

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5 – Order of Conditions

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

Provided by MassDEP:

090-1292

MassDEP File #

eDEP Transaction #

Andover

City/Town

*and Article XIV, Andover Wetlands Protection
By-Law*

A. General Information

Please note:
this form has been modified with added space to accommodate the Registry of Deeds Requirements

1. From: Andover
Conservation Commission

2. This issuance is for (check one):
a. Order of Conditions b. Amended Order of Conditions

3. To: Applicant:

a. First Name _____ b. Last Name _____

Hayes Engineering, Inc.

c. Organization

603 Salem Street

d. Mailing Address

Wakefield

e. City/Town

MA

f. State

01880

g. Zip Code

4. Property Owner (if different from applicant):

a. First Name _____ b. Last Name _____

LNS, Inc.

c. Organization

9 Sunset Drive

d. Mailing Address

Saugus

e. City/Town

MA

f. State

01906

g. Zip Code

5. Project Location:

16 Hacienda Way

a. Street Address

224

c. Assessors Map/Plat Number

Andover

b. City/Town

26

d. Parcel/Lot Number

Latitude and Longitude, if known:

42d39m40s

d. Latitude

71d13m37s

e. Longitude



This document contains 28 pages.



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A. General Information (cont.)

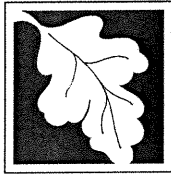
6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):
Essex North
- | | |
|-------------|--|
| a. County | b. Certificate Number (if registered land) |
| <u>4159</u> | <u>108</u> |
| c. Book | d. Page |
7. Dates: May 2, 2017 September 19, 2017 October 5, 2017
 a. Date Notice of Intent Filed b. Date Public Hearing Closed c. Date of Issuance
8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):
Plan to Accompany Notice of Intent
- | | |
|--|--|
| a. Plan Title | |
| <u>Hayes Engineering, Inc.</u> | <u>Peter M. Blaisdell, PE and Peter J. Ogren, P.E.</u> |
| b. Prepared By | |
| <u>7-13-17 sheets 104; 9-12-17 sheet 5</u> | <u>as noted</u> |
| d. Final Revision Date | e. Scale |
| <u>See Attached.</u> | |
| f. Additional Plan or Document Title | g. Date |

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:
- Following the review of the above-referenced Notice of Intent and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:
- | | | |
|---|--|---|
| a. <input checked="" type="checkbox"/> Public Water Supply | b. <input type="checkbox"/> Land Containing Shellfish | c. <input checked="" type="checkbox"/> Prevention of Pollution |
| d. <input checked="" type="checkbox"/> Private Water Supply | e. <input checked="" type="checkbox"/> Fisheries | f. <input checked="" type="checkbox"/> Protection of Wildlife Habitat |
| g. <input checked="" type="checkbox"/> Groundwater Supply | h. <input checked="" type="checkbox"/> Storm Damage Prevention | i. <input checked="" type="checkbox"/> Flood Control |
2. This Commission hereby finds the project, as proposed, is: (check one of the following boxes)

Approved subject to:

- a. the following conditions which are necessary in accordance with the performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Notice of Intent referenced above, the following General Conditions, and any other special conditions attached to this Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, these conditions shall control.



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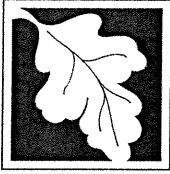
B. Findings (cont.)

Denied because:

- b. the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. **A description of the performance standards which the proposed work cannot meet is attached to this Order.**
- c. the information submitted by the applicant is not sufficient to describe the site, the work, or the effect of the work on the interests identified in the Wetlands Protection Act. Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. **A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).**
- 3. Buffer Zone Impacts: Shortest distance between limit of project disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a) _____ a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. <input type="checkbox"/> Bank	_____ a. linear feet	_____ b. linear feet	_____ c. linear feet	_____ d. linear feet
5. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	600 _____ a. square feet	600 _____ b. square feet	1,350 _____ c. square feet	1,350 _____ d. square feet
6. <input type="checkbox"/> Land Under Waterbodies and Waterways	_____ a. square feet _____ e. c/y dredged	_____ b. square feet _____ f. c/y dredged	_____ c. square feet	_____ d. square feet
7. <input type="checkbox"/> Bordering Land Subject to Flooding	_____ a. square feet	_____ b. square feet	_____ c. square feet	_____ d. square feet
Cubic Feet Flood Storage	_____ e. cubic feet	_____ f. cubic feet	_____ g. cubic feet	_____ h. cubic feet
8. <input type="checkbox"/> Isolated Land Subject to Flooding	_____ a. square feet	_____ b. square feet		
Cubic Feet Flood Storage	_____ c. cubic feet	_____ d. cubic feet	_____ e. cubic feet	_____ f. cubic feet
9. <input type="checkbox"/> Riverfront Area	_____ a. total sq. feet	_____ b. total sq. feet		
Sq ft within 100 ft	_____ c. square feet	_____ d. square feet	_____ e. square feet	_____ f. square feet
Sq ft between 100-200 ft	_____ g. square feet	_____ h. square feet	_____ i. square feet	_____ j. square feet



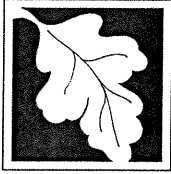
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B. Findings (cont.)

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. <input type="checkbox"/> Land Under the Ocean	_____	_____		
	a. square feet	b. square feet		
	_____	_____		
	c. c/y dredged	d. c/y dredged		
12. <input type="checkbox"/> Barrier Beaches	Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. <input type="checkbox"/> Coastal Beaches	_____	_____	_____ cu yd	_____ cu yd
	a. square feet	b. square feet	c. nourishment	d. nourishment
14. <input type="checkbox"/> Coastal Dunes	_____	_____	_____ cu yd	_____ cu yd
	a. square feet	b. square feet	c. nourishment	d. nourishment
15. <input type="checkbox"/> Coastal Banks	_____	_____		
	a. linear feet	b. linear feet		
16. <input type="checkbox"/> Rocky Intertidal Shores	_____	_____		
	a. square feet	b. square feet		
17. <input type="checkbox"/> Salt Marshes	_____	_____	_____	_____
	a. square feet	b. square feet	c. square feet	d. square feet
18. <input type="checkbox"/> Land Under Salt Ponds	_____	_____		
	a. square feet	b. square feet		
	_____	_____		
	c. c/y dredged	d. c/y dredged		
19. <input type="checkbox"/> Land Containing Shellfish	_____	_____	_____	_____
	a. square feet	b. square feet	c. square feet	d. square feet
20. <input type="checkbox"/> Fish Runs	Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above			
	_____	_____		
	a. c/y dredged	b. c/y dredged		
21. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	_____	_____		
	a. square feet	b. square feet		

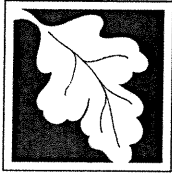


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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

9. No work shall be undertaken until the Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
10. A sign shall be displayed at the site not less than two square feet or more than three square feet in size bearing the words,
"Massachusetts Department of Environmental Protection" [or, "MassDEP"]
"File Number 090-1292 "
11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
13. The work shall conform to the plans and special conditions referenced in this order.
14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.
17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

NOTICE OF STORMWATER CONTROL AND MAINTENANCE REQUIREMENTS

19. **The work associated with this Order (the “Project”) is (1) is not (2) subject to the Massachusetts Stormwater Standards. If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:**

a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:

- i.* all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;
- ii.* as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
- iii.* any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;
- iv.* all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;
- v.* any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

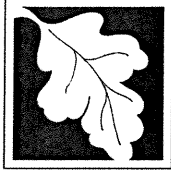


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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement") for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following: *i.*) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and *ii.*) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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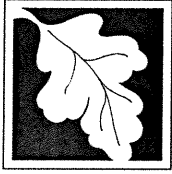
C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
 1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
 2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
 3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.

- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

See Attached Conditions.



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D. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? Yes No
2. The Andover Conservation Commission hereby finds (check one that applies):
 - a. that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

1. Municipal Ordinance or Bylaw _____ 2. Citation _____

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

- b. that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

Article XIV, Andover Wetlands Protection By-Law By-Law
 1. Municipal Ordinance or Bylaw _____ 2. Citation _____

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

See Attached Conditions.

16 Hacienda Way – New Dwelling, Barn, Tennis Court and associated site work and driveway improvements.

DEP FILE NO. 090-1292 SPECIAL CONDITIONS

1 FINDING - NOTICE OF JURISDICTION UNDER THE MASSACHUSETTS WETLANDS PROTECTION ACT, M.G.L.C. 131, S. 40. The Andover Conservation Commission hereby finds that all or part of the property on which the work authorized by this Order is proposed is subject to jurisdiction under the Massachusetts Wetlands Protection Act, M.G.L.C. 131, s. 40. The owner is hereby notified of his or her responsibility to comply with the provisions of that statute. **This condition shall remain in effect in perpetuity and shall survive the issuance of a Certificate of Compliance.**

2 FINDING – ANDOVER WETLANDS PROTECTION BY-LAW. The Conservation Commission finds that all conditions set forth in this Order of Conditions are necessary to protect the interest described in the Andover Wetlands Protection By-Law. The owner is hereby notified of his or her responsibility to comply with the provisions of that By-Law. **This condition shall remain in effect in perpetuity and shall survive the issuance of a Certificate of Compliance.**

3 FINDING – RIVERFRONT AREA. The Conservation Commission finds that the proposed work is **Not** located within the two hundred Riverfront Area.

3 FINDING – BORDERING VEGETATED WETLAND. The Conservation Commission finds that the Boundary of Bordering Vegetated Wetland, as reviewed and depicted on the approved plan.

4 FINDING - 25 FOOT PERMANENT BUFFER STRIP PROTECTED. The Andover Conservation Commission hereby finds that the “25’ NON-DISTURBANCE ZONE” depicted on the approved plan (a copy of which is attached to and made part of this Order) shall remain in effect in perpetuity. No building or alteration is to occur in this restricted area. The markers noted on the plan entitled “Plan Accompanying Notice of Intent.” shall be installed as noted on the approved plan. **No work other than installation of erosion controls the Non-Disturb Markers have been installed and approved by the Conservation Agent or Commission’s Site Monitor.** Such bounds shall consist of Berntsen Feno Survey Markers with permanent medallions (information can be provided by the Conservation Commission), bearing the following inscription: “25 FOOT NON-DISTURBANCE ZONE TO WETLAND. PER ORDER OF ANDOVER CONSERVATION COMMISSION. DO NOT REMOVE.” The condition will be enforceable by the Andover Conservation Commission against the owner and /or its successors. **This condition shall remain in effect in perpetuity.**

5 FINDING – STOCKPILING OF MATERIAL WITHIN THE JURISDICTIONAL 100 FOOT BUFFER ZONE. The Conservation Commission finds that there shall be no stockpiling of material within the 100 foot buffer zone.

6 FINDING – DIGITAL FILE FOR WETLAND RESOURCES. Prior to recording, the

applicant shall provide to the Andover Conservation Commission a digital file containing the file of the confirmed boundary of resource areas. The file format shall be in AutoCAD DWG (or ASCII DXF) version 2010 or earlier and Adobe PDF, delivered on CD-ROM or DVD-R media. AutoCAD file delivery shall be in full model view. The digital file shall include property boundaries, dimensions, easements, rights-of-way, edge of pavement, edge of side walk, edge of water bodies, wetland boundaries, topographic contours, spot elevations, etc. Said digital data shall be delivered in Massachusetts State Plane Coordinate System, North American Datum 1983 and North American Vertical Datum 1988, in U.S. Survey Feet – **OR other format acceptable to the Conservation staff.**

7 FINDING - NON-DISTURBANCE ZONE – REQUIRED DEED LANGUAGE. Any Deed (as defined below) for all or any portion of the property subject to this Order of Conditions which includes a non-disturbance zone shall contain the following language "This property is subject to a non-disturbance zone in which no alteration of land or vegetation may occur. The non-disturbance zone is shown on the plans entitled "Plan to Accompany Notice of Intent", recorded at the Essex County Registry of Deeds, North District, at Book ____, Page ____, and/or registered with the Land Registration Office of the Essex County Registry District as Document No. _____ and as described in the Order of Conditions recorded in the same Registry at Book ____, Page ____, and/or in the same Registry District as Document _____. In accordance with said Order of Conditions, this language shall be incorporated in full into all future deeds, easements, mortgages, leases, licenses, occupancy agreements or any other instrument of transfer, whereby an interest in and/or a right to use the property or a portion thereof is conveyed (a "Deed")."

The plans referenced in this Order of Conditions shall be recorded with the Order of Conditions and cross referenced thereto in the Essex County Registry of Deeds and/or the Essex County Registry District. **This condition shall remain in effect in perpetuity.**

8 FINAL APPROVED PLAN AND OTHER DOCUMENTS. Work shall conform to the plans referenced on Page 1 of this Order and to the following materials submitted by the applicant and which are on file with the Andover Conservation Commission:

The following documents, plans, and reports have been received and reviewed are part of this Order of Conditions:

- **April 2017 Notice of Intent Application and Site Plans (Sheets 1-5) dated July 17, 2008 prepared by Hayes Engineering, Inc.,**
- **July 14, 2017 Cover Letter and Site Plans (Sheets 1-5) Revised July 13, 2017 prepared by Hayes Engineering, Inc.,**
- **August 18, 2017 Cover Letter, Replication Area Specifications dated August 14, 2017, and Site Plan (Sheet 5) Revised August 16, 2017 prepared by Hayes Engineering, Inc.,**
- **Replication Area Specifications dated August 14, 2017 and revised September 11, 2017,**

**September 12, 2017 prepared by Hayes Engineering, Inc., and
• Replication Area Specifications Revised September 14, 2017.**

9 RELIANCE UPON PEER REVIEW. The Conservation Commission is in partial reliance upon a peer review of the filing completed by **Ann Marton of LEC Environmental. The documentation for this review is comprised of Letter reports dated September 19, 2017.**

10 WORK AUTHORIZED UNDER THIS ORDER – Only work explicitly described in the above-referenced plans and Notice of Intent is authorized under this Order of Conditions.

11 INSTALLATION OF EROSION CONTROL. Prior to commencement of work the applicant shall retain the services of the design professional or a Professional Land Surveyor to stake out the location of the proposed sediment controls. The applicant shall then install *appropriate* sediment controls in accordance with the above-referenced plans *that have been approved by an Agent for the Commission and are specific to site conditions.*

A written request for inspection of the erosion control shall be submitted to the Conservation Commission, and a satisfactory inspection performed before any land-disturbing activity may commence. The Conservation Commission or its agents may require other sediment controls as field conditions warrant. The siltation control device shall be the Limit of Construction beyond which no earth-disturbing activity shall occur or heavy equipment shall be allowed. All siltation and erosion controls shall be maintained in a state of good repair. The siltation control devices shall not be removed until the commission or its agent has reviewed and found satisfactory the stabilization of the disturbed area.

12 CERTIFIED FOUNDATION PLAN. Within ten days of the installation of the building foundation, **but in every case prior to framing or further construction of the building**, the applicant shall submit to the Conservation Commission a Certified Foundation Plan prepared by a Registered Land Surveyor. Said plan shall be sufficiently detailed to show the horizontal location of the foundation with respect to the property lines and the top of foundation elevation, or elevations if more than one level, and the location of any major openings, including, but not limited to, garage entrance, if one shall be provided for. No framing or further construction of the building may occur until the Certified Foundation Plan has been approved by the Conservation Agent or Commission's Site Monitor.

13 STORMWATER MANAGEMENT. The Applicant or his successors in interest shall be responsible in perpetuity to maintain all drainage and stormwater management features, including stormwater best management practices (BMPs) in good working order. The Conservation Commission reserves the right to enter upon the property and make independent examination of these BMP measures, and to require the Applicant or his successors in interest to perform such maintenance as is needed in its judgment. The Conservation Commission shall provide prior notice to the property owner of its intent to perform such inspection not less than forty-eight hours prior to such inspection. **This condition shall remain in effect in perpetuity and shall survive the issuance of a Certificate of Compliance.**

14 CERTIFICATE OF COMPLIANCE. Not more than thirty days following completion of the project, the applicant shall submit to the Commission and the Commission's Site Monitor with their request for a Certificate of Compliance, an affidavit prepared by a professional engineer or land surveyor registered in the Commonwealth of Massachusetts, stating that the site has been developed in accordance with the requirements of this Order of Conditions, based upon an on-site inspection and the referenced site plan. This affidavit should include a listing of any deviations from the approved plan.

An as-built drawing, prepared by a Professional Land Surveyor or Professional Engineer, registered in the Commonwealth of Massachusetts, and depicting the final and actual condition of all areas within the jurisdiction of the Massachusetts Wetlands Protection Act shall accompany such request.

15 EXCAVATION DEWATERING. In the event that excavation dewatering is required within any area subject to jurisdiction of the Wetlands Protection Act the applicant shall notify the Conservation Commission and the Commission's Site Monitor in advance of such work, and shall be responsible to ensure that such water is free of suspended solids before being discharged into either a wetland or into any storm water drainage system. This condition applies to all forms of dewatering, including pumping and trenching.

16 NOTIFICATION OF COMMENCEMENT OF WORK. The applicant shall notify the Conservation Commission and the Commission's Site Monitor, in writing, 48 hours before any activity commences on the project site and shall advise the Conservation Commission and the Commission's Site Monitor of the name(s) and telephone number(s) of the person(s) responsible on site for compliance with this Order. This list shall be resubmitted if any changes are made to it.

The developer or contractor responsible for the project's completion shall be notified of, and understand, the requirements of this Order of Conditions. The developer and/or contractor shall acknowledge receipt of the Order of Conditions by submitting a letter to that effect to the Conservation Commission. A copy of this Order, as well as copies of the above-mentioned documents, plans, and reports shall be on-site while activities regulated by this Order are being performed.

This Order of Conditions shall be made part of all construction documents for this project. All contractors working at the site shall be made aware of the provisions contained within this Order of Conditions and shall adhere to all the Special Conditions contained herein. The applicant, or his designee, shall, at all times, have a copy of the Final Order of Conditions at the site and shall monitor compliance with the provisions of this Order.

17 CONSTRUCTION OVERVIEW BY DESIGN ENGINEER / REPORTS. In accordance with Massachusetts General Laws Chapter 44, §53G, the Conservation Commission requires that the applicant provide funds **prior to commencement of work** to the Commission for the reasonable fees of a consultant with professional credentials to be selected by the Commission to review and/or approve the inspection of work thereunder. Such fees shall be an estimate of

inspections which shall take place during once every 7 calendar days and within 24 hours of the end of a storm event having ½ inch of rainfall or greater within a twenty-four hour period, throughout the duration of the project. This period shall begin when siltation controls are installed, and shall end with issuance of a Certificate of Compliance. **Since the fees are an estimate, additional fees may be required pending the duration of the project and/or overpayment returned to the applicant upon the issuance of a Certificate of Compliance.**

Where submission of a certified foundation plan is otherwise required under this Order of Conditions a copy of said certified foundation plan shall be attached to the next inspection report following installation of the foundation. The weekly logs/reports shall be submitted on a monthly basis to the Conservation Commission and shall state whether such work is in his or her opinion in compliance with the Order of Conditions. The Conservation Commission reserves the right to require submission of such reports on a more frequent interval. **The Conservation Commission also reserves the right to authorize the consultant to reduce the number of weekly inspections submitted on a monthly basis at their discretion.**

The applicant must request approval for temporary cessation of reports in writing prospectively. **This request must have the prior approval of an Agent for the Commission.** Failure to submit satisfactory reports shall be deemed sufficient cause for revocation of this permit without further review.

18 CLEAN FILL. All fill used in connection with this project shall be clean borrow. The following shall be prohibited: chemically contaminated material; concrete and asphalt rubble; stumps and other solid waste.

19 GRADING AND STABILIZATION. Grading shall conform to the plans and data referenced above. In all cases final grades shall have a minimum of two inches of topsoil (measured in place) over all disturbed areas. In all cases exposed soil areas shall be stabilized with vegetation, e.g., grass or some form of ground cover plant. In no case shall wood chips, mulch, or similar covering be acceptable on sloping ground in lieu of vegetation.

20 STOCKPILING. All debris, fill and excavated material stockpiles within 100 feet of a wetland area must be surrounded by staked hay bales to prevent sediment from surface runoff from entering the wetland.

21 CONTROL OF CONSTRUCTION DEBRIS. No construction debris (paper, wood, metal, concrete, etc.) may be allowed to enter the wetland resource areas at any time. Windblown material shall be promptly removed from wetland resource areas.

22 DAMAGES TO RESOURCE AREAS. Any damage caused as a direct result of this project to any wetland resource areas, beyond that authorized by the Order, is the responsibility of the applicant to repair, restore or replace. Sedimentation or erosion into these areas shall be considered damage to wetland resource areas. The Conservation Commission shall be promptly notified of any damage to wetland resource areas. Following notification, the applicant must submit a plan for abatement of the problem and restoration. This plan must be approved by the Conservation Commission prior to implementation.

notified of any damage to wetland resource areas. Following notification, the applicant must submit a plan for abatement of the problem and restoration. This plan must be approved by the Conservation Commission prior to implementation.

23 SURPLUS EARTH MATERIALS. It shall be the responsibility of the Applicant to ensure that any and all surplus materials that are not needed for use on the project are lawfully disposed of outside any area subject to protection under M.G.L.c 131, s. 40, unless such disposal area and activity are regulated under either a valid Order of Conditions or Determination of Applicability.

24 FINDING. Existing 25 foot non-disturb markers located on site shall be relocated on site to the actual 25 foot non-disturb line based on existing wetland flagging.



Massachusetts Department of Environmental Protection
 Bureau of Resource Protection - Wetlands
WPA Form 5 – Order of Conditions
 Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
 090-1292
 MassDEP File #

eDEP Transaction #
 Andover
 City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Oct. 5, 2017
 1. Date of Issuance

Please indicate the number of members who will sign this form.

6
 2. Number of Signers

This Order must be signed by a majority of the Conservation Commission.

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

Signatures:

[Signature]
[Signature]
[Signature]

[Signature]
[Signature]
[Signature]

by hand delivery on

by certified mail, return receipt requested, on

Date

October 5, 2017
 Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request of Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

**REPLICATION AREA
SPECIFICATIONS
#16 HACIENDA WAY
ANDOVER, MASSACHUSETTS**

August 14, 2017
Revised September 14, 2017

Existing Replication Area Modification

The existing 2,510 s.f. replication area will be modified as follows prior to construction of the replication expansion (see below).

1. The earthen berm along the southeastern side of the replication area will be removed so as to establish a hydrologic connection between the replication area and natural wetland. This work will be accomplished during late fall or winter months when the surface of the soil is frozen to avoid soil rutting and disturbance to existing ground cover vegetation. A backhoe or small excavator will enter the new area from the driveway and proceed with the berm removal. A silt fence will be installed between the berm and natural wetland to provide a visible limit of work and to protect the adjacent resource area from accidental encroachment.
2. Fourteen wetland plants (thirteen winterberry and one red maple) will be planted within the area in order to attain the number of plantings approved in the 2001 Order of Conditions (49 total). This mitigative action was previously specified in the August 22, 2008 Mason and Associates report to the Andover Conservation Commission and memorialized in the Commission's 2008 Order of Conditions.
3. The few scattered roses and brambles that have spontaneously grown within the replication area will be removed to improve the composition of the plant community.

**Proposed Plant Table
Existing Replication Area**

Type	Species	Quantity
Tree	Red Maple (<i>Acer rubrum</i>)	1 Tree 6-8' ht, at least 1" diameter
Shrubs	Winterberry (<i>Ilex verticillata</i>)	13 Plants (24-36" high, #2 Pot)

4. This work shall be performed under the supervision of a wetland scientist.

Supplemental Replication Area

The existing 2,510 s.f. replication area will be expanded by 1,350± square feet as mitigation for proposed wetland filling which will result from culvert installation and associated grading during driveway completion. The location and design of this additional wetland replication is shown on sheet #5 of the Hayes Engineering, Inc. plan titled "Plan to Accompany Notice of Intent in Andover, Mass., Wetland Replication Area Detail" revised through September 12, 2017.

Existing Conditions

The supplemental replication area is currently vegetated with a plant community predominantly composed of black and grey birch, red oak, red maple, hay fern, wood aster, and star flower but also containing a few white pine saplings, raspberry, and highbush blueberry. A soil sample taken within the proposed area revealed that the upper horizons generally consist of the following: 8" fine sandy loam 10YR 2/2 (A-horizon) with 8"+ fine sandy loam 10YR 3/2 (B-horizon) below. Plant community vegetation in the natural wetland is generally dominated by red maple, birches, sweet pepperbush, highbush blueberry, and various ferns. A soil sample taken within the natural wetland downgradient of flag #AA6 revealed that the upper horizons generally consist of the following: 9 "well decomposed organics (O-horizon), 7" black fine sandy loam 2.5/N (A horizon), with loamy fine sand 10YR 5/2 (organics and redox present below (B – horizon).

Proposed Conditions

Supplemental wetland replication will be accomplished by excavating the specified area of upland along wetland flags AA6-AA10 to subgrade of at least 9" below the final replication elevation (matching that of the adjacent natural and existing replication wetlands as much as possible); bringing the grade up with a layer of highly organic soil mixture so as to blend the supplemental area with the existing replication area; and finally planting with indigenous wetland plant species (nursery stock) in order to establish a tree, shrub and fern dominated wetland.

A small "berm" near elevation 198.2± will be created by the construction of the Wetland Replication Area. The previous replication area slopes in the northerly direction from a high at elevation 200.0 proximate wetland flag number 17 to a low of elevation 197.4± approximately 7-feet westerly of wetland flag number 12 and flag number 11. The proposed wetland replication area will extend this depression to increase the area below the 198-foot contour from 700± square feet to 2,075± square feet. The southern extent of the replication area will be approximately 0.8-feet (10-inches) below the "berm" with the "berm" tapering off to the south. The "berm" area will be no higher than the elevation of the adjacent, previously constructed, wetland area. The variations in topography will be proposed in an effort to enhance wetland survival and habitat value through the creation of high and low marsh areas catering to the different species available within the wetland seed mixture.

The aforementioned replication area organic soil material will be a 50:50 mixture of topsoil material (from on-site construction locations as long as the vegetation within these areas does not contain invasive species - and if necessary supplemented with nursery topsoil) and nursery peat. Refer to the Plant Tables below and on the aforementioned Notice of Intent plan sheets for amounts and types of plants to be installed. This action will ensure that the replacement area will re-establish itself as part of the existing wetland community, and ultimately function in a similar manner.

A construction sequence for the additional wetland replication area is detailed below. The wetland replication area construction process shall proceed to completion without substantial interruption once started (e.g. be completed in the same day). A wetland scientist shall supervise berm removal on the existing replication area and construction of the new replication area.

Construction Sequence

The following method shall be followed for construction of the replication area as shown on the Hayes Engineering, Inc. plan sheets titled "Wetland Replication Area Details":

1. An erosion control barrier (silt fence) shall be installed between the wetland boundary at AA6- AA7 and the new replication area to serve as a limit of work and to prevent sediments from inadvertently encroaching upon the wetlands. Note that an erosion barrier will not be installed between the existing and new replication areas to allow the two wetlands to be blended during grading activities.
2. Existing trees and vegetation will be cleared from the new area.
3. The replication area shall be excavated to 9" below final grade (over fill the area with 12-inches so that as the soil naturally compacts over time the final depth will be 9-inches). Actual depth of excavation shall be determined in the field using estimated upper extent of groundwater.
4. Manufacture and spread sufficient organic soil mixture of 50:50 topsoil and peat to bring new replication area up to final grade.
4. Topsoil material removed during house construction may be used to bring the replication area up to the proposed final grade, if approved by the project wetland biologist.
5. The wetland replication shall be graded as shown on the plan, with final bottom elevations approximately those existing in the wetland. Actual depth to be determined in the field by a biologist.
6. Wetland vegetation (nursery stock) specified in the Table below shall be planted in the prepared replication area using standard landscaping methods. Spacing shall be as follows: Trees as shown on the plan, shrubs 10 feet apart, ferns to be scattered throughout area, and seed mix to be applied as recommended by manufacturer.
7. Mulch the replication area with clean, seed-free straw to protect the soil from erosion and to provide moisture retention.
8. Begin monitoring program below. Evaluations one (1) month after completion and once a growing season for two (2) years until 75% survival of woody vegetation and 75% cover with herbaceous vegetation.

**Proposed Plant Table
 New Replication Area**

Type	Species	Quantity
Tree	Red Maple (<i>Acer rubrum</i>)	4 Trees 6-8' ht, at least 1" diameter
Shrubs	Highbush blueberry (<i>Vaccinium corymbosum</i>) Winterberry (<i>Ilex verticillata</i>) Silky Dogwood (<i>Cornus amomum</i>) Plant 10' on center, Mix species	10 Plants 10 Plants 20 Plants (24-36" high, #2 Pot)
Ferns	Cinnamon ferns (<i>Osmunda cinnamomea</i>)	20 Plants, #1 Pot Scattered through area.
Seed Mix	"Northeast Wetland Hummock " product from Southern Tier Consulting, Inc. (or equivalent)	Apply at 1 lb / 13,400 s.f., and as Manufacturer specifies.

Note: Planting within prepared wetland shall be performed when area not inundated.

Note: Plant species shown in the Table may be substituted due to unavailability provided that the approval of the Conservation Commission and Hayes Engineering, Inc. is obtained.

Monitoring Program

Vegetative growth and hydrological conditions within the replication area shall be inspected and recorded to the Conservation Commission for the duration of at least two growing seasons, or until 75% of the area is established with indigenous wetland species. Monitoring of the area shall occur initially at least one month during the growing season after planting to ensure proper planting techniques have been followed and to provide a baseline description of the plants existing in the area. Thereafter, inspection and monitoring reports shall be accomplished twice a growing season (late spring and fall) until the area has achieved at least 75% cover. Invasive plants such as Japanese bamboo, purple loosestrife and reed grasses shall be hand removed upon discover so as to avoid establishment of large colonies. Plants that die during the two growing seasons time period shall be replaced with similar species. Should the area fail to

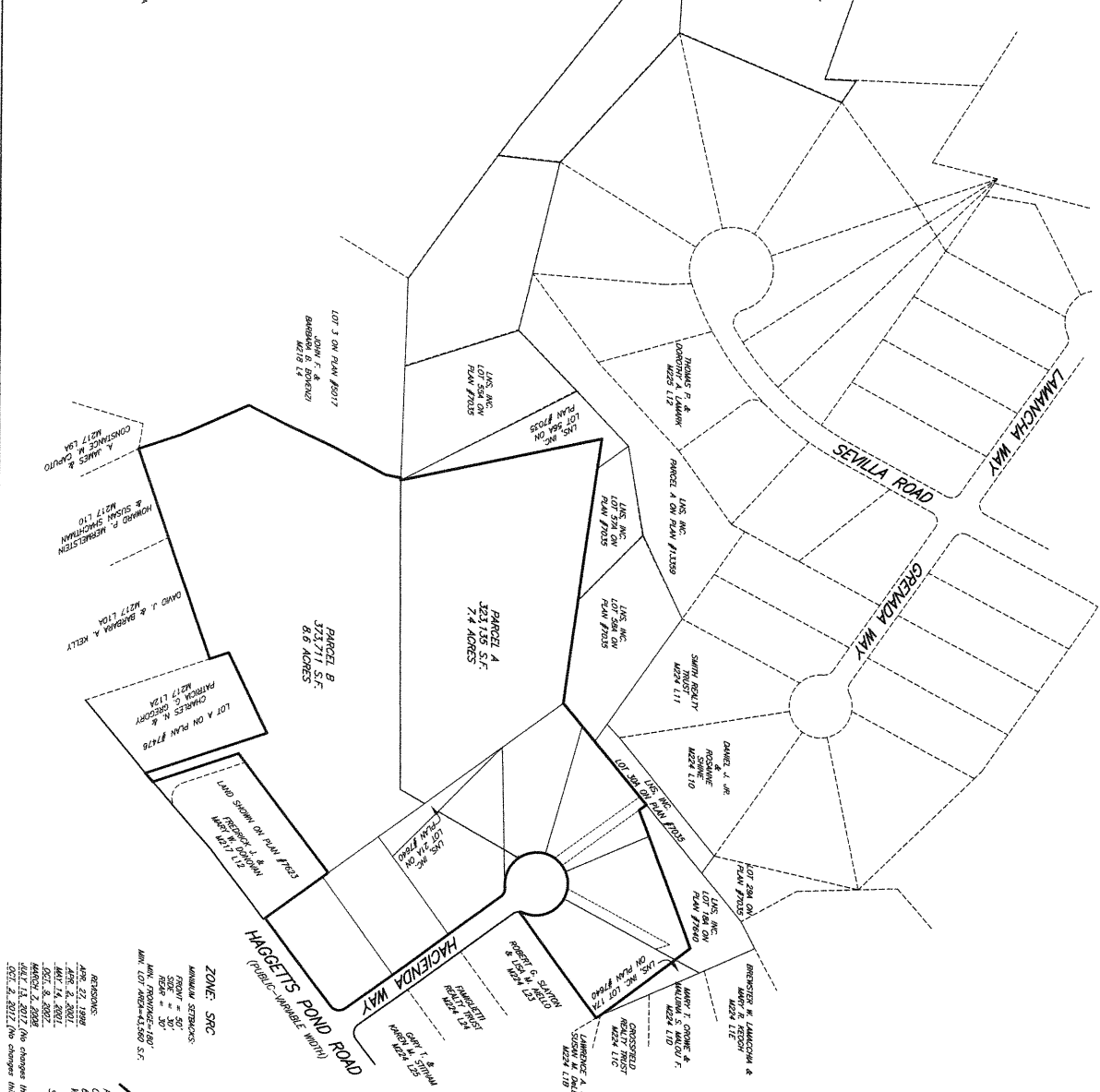
Replication Area Specifications, #16 Hacienda Way, Andover, MA
Revised September 14, 2017

achieve 75% cover in two seasons, corrective measures shall be submitted to the Conservation Commission.



LEGEND OF SYMBOLS & ABBREVIATIONS

EDGE OF PARCELS	---
EXISTING CONTOUR
PROPOSED CONTOUR
PROPOSED UTILITY LINE	---
EDGE OF E.P.W.	---
EXISTING WETLAND FLAG	-----
LIMIT OF 100' BUFFER ZONE	-----
LIMIT OF 50' NO-BUILD ZONE	-----
LIMIT OF 25' NO-BUILD ZONE	-----
ADJUTING PROPERTY LINES	-----
SPR. EXIST. PIT	○
PAVE WADERY	▭
PROPOSED SPOT ELEVATION	①
TOP OF FLOODPLAIN ELEVATION	TF
CELESTIAL FLOOR ELEVATION	CF
PROPOSED CEILING FLOOR ELEVATION	CF
HIGHWAY	==*



ANDOVER, MASS.
 Plan to Accompany
 Notice of Intent in
 MASS.

OWNER:
 LWS, INC.
 9 SUNSET DRIVE
 SAUGUS, MA 01906

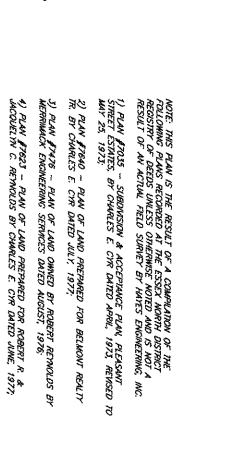
REVISIONS:
 APR. 23, 1988
 APR. 24, 2001
 OCT. 8, 2002
 MAR. 2, 2003
 APR. 11, 2012 (No changes this sheet)
 FEB. 2, 2012 (No changes this sheet)

SCALE: 1" = 100'

DATE: FEBRUARY 12, 1988

NOTES:

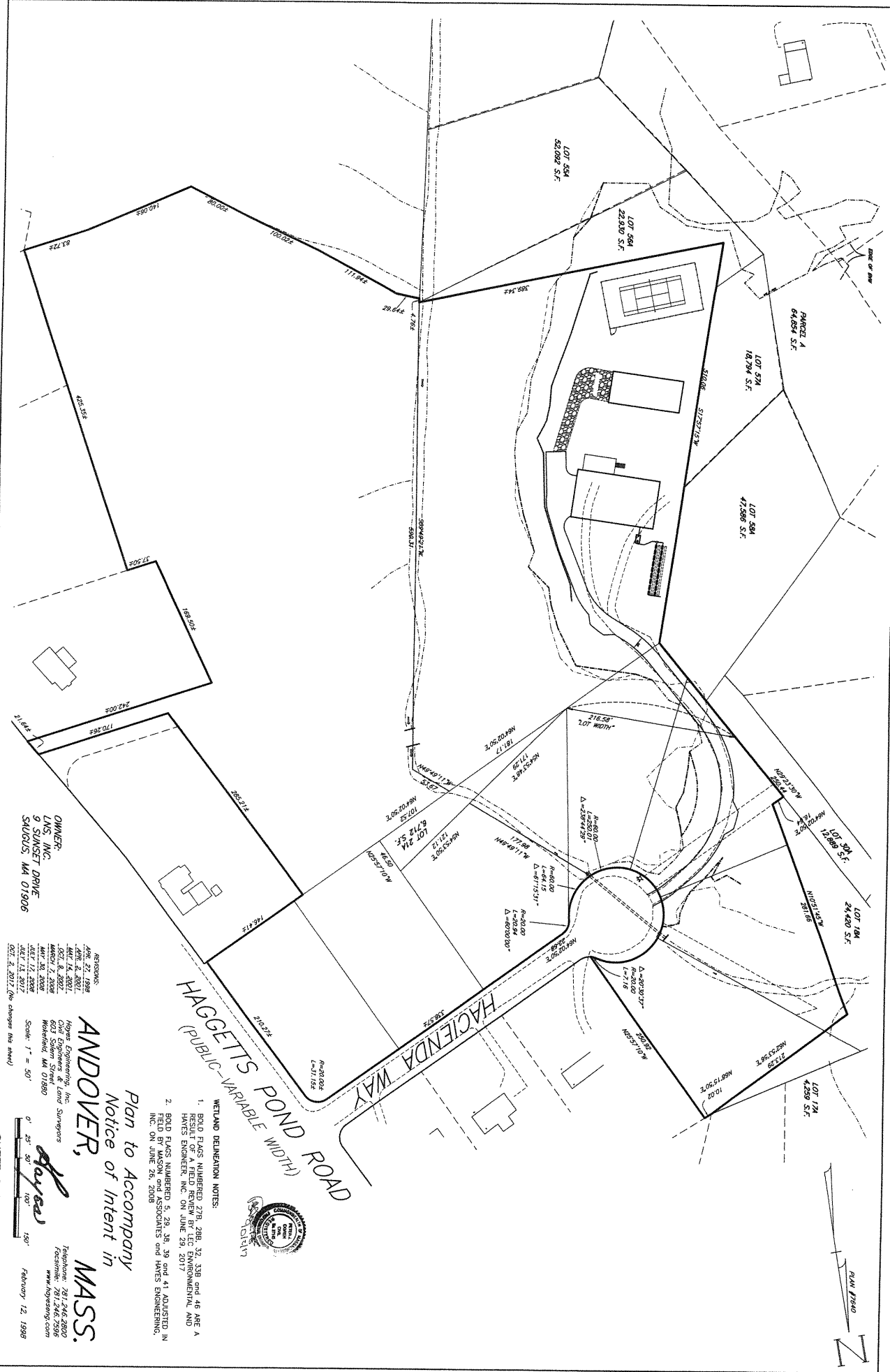
- 1) FIRM PLAN IS THE RESULT OF A COMPARISON OF THE FOLLOWING PLANS, RECORDS AND SURVEYS AND IS NOT A RESULT OF A FIELD SURVEY BY HAYES ENGINEERING, INC.
- 2) FIRM PLAN IS THE RESULT OF A COMPARISON OF THE FOLLOWING PLANS, RECORDS AND SURVEYS AND IS NOT A RESULT OF A FIELD SURVEY BY HAYES ENGINEERING, INC.
- 3) FIRM PLAN IS THE RESULT OF A COMPARISON OF THE FOLLOWING PLANS, RECORDS AND SURVEYS AND IS NOT A RESULT OF A FIELD SURVEY BY HAYES ENGINEERING, INC.
- 4) FIRM PLAN IS THE RESULT OF A COMPARISON OF THE FOLLOWING PLANS, RECORDS AND SURVEYS AND IS NOT A RESULT OF A FIELD SURVEY BY HAYES ENGINEERING, INC.
- 5) FIRM PLAN IS THE RESULT OF A COMPARISON OF THE FOLLOWING PLANS, RECORDS AND SURVEYS AND IS NOT A RESULT OF A FIELD SURVEY BY HAYES ENGINEERING, INC.
- 6) UNRECORDED PLAN BY CHARLES E. CHM DATED JANUARY, 1978.



VICINITY MAP
 SCALE: 1" = 1000'

NOTES:

- 1) FIRM PLAN IS THE RESULT OF A COMPARISON OF THE FOLLOWING PLANS, RECORDS AND SURVEYS AND IS NOT A RESULT OF A FIELD SURVEY BY HAYES ENGINEERING, INC.
- 2) FIRM PLAN IS THE RESULT OF A COMPARISON OF THE FOLLOWING PLANS, RECORDS AND SURVEYS AND IS NOT A RESULT OF A FIELD SURVEY BY HAYES ENGINEERING, INC.
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- 6) UNRECORDED PLAN BY CHARLES E. CHM DATED JANUARY, 1978.



OWNER:
LNS, INC.
9 SUNSET DRIVE
SAUGUS, MA 01906

PERSONS:
DATE: 2/2/2017
TIME: 2:30PM
DRAWN BY: J. HAYES
CHECKED BY: J. HAYES
DATE: 2/2/2017
TIME: 2:30PM
DRAWN BY: J. HAYES
CHECKED BY: J. HAYES
DATE: 2/2/2017
TIME: 2:30PM
DRAWN BY: J. HAYES
CHECKED BY: J. HAYES

Scale: 1" = 50'
1" = 100'

150°
February 12, 1999

HAGGETTS POND ROAD
(PUBLIC-VARIABLE WIDTH)

WETLAND DELINEATION NOTES:

1. BOLD FLAGS NUMBERED 278, 289, 372, 338 and 48 ARE A RESULT OF A FIELD REVIEW BY J.C. MANNING, AND HAYES ENGINEERS, INC. ON JUNE 29, 2017.
2. BOLD FLAGS NUMBERED 5, 29, 38, 39 and 41 ADJUSTED, IN ACCORDANCE WITH THE FIELD NOTES OF J.C. MANNING, AND HAYES ENGINEERS, INC. ON JUNE 26, 2008.

Plan to Accompany
Notice of Intent in
ANDOVER, MASS.

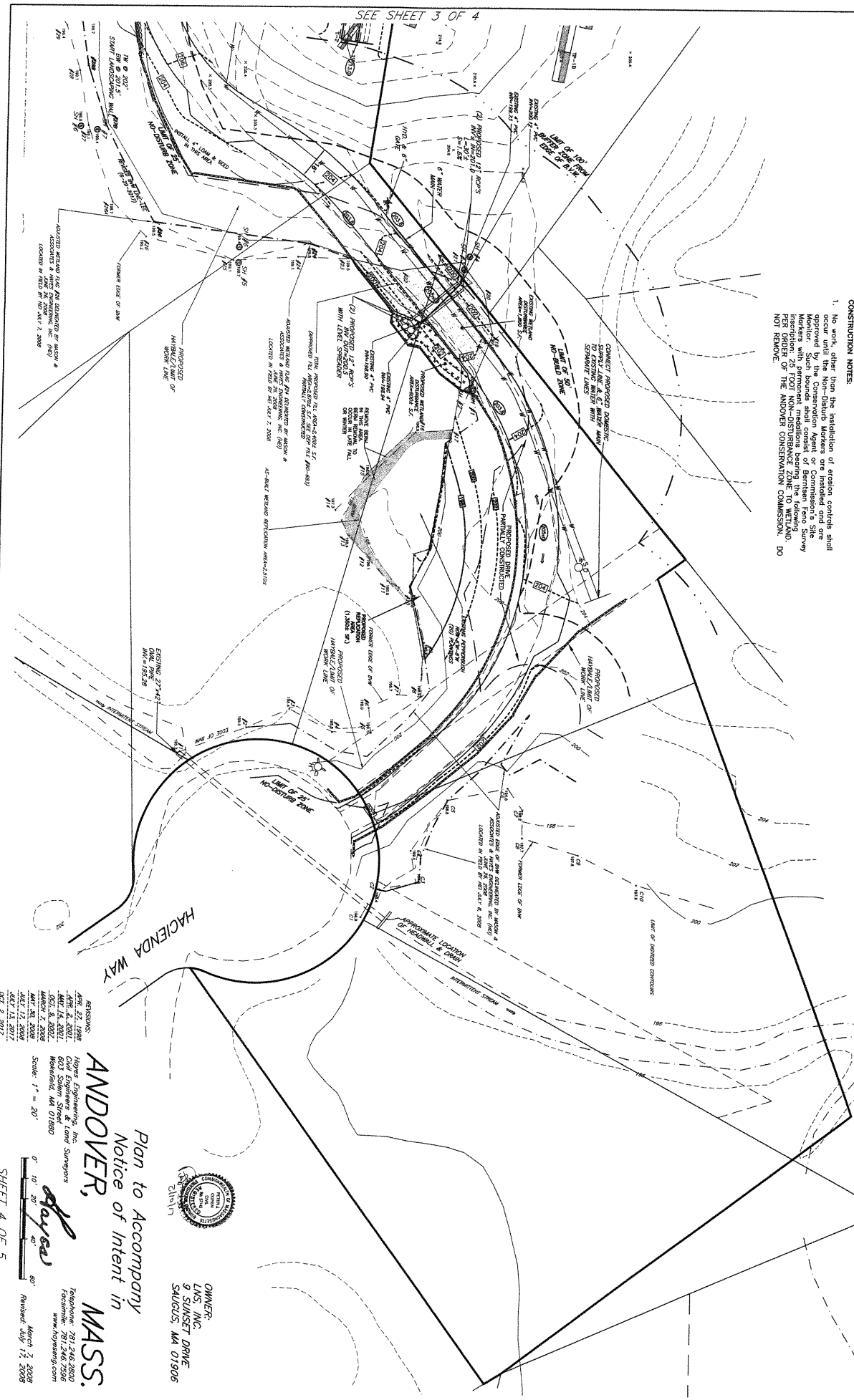
Hoyes Engineering, Inc.
Civil Engineers & Land Surveyors
603 Salem Street
Andover, MA 01820

Telephone: 978.466.2800
Facsimile: 978.466.2800
www.hoyeseng.com





- NOTES:**
- 1) THIS PLAN IS THE RESULT OF AERIAL PHOTOGRAMMETRY OBTAINED FROM THE FIRM OF ANDOVER LAND SURVEYING ENGINEERS, INC. (ALE) AND ACTUAL FIELD SURVEY CONDUCTED BY THE ENGINEER.
 - 2) EXISTING 4" PVC DRAINAGE LOCATED AT CROSSING ARE TO BE REMOVED.
- CONSTRUCTION NOTES:**
1. No work other than the installation of erosion controls shall occur until the proposed work has been approved by the Conservation Agency. Such bounds shall consist of Bernheim Fano Survey Monument, 200' from the centerline of the proposed driveway, PER ORDER OF THE ANDOVER CONSERVATION COMMISSION. DO NOT REMOVE.



REVISIONS:

DATE	DESCRIPTION
APRIL 2, 2012	AS SHOWN
MAY 14, 2012	AS SHOWN
OCT 18, 2012	AS SHOWN
NOV 27, 2012	AS SHOWN
MAY 14, 2013	AS SHOWN
OCT 2, 2017	AS SHOWN

**Plan to Accompany
Notice of Intent in
ANDOVER,
MASS.**

**OHMWER-
LNS, INC.
9 SUNSET DRIVE
SAUGUS, MA 01906**

**HOYER ENGINEERING, INC.
SURVEYORS**
791.246.2800
603 Salem Street
Waterford, MA 01880
www.hoyereng.com

Scale: 1" = 20'
March 7, 2008
Revised July 17, 2008



SHEET 4 OF 5

**PROPOSED PLANTING LEGEND
NEW REPLICATION AREA**

SYMBOL	TYPE	QTY.	SPECIES	SIZE
(Symbol: Tree with 1" DBH)	TREE	4	RED MAPLE (ACER RUBRUM)	6" to 8" HEIGHT, 1" DBH
(Symbol: Tree with 1" DBH)	SHRUB	10	WHITEBERRY (ILEX VERTICILLATA)	#2 POTS, 24"-36" HEIGHT
(Symbol: Tree with 1" DBH)	SHRUB	10	HEMLOCK BLUEBERRY (VACCINIUM COMMISSURATUM)	#2 POTS, 24"-36" HEIGHT
(Symbol: Tree with 1" DBH)	SHRUB	20	SLAVY DOGWOOD (CORNUS FLORIDA)	#2 POT, 24"-36" HEIGHT
(Symbol: Tree with 1" DBH)	FERN	20	SPERMATOPHYTES (SAGITTARIA)	#1 POT
(Symbol: Seedling)	SEED MIX	1 LB./2500#	SODIUMSIS TER CONSULTING INC. NONPOINT WETLAND BOUNDARY	SEED AT 1/8" POT, 1/2" DOGWOOD #1 IN ACCORDANCE WITH REGULATIONS

**PROPOSED PLANTING LEGEND
EXISTING REPLICATION AREA**

SYMBOL	TYPE	QTY.	SPECIES	SIZE
(Symbol: Tree with 1" DBH)	TREE	1	RED MAPLE (ACER RUBRUM)	6" to 8" HEIGHT, 1" DBH
(Symbol: Tree with 1" DBH)	SHRUB	13	WHITEBERRY (ILEX VERTICILLATA)	#2 POTS, 24"-36" HEIGHT

REPLICATION TABLE:

EXISTING WETLAND FILL AREA = 1,880 sq. ft.
 PROPOSED REPLICATION AREA = 2,510 sq. ft.
 EXISTING REPLICATION FILL AREA = 1,411 sq. ft.
 PROPOSED ADDITIONAL FILL AREA = 800 sq. ft.
 PROPOSED ADDITIONAL REPLICATION = 1,350 sq. ft.
 PROPOSED REPLICATION FILL AREA = 2,251 sq. ft.
 TOTAL WETLAND FILL (PROJECT) = 2,460 sq. ft.
 TOTAL REPLICATION (PROJECT) = 3,810 sq. ft.
 TOTAL WADL (PROJECT) = 1,611 sq. ft.

CONSTRUCTION SEQUENCE:

1. THE FOLLOWING METHOD SHALL BE FOLLOWED FOR CONSTRUCTION OF THE REPLICATION AREA AS SHOWN ON THE PLAN SHEET TITLED "WETLAND REPLICATION AREA DETAILS" AND AS DESCRIBED IN THE DOCUMENT TITLED "REPLICATION AREA SPECIFICATIONS".
2. AN EROSION CONTROL BARRIER (SILT FENCE) SHALL BE INSTALLED BETWEEN THE WETLAND BOUNDARY AT THE REPLICATION AREA TO BE REPLICATED AND THE WETLAND BOUNDARY AT THE EXISTING REPLICATION AREA TO PREVENT SEDIMENT FROM MOVING FROM THE REPLICATION AREA TO THE EXISTING REPLICATION AREA.
3. EXISTING TREES AND VEGETATION WILL BE CLEARED FROM THE NEW AREA.
4. THE REPLICATION AREA SHALL BE EXCAVATED TO 9" BELOW FINAL GRADE. ACTUAL DEPTH OF EXCAVATION SHALL BE DETERMINED BY FIELD SURVEY.
5. TOPSOIL MATERIAL, REMOVED DURING HOUSE CONSTRUCTION, MAY BE USED TO BRING THE REPLICATION AREA TO FINAL GRADE. APPROXIMATELY THOSE EXISTING IN THE WETLAND ACTUAL DEPTH TO BE DETERMINED IN THE FIELD BY FIELD SURVEY.
6. WETLAND VEGETATION (NURSERY STOCK) SPECIFIED IN THE TABLE BELOW SHALL BE PLANTED IN THE REPLICATION AREA USING STANDARD LANDSCAPING METHODS. SPACING SHALL BE AS FOLLOWS: TREE MIX TO BE APPLIED AS RECOMMENDED BY MANUFACTURER.
7. TO PROMOTE REPLICATION AREA WITH CLEAN, SEED-FREE STRAW TO PROTECT THE SOIL FROM EROSION AND TO PROMOTE REPLICATION AREA WITH CLEAN, SEED-FREE STRAW TO PROTECT THE SOIL FROM EROSION AND TO PROMOTE REPLICATION AREA WITH CLEAN, SEED-FREE STRAW TO PROTECT THE SOIL FROM EROSION.
8. BEGIN MONITORING PROGRAM EVALUATIONS ONE (1) MONTH AFTER COMPLETION AND ONE (1) YEAR AFTER COMPLETION AND ONE (1) YEAR AFTER COMPLETION AND ONE (1) YEAR AFTER COMPLETION.

CONSTRUCTION NOTES:

1. REPLICATION AREA CONSTRUCTION TO OCCUR AFTER BERM REMOVAL AT EXISTING REPLICATION AREA. ALL REPLICATION AREA WORK SHALL BE MONITORED BY A WETLAND SPECIALIST.
2. ALL REPLICATION AREA WORK SHALL BE MONITORED BY A WETLAND SPECIALIST.

*Plan to Accompany
Notice of Intent in
MASS.
ANDOVER,
WETLAND REPLICATION AREA DETAILS
SHEET 5 OF 5*

OWNER:
LANS
9 SUNSET DRIVE
SAUGUS, MA 01906

Scale: 1" = 10'
 0' 5' 10' 20' 30'

July 13, 2017
 August 16, 2017
 September 1, 2017
 October 2, 2017

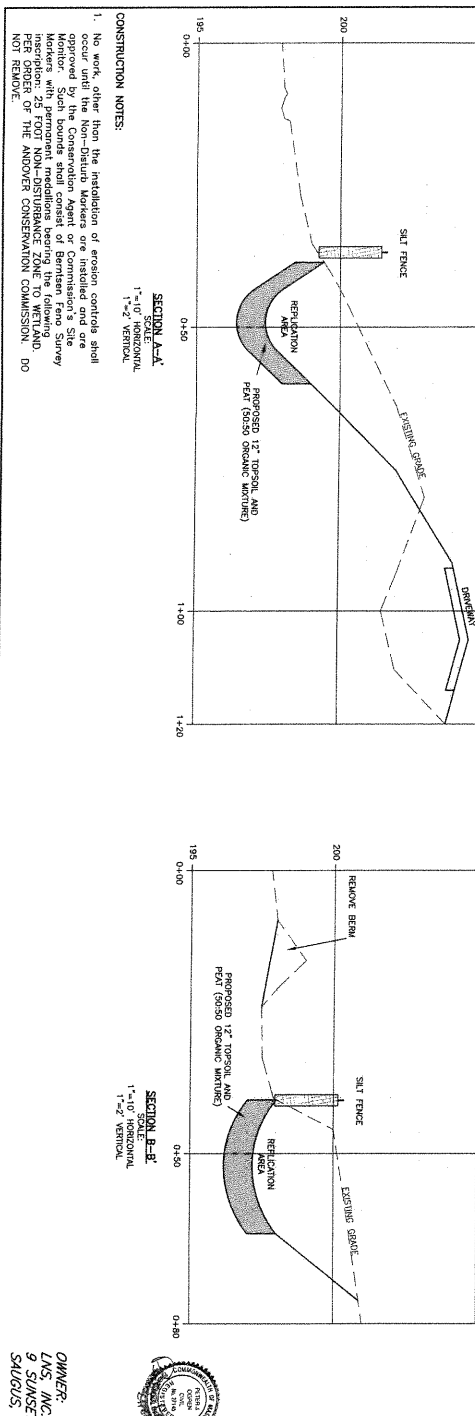
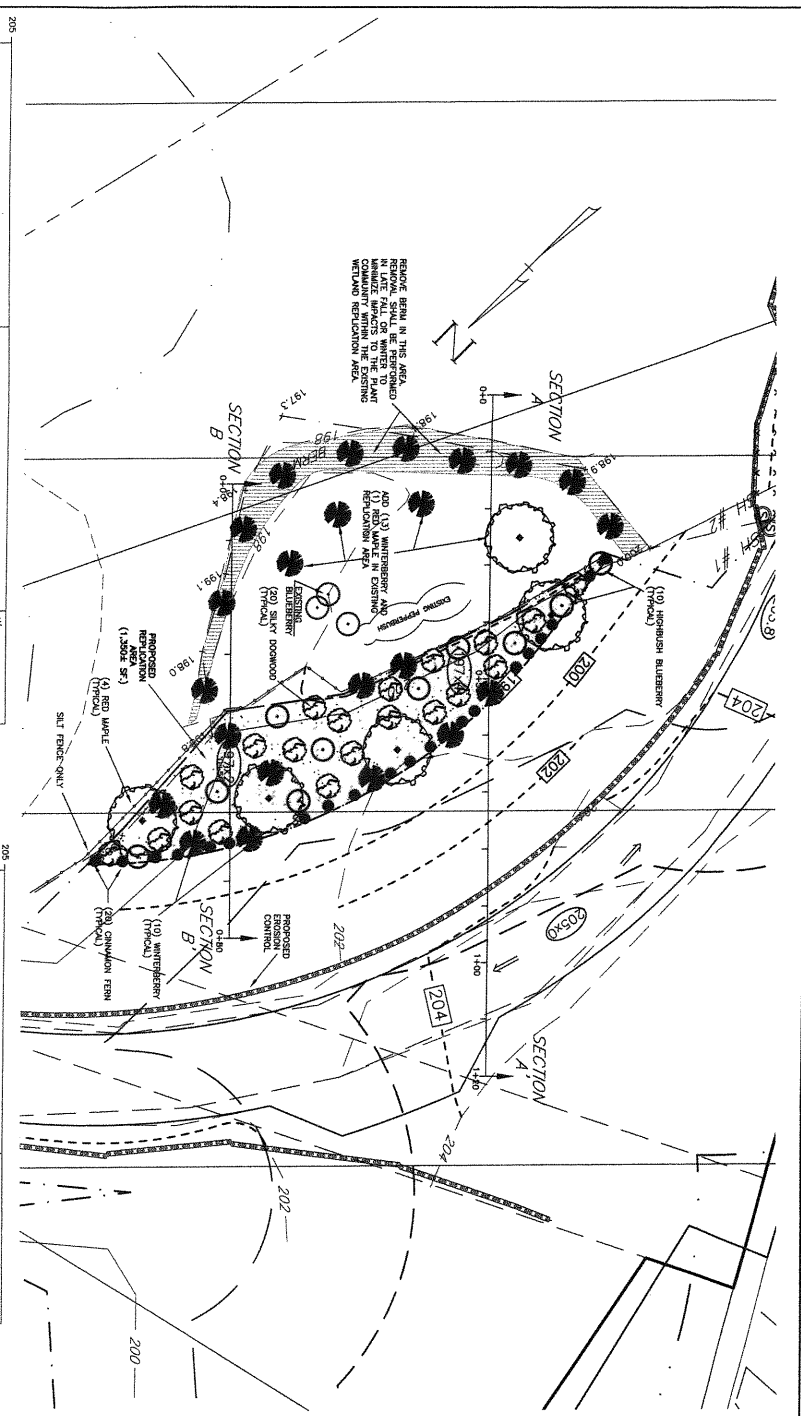


Hayes Engineering, Inc.
 Civil Engineers & Land Surveyors
 603 Salem Street
 Wakefield, MA 01880
 www.hayeseng.com

Telephone: 781.246.2800
 Fax: 781.246.2396
 September 1, 2017

David J. Hayes
 Professional Engineer
 License No. 101880

WETLAND REPLICATION AREA DETAILS
 SHEET 5 OF 5



CONSTRUCTION NOTES:

1. No work, other than the installation of erosion controls, shall occur until the Non-Disturb Markers are installed and are approved by the Conservation Agent or Commission's Site Inspectors. Non-Disturb Markers shall consist of Benchmark Tero Survey Markers with a minimum of 25 feet of non-disturbance zone to wetland. PER ORDER OF THE ANDOVER CONSERVATION COMMISSION. DO NOT REMOVE.