

**NOTICE OF INTENT  
PROJECT DESCRIPTION  
46 IPSWICH ROAD  
BOXFORD, MASSACHUSETTS**

Nov. 2015

LIST OF PLANS AND DOCUMENTS

<u>Identifying Number / Letter</u>	<u>Title / Date</u>
PLANS	Plan to Accompany Amended Notice of Intent, 46 Ipswich Road, Boxford, Mass.; Hayes Engineering, Inc.; Scale: 1"=20'; date: October 29, 2015 (Plan Sheet 1 of 1)
A	Project Narrative, 46 Ipswich Road Boxford, Mass.; Hayes Engineering, Inc.; October 29, 2015
C	Erosion and Sedimentation Control, 46 Ipswich Road, Boxford, MA; Nov. 2015.

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

(to be submitted to the Massachusetts Department of  
Environmental Protection and the Conservation Commission  
when filing a Notice of Intent)

I, \_\_\_\_\_ Gordon Rogerson\_\_\_\_, hereby certify under the pains and penalties of perjury that on Nov. 3, 2015 I gave notification to abutters in compliance with the **second paragraph of Massachusetts General Laws, Chapter 131, Section 40, and the DEP Guide to Abutter Notification** dated April 8, 1994, in connection with the following matter: Existing deck expansion.

An Amended Notice of Intent filed under the Massachusetts Wetlands Protection Act by David and Mary Katherine Kreider with the Boxford Conservation Commission on Tuesday November 3, 2015 for property located at 46 Ipswich Road.

The form of the notification, and a list of the abutters to whom it was given and their addresses are attached to this Affidavit of Service.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date

**Notification to Abutters Under the  
Massachusetts Wetlands Protection Act**

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following.

- A. A Notice of Intent application has been filed with the Boxford Conservation Commission seeking permission to work within an Area Subject to Protection Under the Wetlands Protection Act (General Laws Chapter 131, Section 40).
- B. The name of the applicant is: David and Mary Katherine Kreider.
- C. The address of the lot where the activity is proposed: 46 Ipswich Road
- D. The activity proposed on the site: To rebuild and enlarge existing deck.
- E. Copies of the Notice of Intent may be examined/obtained at:  
Hayes Engineering, Inc., 603 Salem Street, Wakefield, MA, 01880 between the hours of 1 p.m and 4:30 p.m. on the following days of the week: Monday through Thursday by appointment only. For more information, call: (781) 246 – 2800  
Check one: This is the \_\_\_\_ applicant,  representative, or \_\_\_\_ other (please specify).
- \*F. Information regarding the date, time and place of the public hearing may be obtained from: The Topsfield Conservation Commission (office hours vary)  
Check one: This is the \_\_\_\_ applicant, \_\_\_\_ representative, or \_\_\_\_ other (please specify).

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**\*NOTE: Notice of the public hearing, including its date, time and place, will be published at least five (5) days in advance in a newspaper with general circulation.**

**\*NOTE: Notice of the public hearing, including its date, time and place, will be posted in the City or Town Hall not less than forty-eight (48) hours in advance.**

**NOTE: You also may contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact the DEP, call:**

\*Northeast Region- Wilmington: 978-694-3200

**EROSION AND SEDIMENTATION CONTROL  
46 IPSWICH ROAD  
BOXFORD, MASSACHUSETTS**

Nov. 2015

**PART I - GENERAL**

- A. The applicant and site contractors shall be responsible for reviewing, and taking steps to meet all requirements contained in the Order of Conditions issued by the Boxford Conservation Commission for this project.
- B. Follow siltation control methods as outlined below, shown on the plan and as directed by Engineer.
- C. Operations will be restricted to areas of work indicated on drawings (and clearly marked on site) and to areas that must be entered for construction of temporary or permanent facilities.
- D. Siltation controls along areas of grading and at catch basins shall be checked frequently and maintained in functioning condition throughout the duration of site work so as to prevent encroachment upon adjacent resource areas. If siltation control barriers are damaged or washed away, contact the Conservation Commission and Engineer, and repair /remove materials and silt accumulations from fouled areas as directed.
- E. Conservation Commission has authority to direct immediate permanent or temporary pollution control measures to prevent contamination of wetlands, including construction of temporary berms, sediment basins, sediment traps, slope drains and use of temporary mulches, mats or other control devices or methods as necessary to control erosion.
- F. Temporary storage areas for demolition materials and mechanized equipment shall be kept as far away from adjacent resource areas as possible.
- G. Equipment and trucks shall be routed only over the existing pavement and workers shall avoid foot traffic in vegetated areas adjacent to the work area.

**PART 2 – EROSION CONTROL BARRIERS**

Erosion control barriers shall be installed along the limit of work as shown on the Notice of Intent plan prior to commencement of any site work as specified below. Alternative types of barriers (i.e straw, coir or Filtrexx™ type logs) may be used with the approval of the Conservation Commission and Project Engineer, and be installed per manufacturers instructions. The approved alternative barrier must be designed and sized specifically for conditions on this site. After initial barrier installation, site personnel shall perform weekly inspections of, and maintain, the siltation control barrier during construction. Inspections of the siltation control barrier shall also be performed prior to and immediately following major (>1") rainfall event. After all construction activities are completed, and the areas of bare soil are vegetated and or stabilized, the siltation control barriers may be removed. It is important that

the disturbed areas previously occupied by the siltation control barriers, as well as adjacent areas, be repaired and vegetated immediately after removal of the barriers.

## A. MATERIALS

### Staked Haybale Barrier

1. Hay or straw bales, enough to accomplish length specified on plan and 10 to be reserved for replacement or barrier re-enforcement use, as needed.
2. 2-inch by 2-inch by 3.5-foot wooden stakes for hay bales, two stakes per bale.

### Filter Fences

#### A. Synthetic Filter Fabric

1. Synthetic filter fabric shall consist of a pervious sheet of propylene, nylon, polyester or ethylene filaments.
2. Certified by manufacturer or supplier as conforming to the following requirements:

<u>Physical Property</u>	<u>Minimum Requirements</u>
Filtering Efficiency	75 percent
Tensile Strength at 20% (maximum) Elongation	Extra Strength: 50 lbs./ linear inch Standard Strength: 30 lbs../ linear inch
Flow Rate	.3 gal./ sq.ft.

#### B. Non-synthetic Filter Fabric

1. Shall consist of burlap fabric weighing 10 ounces per square yard.

#### C. Filter Fabric Support

1. Posts or stakes for filter fences shall be of sufficient size and strength to support the fabric. Steel posts shall have projections for fastening wire to them.

## B. INSTALLATION

### 1. Location

Install erosion controls prior to commencement of construction activities along limits of work area as specified on plan, surrounding bases of all deposits of stored fill material outside of disturbed area, and where directed by the Boxford Conservation Commission.

### 2. Barrier Installment

- A. Hay Bales  
Hay bales, if specified, will be embedded in the soil a minimum of 4 inches. Hold bales in place with two 2-inch by 2-inch by 3.5-foot stakes so that each bale is butted tightly against adjoining bale, thereby precluding short-circuiting of erosion check. The first stake in each bale shall be driven toward the previously-laid bale to push the bales together.
  
- B. Filter Fences
  - 1. Excavate trench along post line 6 inches wide and 6 inches deep on the upslope side of the barrier.
  - 2. Space posts a maximum of 10 feet apart and drive them a minimum of 12 inches into the ground. The posts should not be greater than 36 inches above the ground.
  - 4. Staple, wire or tie the standard strength filter fabric to the posts. The fabric should be pulled tight between posts. The fabric shall extend 8 inches into the trench and shall not extend more than 36 inches above the ground. Do not staple filter fabric to existing trees. Backfill trench and compact soil over filter fabric.
  - 6. Provide wildlife passage corridor with baffle for every 100' of fence installation. Passage shall be 18" wide between stakes, and baffle shall be installed parallel to fence, offset 18" from fenceline, and overlapping passage by 48" on either side of break.

### **PART 3 – POLLUTION CONTROL MEASURES**

- A. Sedimentation control devices (i.e. hay bales, filter fabric, silt bag, fiber roll or other approved device) shall be installed at, or within, catch basins to effectively prevent sediments from entering the drainage system during construction. These devices shall be inspected frequently and maintained in functioning condition throughout site construction.
- B. Discharge silt-laden water from excavations onto filter fabric mat and/or baled hay or straw sediment traps to ensure that only sediment-free water is returned to wetland areas. Sediment traps, if needed, should be constructed by standard methods.
- C. Do not place soil backfill material adjacent to resource areas without proper siltation controls or otherwise preventing the soil from washing away by high water or runoff.
- D. Do not dump any materials into any streams, wetlands, surface waters or unspecified locations.
- E. Do not pump silt-laden water from trenches or excavations into surface waters, streams, wetlands or natural or man-made channels leading thereto.

- F. Do not dispose of trees, brush, debris, paints, chemicals, asphalt products, concrete curing compounds, fuels, lubricants, insecticides, wash water from concrete trucks or hydroseeders, or any other pollutant into any streams, wetlands, surface waters or natural or man-made channels leading thereto, or unspecified locations.
- G. No disturbance or alteration of any kind allowed between the specified limit of work and the wetland boundary or within adjacent wetlands.
- H. Prevent any operation of equipment outside the designated limit of work (silt fence).
- I. Take preventative measures to ensure that sediments generated by site work do not wash into catch basins and other components of the drainage system.

#### **PART 4 – STABILIZATION TECHNIQUES**

##### **A. Protecting and Minimizing Exposed Areas**

Steps shall be taken to minimize area of bare earth exposure by preserving existing vegetation and providing soil stabilization. Equipment and trucks shall be routed only over the existing paved or proposed work areas and workers shall minimize foot traffic in vegetated areas adjacent to the work area as much as possible. During site work, utilization of stabilization techniques are necessary for controlling erosion on exposed areas, including grading, seeding and otherwise stabilizing the areas.

##### **B. Sediment And Erosion Control**

Prior to any construction occurring adjacent to identified resource areas (shown on the plan and/or marked in the field, proper erosion and siltation barriers will be installed or repaired so that throughout and until completion of construction, those areas will be afforded maximum protection. Temporary stockpiles of soil shall be surrounded with an erosion control barrier to prevent sediments from exiting the subject property. All erosion control barriers are to be maintained and periodically inspected until areas of bare soil (if any) are stabilized to ensure that they are in functioning condition. Mirafi (or equivalent fabric) fencing and haybales shall be installed along the limit of work as shown on the above-mentioned plan. Any accumulations of sediments present along erosion control barriers shall be removed as soon as possible after deposition in order to ensure the effectiveness of all sedimentation controls.

##### **C. Vegetational Covers**

###### **1. Temporary Vegetational Cover**

Any area proposed for removal of vegetation where soil will be exposed for more than 10 days shall be mulched or otherwise treated to prevent erosion. On sediment-producing areas in the buffer zone, where the period of exposure will be more than 30 days, the following procedures should be followed for a cover of annual rye. When bare soils are not completely graded and vegetated by September 30 of any year, winter

rye shall be planted as specified in table and mulched with three (3) inches of hay or straw.

- a. Install needed surface water control measures.
- b. Perform all cultural operations at right angles to the slope.
- c. Establish grass or other ground cover species as recommended in the attached excerpt (pgs 144 -146) from Massachusetts Erosion and Sedimentation Guidelines for Urban and Suburban Areas, 2003.

## 2. Permanent Vegetational Cover

To reduce damages from the potential incidence of sedimentation and runoff to other properties, and to avoid erosion on the site itself, a permanent type cover shall be established in disturbed areas located adjacent to resource areas immediately upon completion of grading. Seeding herbaceous cover is usually the most economical and practical way to stabilize any large area. For this site, all disturbed areas where lawns are desired will be seeded in Fall during the period of August 1 to October 1; or in spring by May 15 with a commercial lawn mixture utilizing standard landscape methods and as recommended by the seed manufacturer. Grass sod or landscape plantings may be used instead of seed, if preferred.

In upland/ buffer zone areas, outside of lawn locations, where an erosion control - wildlife seed mixture is desired, prepare soil and use one of grass seed mixes #1 through #6 as recommended in the attached excerpts (pgs 136-137) from Massachusetts Erosion and Sedimentation Guidelines for Urban and Suburban Areas 2003, to establish a stable, permanent cover.

## REFERENCES

Department of Environmental Protection, Bureau of Resource Protection and U.S. Environmental Protection Agency, Massachusetts Erosion and Sedimentation Guidelines for Urban and Suburban Areas: A Guide for Planners, Designers and Municipal Officials. Massachusetts Executive Office of Environmental Affairs, Boston, Massachusetts, Reprint: May 2003.



Use low-maintenance native species wherever possible.

Planting should be timed to minimize the need for irrigation.

Sheet erosion, caused by the impact of rain on bare soil, is the source of most fine particles in sediment. To reduce this sediment load in runoff, the soil surface itself should be protected. The most efficient and economical means of controlling sheet and rill erosion is to establish vegetative cover. Annual plants which sprout rapidly and survive for only one growing season are suitable for establishing temporary vegetative cover. Temporary seeding is effective when combined with construction phasing so bare areas of the site are minimized at all times.

Temporary seeding may prevent costly maintenance operations on other erosion control systems. For example, sediment basin clean-outs will be reduced if the drainage area of the basin is seeded where grading and construction are not taking place. Perimeter dikes will be more effective if not choked with sediment.

Proper seedbed preparation and the use of quality seed are important in this practice just as in permanent seeding. Failure to carefully follow sound agronomic recommendations will often result in an inadequate stand of vegetation that provides little or no erosion control.

Soil that has been compacted by heavy traffic or machinery may need to be loosened. Successful growth usually requires that the soil be tilled before the seed is applied. Topsoiling is not necessary for temporary seeding; however, it may improve the chances of establishing temporary vegetation in an area.

## Planting Procedures

### Time of Planting

Planting should preferably be done between April 1 and June 30, and September 1 through September 30. If planting is done in the months of July and August, irrigation may be required. If planting is done between October 1 and March 31, mulching should be applied immediately after planting. If seeding is done during the summer months, irrigation of some sort will probably be necessary.

### Site Preparation

Before seeding, install needed surface runoff control measures such as gradient terraces, interceptor dike/swales, level spreaders, and sediment basins.

### Seedbed Preparation

The seedbed should be firm with a fairly fine surface.

Perform all cultural operations across or at right angles to the slope. See **Topsoiling** and **Surface Roughening** for more information on seedbed preparation. A minimum of 2 to 4 inches of tilled topsoil is required.

### Liming and Fertilization

Apply uniformly 2 tons of ground limestone per acre (100 lbs. per 1,000 Sq. Ft.) or according to soil test.

Apply uniformly 10-10-10 analysis fertilizer at the rate of 400 lbs. per acre (14 lbs. per 1,000 Sq. Ft.) or as indicated by soil test. Forty percent of the nitrogen should be in organic form.

Work in lime and fertilizer to a depth of 4 inches using any suitable equipment.

<i>Species</i>	Seedings for Temporary Cover		<i>Recommended Seeding Dates</i>
	<i>Seeding Rates lbs/sq.ft.</i>	<i>Acres</i>	
	<u>1,000 Sq.Ft.</u>	<u>Acres</u>	
Annual Ryegrass	1	40	April 1 to June 1 Aug. 15 to Sept. 15
Foxtail Millet	0.7	30	May 1 to June 30
Oats	2	80	April 1 to July 1 August 15 to Sept. 15
Winter Rye	3	120	Aug. 15 to Oct. 15

“Hydro-seeding” applications with appropriate seed-mulch-fertilizer mixtures may also be used.

### Seeding

Select adapted species from the accompanying table.

Apply seed uniformly according to the rate indicated in the table by broadcasting, drilling or hydraulic application.

Cover seeds with suitable equipment as follows:

- ∞ Rye grass                    ¼ inch
- ∞ Millet                        ½ to ¾ inch
- ∞ Oats                            1 to 1-1/2 inches
- ∞ Winter rye                    1 to 1-1/2 inches.

### Mulch

Use an effective mulch, such as clean grain straw; tacked and/or tied down with netting to protect seedbed and encourage plant growth.

### Common Trouble Points

#### *Lime and fertilizer not incorporated to at least 4 inches*

May be lost to runoff or remain concentrated near the surface where they may inhibit germination.

#### *Mulch rate inadequate or straw mulch not tacked down*

Results in poor germination or failure, and erosion damage. Repair damaged areas, reseed and mulch.

***Annual ryegrass used for temporary seeding***

Ryegrass reseeds itself and makes it difficult to establish a good cover of permanent vegetation.

***Seed not broadcast evenly or rate too low***

Results in patchy growth and erosion.

**Maintenance**

Inspect within 6 weeks of planting to see if stands are adequate. Check for damage after heavy rains. Stands should be uniform and dense. Fertilize, reseed, and mulch damaged and sparse areas immediately. Tack or tie down mulch as necessary.

Seeds should be supplied with adequate moisture. Furnish water as needed, especially in abnormally hot or dry weather or on adverse sites. Water application rates should be controlled to prevent runoff.

**References**

Massachusetts Department of Environmental Protection, Office of Watershed Management, Nonpoint Source Program, Massachusetts **Nonpoint Source Management Manual**, Boston, Massachusetts, June, 1993.

North Carolina Department of Environment, Health, and Natural Resources, **Erosion and Sediment Control Field Manual**, Raleigh, NC, February 1991.

U.S. Environmental Protection Agency, **Storm Water Management For Construction Activities**, EPA-832-R-92-005, Washington, DC, September, 1992.

Washington State Department of Ecology, **Stormwater Management Manual for the Puget Sound Basin**, Olympia, WA, February, 1992.

**Silt Curtain**

A temporary sediment barrier installed parallel to the bank of a stream or lake. Used to contain the sediment produced by construction operations on the bank of a stream or lake and allow for its removal.

**Where Practice Applies**

The silt curtain is used along the banks of streams or lakes where sediment could pollute or degrade the stream or lake.

### **Seeding Dates**

Seeding operations should be performed as an early spring seeding (April 1-May 15) with the use of cold treated seed. A late fall early winter dormant seeding (November 1 - December 15) can also be made, however the seeding rate will need to be increased by 50%.

### **Seeding Methods**

Seeding should be performed by one of the following methods:

- ∞ Drill seedings (de-awned or de-bearded seed should be used unless the drill is equipped with special features to accept awned seed).
- ∞ Broadcast seeding with subsequent rolling, cultipacking or tracking the seeding with small track construction equipment. Tracking should be oriented up and down the slope.
- ∞ Hydroseeding with subsequent tracking. If wood fiber mulch is used, it should be applied as a separate operation after seeding and tracking to assure good seed to soil contact.

### **Mulch**

Mulch the seedings with straw applied at the rate of ½ tons per acre. Anchor the mulch with erosion control netting or fabric on sloping areas.

### **Seed Mixtures for Permanent Cover**

Recommended mixtures for permanent seeding are provided on the following pages. Select plant species which are suited to the site conditions and planned use. Soil moisture conditions, often the major limiting site factor, are usually classified as follows:

**Dry** - Sands and gravels to sandy loams. No effective moisture supply from seepage or a high water table.

**Moist** - Well drained to moderately well drained sandy loams, loams, and finer; or coarser textured material with moderate influence on root zone from seepage or a high water table.

**Wet** - All textures with a water table at or very near the soil surface, or with enduring seepage.

When other factors strongly influence site conditions, the plants selected must also be tolerant of these conditions.

Permanent Seeding Mixtures					
Mix	Site	Seed Mixture	Seed, Pounds per:		Remarks
			Acre	1,000 sf	
1	Dry	Little Bluestem	10	0.25	* Use Warm Season planting procedure.
		or Broomsedge			* Roadsides
		Tumble Lovegrass*	1	0.10	* Sand and Gravel Stabilization
		Switchgrass	10	0.25	* Clover requires inoculation with nitrogen-fixing bacteria
		Bush Clover*	2	0.10	
		Red Top	1	0.10	* Rates for this mix are for PLS.
2	Dry	Deertongue	15	0.35	* Use Warm Season planting procedures.
		Broomsedge	10	0.25	* Acid sites/Mine spoil
		Bush Clover*	2	0.10	* Clover requires inoculation with nitrogen-fixing bacteria.
		Red Top	1	0.10	
3	Dry				*Rates for this mix are for PLS.
		Big Bluestem	10	0.25	* Use Warm Season planting procedures.
		Indian Grass	10	0.25	* Eastern Prairie appearance
		Switchgrass	10	0.25	* Sand and Gravel pits.
		Little Bluestem	10	0.25	* Golf Course Wild Areas
		Red Top or	1	0.10	* Sanitary Landfill Cover seeding
		Perennial Ryegrass	10	0.25	* Wildlife Areas
					*OK to substitute Poverty Dropseed in place of Red Top/Ryegrass. *Rates for this mix are for PLS.
4	Dry	Flat Pea	25	0.60	* Use Cool Season planting procedures
		Red Top or	2	0.10	* Utility Rights-of-Ways (tends to suppress woody growth)
		Perennial Ryegrass	15	0.35	
5	Dry	Little Bluestem	5	0.10	* Use Warm Season planting procedures.
		Switchgrass	10	0.25	* Coastal sites
		Beach Pea*	20	0.45	* Rates for Bluestein and Switchgrass are for PLS.
		Perennial Ryegrass	10	0.25	
6	Dry - Moist	Red Fescue	10	0.25	* Use Cool Season planting procedure.
		Canada Bluegrass	10	0.25	* Provides quick cover but is non-aggressive; will tend to allow indigenous plant colonization.
		Perennial Ryegrass	10	0.25	
		Red Top	1	0.10	* General erosion control on variety of sites, including forest roads, skid trails and landings.
7	Moist- Wet	Switchgrass	10	0.25	* Use Warm Season planting procedure.
		Virginia Wild Rye	5	0.10	* Coastal plain/flood plain
		Big Bluestem	15	0.35	* Rates for Bluestem and Switchgrass are for PLS.
		Red Top	1	0.10	

# Alternative Analysis

Where as the site already has a wood deck on the rear of the house being 10.3'x28.0' and is in need of repair, the enlarging of the deck to a depth of 14 feet from the existing house and 35 feet in length which is 7 feet longer and 3.7feet wider than the original deck. The supports for the deck will be set on sonatubes as shown on the design plan. The stock piling of material will be placed outside the erosion control device, there is no other location for the deck.

**PROJECT NARRATIVE  
46 IPSWICH ROAD  
BOXFORD, MASSACHUSETTS**

Nov. 2015

The subject locus is a 2.0 Acre property on Ipswich Road. The applicant seeks to rebuild and expand an existing deck in the rear of the existing house. Also at this time to submit the changes to the front of the house where the retaining wall, walk and landscaping was done without approval from the conservation commission.

The proposed deck work will be performed within the jurisdiction of both the Massachusetts Wetlands Protection Act (M.G.L. Chapter 131, Sec. 40, 310 CMR 10.00 et. al.) and is required to meet performance standards outlined in the associated regulations. These standards and project compliance are discussed below. Existing and proposed conditions are shown on the accompanying Topographic Plans.

**Regulations**

Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00 et.al)

**Buffer Zone**

Buffer zone disturbances will result from activities related to constructing the proposed expansion of the deck. Erosion control barriers will be installed along the limit of work prior to commencement of work as shown on the plan and described in the attached document, "Erosion and Sedimentation Control" to protect adjacent wetland resource area and buffer zone areas from sediment and personnel encroachment. Buffer strips will be provided along the wetland boundaries to the extent practicable.

**Bordering Vegetated Wetland**

The Bordering Vegetated Wetlands will not be disturbed during the construction.

**Applicant: David & Mary Katherine Kreider**  
**46 Ipswich Road**  
**Boxford, Mass. 01921**

**DEP 114-519**

**Amended**  
**Order**  
**Of**  
**Conditions**

**46 Ipswich Road**  
**Boxford, Massachusetts**



**Oct. 2015**



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