STREAM BIOLOGICAL CONDITIONS
ENVIRONMENTAL AUDITOR REPORT

Version 2.3

Wetland Studies and Solutions, Inc.® a DAVEY company

Stream ID: S-GH40	**Crossing Start Date:** 09/27/2023	**Crossing Completion Date:** 09/29/2023
Milepost: 273.2	**Pre-Con Assessment Date:** 09/19/2023	**Post-Con Assessment Date:** 09/29/2023
Station: 14434+14	**Stream Classification:** Ephemeral **(Perennial, Intermittent, Ephemeral)**	**Bankfull Width (ft.):** 3
County: Franklin	**303(d) Impairment Listing:** Not Impaired	**Riffle:Pool Complexes Present?** No

Item #	Resource Crossing Conditions	N/A	YES	NO
1.	Were all applicable resource specific crossing conditions satisfied? Time of Year Restrictions (TOYR)? N/A Fish Relocation? N/A Mussel Relocation? N/A	X		
2.	Is this resource designated a wild or stockable trout stream?			X
3.	Which crossing methods were utilized during the stream crossing? *(Select one or more)* Dam & Pump, Flume, Cofferdam, Conventional Bore, Horizontal Directional Drill (HDD) Bore?	Flume		
4.	Was the top 1-foot (12-inches) of streambed substrate segregated and stockpiled separate from trench spoils?		X	
5.	Was excess material not needed for backfill removed and disposed of in an upland area?		X	
6.	Was the top 12-inches of backfill made with clean native stream substrate?		X	
7.	Was the pre-construction survey data provided and utilized during restoration in attempt to re-establish pre-construction contours?		X	
8.	Were any field modifications to the stream implemented by project or regulatory personnel to address potential drainage or bank restoration limitations?			X
9.	Were impervious trench breakers/plugs properly installed within 25-feet of top-of-bank to prevent subsurface erosion to or from the resource area?		X	
10.	Was permanent seed and stabilization material (straw or matting) applied to riparian areas and stream banks prior to re-establishing flow to the impact area of the channel?		X	
11.	Was the time of disturbance minimized by conducting resource work continuously to completion?		X	
12.	Have civil surveys been scheduled to verify as-built conditions meet pre-construction conditions in accordance with the project Mitigation Framework and federal/state permit requirements?		X	
13.	Are bareroot saplings required and/or scheduled to be planted for the dormant season (10/1 – 4/30)?			X
14.	Did any unauthorized discharges to unpermitted resources occur during the crossing? If so, explain the corrective actions implemented in the Comments section and include additional photos.			X

Item #	Biological Conditions	Pre-Con	Post-Con
15.	**Predominant Substrate Type (select one):** *Bedrock, Boulder (>10"), Cobble (2-10"), Gravel (0.1-2"), Sand (<0.1"), Mud/Silt/Clay*	Mud/Silt/Clay	Mud/Silt/Clay
16.	**Channel Conditions:** **Rating:** *1-Optimal (80-100% stable banks), 2-Sub-optimal (60-80% stable banks), 3-Marginal (40-60% stable banks), 4-Poor (20-40% stable banks), 5-Severe (0-20% stable banks, highly eroded or unvegetated banks)*	2 - Suboptimal	1 - Optimal
17.	**Riparian Buffer Zone within ROW and ≤50 ft. from Stream Top-of-Bank:** **Rating:** *1-Optimal (60-100% heavy vegetative cover), 2-Sub-optimal (30-60% mixed vegetated coverage), 3-Marginal (<30% vegetative coverage), 4-Poor (Mowed/maintained area or farmland, impervious area, sparsely vegetated coverage, etc.)*	2 - Suboptimal	1 - Optimal
18.	**Instream Habitat Conditions:** **Examples:** *Varied substrate sizes, varied combination of water velocities/depths, presence of woody/leafy debris, stable substrate with low amount of mobile particles, low embeddedness, shade protection, undercut banks, root mats, submerged aquatic vegetation.* **Rating:** *1-Optimal (Habitat conditions present in >50% of resource), 2-Suboptimal (Habitat conditions in 30-50% of resource), 3-Marginal (Habitat conditions in 10-30% of resource), 4-Poor (Habitat conditions in 0-10% of resource)*	3 - Marginal	3 - Marginal
19.	**Channel Alterations:** **Examples:** *Straightened channel, non-MVP stream crossings, non-native riprap/rock along banks, concrete/gabions/concrete block, manmade embankments, constrictions w/in channel, livestock or agricultural impacts.* **Rating:** *1-Negligible (unaltered/natural stream), 2-Minor (20-40% of resource disrupted by channel alterations), 3-Moderate (40-80% of resource disrupted), 4-Severe (>80% of resource disrupted)*	1 - Negligible	1 - Negligible

Comments/Remarks

9-19-2023: Pre-con meeting at 1pm. EI Glen Marrow. Foreman is Clayton "Brian" Dennis. This resource will be open cut. Planning to use flume as crossing method. There are two drainage features adjacent to the stream that are not classified as streams. Crew will ensure they do not disturb these areas if it's not needed and ensure maintain pre-existing flow pattern. The stream and drainage features were dry. – S. Canfield.

9-20-2023: Per on-site personnel, this resource likely won't start crossing until 9-22 or later. Work has not entered the 50ft buffer. -S. Canfield

9-21-2023: No changes on-site. Anticipated start date is 9-25-23. -S. Canfield

9-22-2023: No changes on-site. Anticipated start date is 9-25-23. -S. Canfield

9-24-2023: No changes on-site. Anticipated start date is 9-25-23. -S. Canfield

9-25-2023: Dug trench up to the 50ft buffer but did not enter it. Crew noted they will finish installing the pipe in this upland area before moving on to the resource crossing. Potential start of 9-27-2023. -S. Canfield

9-26-2023: Entered the 50ft buffer to remove & stockpile topsoil. Crossing within the 10ft buffer will start 9-27-2023. -S. Canfield

9-27-2023: Crossing started. Segregated 10ft buffer and stream bank topsoil, storing on geotech material. Segregated stream substrate and wrapped it in geotech material. Upland topsoil stored separately. Upstream dam installed. Flume installed. Trench excavated and pipe was placed in the trench. Pipe was welded. -S. Canfield

9-28-2023: Finished pipe installation and backfilled. Two trench breakers installed within 25ft of the resource at 18" below surface. Stream and 10ft buffer restored. 50ft buffer to be restored 9-29-23. -S. Canfield

9-29-2023: Removed energy dissipation rock from the downstream end and restored the 50ft buffers. Post-con assessment completed. -S. Canfield

9-30-2023: Post-con photos taken on 9/30 because buffers were restored late 9/29. Photo image quality improved with daylight. – S. Canfield

In accordance with the Mountain Valley Pipeline Consent Decree, Case No. CL18006874-00, (Issued October 11, 2019) this independent report was completed to document the on-site monitoring of instream invertebrate and fisheries resources during all construction activity related to waterbody and wetland crossings, and document instream conditions and any impacts to the resources.

This report was written by	Stephanie Canfield *Print Name*	Stephanie Canfield *Signature*	09/30/2023 *Date*

Required Photos

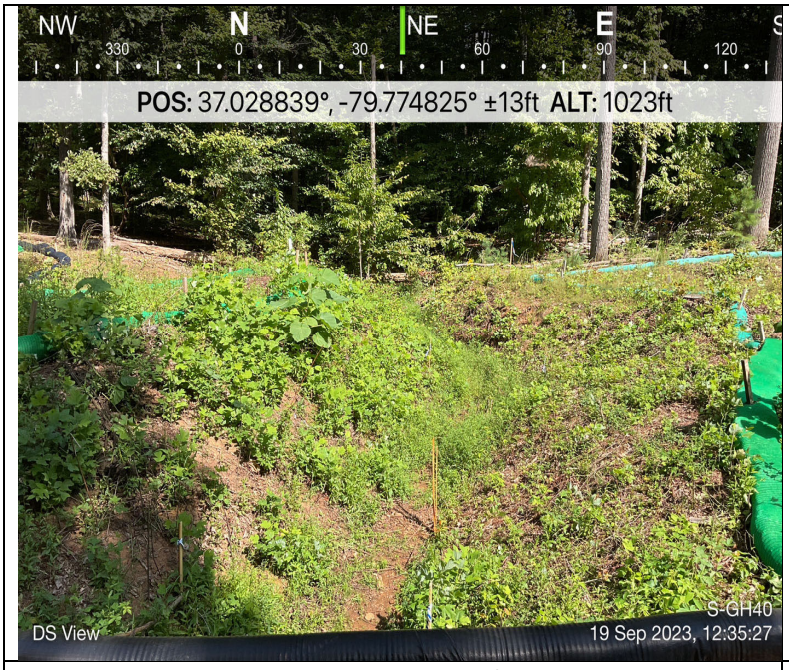

Photo Description: Downstream view of permitted impact area during pre-construction assessment.

Photo Description: Conditions of the downstream area outside the ROW during pre-construction assessment.

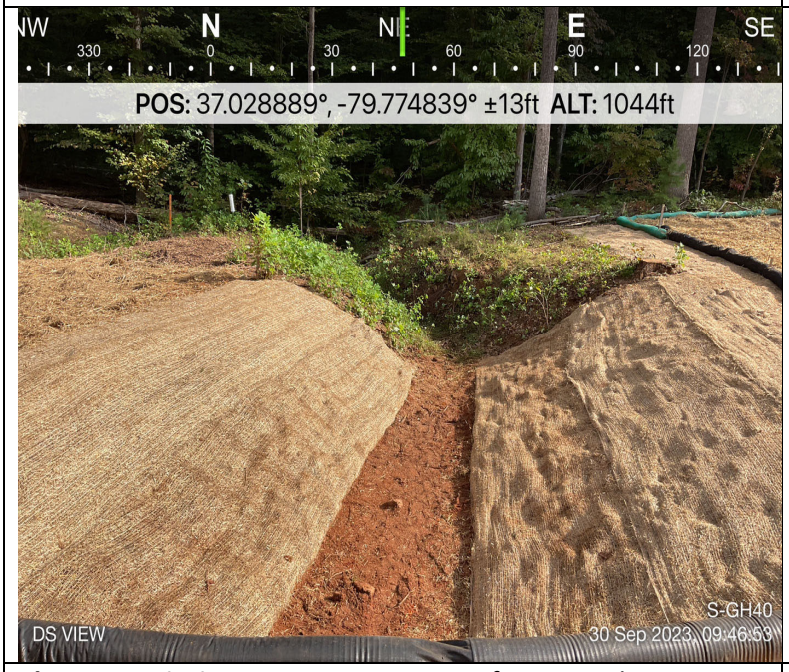

Photo Description: Downstream view of permitted impact area during post-construction assessment.

Photo Description: Conditions of the downstream area outside the ROW during post-construction assessment.

Optional Additional Photos

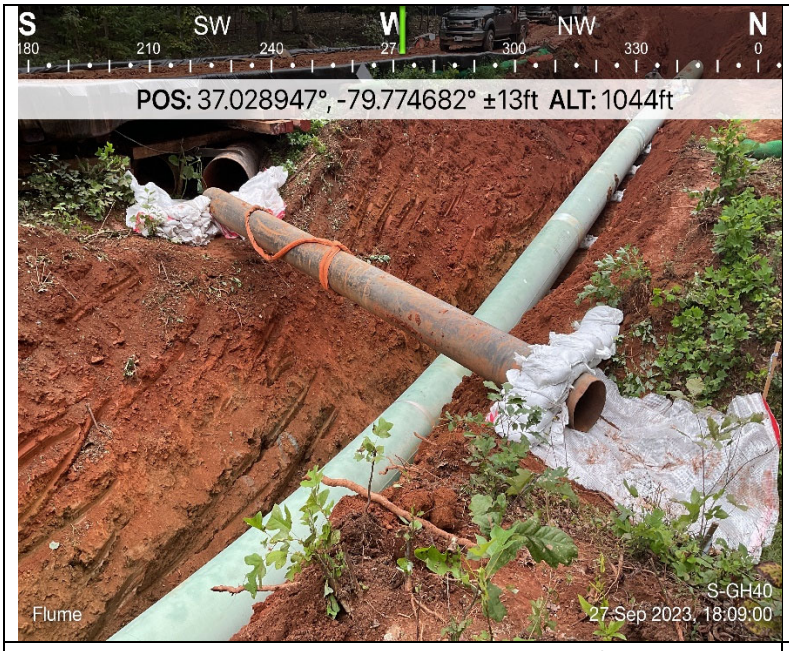

Photo Description: Flume crossing installed and functioning throughout crossing.

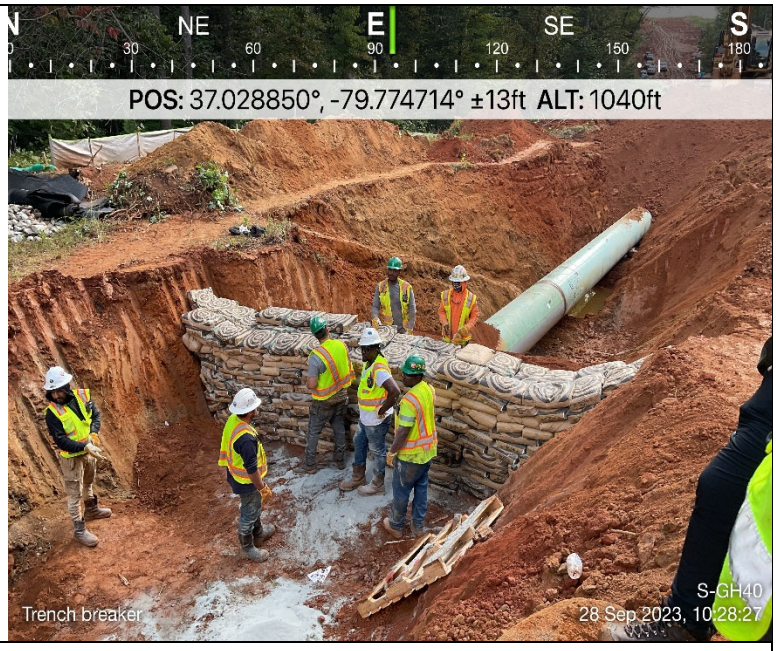

Photo Description: Trenchbreaker installations

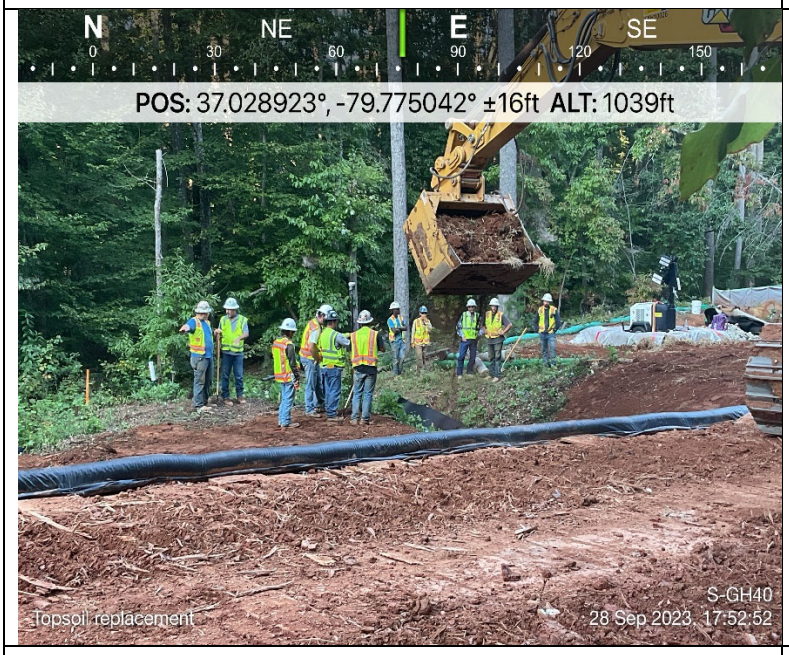

Photo Description: Topsoil restoration.

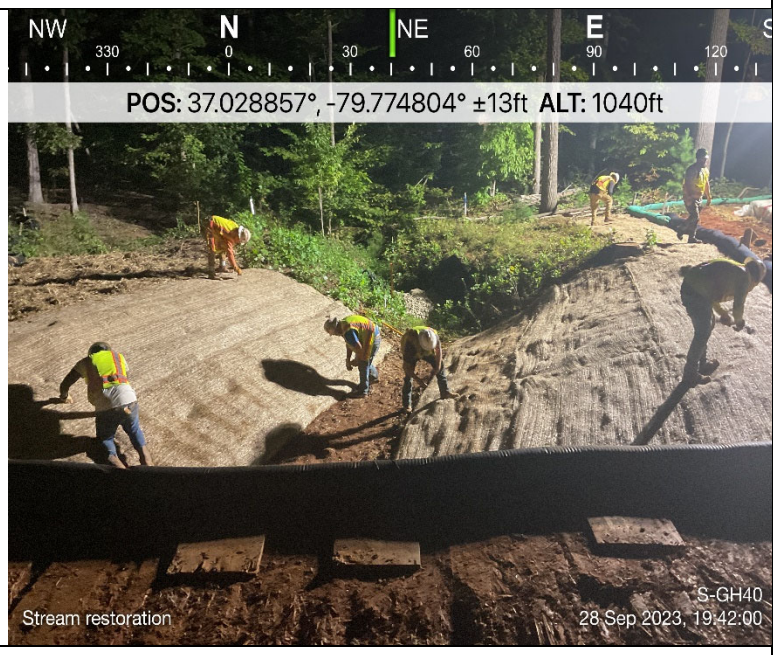

Photo Description: Restoration crews staking in erosion control matting along the streambanks.