
Notice of Intent

TEC Project File No. T1406

Proposed Culvert Replacement South Street Over Miscoe Brook

Prepared for: **Town of Franklin – Dept. of Public Works**
257 Fisher Street
Franklin, MA 02038



Prepared by: **TEC, Inc.**
311 Main Street, Suite 201
Worcester, MA 01608



February 5, 2024

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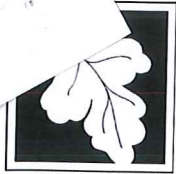
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WPA FORM 3



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

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

MassDEP File Number
Document Transaction Number
Franklin
City/Town

Important:
When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



Note:
Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

South Street Culvert over Miscoe Brook	Franklin	02038
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:	42.04087	-71.42661
	d. Latitude	e. Longitude
N/A	N/A	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	

2. Applicant:

Michael	Maglio	
a. First Name	b. Last Name	
Town of Franklin - Town Engineer		
c. Organization		
257 Fisher Street		
d. Street Address		
Franklin	MA	02038
e. City/Town	f. State	g. Zip Code
508-553-5500	mmaglio@franklinma.gov	
h. Phone Number	i. Fax Number	j. Email Address

3. Property owner (required if different from applicant): Check if more than one owner

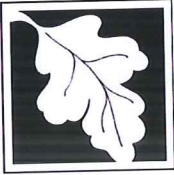
a. First Name	b. Last Name	
c. Organization		
d. Street Address		
e. City/Town	f. State	g. Zip Code
h. Phone Number	i. Fax Number	j. Email address

4. Representative (if any):

Jared	Duval	
a. First Name	b. Last Name	
TEC, Inc.		
c. Company		
311 Main Street		
d. Street Address		
Worcester	MA	01608
e. City/Town	f. State	g. Zip Code
774-670-3569	jduval@theengineeringcorp.com	
h. Phone Number	i. Fax Number	j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

Exempt	Exempt	Exempt
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



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A. General Information (continued)

6. General Project Description:

Perennial Stream culvert replacement at Miscoe Brook on South Street..

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

- 1. Single Family Home
- 2. Residential Subdivision
- 3. Commercial/Industrial
- 4. Dock/Pier
- 5. Utilities
- 6. Coastal engineering Structure
- 7. Agriculture (e.g., cranberries, forestry)
- 8. Transportation
- 9. Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

- 1. Yes No If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

310 CMR 10.53(3)(i)- Culvert Repair/ Replacement

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Norfolk

a. County

N/A

c. Book

b. Certificate # (if registered land)

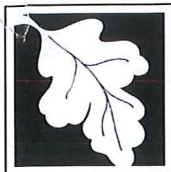
N/A

d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

- 1. Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
- 2. Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. <input checked="" type="checkbox"/> Bank	120 (72' is ex culvert side wall) 1. linear feet	115 (52' rest. in new culvert) 2. linear feet
b. <input checked="" type="checkbox"/> Bordering Vegetated Wetland	245 temp, 30 perm 1. square feet	245 2. square feet
c. <input checked="" type="checkbox"/> Land Under Waterbodies and Waterways	355 temp (150 in ex culvert) 1. square feet 20 3. cubic yards dredged	795 2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. <input checked="" type="checkbox"/> Bordering Land Subject to Flooding	3,000 1. square feet 0 3. cubic feet of flood storage lost	2. square feet 1,900 4. cubic feet replaced
e. <input type="checkbox"/> Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced
f. <input checked="" type="checkbox"/> Riverfront Area	Miscoe Brook (Inland) 1. Name of Waterway (if available) - specify coastal or inland	

2. Width of Riverfront Area (check one):

- 25 ft. - Designated Densely Developed Areas only
- 100 ft. - New agricultural projects only
- 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: 13,830
square feet

4. Proposed alteration of the Riverfront Area:

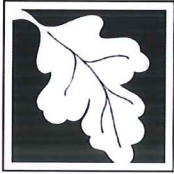
6,595 (6,395 prev dist. and/or degraded) 6,595 (6,395 prev dist. and/or degraded) 0
c. square feet between 100 ft. and 200 ft.

5. Has an alternatives analysis been done and is it attached to this NOI? Yes No

6. Was the lot where the activity is proposed created prior to August 1, 1996? Yes No

3. Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f.** above.



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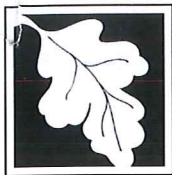
City/Town _____

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
 Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

<u>Resource Area</u>	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
a. <input type="checkbox"/> Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. <input type="checkbox"/> Land Under the Ocean	1. square feet _____	
	2. cubic yards dredged _____	
c. <input type="checkbox"/> Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. <input type="checkbox"/> Coastal Beaches	1. square feet _____	2. cubic yards beach nourishment _____
e. <input type="checkbox"/> Coastal Dunes	1. square feet _____	2. cubic yards dune nourishment _____
	<u>Size of Proposed Alteration</u>	<u>Proposed Replacement (if any)</u>
f. <input type="checkbox"/> Coastal Banks	1. linear feet _____	
g. <input type="checkbox"/> Rocky Intertidal Shores	1. square feet _____	
h. <input type="checkbox"/> Salt Marshes	1. square feet _____	2. sq ft restoration, rehab., creation _____
i. <input type="checkbox"/> Land Under Salt Ponds	1. square feet _____	
	2. cubic yards dredged _____	
j. <input type="checkbox"/> Land Containing Shellfish	1. square feet _____	
k. <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	
	1. cubic yards dredged _____	
l. <input type="checkbox"/> Land Subject to Coastal Storm Flowage	1. square feet _____	
4. <input type="checkbox"/> Restoration/Enhancement	If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.	
	a. square feet of BVW _____	b. square feet of Salt Marsh _____
5. <input checked="" type="checkbox"/> Project Involves Stream Crossings	0 _____	1 _____
	a. number of new stream crossings	b. number of replacement stream crossings



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C. Other Applicable Standards and Requirements

- This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

- a. Yes No

If yes, include proof of mailing or hand delivery of NOI to:

Natural Heritage and Endangered Species Program
Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581

8/1/21 Atlas

b. Date of map

If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

- c. Submit Supplemental Information for Endangered Species Review*

1. Percentage/acreage of property to be altered:

(a) within wetland Resource Area

percentage/acreage

(b) outside Resource Area

percentage/acreage

2. Assessor's Map or right-of-way plan of site

2. Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

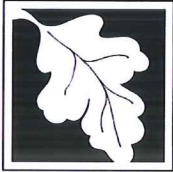
(a) Project description (including description of impacts outside of wetland resource area & buffer zone)

(b) Photographs representative of the site

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see <https://www.mass.gov/endangered-species-act-mesa-regulatory-review>).

Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



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C. Other Applicable Standards and Requirements (cont'd)

- (c) MESA filing fee (fee information available at <https://www.mass.gov/how-to/how-to-file-for-a-mesa-project-review>).
- Make check payable to "Commonwealth of Massachusetts - NHESP" and **mail to NHESP** at above address

Projects altering 10 or more acres of land, also submit:

- (d) Vegetation cover type map of site
- (e) Project plans showing Priority & Estimated Habitat boundaries
- (f) OR Check One of the Following

- 1. Project is exempt from MESA review.
 Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, <https://www.mass.gov/service-details/exemptions-from-review-for-projectsactivities-in-priority-habitat>; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)
- 2. Separate MESA review ongoing. _____
 a. NHESP Tracking # _____ b. Date submitted to NHESP
- 3. Separate MESA review completed.
 Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

- 3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?
 a. Not applicable – project is in inland resource area only b. Yes No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

North Shore - Hull to New Hampshire border:

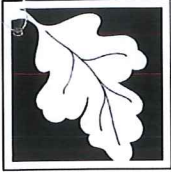
Division of Marine Fisheries -
 Southeast Marine Fisheries Station
 Attn: Environmental Reviewer
 836 South Rodney French Blvd.
 New Bedford, MA 02744
 Email: dmf.envreview-south@mass.gov

Division of Marine Fisheries -
 North Shore Office
 Attn: Environmental Reviewer
 30 Emerson Avenue
 Gloucester, MA 01930
 Email: dmf.envreview-north@mass.gov

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

- c. Is this an aquaculture project? d. Yes No

If yes, include a copy of the Division of Marine Fisheries Certification Letter (M.G.L. c. 130, § 57).



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C. Other Applicable Standards and Requirements (cont'd)

Online Users:

Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?
- a. Yes No If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.
- b. ACEC
5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
- a. Yes No
6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?
- a. Yes No
7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?
- a. Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:
1. Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)
 2. A portion of the site constitutes redevelopment
 3. Proprietary BMPs are included in the Stormwater Management System.
- b. No. Check why the project is exempt:
1. Single-family house
 2. Emergency road repair
 3. Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

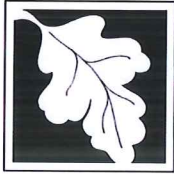
D. Additional Information

- This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)
2. Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.



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D. Additional Information (cont'd)

3. Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. List the titles and dates for all plans and other materials submitted with this NOI.

Culvert Replacement - Franklin - South Street over Miscoe Brook

a. Plan Title _____

TEC, Inc. _____

Greg Gaudreau _____

b. Prepared By _____

c. Signed and Stamped by _____

TBD _____

Varies _____

d. Final Revision Date _____

e. Scale _____

Resource Area Impacts Plan

2.1.24

f. Additional Plan or Document Title _____

g. Date _____

5. If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. Attach NOI Wetland Fee Transmittal Form

9. Attach Stormwater Report, if needed.

E. Fees

1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

2. Municipal Check Number _____

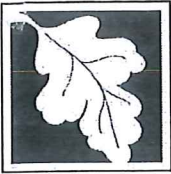
3. Check date _____

4. State Check Number _____

5. Check date _____

6. Payor name on check: First Name _____

7. Payor name on check: Last Name _____



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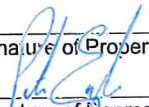
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F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

	<u>2/7/24</u>
1. Signature of Applicant	2. Date
	
3. Signature of Property Owner (if different)	4. Date
	2.7.24
5. Signature of Representative (if any)	6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



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Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



A. Applicant Information

1. Location of Project:

South Street Culvert over Miscoe Brook	Franklin
a. Street Address	b. City/Town
N/A	N/A
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Michael	Maglio	
a. First Name	b. Last Name	
Town of Franklin - Town Engineer		
c. Organization		
257 Fisher Street		
d. Mailing Address		
Franklin	MA	02038
e. City/Town	f. State	g. Zip Code
508-553-5500	mmaglio@franklinma.gov	
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

_____	_____	
a. First Name	b. Last Name	

c. Organization		

d. Mailing Address		
_____	_____	_____
e. City/Town	f. State	g. Zip Code
_____	_____	_____
h. Phone Number	i. Fax Number	j. Email Address

B. Fees

Fee should be calculated using the following process & worksheet. **Please see Instructions before filling out worksheet.**

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

NOTICE OF INTENT NARRATIVE

INTRODUCTION AND PURPOSE

The Town of Franklin Department of Public Works is proposing a culvert replacement project at South Street over Miscoe Brook. The proposed culvert will provide a span of greater than 10' for a public way and therefore falls under the jurisdiction of the MassDOT.

The proposed culvert replacement is intended to replace the existing degraded and undersized culvert with a new Massachusetts Stream Crossing Standard compliant, open bottom, 3-sided box culvert. The project also includes a new concrete headwalls, new steel guardrails, and a resurfaced portion of roadway. Generally, the proposed roadway features and dimensions will closely match existing conditions. The project will require the temporary closing of South Street during construction as the entire width of the roadway will need to be opened in order to remove and replace the stream crossing culvert.

The project will result in a significant improvement over existing conditions. The existing culvert is a mix between a 4.5' wide by 2' high box and a 42" concrete pipe. The proposed 16' wide by 3' high box culvert opening will meet the general stream crossing standards for span and openness ratio. The proposed open bottom box culvert will also meet the standards for embedment and the restoration of a natural stream substrate. The construction of the larger open bottom box culvert will also include the restoration of banks as well as more natural water depths and velocities of the stream at the culvert over existing conditions. See Table 1 below for a summary of the compliance with the Massachusetts Stream Crossing Standards.

Table 1 – Proposed Culvert Stream Crossing Standards Compliance

Standard	Standard Requirement	Optimum Requirement	Proposed Culvert	
			Provided	Check
1. Crossing Type	Open Bottom	Bridge	Open Bottom	OK
2. Embedment	2 ft min.		4 ft	OK
3. Crossing Span	1.2 Bankfull width	1.2 Bankfull width, headroom for dry wildlife passage	1.23 Bankfull width	OK
4. Openness	Ratio ≥ 0.82 ft	Ratio ≥ 1.64 ft, 6' height min.	16'x3'/26' = 1.85	OK
5. Substrate	Natural Substrate		Natural Substrate	OK
6. Water Depth and Velocity	Match Natural Channel		Match Channel via streambed restoration	OK
7. Banks	Present matching stream channel		Match Channel via bank restoration	OK

RESOURCE AREAS

H.W. Moore Associates conducted a field inspection of the project area in September 2022. At that time, wetland resources subject to jurisdiction under the Massachusetts Wetlands Protection Act (MGL Ch 131 §. 40) and the Town of Franklin Wetland Protection Bylaw within the project area were identified. Wetlands were delineated in accordance with the procedures established in the Massachusetts Wetlands Protection Act Regulations (310 CMR 10.00) and the Bylaw regulations. Numbered sequences of flags or stakes were placed in the field to delineate the boundary between upland and wetland resources. Resource Areas associated with the project include a perennial stream, Miscoe Brook, and associated bank, riverfront areas, land under water and waterways, bordering vegetated wetlands, and bordering land subject to flooding. A copy of the wetland evaluation and delineation report dated September 28, 2022 is attached.

STORMWATER MANAGEMENT

The intention of this project is to maintain existing drainage patterns. The project does not propose any change in ground cover types or drainage paths which would deviate from existing conditions. The project qualifies as a redevelopment project and as a limited project as described in 310 CMR 10.05(6)(k)7, and 310 CMR 10.53(3)(i) and therefore the project is required to meet certain Stormwater Standards to the maximum extent practicable. The culvert replacement will provide for increased hydraulic capacity and will provide for an increase of flood storage volume. A Drainage Study has been included as an appendix of this application which justifies the project's accordance with the MassDEP Checklist for Stormwater Report.

MITIGATION

Prior to construction, erosion control and sedimentation barriers will be installed between the project area and resource areas to establish a limit-of-work. The erosion control measures will be installed and maintained throughout construction per the requirements of the Franklin Conservation Commission. Miscoe Brook will be temporarily diverted through the use of a bypass pipe/ culvert which will be installed prior to the removal of the existing culvert and will be removed following installation of the new culvert structure. Any dewatering will be required to be routed to a stilling basin/ dewatering bag before being discharged to resource areas.

The project will result in the following resource area impacts:

<u>Resource Area</u>	<u>Impact</u>
Bordering Vegetated Wetlands	275 s.f. (245 s.f. temp, 30 s.f. perm.)
Bank	120 l.f. (72' prev. disturbed within ex. culvert)
Land Under Waterways	355 s.f. (150 s.f. prev. disturbed within ex. culvert)
Bordering Land Subject to Flooding	3,000 s.f. (net increase in storage volume)
0'-100' Riverfront Area Miscoe Brook	6,595 s.f. total dist. within 100' of Miscoe Brook
	4,425 s.f. within ex. degraded area*
	1,970 s.f. within prev. disturbed area*
	200 s.f. new disturbance

*Degraded and previously disturbed riverfront areas defined as of 310 CMR 10.58(5).

The project will result in the following resource area impact mitigation:

<u>Resource Area</u>	<u>Replacement</u>
Bordering Vegetated Wetlands	245 s.f. (restored in place following site grading) 30 s.f. loss due to new limit of LUW/ Bank
Bank	115 l.f. 52 l.f. recreated within pr. culvert 15 l.f. increase in bank outside of culvert
Land Under Waterways	795 s.f. total (355 s.f. restored, 440 s.f. increase)
Bordering Land Subject to Flooding	1,900 c.f. total increase in storage volume
0'-100' Riverfront Area Misco Brook	No increase in impervious area, revegetation of temporarily disturbed areas, 200 s.f. new disturbance within BVW areas which are proposed to be restored.

There is no proposed impact to rare species habitat. Work is proposed within the local Franklin Wetlands Bylaw 25' No Disturb Buffer and the 50' No Structure Area, however all work is proposed in previously disturbed and degraded area and is related to the replacement of an existing degraded and undersized public roadway culvert.

Almost all proposed work within the Miscoe Brook Riverfront Area is within previously disturbed and degraded Riverfront Area according to the definitions as set forth in 310 CMR 10.58(5), qualifies as a Limited Project per 310 CMR 10.53(3)(i) as it is in relation to the replacement of a public roadway culvert, and will result in significant improvement over existing conditions in terms of improved bank and land under water resource areas, habitat, hydraulics, and stream continuity.

WPA INLAND RESOURCE AREA PERFORMANCE STANDARDS

10.54: Bank

The proposed construction is intended to replace an existing stream crossing culvert with a Massachusetts Stream Crossing Standards Compliant culvert which will impact bank, but will meet the performance standards of the WPA:

1. Not impair the physical stability of the bank. The new box culvert and stream channel construction will ensure stability of the bank significantly over the existing degraded culvert.
2. Not impair the water carrying capacity of the channel. The new box culvert will significantly increase the hydraulic capacity of the channel over the existing culvert.
3. Not impair ground or surface water quality. The culvert has been designed to minimize scour and velocities as well as provide construction period BMPs so as to not impair surface water quality.
4. Not impair the capacity of the bank to provide fisheries habitat. The project will include the restoration and recreation of a more natural bank and streambed within the box culvert over existing conditions thus providing for an improvement of potential fisheries habitat.

5. Not impair the capacity of the bank to provide important wildlife habitat function. The project will include the recreation of a more natural bank and streambed within the box culvert over existing conditions, as well as provide a span of 1.2 times the bankfull width and an openness ratio meeting the requirements of the Massachusetts Stream Crossing Standards thus providing for an improvement of the potential for important wildlife habitat function.
6. Meet Massachusetts Stream Crossing Standards. The replacement culvert as designed will meet all requirements of the Massachusetts Stream Crossing Standards, whereas the existing culvert does not.
7. No impact on habitat sites of rare species. There is no rare species habitat in the vicinity of the project. The project will alter over 50 linear feet of bank, however the bank to be altered is currently an existing culvert which likely provides little to no habitat function. A more natural bank will be restored/ recreated within the proposed open bottom box culvert as a replacement which should provide for a greater level of wildlife habitat than currently exists.

10.55: Bordering Vegetated Wetlands

The proposed construction is intended to replace an existing stream crossing culvert with a Massachusetts Stream Crossing Standards Compliant culvert which will impact BVW. The project meets the standards as follows:

1. Results in the loss of up to 5,000 square feet of BVW. The project involves the temporary impact of 275 s.f. of BVW during construction grading activities. 245 s.f. will be restored to BVW via seeding with native wetland seed mix. 30 s.f. of BVW will be permanently lost as the area will be converted to bank and LUW during the reconstruction of the stream channel through the culvert. The existing culvert is much narrower than the proposed open bottom box culvert which has resulted in a choke point in the stream. The proposed 16' wide open bottom box culvert will allow for a more natural stream channel constructed to typical bankfull width as determined up and down stream of the culvert. As the project is a roadway culvert project, the property limits of the Town of Franklin are restricted to the existing right-of-way, and currently BVW follows the right-of-way on both sides of the street, which restricts the ability to provide replication area for the lost area, however the project will result in an increase of 445 s.f. of land under water. As the proposed permanent loss area is less than 500 s.f., the project would meet the interests of the act per 310 CMR 10.55(4)(c).
2. The replacement area shall be equal to that of the lost area. The project involves the temporary impact of 275 s.f. of BVW during construction grading activities. 245 s.f. will be restored to BVW via seeding with native wetland seed mix. 30 s.f. of BVW will be permanently lost as the area will be converted to bank and LUW during the reconstruction of the stream channel through the culvert. The existing culvert is much narrower than the proposed open bottom box culvert which has resulted in a choke point in the stream. The proposed 16' wide open bottom box culvert will allow for a more natural stream channel

constructed to typical bankfull width as determined up and down stream of the culvert. As the project is a roadway culvert project, the property limits of the Town of Franklin are restricted to the existing right-of-way, and currently BVW follows the right-of-way on both sides of the street, which restricts the ability to provide replication area for the lost area, however the project will result in an increase of 445 s.f. of land under water.

3. The configuration and location of the replacement area shall be similar to that of the lost area. The restored BVW is proposed in the same location as they currently existing along the banks of Miscoe Brook adjacent to the culvert.
4. Replacement area shall have unrestricted hydraulic connection to the same water body or waterway as the lost area. The restored BVW is proposed in the same location as they currently existing along the banks of Miscoe Brook adjacent to the culvert.
5. 75% of the replacement area shall be reestablished with wetland plant species within two growing seasons. Restored BVW is proposed to be revegetated with native wetland seed mix and will be monitored to ensure proper vegetative growth.
6. No impact on habitat sites of rare species. There is no rare species habitat in the vicinity of the project.
7. No impact on BVW within ACEC. The project is not located within an ACEC.

Temporary construction period erosion and sedimentation control BMPs will be utilized to protect the BVW during construction.

10.56: Land Under Water Bodies and Waterways

The proposed construction is intended to replace an existing stream crossing culvert with a Massachusetts Stream Crossing Standards Compliant culvert which will impact Land Under Waterways, but will meet the performance standards of the WPA:

1. Not impair the water carrying capacity of the channel. The new box culvert will significantly increase the hydraulic capacity of the channel over the existing culvert.
2. Not impair ground or surface water quality. The culvert has been designed to minimize scour and velocities as well as provide construction period BMPs so as to not impair surface water quality.
3. Not impair the capacity of the LUW to provide fisheries habitat. The project will include the restoration and recreation of a more natural bank and streambed within the box culvert over existing conditions thus providing for an improvement of potential fisheries habitat.
4. Not impair the capacity of the LUW to provide important wildlife habitat function. The project will include the recreation of a more natural bank and streambed within the box culvert over existing conditions, as well as provide a span of 1.2 times the bankfull width and an openness ratio meeting the requirements of the Massachusetts Stream Crossing Standards thus providing for an improvement of the potential for important wildlife habitat function.

5. Meet Massachusetts Stream Crossing Standards. The replacement culvert as designed will meet all requirements of the Massachusetts Stream Crossing Standards, whereas the existing culvert does not.
6. No impact on habitat sites of rare species. There is no rare species habitat in the vicinity of the project. The project will disturb under 5,000 square feet of LUW, and a large portion of existing LUW to be altered is currently within an existing culvert which likely provides little to no habitat function. A large area of LUW is proposed within the open bottom box culvert which should provide for a greater level of wildlife habitat than currently exists.

10.57: Land Subject to Flooding

The proposed construction is intended to replace an existing stream crossing culvert with a Massachusetts Stream Crossing Standards Compliant culvert which will impact Bordering Land Subject to Flooding, but will meet the performance standards of the WPA:

1. Not cause an increase or contribute incrementally to an increase in the horizontal extent and level of flood water during peak flows. The new box culvert will increase the cross-sectional area, hydraulic capacity and water carrying capacity of the culvert. This will result in an increase of available flood storage capacity at the culvert and will result in a decrease of the horizontal extent and level of flood water during peak flows as indicated by the hydrologic and hydraulic analysis of the stream.
2. Not impair capacity to provide important habitat functions. The project will include the recreation of a more natural bank and streambed within the box culvert over existing conditions and provide an improvement of potential habitat functions. The total area of work within the BLSF is less than 5,000 s.f.
3. No impact on habitat sites of rare species. There is no rare species habitat in the vicinity of the project.

10.58 Riverfront Area

The proposed work meets the performance standards for Riverfront Area as the project is for redevelopment within previously developed and degraded riverfront areas. The work, replacement of a non-stream standards conforming culvert could be considered exempt from the requirements of the Riverfront Area according to 310CMR10.58(6)(a). The work is intended to improve upon existing conditions. Stormwater drainage patterns will match existing conditions and no change in ground cover is proposed. All stormwater standards established by the DEP will be met. The total riverfront area disturbance is approximately 6,595 square feet.

Riverfront Alternatives Analysis:

- No Build: The project's purpose is to replace a degraded and undersized public roadway stream crossing culvert. The No-Build alternative does not meet the project's purpose and could eventually cause a safety concern for the public. The failure/ closing of the road due to culvert failure could cause significant transportation impacts in the event the bridge is not repaired. A washout of the roadway caused by the failure of the culvert would

negatively impact downstream resource areas. The No Build scenario is not a practicable alternative.

- Culvert Repair: The repair of the existing roadway culvert could be considered an alternative for the project. The existing culvert is undersized and does not meet current stream crossing standards. The culvert is also a mixture of a pipe and box culvert, making the repair of the culvert difficult. Due to the size of the culvert, it would be practically impossible to repair the culvert from the inside and would require excavation of the roadway regardless. This alternative would maintain the limited hydraulic capacity of the culvert which impairs the bordering land subject to flooding at the culvert. The alternative to attempt to repair the existing culvert would result in maintaining greater environmental impacts than the replacement of the culvert with a stream crossing standards compliant culvert. This alternative would require ongoing maintenance to the existing culvert. The repair of the existing culvert is not a practicable or substantially equivalent economic alternative.
- Restoration of Riverfront Areas: An alternative to the project which would significantly improve Riverfront Area conditions would be the removal of all degraded areas and restoration of the Riverfront Area within the controlled property limits. This would require the removal and restoration of all impervious areas within 200' of Miscoe Brook in each direction within the right of way of South Street, which would include the removal of over 400' of South Street. This alternative would not meet the project purpose, and would cause significant traffic/ transportation impacts to the area. The removal of the culvert and roadway and restoration of Riverfront Area is not a practicable or substantially equivalent economic alternative.
- Preferred Alternative/ Current Proposal: The current proposal achieves the project goal of maintaining a safe travel route on South Street by replacing a degraded culvert, and will result in a significant improvement of resource areas by meeting stream crossing standards.

10.59: Estimated Habitats of Rare Wildlife

Not Applicable. No Estimated Habitat of State Listed Wildlife according to the most recent NHESP Habitat Maps is located within the project area and therefore the proposed construction will meet the performance standards of the WPA.

LOCAL WETLAND PROTECTION BYLAW WAIVER REQUESTS

The Applicant respectfully requests the Commission issue the following waivers of the Franklin Wetland Protection Bylaw for the proposed project:

- §4.2. 25' No Disturbance Buffer zone Much of the existing roadway, culvert, and proposed improvements are located within 25' of Miscoe Brook.
- §4.3: 50' No Structure Buffer Zone. Much of the existing roadway, culvert, and proposed improvements are located within 50' of Miscoe Brook.

CONCLUSION

The proposed culvert replacement will result in significant improvements to resource areas by meeting current stream crossing standards. Generally, the proposed roadway features and dimensions will closely match existing conditions. The majority of resource area impacts are to previously disturbed and degraded areas. Construction period erosion and sedimentation controls are proposed to protect the resource areas during construction, and stabilization measures following construction will provide for permanent protection of the resource areas from impact. The Applicant requests that the Conservation Commission finds that the project as described in this Notice of Intent successfully upholds the interest of the Wetlands Protection Act and the Franklin Wetland Protection Bylaw, and subsequently issues an Order of Conditions for the proposed improvement project.