



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
 Division of Water Resources
 William R. Snodgrass Tennessee Tower, 312 Rosa L. Parks Avenue, 11th Floor,
 Nashville, Tennessee, 37243
 1-888-891-8332 (TDEC)

JHD _____
 WLP _____

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Certification

OFFICIAL STATE USE ONLY	Site #: <u>W6161711</u>	Permit #: <u>NR2201.023</u>
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Section 1. Applicant Information (individual responsible for site, signs certification below)

Applicant Name (company or individual): <u>City of Chattanooga</u>		SOS #:	Status: <u>N/A</u>
Primary Contact/Signatory: <u>Bill Payne, PE</u>		Signatory's Title or Position: <u>City Engineer</u>	
Mailing Address: <u>1250 Market Street Ste. 2100</u>	City: <u>Chattanooga</u>	State: <u>TN</u>	Zip: <u>37402</u>
Phone: <u>423-643-6160</u>	Fax: <u>423-643-6008</u>	E-mail: <u>bpayne@chattanooga.gov</u>	

Section 2. Alternate Contact/Consultant Information (a consultant is not required)

Alternate Contact Name: <u>Adam Beavers</u>			
Company: <u>City of Chattanooga</u>		Title or Position: <u>Engineering Technician</u>	
Mailing Address: <u>1250 Market St, Ste. 2100</u>	City: <u>Chattanooga</u>	State: <u>TN</u>	Zip: <u>37402</u>
Phone: <u>423-643-5896</u>	Fax: <u>423-643-6008</u>	E-mail: <u>jbeavers@chattanooga.gov</u>	

Section 3. Fee (application will be incomplete until fee is received)

No Fee Fee Submitted with Application Amount Submitted: \$ 500.00

Current application fee schedules can be found at the Division of Water Resources webpage at:
<https://www.tn.gov/environment/permit-permits/water-permits1/aquatic-resource-alteration-permit--arap-.html>
 or by calling (615) 532-0625. Please make checks payable to "Treasurer, State of Tennessee".

Billing Contact (if different from Applicant): Name: Email:
 Address: Phone:

Section 4. Project Details (fill in information and check appropriate boxes)

Site or Project Name: Hixson Park Stream Headwall Replacement Nearest City, Town or Major Landmark: Hixson, TN

Street Address or Location (include zip): 5410 School Dr, Hixson, TN 37343

County(ies): <u>Hamilton</u>	MS4 Jurisdiction: <u>TNS068063</u>	Latitude (dd.dddd): <u>35.143266</u>
		Longitude (dd.dddd): <u>-85.237338</u>

Resources Proposed for Alteration: Stream / River Wetland Reservoir

Name of Water Resource (for more information, access <http://tdeconline.tn.gov/dwr>): North Chickamauga Creek

Brief Project Description (a more detailed description is required under Section 8):
Replace headwall that is located on the stream bank.

Does the proposed activity require approval from the U.S. Army Corps of Engineers, the Tennessee Valley Authority, or any other federal, state, or local government agency? Yes No

If Yes, provide the permit reference numbers:

Will the activity require a 401 Water Quality Certification: Yes No

If Yes, attach any 401 WQC pre-filing meeting request documentation

Is the proposed activity associated with a larger common plan of development: Yes No

If Yes, submit site plans and identify the location and overall scope of the common plan of development.

Plans attached? Yes No

If applicable, indicate any other federal, state, or local permits that are associated with the overall project site (common plan of development) that have been obtained in the past (e.g., construction general permit and/or other ARAP):

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 CHATTANOOGA FIELD OFFICE

Application for Aquatic Resource Alteration Permit (ARAP) & State §401 Water Quality Certification

Section 5. Project Schedule (fill in information and check appropriate boxes)	
Proposed start date: March 2022	Estimated end date: March 2023
Is any portion of the activity complete now?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If yes, describe the extent of the completed portion:	

The required information in Sections 6-11 must be submitted on a separate sheet(s) and submitted in the same numbered format as presented below. If any question is not applicable, state the reason why it is not applicable.

Section 6. Description	Attached	
	Yes	No
6.1 A narrative description of the scope of the project	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.2 USGS topographic map indicating the exact location of the project (can be a photographic copy)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.3 Photographs of the resource(s) proposed for alteration with location description (photo locations should be noted on map)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.4 A narrative description of the existing stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.5 A narrative description of the proposed stream and/or wetland characteristics including, but not limited to, dimensions (e.g., depth, length, average width), substrate and riparian vegetation	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.6 In the case of wetlands, include a wetland delineation with delineation forms and site map denoting location of data points	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6.7 A copy of all hydrologic or jurisdictional determination documents issued for water resources on the project site	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Section 7. Project Rationale	Attached	
	Yes	No
Describe the need for the proposed activity, including, but not limited to the purpose, alternatives considered and rationale for selection of least impactful alternative, and what will be done to avoid or minimize impacts to water resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>

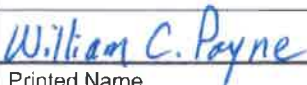
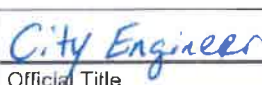

Section 8. Technical Information	Attached	
	Yes	No
8.1 Detailed plans, specifications, blueprints, or legible sketches of present site conditions and the proposed activity. Plans must be 8.5.x 11 inches. Additional larger plans may also be submitted to aid in application review. The detailed plans should be superimposed on existing and new conditions (e.g., stream cross sections where road crossings are proposed)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.2 For the proposed activity and compensatory mitigation, provide a discussion regarding the sequencing of events and construction methods and any proposed monitoring	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.3 Depiction and narrative on the location and type of erosion prevention and sediment control (EPSC) measures for the proposed alterations and any other measures to treat, control, or manage impacts to waters	<input checked="" type="checkbox"/>	<input type="checkbox"/>

<p>Section 9. Water Resources Degradation (degree of proposed impact)</p> <p>Note that in most cases, activities that exceed the scope of the General Permit limitations are considered greater than <i>de minimis</i> degradation to water quality.</p> <p>Please provide your basis for concluding the proposed activity will cause one of the following levels of water quality degradation:</p> <p><input checked="" type="checkbox"/> a. <i>De minimis</i> degradation, no appreciable permanent loss of resource values</p> <p><input type="checkbox"/> b. Greater than <i>de minimis</i> degradation (if greater than <i>de minimis</i> complete Sections 10-11)</p> <p><i>For information and guidance on the definition of de minimis and degradation, refer to the Antidegradation Statement in Chapter 0400-40-03-.06 of the Tennessee Water Quality Criteria Rule:</i> https://publications.tnsosfiles.com/rules/0400-40-03-.06/0400-40-03-06.htm</p> <p><i>For more information on specifics on what General Permits can cover, refer to the Natural Resources Unit webpage at:</i> https://www.tn.gov/environment/permit-permits/water-permits/aquatic-resource-alteration-permit-arap.html</p>

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Section 10. Detailed Alternatives Analysis		Attached	
		Yes	No
10.1	Analyze all reasonable alternatives and describe the level of degradation and permanent loss of resource value caused by each alternative. Assessment must consider options other than the "Preferred" and "No Action" alternatives. Provide associated rationale for selecting or rejecting all alternatives considered and demonstration that the least impactful practicable alternative was selected.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.2	Discuss the social and economic consequences of each alternative	<input type="checkbox"/>	<input checked="" type="checkbox"/>
10.3	Demonstrate that the degradation associated with the preferred alternative will not violate water quality criteria for uses designated in the receiving waters, and is necessary to accommodate important economic and social development in the area	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Section 11. Compensatory Mitigation		Attached	
		Yes	No
11.1	A detailed discussion of the proposed compensatory mitigation. Provide evidence of credit reservation if proposing to utilize a third-party provider.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.2	Analysis of any proposed appreciable loss of resource value using the TN Stream Mitigation Guidelines. Provide Stream Quantification Tool (SQT) results if applicable. Include Existing Condition Score (ECS) and debit/credit calculations.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.3	Describe how the compensatory mitigation would result in no net loss of resource value	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.4	Provide a detailed monitoring plan for the compensatory mitigation site if permittee-responsible project is proposed	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11.5	Describe the long-term protection measures for the compensatory mitigation site if permittee-responsible project is proposed (e.g., deed restrictions, conservation easement)	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Certification and Signature			
<p>An application submitted by a corporation must be signed by a principal executive officer; from a partnership or proprietorship, by the partner or proprietor respectively; from a municipal, state, federal or other public agency or facility, the application must be signed by either a principal executive officer, ranking elected official, or other duly authorized employee. <i>I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision. The submitted information is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury. The project proponent hereby requests that the certifying authority review and take action on this CWA 401 certification request within the applicable reasonable period of time.</i></p>			
 Printed Name	 Official Title	 Signature	03-03-22 Date

Note that this form must be signed by the principal executive officer, partner or proprietor, or a ranking elected official in the case of a municipality; for details see **Certification and Signature** statement above. For more information, contact your local EFO at the toll-free number 1-888-891-8332 (TDEC). Submit the completed ARAP Application form (keep a copy for your records) to the appropriate EFO for the county(ies) where the proposed activity is located, addressed to **Attention: ARAP Processing**. You may also electronically submit the complete application and all associated attachments to water.permits@tn.gov.

EFO	Street Address	Zip Code	EFO	Street Address	Zip Code
Memphis	8383 Wolf Lake Drive, Bartlett	38133-4119	Cookeville	1221 South Willow Ave.	38506
Jackson	1625 Hollywood Drive	38305-4316	Chattanooga	1301 Riverfront Pkwy., Ste. 206	37402
Nashville	711 R S Gass Boulevard	37243	Knoxville	3711 Middlebrook Pike	37921
Columbia	1421 Hampshire Pike	38401	Johnson City	2305 Silverdale Road	37601



Narrative: Hixson Park Stream Headwall Replacement W.O. 182031 (Area C)

Section 6: Description

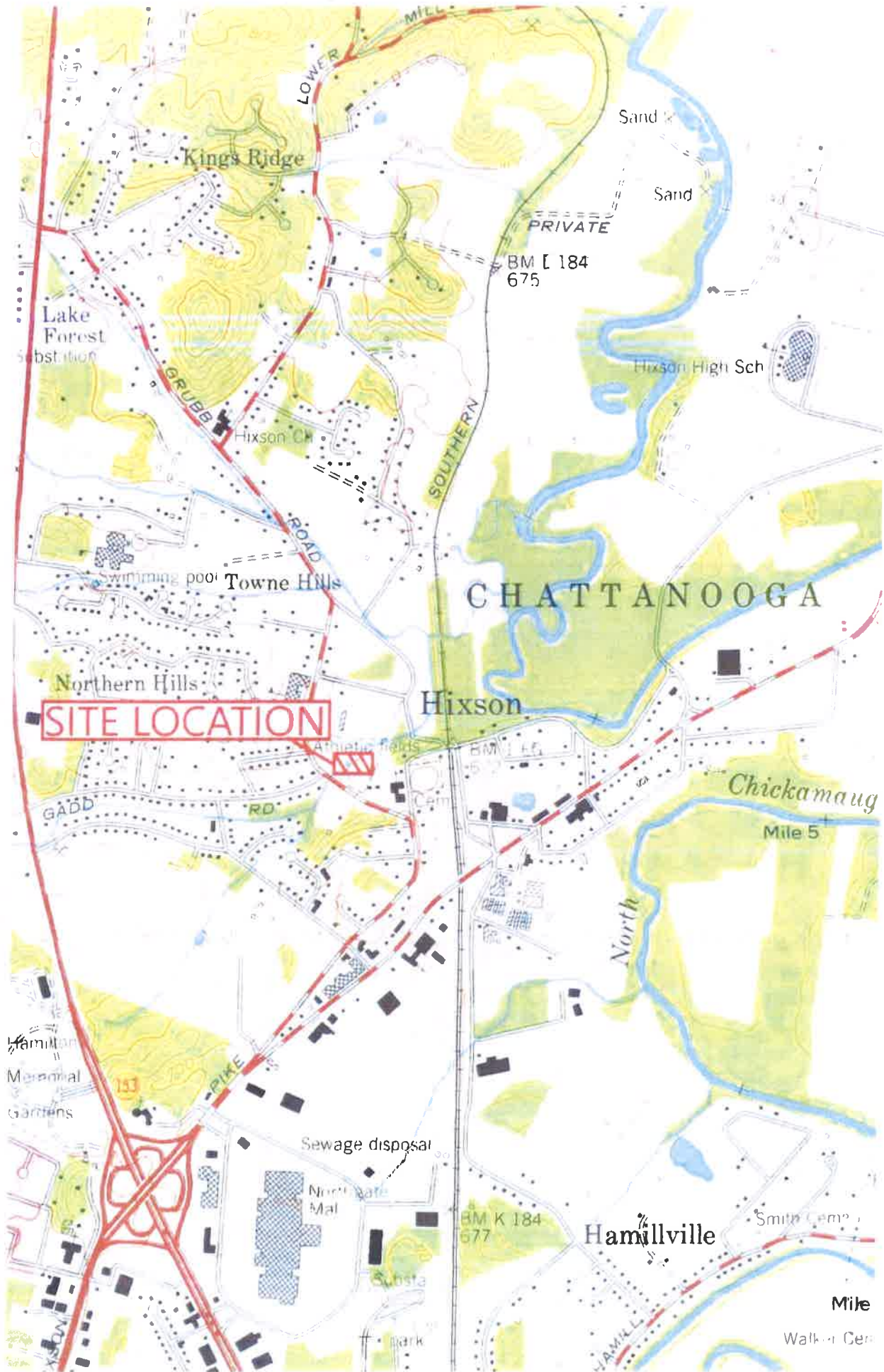
- 6.1 Replace existing headwall, clean out pipe and stabilize exposed pipe with riprap.
- 6.2 See attached maps.
- 6.3 See attached photographs.
- 6.4 The unnamed stream is a tributary of the North Chickamauga Creek. It is approximately 8 to 11 feet wide and 1 to 2 feet deep along the proposed project area. This portion of the stream has extensive erosion around the existing headwall. There is typical turf grass along the streambank and natural gravel in the streambed at this location.
- 6.5 The existing conveyance of the stream will be minimally altered along the affected area of the stream bank.
- 6.6 No wetlands will be affected by the proposed work.
- 6.7 It has been determined that this stream comes under the jurisdiction of TDEC.

Section 7: Project Rationale

The purpose of this project is to replace an existing headwall located on the northern side of the streambank that has been affected by erosion, remove blockages in the pipe and stabilize the bank around the exposed pipe with riprap (appx. 10 to 12 feet).

Section 8: Technical Information

- 8.1 See attached drawings.
- 8.2 The existing headwall will be removed. The existing pipe will be cleared of obstruction. A new headwall will be installed. Riprap will be installed on the bank around the exposed pipe. Exposed soil on the bank around the project area will be seeded after the riprap is installed. All work should take approximately two days. City staff will be monitoring the stability of the repair in the weeks following after rain events.
- 8.3 The stream stays dry, except for during periods of heavy rain. The repair will be conducted in dry weather so erosion protection shouldn't be necessary, but will be used on an as needed basis.



SITE LOCATION

CHATTANOOGA

Hixson

Chickamaug
Mile 5

Hamillville

Mile

Walker Cen



EXISTING CONDITIONS - FRONT VIEW OF HEADWALL



EXISTING CONDITIONS - SIDE VIEW OF HEADWALL

A photograph showing a side view of a concrete headwall structure. The structure is made of several large, rectangular concrete blocks, some of which appear to be partially broken or displaced. It is situated in a ditch or drainage area. The ground around the structure is covered with dry leaves, twigs, and some green vegetation. In the background, there is a grassy area with a few trees and a fence. A dark-colored SUV is parked on a paved surface behind the fence. The overall scene suggests a rural or semi-rural setting with some infrastructure in need of maintenance or repair.

EXISTING CONDITIONS - SIDE VIEW OF HEADWALL



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
CHATTANOOGA ENVIRONMENTAL FIELD OFFICE
DIVISION OF WATER RESOURCES
1301 RIVERFRONT PARKWAY SUITE 206
CHATTANOOGA, TN 37402

November 17, 2015

Mr. Joshua Rogers
City of Chattanooga
1250 Market Street
Suite 2100
Chattanooga, TN 37402

RE: Hixson Youth Athletic Association, 5410 School Dr., Chattanooga, TN
Hydrologic Determination
North Chickamauga Creek Watershed, Hamilton County

Dear Mr. Rogers:

The Division concurs with the hydrologic determinations that you conducted, as documented in "Hydrologic Determination Field Data Sheet at Hixson Youth Athletic Association, 5410 School Dr., Chattanooga, TN" dated October 13, 2015.

Alterations to waters of the State of Tennessee, including wetlands, require coverage under an Aquatic Resource Alteration Permit (ARAP) from this Division. The ARAP information, including a permit application and guide, may be obtained at the following web page: <http://state.tn.us/environment/permits/arap.shtml>. Alterations to a wet weather conveyance may be performed without application or notification to the Division, as long as they conform to the provisions of the *Alteration of Wet Weather Conveyances* General Permit: http://state.tn.us/environment/water/docs/wpc/arap-gp_wet-weather-conveyances.pdf

Please be aware that hydrologic determinations are advised and governed by Tennessee Department of Environment and Conservation (TDEC) rules and regulations and therefore only apply to the State's permitting process. Water features located onsite may also be considered jurisdictional Waters of the United States; therefore, alterations to them should only be performed after consultation with the U.S. Army Corps of Engineers (865-986-7296).

We appreciate the opportunity to assess the site prior to site plan finalization and initiation of construction activities. Because natural variation and human activities can alter hydrologic conditions, the Division reserves the right to reassess the status of this water feature in the future. If you have any questions concerning this letter or need further information, please contact me at 423-634-5734 or by email at Charles.Walton@tn.gov

Sincerely,

A handwritten signature in black ink, appearing to read "Chip Walton".

Chip Walton
Division of Water Resources
Chattanooga Environmental Field Office

Hydrologic Determination Field Data Sheet
Tennessee Division of Water Pollution Control, Version 1.4

County: <u>Hamilton</u>	Named Waterbody: <u>N. Chick</u>	Date/Time: <u>10/13/15 10:45</u>
Assessors/Affiliation: <u>Joshua Rogers / City of Chattanooga</u>	Project ID:	
Site Name/Description: <u>Hixson Youth Athletic Association</u>		
Site Location: <u>5410 School Dr</u>		
USGS quad: <u>Daisy</u>	HUC (12 digit): <u>060200010502</u>	Lat/Long:
Previous Rainfall (7-days): <u>2" (10/9-10/10)</u>		
Precipitation this Season vs. Normal: very wet <input checked="" type="radio"/> (wet) average dry drought unknown		
Source of recent & seasonal precip data:		
Watershed Size: <u>811 Acres</u>	Photos: <input checked="" type="radio"/> (Y) or N (circle) Number:	
Soil Type(s) / Geology: <u>AcB & Fwd / One</u>	Source: <u>USGS</u>	
Surrounding Land Use: <u>Residential & Commercial</u>		
Degree of historical alteration to natural channel morphology & hydrology (circle one & describe fully in Notes): Severe <input type="radio"/> <u>Moderate</u> <input type="radio"/> Slight <input type="radio"/> Absent <input type="radio"/>		

Primary Field Indicators Observed

Primary Indicators	NO	YES
1. Hydrologic feature exists solely due to a process discharge	✓	WWC
2. Defined bed and bank absent, dominated by upland vegetation / grass	✓	WWC
3. Watercourse dry anytime during February through April 15th, under normal precipitation / groundwater conditions	NA	WWC
4. Daily flow and precipitation records showing feature only flows in direct response to rainfall	✓	WWC
5. Presence of multiple populations of obligate lotic organisms with ≥ 2 month aquatic phase	✓	Stream
6. Presence of fish (except <i>Gambusia</i>)	✓	Stream
7. Presence of naturally occurring ground water table connection	✓	Stream
8. Flowing water in channel and 7 days since last precipitation in local watershed	NA	Stream
9. Evidence watercourse has been used as a supply of drinking water	✓	Stream

NOTE : If any Primary Indicators 1-9 = "Yes", then STOP; absent directly contradictory evidence, determination is complete.

In the absence of a primary indicator, or other definitive evidence, complete the secondary indicator table on page 2 of this sheet, and provide score below

Guidance for the interpretation and scoring of both the primary & secondary indicators is provided in *TDEC-WPC Guidance For Making Hydrologic Determinations, Version 1.4*

Overall Hydrologic Determination = <u>STREAM</u>
Secondary Indicator Score (if applicable) = <u>18.75</u>

Justification / Notes :

Historical Alteration: The area has been used for athletic fields since the 50's. The riparian zone has been completely removed and upland vegetation has begun to dominate the channel due to the amount of soil reaching the channel and the intermittent condition of the stream.

Upstream & downstream segments are wooded and have stronger stream characteristics.

The overall determination is that this is a STREAM because of alterations in and around the channel masking some of characteristics.

modifying

Secondary Field Indicator Evaluation

558:531
↓
1.05

$.25 + 2 + 1.5 + 0 + 1.25 + 3$

A. Geomorphology (Subtotal = 14)	Absent	Weak	Moderate	Strong
1. Continuous bed and bank	0	1	2	3
2. Sinuous channel	0	1	2	3
3. In-channel structure: riffle-pool sequences	0	1	2	3
4. Sorting of soil textures or other substrate	0	1	2	3
5. Active/relic floodplain	0	1	2	3
6. Depositional bars or benches	0	1	2	3
7. Braided channel	0	1	2	3
8. Recent alluvial deposits	0	0.5	1	1.5
9. Natural levees	0	1	2	3
10. Headcuts	0	1	2	3
11. Grade controls	0	0.5	1	1.5
12. Natural valley or drainageway	0	0.5	1	1.5
13. At least second order channel on existing USGS or NRCS map	No = 0		Yes = 3	

$1.5 + 1.25 + 1.5$

B. Hydrology (Subtotal = 3.5)	Absent	Weak	Moderate	Strong
14. Subsurface flow/discharge into channel	0	1	2	3
15. Water in channel and >48 hours since sig. rain	0	1	2	3
16. Leaf litter in channel (January - September) NA	1.5	1	0.5	0
17. Sediment on plants or on debris	0	0.5	1	1.5
18. Organic debris lines or piles (wrack lines)	0	0.5	1	1.5
19. Hydric soils in stream bed or sides of channel	No = 0		Yes = 1.5	

$0.25 + 1$

C. Biology (Subtotal = 1.25)	Absent	Weak	Moderate	Strong
20. Fibrous roots in channel	3	2	1	0
21. Rooted plants in channel	3	2	1	0
22. Crayfish in stream (exclude in floodplain)	0	0.5	1	1.5
23. Bivalves/mussels	0	1	2	3
24. Amphibians	0	0.5	1	1.5
25. Macroinvertebrates (record type & abundance)	0	1	2	3
26. Filamentous algae; periphyton	0	1	2	3
27. Iron oxidizing bacteria/fungus	0	0.5	1	1.5
28. Wetland plants in channel	0	0.5	1	2

Focus is on the presence of upland plants.

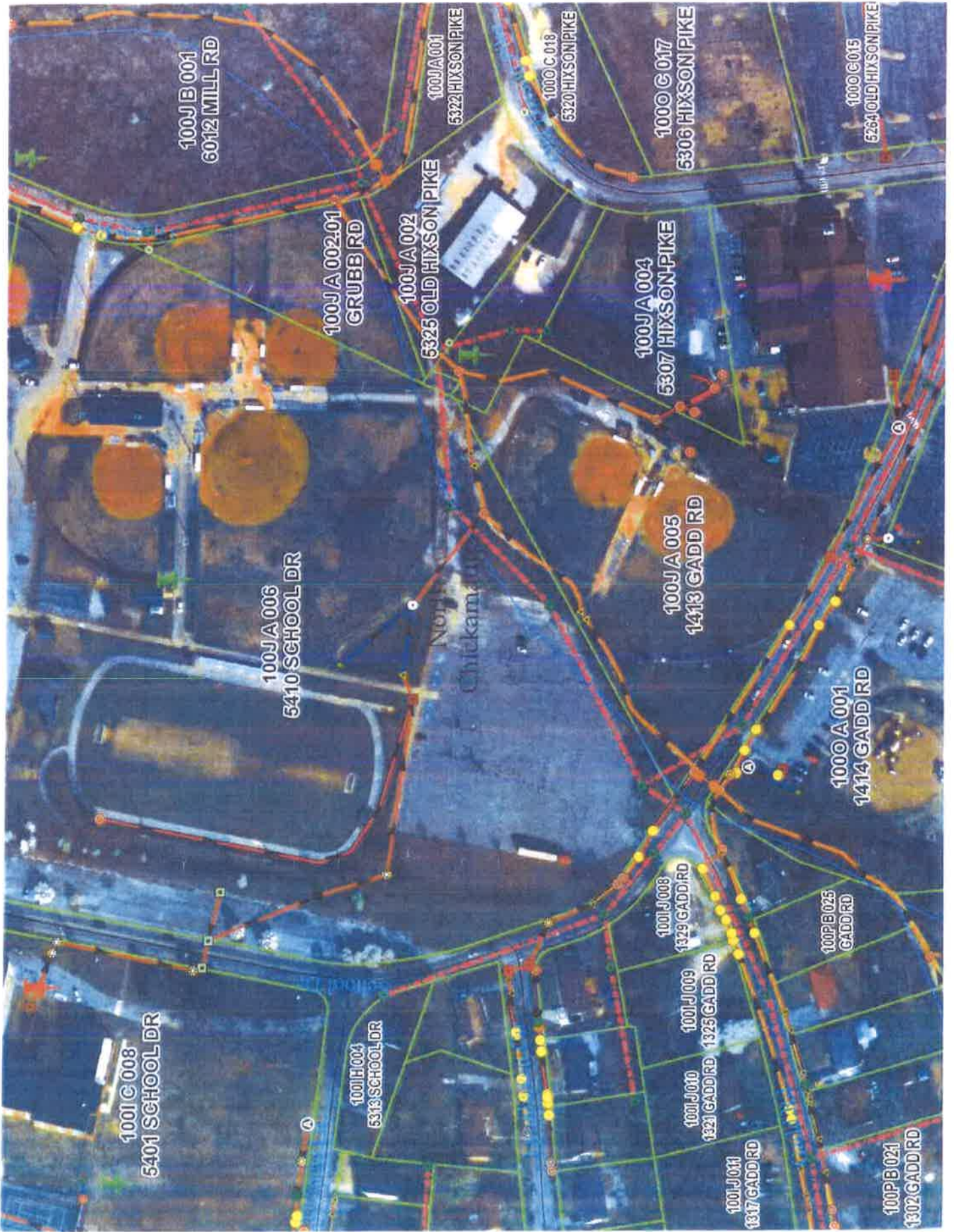
Focus is on the presence of aquatic or wetland plants.

Total Points = 18.75

Under Normal Conditions, Watercourse is a Wet Weather Conveyance if Secondary Indicator Score < 19 points

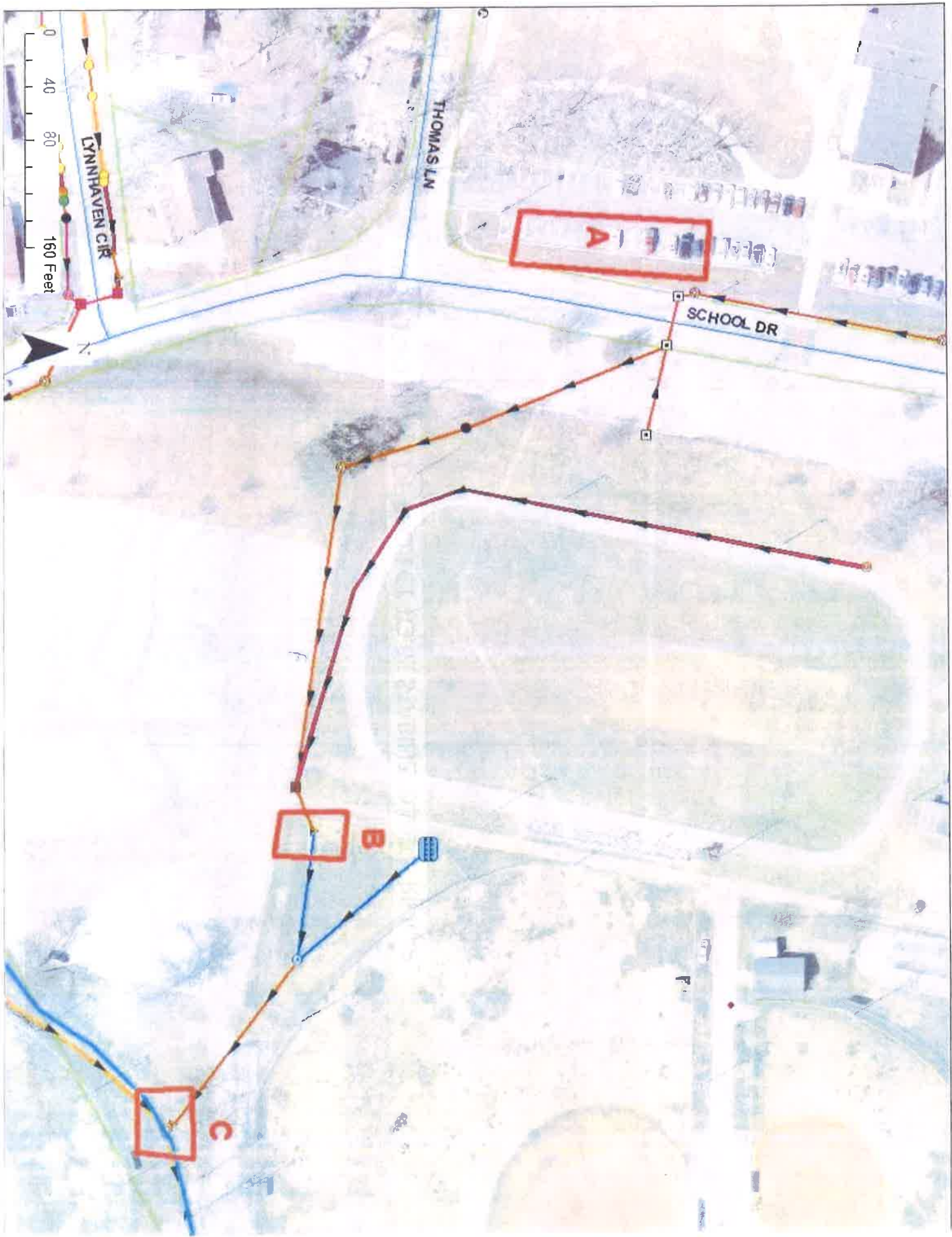
Notes :

Soil texture sorting is difficult to observe b/c of introduced riprap at multiple locations of the stream.

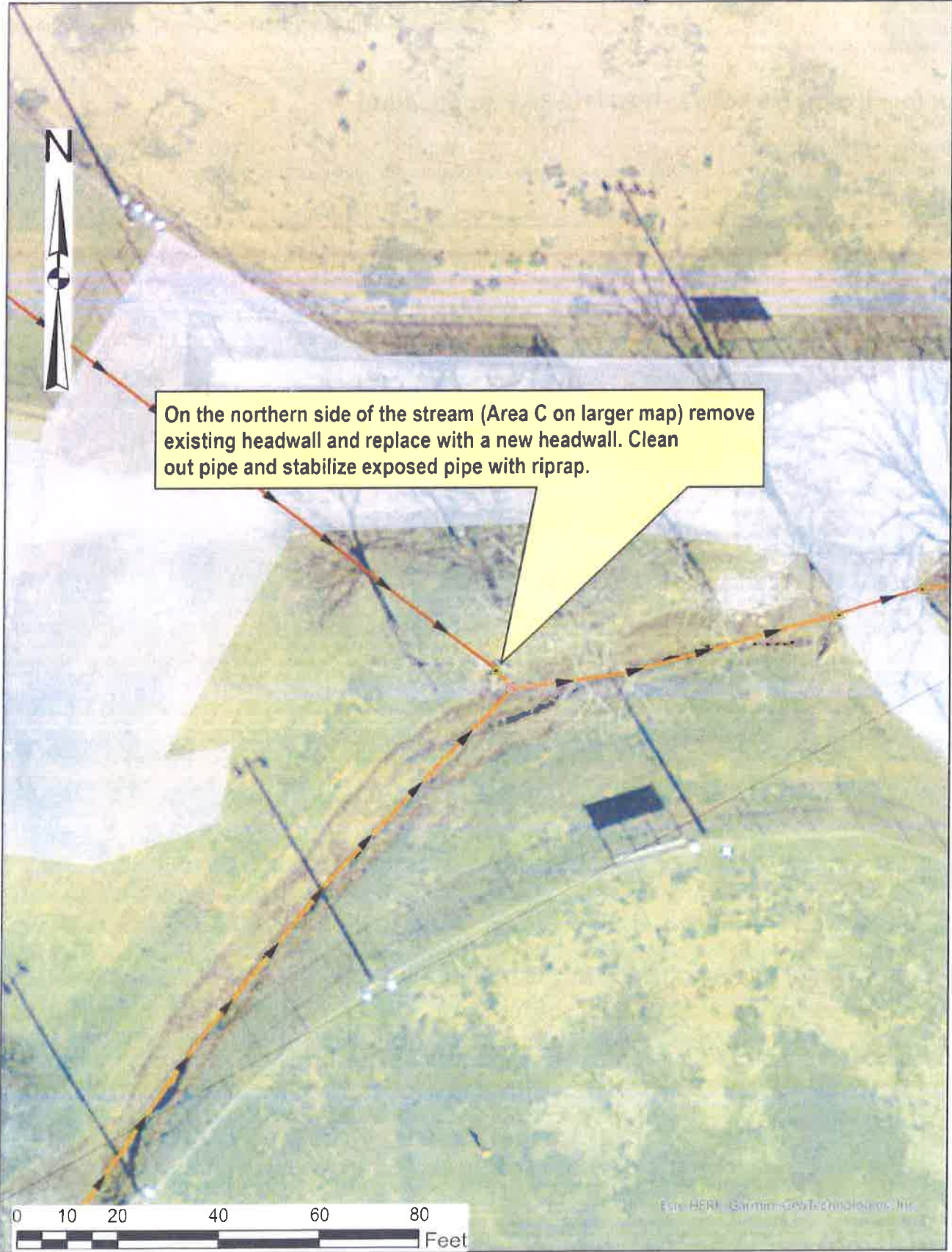




PROPOSED LIMITS OF PROJECT TO BE STABILIZED WITH RIPRAP



WO # 182031 (Area C)



5410 School Dr, Hixson, TN 37343



Bonnie Mumpower <bmumpower@chattanooga.gov>

Check for Hixson Park W.O. 182031 ARAP Application

Adam Beavers <jbeavers@chattanooga.gov>

Thu, Feb 24, 2022 at 10:05 AM

To: Bonnie Mumpower <bmumpower@chattanooga.gov>, Joshua Rogers <jsrogers@chattanooga.gov>

Hi Bonnie,

I'm working with Josh Rogers on the ARAP for this work order. Can you issue a check for the ARAP for Work Order # 182031? The application fee is \$500.00 made payable to "Treasurer, State of Tennessee".

I've attached a copy of the ARAP. Let me know if you need anything else.

Thanks,
Adam

Jeremy Adam Beavers
Engineering Technician - Water Quality
City of Chattanooga | Department of Public Works
423-643-5896 | jbeavers@chattanooga.gov

 **Hixson Park W.O. 182031 ARAP Application.pdf**
21232K



Bonnie Mumpower <bmumpower@chattanooga.gov>

Check for Hixson Park W.O. 182031 ARAP Application

Adam Beavers <jbeavers@chattanooga.gov>

Fri, Feb 25, 2022 at 9:26 AM

To: Joshua Rogers <jsrogers@chattanooga.gov>

Cc: Bejan Poureshmenantalemy <poureshmenantalemy@chattanooga.gov>, Bonnie Mumpower <bmumpower@chattanooga.gov>

I checked with Maria on this. She said we will be using funding source: 6030 k70106

Thanks

[Quoted text hidden]