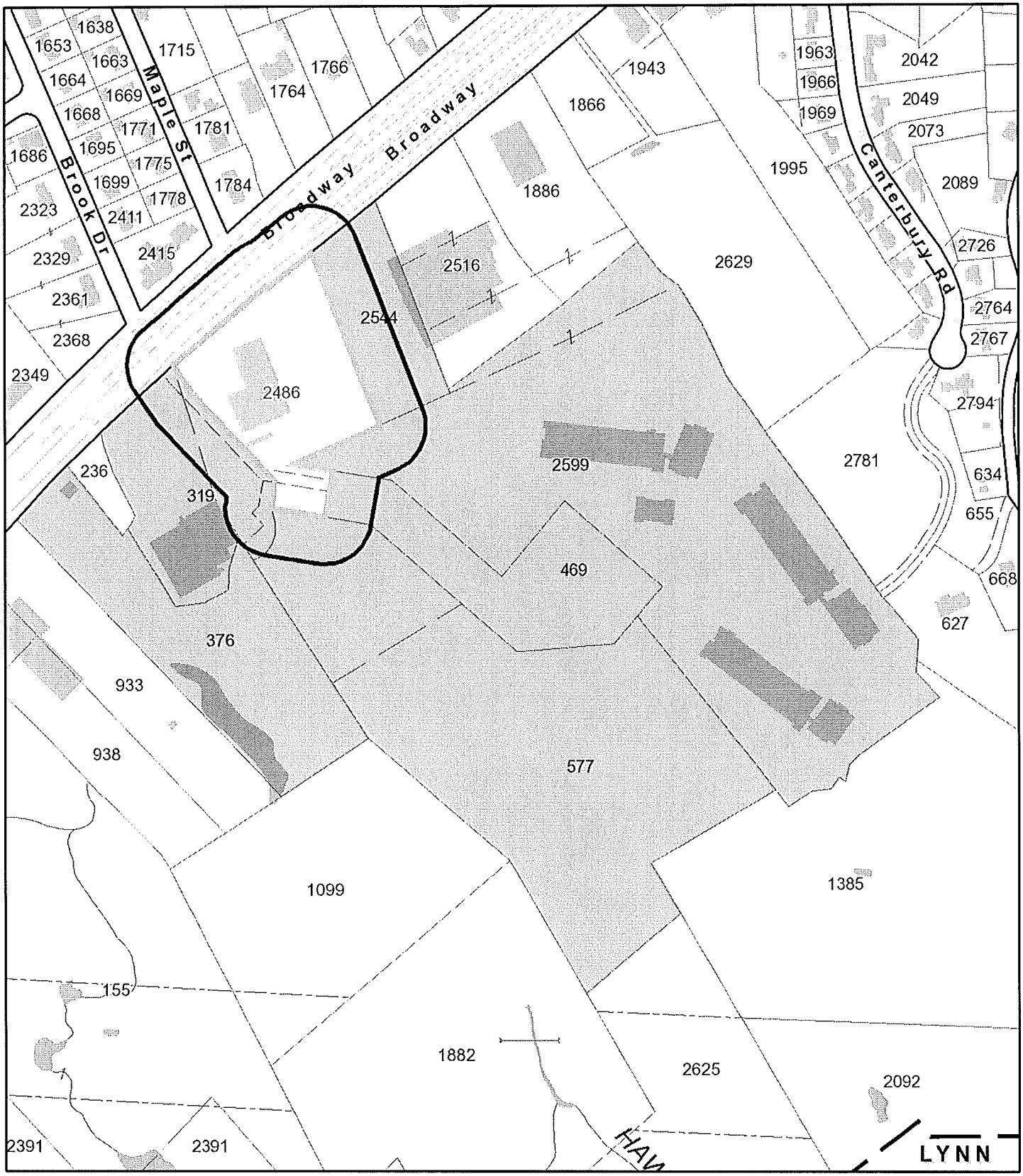
Lynnfield, MA

1 inch = 292 Feet

February 25, 2022

0 292 584 876

CAI Technologies
Precision Mapping Geospatial Solutions
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.

CASH ONLY IF ALL *CheckLock*™ SECURITY FEATURES LISTED ON BACK INDICATE NO TAMPERING OR COPYING

KELLCO MANAGEMENT INC.
155 ANDOVER STREET
DANVERS, MA 01923

BANK OF AMERICA
5-13/110

25164

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

MEMO Storm Water Permit

⑈025164⑈ ⑆011000138⑆ 004640588137⑈

KELLCO 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

HAYES ENGINEERING, INC. WAKEFIELD, MA 01880

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

Hayes Engineering, Inc.

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 Moda MP

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

⑈087973⑈ ⑆011301798⑆ 12 113 4⑈

Hayes Engineering, Inc
603 Salem Street
Wakefield, MA 01880
Tel: (781) 246-2800
Fax: (781) 246-7596
Nantucket, MA 02554
Tel: (508) 228-7909

Water Quality Flow Calculation Worksheet

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)

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

$$Q_{0.5} = 1.89\ cfs$$

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 [1]	Water Quality Flow Rate Q [2]	Peak Conveyance Flow Rate [3]	Hydrocarbon Capacity [4]	Maximum Sediment Capacity [4]
	(ft)	(m)	(cfs)	(cfs)	(Gallons)	(lb)
STC 450i	4	68	0.40	5.5	86	46
STC 900	6	63	0.89	22	251	89
STC 2400	8	104	1.58	22	840	205
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	1,677

[1] Depth Below Pipe Inlet Invert to the Bottom of Base Slab, and Maximum Sediment Capacity can vary to accommodate specific site designs and pollutant loads. Depths can vary to accommodate special designs or site conditions. Contact your local representative for assistance.
[2] Water Quality Flow Rate (Q) is based on 80% annual average TSS removal of the OK-110 particle size distribution.
[3] Peak Conveyance Flow rate is based upon idle velocity of 3 feet per second and outlet pipe diameters of 18-inch, 36-inch, and 54-inch diameters.
[4] Hydrocarbon & Sediment capacities can be modified to accommodate specific site design requirements, contact your local representative for assistance.

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

TSS Removal Calculation Worksheet

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

Total TSS Removal = 83%

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

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

*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

Hayes Engineering, Inc.
Land Planning
Environmental Engineering
603 Salem Street
Wakefield, MA 01880
T: (781) 246-28
F: (781) 246-75
Nantucket: (508) 228-79
www.hayeseng.com

Commonwealth of Massachusetts
City/Town of LYNNFIELD

Form 11 - Soil Suitability Assessment

A. Facility Information

KELLY AUTOMOTIVE GROUP
Owner Name

155 ANDOVER STREET
Street Address

Map/Lot #

DANVERS
City

Ma
State

01923
Zip Code

B. Site Information

1. (Check one) ☑ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☑ Yes ☐ No If yes: NRCS (Source) 626B (Soil Map Unit)

MERRIMAC - URBAN LAND
Soil Name

Soil Limitations

GLACIOFLUVIAL DEPOSITS
Soil Parent material

OUTWASH TERRACE
Landform

3. Surficial Geological Report Available? ☐ Yes ☐ No If yes: Year Published/Source; 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 If yes, MassGIS Wetland Data Layer: Wetland Type

7. Current Water Resource Conditions (USGS): Month/Day/ Year Range: ☐ Above Normal ☐ Normal ☐ Below Normal

8. Other references reviewed:

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 information presented in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Gordon Rogerson — Signature of Soil Evaluator

Dec 21, 2021 — Date

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

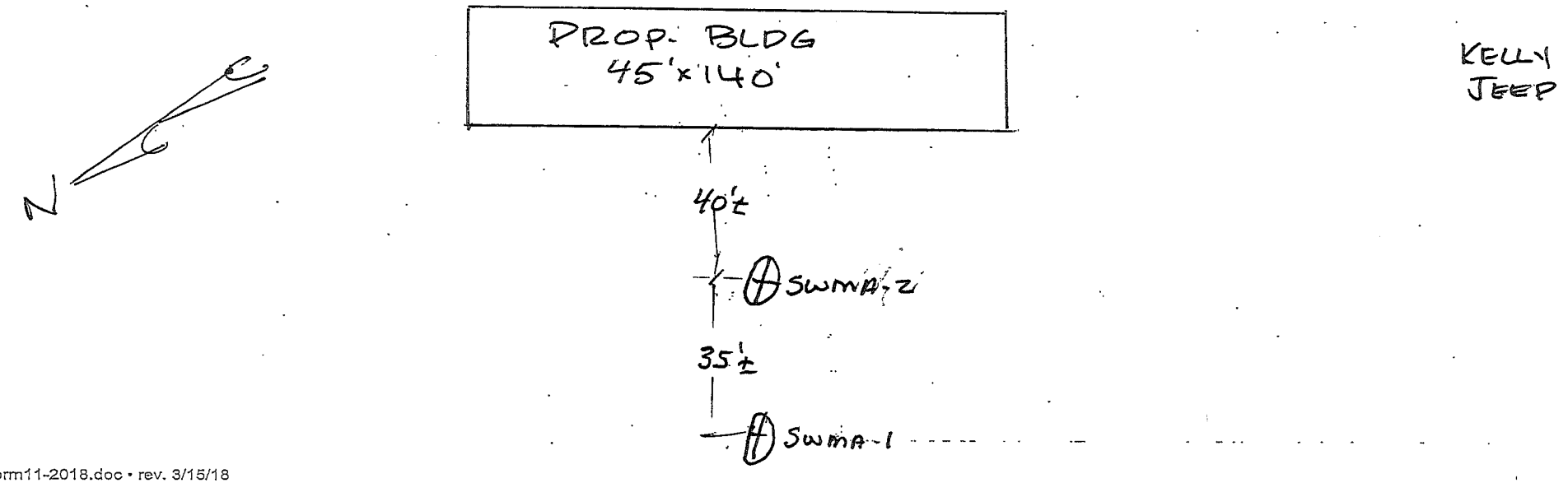
June 30, 2022 — Expiration Date of License

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:



City/Town of LYNNFIELD

Form 11 - Soil Suitability Assessment

C. On-Site Review

Deep Observation Hole Number: SWMA-1 (Hole #) 12-21-21 (Date) _____ (Time) SUNNY 30 (Weather) _____ (Latitude) _____ (Longitude)

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

Description of Location: 353 BROADWAY

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

3. Distances from: Open Water Body >100 feet; Drainage Way _____ feet; Wetlands >100 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 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 - CONCRETE ETC									
108-168	C	fs		108"	10YR 6/8 5Y 7/1		0	0%	m	mfr	

Additional Notes:

Commonwealth of Massachusetts
City/Town of LYNNFIELD

Form 11 - Soil Suitability Assessment

C. On-Site Review

Deep Observation Hole Number: SWMA-2 (Hole #) 12-21-21 (Date) ____ (Time) SUNNY 30° (Weather) ____ (Latitude) ____ (Longitude:)

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

Description of Location: 353 BROADWAY

2. Soil Parent Material: MERRIMAC-URBAN LAND GLACIOFLUVIAL DEPOSITS OUTWASH TERRACE (Landform) ____ (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 >100 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 - BROKEN LEDGE									
104-110	C_1	fs	5Y 4/1	110"	10YR6/8 5Y7/1		0	0/0	m	mfr	
110-144	C_2	fs	2.5Y 5/3				0	0/0	m	mufr	

Additional Notes:

Commonwealth of Massachusetts
City/Town of LYNNFIELD

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

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole # 1	Obs. Hole # 2
☐ Depth observed standing water in observation hole	160 inches	140 inches
☐ Depth weeping from side of observation hole	108 inches	120 inches
☐ Depth to soil redoximorphic features (mottles)	108 inches	110 inches
☐ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	____ inches	____ inches

_____ (Index Well Number) _____ (Reading Date)

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

Obs. Hole/Well# _____ S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW_r _____ 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 O Horizons)? Upper boundary: _____ inches Lower boundary: _____ inches

c. If no, at what depth was impervious material observed? Upper boundary: _____ inches Lower boundary: _____ inches

Hayes Engineering, Inc.
Land Planning
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603 Salem Street
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T: (781) 246-22
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Commonwealth of Massachusetts
City/Town of LYNNFIELD

Form 11 - Soil Suitability Assessment

A. Facility Information

KELLY AUTOMOTIVE GROUP
Owner Name

155 ANDOVER STREET
Street Address

Map/Lot #

DANVERS
City

Ma
State

01923
Zip Code

B. Site Information

1. (Check one) ☑ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☑ Yes ☐ No If yes:

NRCS
Source

626B
Soil Map Unit

MERRIMAC - URBAN LAND
Soil Name

Soil Limitations

GLACIOFLUVIAL DEPOSITS
Soil Parent material

OUTWASH TERRACE
Landform

3. Surficial Geological Report Available? ☐ Yes ☐ No If yes:

Year Published/Source

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 If yes, MassGIS Wetland Data Layer:

Wetland Type

7. Current Water Resource Conditions (USGS): Month/Day/ Year Range: ☐ Above Normal ☐ Normal ☐ Below Normal

8. Other references reviewed:

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 information [illegible] described in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Gordon Rogerson — Dec 21, 2021

Signature of Soil Evaluator — Date

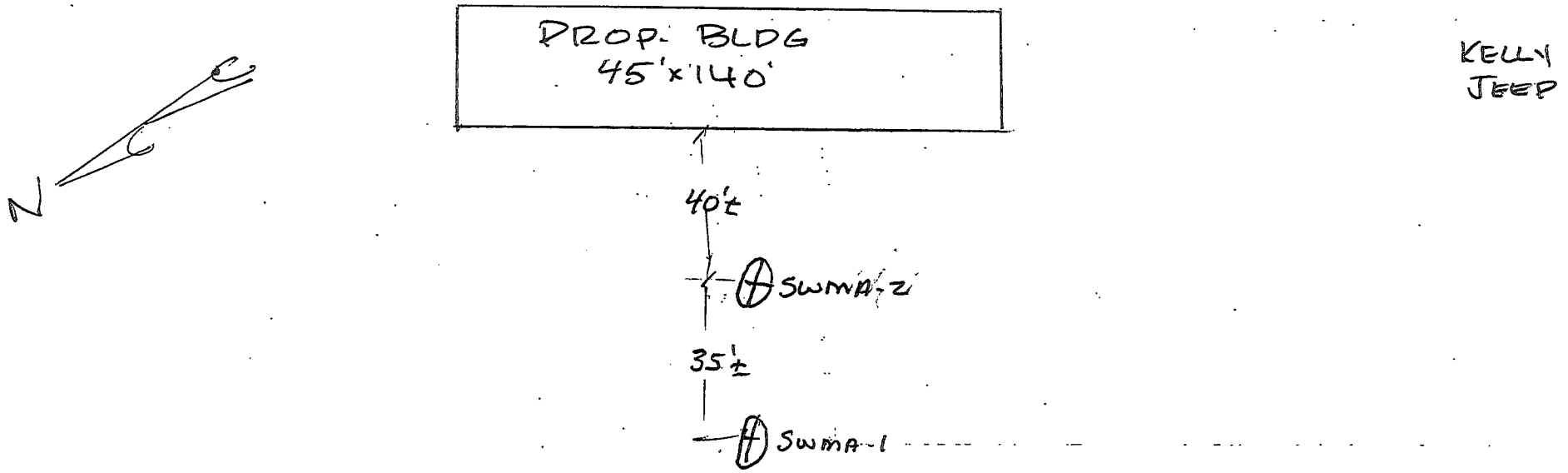
Gordon Rogerson SE 2014 — June 30, 2022

Typed or Printed Name of Soil Evaluator / License # — 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:



City/Town of LYNNFIELD

Form 11 - Soil Suitability Assessment

C. On-Site Review

Deep Observation Hole Number: SWMA-1 (Hole #) 12-21-21 (Date) _____ (Time) SUNNY 30 (Weather) _____ (Latitude) _____ (Longitude)

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

Description of Location: 353 BROADWAY

2. Soil Parent Material: GLACIOFLUVIAL DEPOSITS MERRIMAC-URBAN LAND COMPLEX Landform: OUTWASH TERRACE Position on Landscape (SU, SH, BS, FS, TS)

3. Distances from: Open Water Body >200 feet; Drainage Way _____ feet; Wetlands >100 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; 160 Depth Standing Water in Hole

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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 - CONCRETE ETC									
108-168	C	fs		108"	10YR 6/8 5Y 7/1		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: SWMA-2 (Hole #) 12-21-21 (Date) ____ (Time) SUNNY 30° (Weather) ____ (Latitude) ____ (Longitude)

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

Description of Location: 353 BROADWAY

2. Soil Parent Material: MERRIMAC-URBAN LAND GLACIOFLUVIAL DEPOSITS OUTWASH TERRACE (Landform) ____ (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 >100 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 - BROKEN LEDGE									
104-110	C_1	fs	5Y 4/1	110"	10YR6/8 5Y7/1		0	0/0	m	mfr	
110-144	C_2	fs	2.5Y 5/3				0	0/0	m	mufr	

Additional Notes:

Commonwealth of Massachusetts
City/Town of LYNNFIELD

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

D. Determination of High Groundwater Elevation

1. Method Used:

	Obs. Hole # 1	Obs. Hole # 2
☐ Depth observed standing water in observation hole	160 inches	140 inches
☐ Depth weeping from side of observation hole	108 inches	120 inches
☐ Depth to soil redoximorphic features (mottles)	108 inches	110 inches
☐ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)	____ inches	____ inches

Index Well Number _____ Reading Date _____

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

Obs. Hole/Well# _____ S_c _____ S_r _____ OW_c _____ OW_{max} _____ OW_r _____ 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 O Horizons)? Upper boundary: _____ inches Lower boundary: _____ inches

c. If no, at what depth was impervious material observed? Upper boundary: _____ inches Lower boundary: _____ inches

NPDES FORM 3510-9

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460
NOTICE OF INTENT (NOI) FOR THE 2017 NPDES CONSTRUCTION PERMIT

FORM Approved OMB No. 2040-0004

Submission of this Notice of Intent (NOI) constitutes notice that the operator identified in Section III of this form requests authorization to discharge pursuant to the NPDES Construction General Permit (CGP) permit number identified in Section II of this form. Submission of this NOI also constitutes notice that the operator identified in Section III of this form meets the eligibility requirements of Part 1.1 CGP for the project identified in Section IV of this form. Permit coverage is required prior to commencement of construction activity until you are eligible to terminate coverage as detailed in Part 8 of the CGP. To obtain authorization, you must submit a complete and accurate NOI form. Discharges are not authorized if your NOI is incomplete or inaccurate or if you were never eligible for permit coverage. Refer to the instructions at the end of this form.

Permit Information

NPDES ID: MAR1001M2

State where your construction site is located: MA

Is your construction site located on Indian Country Lands? ☐ YES ☑ NO

Are you requesting coverage under this NOI as a *"Federal Operator"* as defined in Appendix A (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_a_-_definitions_508.pdf)?
☐ YES ☑ NO

Have stormwater discharges from your current construction site been covered previously under an NPDES permit? ☐ YES ☑ NO

Will you use polymers, flocculants, or other treatment chemicals at your construction site? ☐ YES ☑ NO

Has a Stormwater Pollution Prevention Plan (SWPPP) been prepared in advance of filling this NOI, as required? ☑ YES ☐ NO

Are you able to demonstrate that you meet one of the criteria listed in Appendix D (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_d_-_endangered_species_reqs_508.pdf) with respect to protection of threatened or endangered species listed under the Endangered Species Act (ESA) and federally designated critical habitat?
☑ YES ☐ NO

Have you completed the screening process in Appendix E (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-_historic_properties_reqs_508.pdf) relating to the protection of historic properties?
☑ YES ☐ NO

Indicating "Yes" below, I confirm that I understand that CGP only authorized the allowable stormwater discharges in Part 1.2.1 and the allowable non-stormwater discharges listed in Part 1.2.2. Any discharges not expressly authorized in this permit cannot become authorized or shielded from liability under CWA section 402(k) by disclosure to EPA, state or local authorities after issuance of this permit via any means, including the Notice of Intent (NOI) to be covered by the permit, the Stormwater Pollution Prevention Plan (SWPPP), during an Inspection, etc. If any discharges requiring NPDES permit coverage other than the allowable stormwater and non-stormwater discharges listed in Parts 1.2.1 and 1.2.2 will be discharged, they must be covered under another NPDES permit.
☑ YES ☐ NO

Operator Information

Operator Information

Operator Name: Construction Source Management

Mailing Address:

Street/Location: 33 Commercial Street

City: Raynham **State:** MA **Zip Code:** 02767

County or Similar Government Subdivision: BRISTOL

Operator Point of Contact Information

First Name, Middle Initial, LastName: Robby D Craig

Title: Project Manager

Phone: 781-241-2646 **Ext.**

Email: rcraig@constructionsource.com

Project/Site Information

Project/Site Name: Kelly Jeep

Project/Site Address

Street/Location: 325 Broadway

City: Lynnfield **State:** MA **Zip Code:** 01940

County or Similar Government Subdivision: ESSEX

Latitude/Longitude: 42.5107°N, 71.0076°W

Latitude/Longitude Data Source: Map **Horizontal Reference Datum:** WGS 84

Project Start Date: 10/01/2018 **Project End Date:** 10/01/2019 **Estimated Area to be Disturbed:** 2.25

Types of Construction Sites:

- Commercial

Will there be demolition of any structure built or renovated before January 1, 1980? ☐ YES ☑ NO

Was the pre-development land use used for agriculture? ☐ YES ☑ NO

Have earth-disturbing activities commenced on your project/site? ☐ YES ☑ NO

Is your project located on a property of religious or cultural significance to an Indian tribe? ☐ YES ☑ NO

Discharge Information

Does your project/site discharge stormwater into a Municipal Separate Storm Sewer System (MS4)? ☑ YES ☐ NO

Are there any waters of the U.S. within 50 feet of your project's earth disturbances? ☐ YES ☑ NO

Are any of the waters of the U.S. to which you discharge designated by the state or tribal authority under its antidegradation policy as a Tier 2 (or Tier 2.5) water (water quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water) or as a Tier 3 water (Outstanding National Resource Water)? See Appendix F (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_f_-_tier_3_tier_2_and_tier_2.5_waters_508.pdf)

☐ YES ☑ NO

001: Hawkes Brook

Latitude/Longitude: 42.5101°N, 71.0081°E

Tier Designation: N/A

Is this receiving water impaired (on the CWA 303(d) list)? ☐ YES ☑ NO

Has a TMDL been completed for this receiving waterbody? ☐ YES ☑ NO

Stormwater Pollution Prevention Plan (SWPPP)

First Name, Middle Initial, LastName: Robby D Craig

Title: Project Manager

Phone: 781-241-2646 **Ext.**

Email: rcraig@constructionsource.com

Endangered Species Protection

Using the Instructions in Appendix D of the CGP, under which criterion listed in Appendix D are you eligible for coverage under this permit? Criterion A

Provide a brief summary of the basis for criterion selection listed above (the necessary content for a supportive basis statement is provided under the criterion you selected.):

MassGIS

Historic Preservation

Are you installing any stormwater controls as described in Appendix E (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-_historic_properties_reqs_508.pdf) that require subsurface earth disturbances? (Appendix E (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-_historic_properties_reqs_508.pdf), Step 1)

☑ YES ☐ NO

Have prior surveys or evaluations conducted on the site already determined historic properties do not exist, or that prior disturbances have precluded the existence of historic properties? (Appendix (https://www.epa.gov/sites/production/files/2017-02/documents/2017_cgp_final_appendix_e_-_historic_properties_reqs_508.pdf), Step 2):

☑ YES ☐ NO

Certification Information

Certified By: Robby D. Craig (KELLYJEEP2018)

Certified On: 09/17/2018 9:31 AM

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.

Hayes Engineering, Inc

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 Pollution Prevention Plan

For Construction Activities at:

Kelly Jeep
325 Broadway
Lynnfield, Massachusetts 01940

Prepared for:

Construction Source Management
33 Commercial Street
Raynham, MA 02767
September 15, 2018

SWPPP Amendment Log

Based on changes in construction plan(s) and/or on-site inspection this SWPPP was amended as indicated below:

No.	Description	Date	Amendment Prepared by (Name and Title)

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1.0 Introduction

1.1 Background

This Storm Water Pollution Prevention Plan (SWPPP) was created in accordance with the Environmental Protection Agency's (EPAs) "2012 Construction General Permit." The purpose of this SWPPP is to maximize the implementation of both structural and non-structural best management practices (BMPs) in areas of construction to minimize sedimentation and erosion and prevent pollution to receiving waters.

Development, implementation and maintenance of the SWPPP will Construction Source Mangement, the general contractor, with the framework for reducing soil erosion and minimizing pollutants in storm water during construction of the improvements at:

Kelly Jeep
325 Broadway
Lynnfield, Ma. 01940

Hereinafter referred to as "the Project." This SWPPP will:

- Define the characteristics of the site and the type of construction which will be occurring;
- Describe the site plan for the proposed construction;
- Describe the practices that will be implemented to control erosion and the release of pollutants in storm water;
- Create an implementation schedule to ensure that the practices described in this SWPPP are in fact implemented and to evaluate the plan's effectiveness in reducing erosion, sediment, and pollutant levels in storm water discharged from the site; and
- Describe the final stabilization/termination design to minimize erosion and prevent storm water impacts after construction is complete.

1.2 SWPPP Content

This SWPPP includes the following information:

- Identification of the SWPPP coordinator with a description of this person's duties;
- Identification of the storm water pollution prevention team that will assist in implementation of the SWPPP during construction;
- Description of the existing site conditions including existing land use for the site (i.e., wooded areas, open grassed areas, pavement, buildings, etc.), soil types at the site as well as the location of surface waters which are located on or next to the site (wetlands, streams, rivers, lakes, ponds, etc.);

- Identification of the body of water which will receive runoff from the construction site, including the ultimate body of water that receives the storm water;
- Identification of drainage areas and potential storm water contaminants;
- Description of storm water management controls and various BMPs necessary to reduce erosion, sediment and pollutants in storm water discharges;
- Description of the construction monitoring plan and how controls will be coordinated with construction activities; and
- Description of the implementation schedule and provisions for amendment of the plan.

2.0 SWPPP Coordinator and Duties

The construction site SWPPP coordinator is: Robby D. Craig, Project Manager of construction activities at Kelly Jeep, 325 Broadway, Lynnfield, MA.

The coordinator's duties include the following:

- Implement the SWPPP with the aid of the SWPPP team;
- Oversee maintenance practices identified as BMPs in this SWPPP;
- Conduct or provide for inspection and monitoring activities as identified in this SWPPP;
- Identify other potential pollutant sources and make sure they are added to the SWPPP;
- Identify any deficiencies in this SWPPP and make sure they are corrected; and
- Ensure that any changes in construction plans or methods are addressed in this SWPPP.

To aid in the implementation of the SWPPP, support will be provided by the SWPPP preparer:

Hayes Engineering, Inc

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

Contact information for members of the SWPPP team is provided in Table 1: SWPPP Team Contact List on the following page.

Table 1: SWPPP Team Contact List

Role	*Contact Name*	*Company*	*Direct Phone*	*E-mail*
Owner	Peter Almeida	Kelly Automotive Group	978-774-1000	palmeida@kellyauto.com
SWPPP Coordinator	Robby Craig	Construction Source Mangement	781-241-2646	rcraig@constructionsource.com
Erosion Control Monitor	Robby Craig	Construction Source Mangement	781-241-2646	rcraig@constructionsource.com
SWPPP Preparer	Eric Lane, P.E.	Hayes Engineering, Inc. 603 Salem Street Wakefield, MA 01880	781.246.2800	elane@hayeseng.com
Design Engineer	Eric Lane, P.E.	Hayes Engineering, Inc. 603 Salem Street Wakefield, MA 01880	781.246.2800	elane@hayeseng.com
Municipal Contact				
24 hour Emergency Contact	Robby Craig	Construction Source Mangement	781-241-2646	rcraig@constructionsource.com

3.0 Site Description

3.1 Site Location

The Project is located at #325 Broadway (Route One) in Lynnfield, Massachusetts. (see Figure 1 – USGS Locus Map). The subject property is located at 42.5107N, 71.0076W using the North American Datum of 1983 (NAD83). The Project area is not located within or on Native American country lands or a property of religious or cultural significance to a Native American tribe.

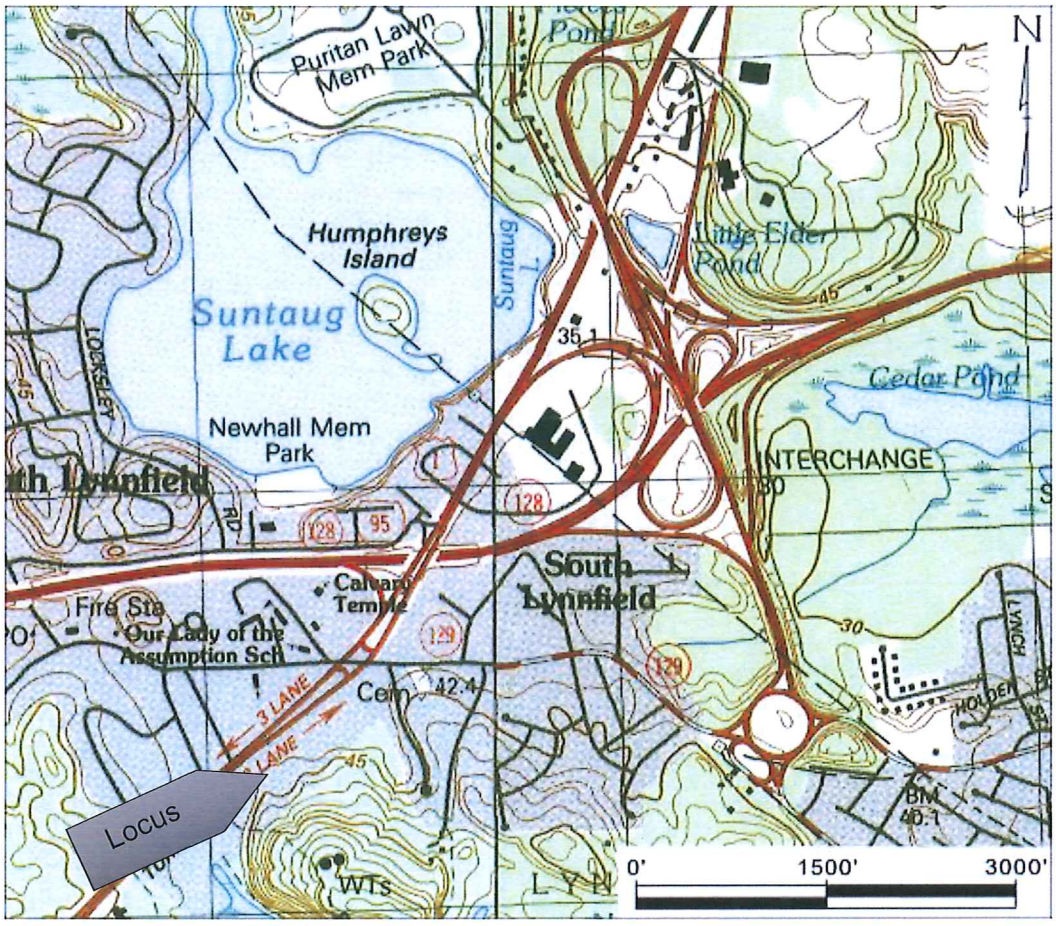
The site does not lie within critical habitats for any federally-listed threatened or endangered species nor does it lie within lands designated for protection by the Commonwealth's Natural Heritage and Endangered Species Program (NHESP).

There are no surface waters or wetland resource areas subject to federal, state or local jurisdiction within the activity area or within fifty (50) feet of the project site.

Storm water runoff from the site is ultimately tributary to Hawkes Brook. The receiving water is located within the *310 CMR 4.00 North Coastal Drainage Area*

and is not a Tier 2, Tier 2.5 or Tier 3 surface water as identified by Commonwealth of Massachusetts Surface Water Quality Standard (310 CRM 4.00) as verified by DEP 2014 Intergraded List of Waters at ***http://www.mass.gov/eea/docs/dep/water/resources/07v5/14iwlistp.pdf***

Figure 1 - USGS Locus Map



3.2 Construction Type

The proposed project will consist of the construction of a new automobile dealership.

3.3 Existing Site Conditions

The site in its existing condition consists of paved parking for existing automobile dealerships. The majority of runoff is captured by existing catch basins located on site with connections to the States drainage system on Broadway (Route One) and to an existing detention pond.

The United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) soil survey for the parcel identifies the on-site soils as being Chatfield Hollis Rock Outcrop land complex which is in the Hydrologic group "D" and Canton Urban without a Hydrologic Rating.

Site Plan

The total parcel size for the project is approximately 2.25 acres in land area. Due to the nature and scope of the project the bulk of the existing constructed site will be active throughout construction.

The ultimate goal of the development is to construct a new 32,378 S.F. automobile dealership with associated parking. The majority of the existing site is already impervious. There is a small area of parking in the East corner of the activity which is currently crushed stone. In the proposed condition this area will be paved. To mitigate the impact to the drainage systems an infiltration system will be constructed to maintain the existing rate of runoff from the site.

As previously stated in section 3.3 of this SWPPP, site runoff is collected by a catch basins on site where it is collected and conveyed by a closed drainage system and an open drain system and ultimately discharges to Hawkes Brook. Hawkes Brook is not classified as a Tier 2, Tier 2.5 or Tier 3 water body.

4.0 Construction Schedule

Construction is anticipated to begin on October 2018 and be completed by October 2019. The following general construction sequence is suggested:

a. Pre-construction meeting(s) including the SWPPP team, relevant sub-contractors and various state and local agencies and authorities;
b. Installation of erosion control measures in accordance with "Site Plan – Kelly Jeep, Lynnfield, Massachusetts" dated November 2, 2017, revised through September 7, 2018 prepared by Hayes Engineering, Inc.
c. Site inspection of newly installed erosion control by the Erosion Control Monitor and SWPP Coordinator;
d. Strip existing pavement;
e. Installation of stabilized construction entrance;
f. Installation of on-site underground utilities, footings and foundations;
g. Building construction
h. Subsurface infiltration chamber installation;
i. Paving of parking surfaces;
j. Stabilization of disturbed soils;
k. Clean catch basins by contractor prior to turning site over to the property owner.

5.0 Identification of Potential Storm Water Contaminants

The purpose of this section is to identify pollutants typically associated with site construction that could impact storm water during the construction of the project.

5.1 Allowable Non-Storm Water Discharges

Discharges to the storm water management system from the following activities or facilities are permissible and have the potential to be present at the site:

- Firefighting (Emergency)
- Water Main and Fire Hydrant Flushing
- Landscape Irrigation
- Uncontaminated Groundwater
- Potable Water Sources
- Foundation Drains
- Air Conditioning Condensation
- Footing Drains
- Water Used for Street Sweeping
- Water Used to Clean Buildings (without detergents)
- Water Used to Control Dust

5.2 Significant Material Inventory

A general list of pollutants that may result from clearing, grading, excavation and building activities that have the potential to be present in storm water runoff are listed in Table 2 – Potential Construction Site Storm Water Pollutants. This table includes information regarding material type, chemical and physical description and specific regulated storm water pollutants associated with each material.

This table does not relieve the Contractor of its obligation to communicate hazards in accordance with Occupational Safety and Health Administration (OSHA) Standards, including Standard 1910.1200 or the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS), Revision 3, issued in the Federal Register Volume 77, Number 58 on March 26, 2012 as related to 29 CFR 1910, 1915 and 1926.

Table 2 - Potential Construction Site Storm Water Pollutants

Trade Name / Material	*Chemical/Physical Description[1]*	*Storm Water Pollutants[1]*
Pesticides (fungicides, herbicides)	Various colored to colorless liquid, powder, pellets, or grains	Chlorinated hydrocarbons, organophosphates, carbamates, arsenic
Fertilizer	Liquid or solid grains	Nitrogen, phosphorous
Plaster	White granules of powder	Calcium sulphate, calcium carbonate, sulfuric acid
Cleaning Solvents	Colorless, blue or yellow-green liquids	Perchloroethylene, menthylene chloride, trichloroethylene, petroleum distillates
Bituminous Asphalt	Black solid	Oil, petroleum distillates
Concrete	White solid	Limestone, sand
Glue, adhesives	White or yellow liquid	Polymers, epoxies

Paints	Various colored liquid	Metal oxides, Stoddard solvent, talc, calcium carbonate, arsenic
Curing compounds	Creamy white liquid	Naphtha
Wastewater from construction equipment washing	Water	Soil, oil and grease, solids
Wood preservatives	Clear, amber or dark brown liquid	Stoddard solvent, petroleum distillates, arsenic, copper, chromium
Hydraulic oil/fluids	Brown or red oily petroleum hydrocarbon	Mineral oil
Gasoline	Colorless, pale brown or pink petroleum hydrocarbon	Benzene, ethyl benzene, toluene, xylene, MTBE
Diesel Fuel	Clear, blue-green to yellow liquid	Petroleum distillates, oil and grease, naphthalene, xylenes
Kerosene	Pale yellow liquid petroleum hydrocarbon	Coal oil, petroleum distillates
Antifreeze/coolant	Clear green/yellow liquid	Ethylene glycol, propylene glycol, heavy metals (copper, lead, zinc)
Erosion	Solid particles	Soil, sediment

(1) Data shall be obtained from SDSs whenever available and appended to this plan.

5.3 Potential Areas for Storm Water Contamination

The following potential source areas of storm water contamination were identified and evaluated:

- Cleared and graded areas;
- Bituminous asphalt pavement driveways and parking area construction;
- Building construction;
- Construction site entrance(s);
- Undisturbed areas.

Table 3 presents site specific information regarding storm water pollution potential for each of these areas.

Table 3 - Potential Areas of Storm Water Contamination

Potential Storm Water Contamination Point	*Drainage Areas*	*Potential Pollutants*	*Potential Problems*
Cleared and Graded Areas	All	Soil erosion, fertilizer, pesticides	Erosion of soils from cleared and graded areas have the potential to discharge into protected resource areas
Bituminous Asphalt Driveways and Parking	All	Asphalt, hydraulic oil, gasoline, antifreeze, soil erosion, fertilizer, pesticides	Leaking hydraulic oil and antifreeze from clearing, grading and asphalt application construction equipment. Gasoline and diesel fuel spills while fueling construction equipment, and erosion of exposed and stockpiled soils. Asphalt chemicals can be

			released to storm water if a rain event occurs before curing is complete.
Construction Site Entrance	All	Asphalt, hydraulic oil, gasoline, antifreeze, soil erosion, fertilizer, pesticides	Leaking hydraulic oil and antifreeze from clearing, grading and asphalt application construction equipment. Gasoline and diesel fuel spills while fueling construction equipment.
Building Construction	All	Plaster, cleaning solvents, asphalt, concrete, paints, hydraulic oil, gasoline, antifreeze, soil erosion, fertilizer, pesticides, glue/adhesives, curing compounds, wood preservatives, kerosene	Accidental spills of paints and cleaning solvents, leaking hydraulic oil and antifreeze from construction equipment, gasoline and diesel fuel spills while fueling construction equipment, erosion of exposed and stockpiled soils, and degradation of scrap dry wall can potentially contaminate storm water.
All Undisturbed Areas	All	None	No storm water related issues with completely vegetated areas.

5.4 Summary of Available Storm Water Sampling Data

No storm water sampling data is available for this site.

6.0 STORM WATER MANAGEMENT CONTROLS

The purpose of this section is to identify the types of temporary and permanent erosion and sediment controls that will be used during construction activities. The controls will provide soil stabilization for disturbed areas and structural controls to divert runoff and remove sediment. This section will also address control of other potential storm water pollutant sources such as construction materials (paints, concrete dust, solvents, and plaster), waste disposal, control of vehicle traffic, and sanitary waste disposal.

6.1 Temporary and Permanent Erosion Control Practices

I. A list of BMPs has been developed and the locations of depicted on "Site Plan – Kelly Jeep, Lynnfield, Massachusetts" dated November 2, 2017, revised through September 7, 2018 prepared by Hayes Engineering, Inc.

Some of the BMPs identified have been developed to remain as post-construction storm water controls.

Site Wide Control Measures:

To prevent soil from entering into the closed drainage system and/or onto adjacent roadways and abutting properties, and ultimately to Hawkes Brook, the following BMPs will be implemented at the Project:

- Silt wattle will be placed as shown on the plan and adjusted based on the extent and intensity of work. Silt wattle shall be installed and inspected prior to commencement of work;
- Siltsacks® or equivalent inlet protection measures will be placed in catch basin inlets on-site and those inlets on adjacent roadways that may be affected by the work. Inlet protection shall be installed and inspected prior to the commencement of work;
- A stabilized construction entrance onto Broadway will be constructed upon commencement of soil disturbance. This area shall act to prevent tracking of soil onto adjacent roadways;
- Temporary sedimentation basins shall be constructed as necessary and stabilized with crushed stone to avoid washout. The distance between the influent location and effluent location in the sedimentation basin will be maximized (i.e.; the aspect ratio of the basin will be a minimum of 2:1). The basins will drain through a temporary standpipe constructed through the berm. When up slope areas are stabilized, the accumulated sediment will be removed from the sedimentation basin and disposed of according with all local, state and federal regulations.
- All cleared and graded soils will be sloped to the sedimentation basin. Disturbed areas are to be brought to final finished grade and stabilized. Bare ground that cannot be permanently stabilized within 30 days shall be stabilized with mulch, hay or jute mats.
- Soil stockpile areas are to be surrounded by silt wattle.

6.2 Construction Practices to Minimize Storm Water Contamination

All waste materials will be collected and stored in a securely lidded metal dumpster rented through a reputable, licensed solid waste management company. The dumpster is to be located outside the buffer zone to resource areas on site. All trash and construction debris from the site will be deposited in the dumpster. The dumpster will be emptied a minimum of twice per week and the trash disposed of in accordance to all local, state and federal regulations. All personnel will be instructed regarding the correct procedure for waste disposal. All sanitary waste will be collected from the portable units a minimum of three times per week by a licensed sanitary waste management contractor.

Good housekeeping and spill control practices will be followed during construction to minimize storm water contamination from petroleum products, fertilizers, paints and concrete. Good housekeeping practices are listed below:

- A stabilized construction entrance will be constructed at the site entrance onto Broadway to reduce vehicle tracking of sediments when the existing pavement areas are removed.
- The paved street adjacent to the site entrance will be swept as necessary to remove excess mud, dirt, or rock tracked from the site.
- Dump trucks hauling material from the construction site are to have their payload covered with a tarpaulin.
- All ruts caused by equipment used for cutting and removing of trees will be graded and re-vegetated
- Fertilizers will be applied only in the minimum amounts recommended by the manufacturer and worked into the soil to limit storm water exposure.
- Fertilizers will be stored in a covered shed and partially used bags will be transferred to a sealable bin to avoid spills.
- All vehicles on site will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage.
- Petroleum products will be stored in tightly sealed containers which are clearly labeled.
- Spill kits will be included with all fueling sources and maintenance activities.
- Any asphalt substances used on-site will be applied according to the manufacturer's recommendation.
- Sanitary waste will be collected from portable units a minimum of three times a week to avoid overfilling.
- A covered dumpster will be used for all waste materials.
- All paint containers and curing compounds will be tightly sealed and stored when not in use. Excess paint will not be discharged into the storm sewers, but will be properly disposed of in accordance to the manufacturer's instructions.
- Materials and equipment necessary for spill clean-up will be kept in the temporary material storage trailer on-site. Equipment will include, but not be limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, saw dust, and plastic and metal trash containers.
- Spray guns will be cleaned on a removable tarp.
- All spills will be cleaned up upon discovery. Spills large enough to reach the storm water conveyance system will be reported to the engineer, environmental monitor, Lynnfield Fire Department and the National Response Center at (800) 424-8802.
- Concrete trucks will not be allowed to wash out or discharge surplus concrete or drum wash water on the site.
- Form release oil used for building foundations will be applied over a pallet covered with an absorbent material to collect excess fluid. The absorbent material will be replaced and disposed of properly when saturated.
- Discharges from construction dewatering shall be directed to sediment basins.

- When testing/cleaning water supply lines, the discharge from the tested pipe(s) will be dechlorinated, collected and conveyed to the sedimentation basin and/or the municipal sanitary sewer (with the municipality's permission).

6.3 Coordination of BMPs with Construction Activities

Structural BMPs will be coordinated with construction activities so the BMP is in place before construction begins. The following BMPs will be coordinated with construction activities:

- The temporary perimeter controls (straw wattles) will be installed before any clearing and grading begins.
- Clearing and grading will not occur in an area until it is necessary for construction to proceed.
- The stabilized construction site entrance and sedimentation basins will be constructed after removal of bituminous asphalt surfaces.
- Once construction activity ceases permanently in an area, that area will be stabilized with permanent seed and/or mulch.
- After the entire site is stabilized, the accumulated sediment will be removed from the basin.
- The temporary perimeter controls (straw wattle) will not be removed until all construction activities at the site are complete and soils have been stabilized.

6.4 Dust Control

Dust will be minimized from within the activity area(s) by using water to control dust from disturbed areas.

6.5 Certification of Compliance with Federal, State and Local Regulations

This SWPPP reflects the storm water management requirements of the Town of Lynnfield and the Commonwealth of Massachusetts, as well as the requirements of the US EPA's National Pollutant Discharge Elimination System (NPDES) permit. There are no other applicable State or Federal requirements for sediment and erosion site plans (or permits) or storm water management site plans (or permits).

7.0 Inspection and Maintenance Procedures

7.1 Inspections

Visual inspections of cleared and graded areas should be performed weekly (silt wattle should be inspected daily by the SWPPP coordinator) and within 12 hours of a significant rain event (greater than 0.5-inches of rain in any 24-hour period). The inspection will be conducted by the SWPPP coordinator and the environmental monitor. The inspection will, at a minimum, verify that the structural BMPS listed in Section 6 of this SWPPP are in good condition and

minimizing erosion. The inspection will also verify that the procedures used to prevent storm water contamination from construction materials and petroleum products are effective. The following inspection and maintenance practices will be used to maintain erosion and sediment controls:

- Built up sediment will be removed from behind silt wattle when it has reached one-third the height of the wattle.
- Silt wattles will be inspected for depth of sediment, for tears, to see if the wattle is securely attached to with fence posts, and to see that wattle posts are securely in the ground.
- The sediment basin will be inspected for depth of sediment and built up sediment will be removed when it reaches one foot in depth.
- Temporary and permanent seeding will be inspected for bare spots, washouts, and healthy growth.
- The stabilized construction entrance will be inspected for sediment tracked on the road, for clean gravel, and to make sure that the culvert beneath the entrance is working and that all traffic uses the stabilized entrance when leaving the site.

The maintenance inspection report will be made after each inspection. A copy of the report form to be completed by the SWPPP coordinator is provided in Appendix A of this SWPPP. Completed forms will be maintained on-site during the entire construction project. Copies of the forms will be sent weekly to the Owner, environmental monitor and design engineer. Following construction, the completed forms will be retained at the general contractor's office for a minimum of one year.

If construction activities or design modifications are made to the site plan which could impact storm water, this SWPPP will be amended appropriately. The amended SWPPP will have a description of the new activities that contribute to the increased pollutant loading and the planned source control activities.

7.2 Employee Training

An employee training program will be developed and implemented to educate employees about the requirements of the SWPPP. This education program will include background on the components and goals of the SWPPP and hands-on training in erosion controls, spill prevention and response, good housekeeping, proper material handling, disposal and control of waste, equipment fueling, and proper storage, washing and inspection procedures. All employees must be trained prior to their first day on the site.

The Employee Training Log for this SWPPP is provided in Appendix E

7.3 Corporate Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manages the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Construction Source Management

Robby Craig

_____

Signature

_____

Print Name

_____

Date

7.4 Contractor Certification

I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit that authorized the storm water discharges associated with industrial activity from the construction site identified as part of this certification.

_____

Signature

_____

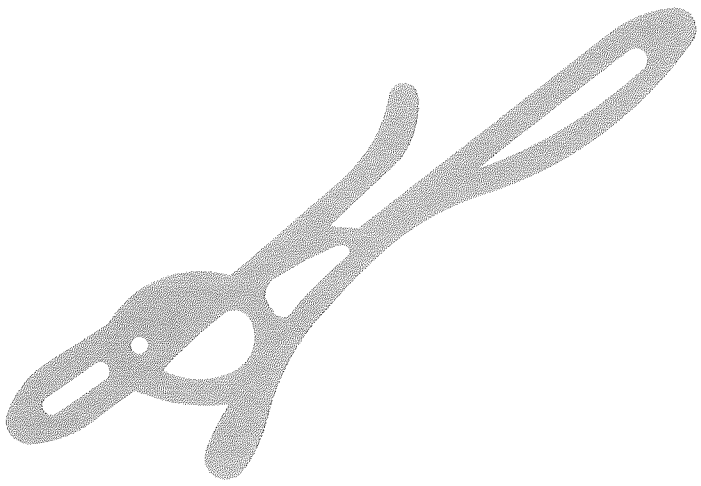
Print Name

_____

Date

APPENDIX A:

Inspection Logs



INSPECTION SCHEDULE and EVALUATION CHECKLIST

To be completed weekly and within 24-hours of significant rainfall events (greater than 0.5-inches in a 24-hour period).

Inspector's Name: _____ Date: _____

Qualifications: _____

_____

Days since last rainfall: _____ days Amount of last rainfall: _____inches

Stabilization Measures

Sub-Catchment	Date of Last Disturbance	Date of Next Disturbance	Stabilized (Yes or No)	Stabilized With:	Condition
To Broadway Drainage					
To Detention Pond					

Stabilization required: _____

_____

_____

_____

_____

_____

_____

To be performed by: _____ on or before: _____

Appendix A: Inspection Log
Inspection No. _____
Date of Inspection: _____

PERIMETER CONTROLS

Date of Inspection: _____

Silt Wattle:

Location(s)	Has sediment reached 1/2 height of silt wattle? (Yes or No)	Depth of Silt (inches)	Is silt wattle secure? (Yes or No)	Is there evidence of bypass or overtopping? (Yes or No)	Describe location of Problem(s), if any.
North					
East					
South					
West					
Other					

Maintenance required for silt wattle and hay bales: _____

_____

_____

_____

Appendix A: Inspection Log
Inspection No. _____
Date of Inspection: _____

To be performed by: _____ on or before: _____

PERIMETER CONTROLS (CONTINUED):

Stabilized Construction Entrance:

Location	Does much sediment get tracked onto roadway? (Yes or No)	Is gravel clean or full of sediment?	Is all traffic using the entrance to access/exit the site? (Yes or No)	Is the culvert beneath the entrance working? (Yes or No)
Broadway				

Maintenance required for stabilized construction entrance: _____

_____

_____

_____

To be performed by: _____ on or before: _____

Other Best Management Practices:

BMP	In use? (Yes or No)	Maintenance Required? (Yes or No)	Describe location of Problem(s), if any.
Sweeping of Adjacent Roads			
Catch Basin Inlet Protection			
Temporary Sediment Basin			

Maintenance required: _____

_____

_____

_____

To be performed by: _____ on or before: _____

Routine Inspection Checklist:

Item No.	Activity	Implemented		Maintenance Req'd		Notes:
		Yes	No	Yes	No	
1.	Are all slopes and disturbed areas not actively being worked properly stabilized?					
2.	Are perimeter controls properly installed and maintained?					
3.	Is the construction exit preventing sediment from being tracked into the street?					
4.	Are storm drain inlets properly protected?					
5.	Is trash/litter from work areas collected and placed in covered dumpsters?					
6.	Are washout facilities available, clearly marked and maintained?					
7.	Are vehicle and equipment fueling, cleaning and maintenance areas free of spills, leaks and/or any deleterious material?					
8.	Are materials that may be potential storm water contaminants stored inside or under cover?					
9.	Are non-storm water discharges properly controlled?					
10.	Other:					

Notes: _____

_____

_____

Changes required to the pollution prevention plan:

Reasons for changes:

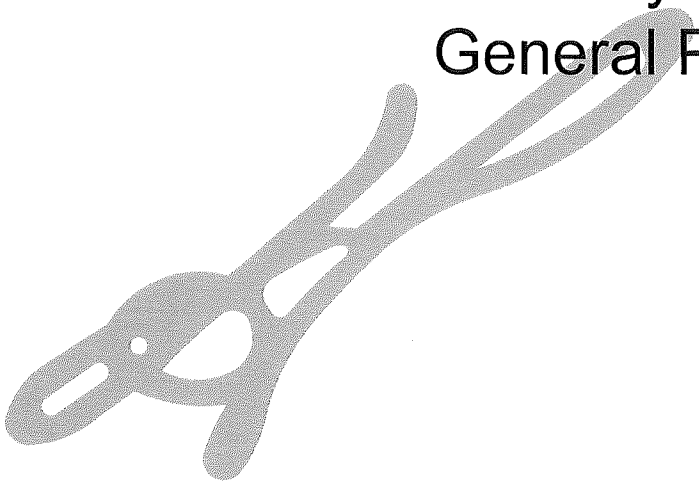
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature: _____ Date: _____

Appendix A: Inspection Log
Inspection No. _____
Date of Inspection: _____

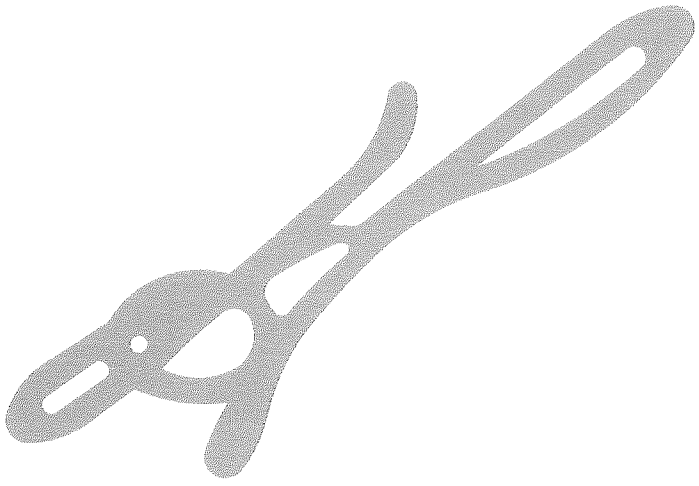
APPENDIX B:

NPDES Form 3510-9 Notice of Intent for Storm Water Discharges Associated with Construction Activity Under an NPDES General Permit



APPENDIX C:

Sub-Contractor Certifications



SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Title: Kelly Jeep, Lynnfield, MA

As a subcontractor, you are required to comply with the Storm Water Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact storm water must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

_____

_____

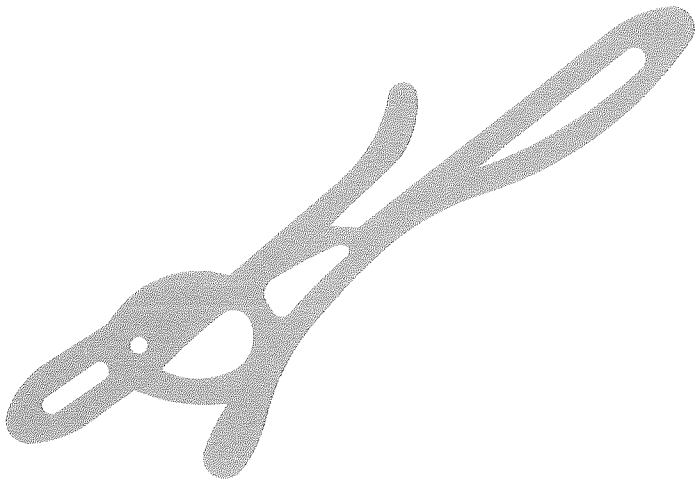
Signature: _____

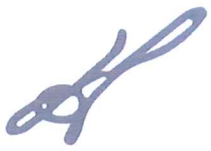
Title: _____

Date: _____

APPENDIX D:

SWPPP Training Log





SWPPP Training Log

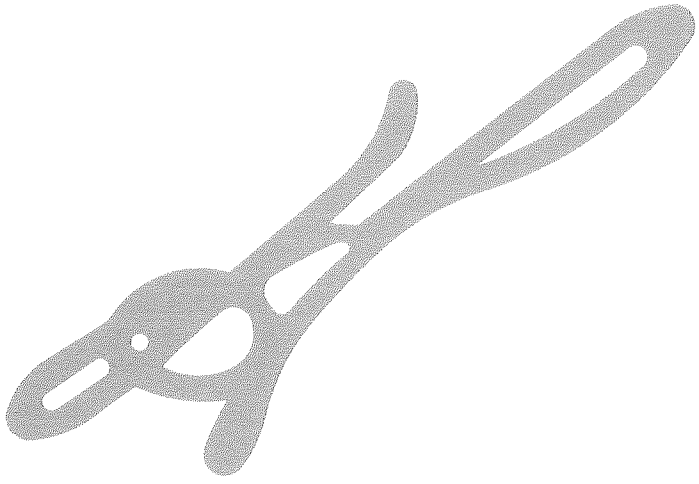
This SWPPP contents and procedures have been reviewed with the following staff on the date(s) indicated:

No.	Name	Company	Date of Training	Initials

No.	Name	Company	Date of Training	Initials

APPENDIX E:

Delegation of Authority



Storm Water Pollution Prevention Plan
Kelly Jeep, Lynnfield, Massachusetts
Date September 15, 2018

Delegation of Authority

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with environmental requirements, including the Construction General Permit, at the _____ construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)

_____ (company)

_____ (address)

_____ (city, state, zip)

_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Appendix I of EPA's Construction General Permit (CGP), and that the designee above meets the definition of a "duly authorized representative" as set forth in Appendix I.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____ **Date:** _____

OPERATION AND MAINTENANCE PLAN
AND LONG-TERM POLLUTION PREVENTION PLAN
#353 BROADWAY
LYNNFIELD, MASSACHUSETTS

January 1, 2022

GENERAL

Stormwater management facilities necessary to control runoff from the project accomplish the goal of mitigating the water quality of the associated runoff prior to that runoff reaching the State's drainage system.

The management plan incorporates a combination of two or more of the following chain of structural best management practices to improve water quality of the stormwater runoff from the proposed pavement and other impervious surfaces.

1. Catch Basin with Deep sump and Gas Trap
2. Stormceptor STC-4800

Each of these facilities has unique characteristics, uses, planning considerations and maintenance requirements. The maintenance requirements, as suggested by the Massachusetts Department of Environmental Protection (DEP) in "Chapter 2: Structural BMP Specifications for the Massachusetts Stormwater Handbook" and the manufacturer's suggested schedules, are summarized in the following sections. It is suggested that the following guidelines be adhered to for a one-year cycle following completion of the project, then adjusted, as necessary, based on the results of the required inspections, unless otherwise stated. Refer to the attached Hayes Engineering, Inc. "Site Plan, Kelly Jeep-Phase 2, #353 Broadway, Lynnfield, Mass." dated October 5, 2020 revised through January 1, 2022 which shows the locations of all Stormwater Management BMPs.

Deep Sump Catch Basin

- The deep sump catch basin shall be inspected or cleaned out at least four (4) times a year, including at the end of foliage and snow removal season. Removed deposits must be handled and disposed of in accordance with local, state, and federal guidelines and Regulations.
- Basin shall be cleaned using a vacuum truck when it is found to contain a significant amount of deposits (whenever the deposit depth is greater than or equal to one-half the depth from the bottom of the lowest invert) and there is a significant amount of trash, as specified in the MADEP Stormwater Handbook, Volume 2, Chapter 2, pages 3 through 5.
- Damaged basin components shall be repaired as soon after discovery as possible to ensure that the catch basin functions properly.

Stormceptor STC 4800 Water Quality Chamber

Regulating the input to the proposed water quality system is the priority maintenance activity. Sediments and any oil spillage should be trapped and removed before they reach the State's drainage system.

- Stormceptor chamber maintenance shall be performed on a regular basis as recommended by the manufacturer (described in the attached excerpt from the Stormceptor Maintenance Brochure obtained from the Stormceptor website (www.stormceptor.com) and as summarized below.

- Sediment removal is recommended annually, but is likely to vary widely based on site conditions and loadings. Typical maintenance cleaning can be done with a vacuum truck. Inspection for each of the Stormceptor units will include a quantification of the sediment load and oil and grease volumes. This is easily made from the surface with a tube dipstick with ball valve inserted through the cleanout pipe or other access port. Depths of sediment indicating maintenance are presented in the following table for the various models. Inspection of the internal structure should be part of the routine inspection plan. The units are designed to accept 15% of their capacity in solids annually based on maximum drainage area loading. Removal of sediment, oils, and grease from the system will depend on rates of accumulation. All sediment and oil waste materials shall be disposed of in accordance with all Federal, State, and Local regulations.

REQUIRED MAINTENANCE *

Model	Sediment Depth (in.)
Stormceptor Model 4800	15*

* based on 15% of the interceptor's sediment storage

Removal of Siltation Controls

All siltation controls, including, but not limited to, hay bales and silt fence, shall be removed, with the approval of the Conservation Commission, as soon as practical after paving, re-vegetation and total stabilization of the site. Unvegetated areas remaining in the area of the siltation controls shall be loamed and seeded with the appropriate groundcover to insure re-vegetation as rapidly as possible after the removal of the siltation controls.

Based on the observations made during the inspections, an engineer shall determine if the stormwater management facilities are functioning properly and, if not, what steps are necessary to restore their functionality.

Ownership / Maintenance Responsibility

Kelly Automotive Group, owner of #353 Broadway, shall be the party responsible for maintenance of the proposed stormwater management system.

Standard #4: Water Quality

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.