Environmental Monitor Construction Site Inspection Report MassDOT Project #608164 Construction Contract # 119678 EM Report #37 Project Description: Bruce Freeman Rail Trail Right-of-Way Permit Description(s): Order of Conditions (MGL Chapter 131, Section 40 and 310 CMR 10.00, Mass DEP File No. 301-1362); 2022 EPA NPDES General Permit for Discharges from Construction Areas; U.S. Army Corps of Engineers Permit No NAE-2021-01975. I. General Project Information Project Name: Bruce Freeman Rail Trail - Phase 2d - Sudbury 12/6/2024 Date of Inspections: December Weekly Inspection #2 Bi Weekly/ Monthly Period Covered: Inspector's Name(s): Anna Haznar Inspectors' Contact Information: ahaznar@beta-inc.com

			Weather Information	1		
	Inspection #1	Inspection #2	Inspection #3	Inspection #4	Inspection #5	Inspection #6
WeatherUnderground	Inspector: Anna Haznar 12/2/2024	Inspector: Anna Haznar 12/6/2024	Inspector:	Inspector:	Inspector:	Inspector:
Type of Inspection (i.e. non-storm event, pre- storm event, during-storm event or post- storm event):	Post-storm	Non-storm				
Number of days since last rain event greater han .25"	4					
Has there been a storm event since the last nspection?	Yes					
f yes, please provide storm start date, storm duration, and approx amount of						
Storm 1:	November 28th (14 hours 1.7")					
Storm 2:						
Storm 3:						
Storm 4:						
Neather at the time of inspection (i.e. clear, overcast, cloudy, rain, sleet, fog, snow,	Clear	Clear				
Temperature:	34	32				
Jnusual Conditions (drought, severe storm):						
Have any discharges occurred since the last nspection report?	No	No				
f yes, please describe:						

III. General Description of Construction Status

12/2/2024 - At the time of the Site visit, no work was occurring.

12/6/2024 - At the time of the Site visit, no work was occurring.

	IV. Status of Existing BMPs							
Control Measure (These are examples; list	Cleaning or Repair Needed (yes	Comments/Recommendations from the EM						
measures specific to the project)	no n/a)							
Perimeter Controls	Yes Perimeter erosion and sedimentation control measures were installed at the commencement of the Project and are in varying conditions across the Sit generally observed to be degraded. Perimeter controls were generally in degraded condition along culverts, streams, and cattle crossings. New perimet on 6/27/2024 at Stations 310+00 through 311+00 as requested. New erosion controls have been installed between the path and the crushed stone sho to 217+50. Areas that still require stabilization do not appear to be at risk for erosion due to surrounding vegetation upgradient of Resource Areas.							
Inlet Protection Measures	No							
Stabilized Construction Entrances	No							
Stockpile Protections	No							
Dust Control	No							
Street Sweeping	Yes	Crushed stone was observed on the path throughout the Project in varying volumes.						
Dewatering Controls	No							
Construction Equipment and Material Storage	No							
Construction and Domestic Waste Storage and Collection	No							
Location of Sanitary Waste Facilities	No							
Washout Areas	No							
Fertilizers, Herbicides, and Landscape	N/A							
Stabilization of Exposed Soil	Yes	Varying degrees of stabilization are present within areas that were constructed/graded as part of the Project. Seed has been applied to multiple locations of exposed soil throughout the path. Erosion control blankets have been installed on the slope near Station 165+00 to 167+00 and Station 217+45. Loam that was applied to the streambank at Station 215+00 to 217+00 requires further stabilization.						
Overall Adherence to Environmental Permits	Yes	As noted in Action Items 41 and 42, it appears that work has been conducted beyond the limits of work approved under the Order of Conditions. These areas will require coordination amongst the Project Team to confirm if any restoration is required. A Site walk was conducted with BETA staff, MassDOT staff and the Conservation Agent on 11/19/2024 to discuss potential resolutions for compliance issues.						
	Note	: Use station numbers, wetland ID or other means to determine locations of BMP's that need repairs.						

V. Compliance Table - Compliance Action Items

V. 1. Compliance Action Items Observed During the One Month Reporting Period Ending [December 31, 2024].

Current Open and Closed Compliance Action Items Observed During the Reporting Period Ending [June 30, 2024]. For those items within the most current two week period, color the Item in blue, as shown on lines 48-50 as an example. RED text indicates that the item is outstanding. Once item is resolved, place resolution date in 'Recommended Resolution/Resolution Date' column, convert to BLACK text, and move to the bottom of the Action Item list. Place resolution date on TOP of resolution action. Each Compliance Action Item is assigned a unique number only to be used to reference that item for the duration of the project. Separate but related Action Items will be labeled in an "Item Number-1 and Item Number-2" manner or similar. Completed action items can be removed once they have appeared in the Bi-Weekly Report to MassDEP

"<u>Urgent</u>" - Needs to be completed immediately, "<u>High</u>" - Needs to be completed in < 7 days due to site conditions, proximity to resource areas, anticipated weather, etc., "<u>Medium</u>" - Needs to be completed within 7 days and has short-term potential to impact resource areas, "<u>Low</u>" - Needs to be completed within 7 days with minimal potential to impact resource areas

Iter	Location/ Description	Observation Date	Resolution Due Date	Recommended Resolution / Resolution Date	Comments/Updates
62	Loam and seed was applied to the streambank at Station 216+00 to 217+00 and requires further stabilization Priority: High	11/25/2024	12/2/2024	An erosion control blanket should be installed along this slope.	12/2/2024 - Loam and seed have been applied to the streambank at Station 215+00. Stabilization is required at Stations 215+00 to 217+00. 12/6/2024 - Observation remains. See previous update.
53	Stone was observed requiring removal from the swale on the east side of the trail at Station 172+00 to 173+00 Priority: High	7/29/2024	8/6/2024	Remove stone from the swale.	 8/5/2024 - Observation remains. 8/7/2024 - Observation remains. Material was observed to have migrated within the swale to Station 173+50. 8/12/2024 - Observation remains. Store is still present within the swale. 8/20/2024 - Observation remains. Stone is still present within the swale. 9/10/2024 - Observation remains. 9/10/2024 - Observation remains. Stone is still present within the swale. 9/10/2024 - Observation remains. 9/20/2024 - Observation remains. 9/20/2024 - Observation remains. 10/2024 - Observation remains. 10/4/2024 - Observation remains. 10/4/2024 - Observation remains. 10/2/2024 - Observation remains. 11/12/2024 - Observat

47	Slope stabilization required due to condition of compost filter tubes at Station 265+50 and 273+00 Priority: High	6/7/2024	6/14/2024	Stabilize the slope with the approved seed mixture and provide interim stabilization such as straw mulch.	 6/14/2024 - Observation remains. 6/17/2024 - Observation remains. 6/24/2024 - Observation remains. 7/15/2024 - Observation remains. 7/15/2024 - Diservation remains. 7/15/2024 - Diservation remains. 8/5/2024 - Observation remains. 8/5/2024 - Observation remains. 8/5/2024 - Observation remains. 8/7/2024 - Observation remains. 8/7/2024 - Observation remains. 8/7/2024 - Observation remains. 8/7/2024 - Observation remains. 8/12/2024 - Observation remains. 8/12/2024 - Observation remains. 8/12/2024 - Observation remains. 8/12/2024 - Observation remains. 8/20/2024 - Application of the approved seed mixture is required at this location. 8/12/2024 - Observation remains. 9/10/2024 - Observation remains. 9/10/2024 - Observation remains. 9/10/2024 - Observation remains. 9/21/2024 - Observation remains. 9/22/2024 - Observation remains. 9/22/2024 - Observation remains. 9/22/2024 - Observation remains. No gernination has been observed. 10/21/2024 - Observation remains. No gernination has been observed but the area is not considered stabilized. 11/12/2024 - Observation remains. See previous update. 11/22/2024 - Observation remains. See previous update. 11/22/2024 - Observation remains.
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Soil and organic deb within the wetland b 32 WF#23-119 and WF# 224+00 Priority: High	etween wetland flagging	5/28/2024	Remove all material and provide stabilization of the area with the approved wetland seed mixture. Straw should also be placed for interim stabilization.	 5/28/2024 - Observation remains. 5/11/2024 - Observation remains. 6/1/2024 - Observation remains. 6/11/2024 - Observation remains. 6/11/2024 - Observation remains. 6/21/2024 - Observation remains. 7/15/2024 - Germination was observed and the area will be monitored for stabilization. 7/15/2024 - Germination was observed and the area will be monitored for stabilization. 7/15/2024 - Observation remains. 8/2/2024 - Observation remains. 9/2/2024 - Observation remains. The contractor indicated hydroseed will be applied to this area. 10/2/2024 - Observation remains. Hydroseed has not been applied to this area. 10/2/2024 - Observation remains. Hydroseed has not been applied to this area. 10/2/2024 - Observation remains. Hydroseed has not been applied to this area. 10/2/2024 - Observation remains. Hydroseed has not been applied to this area. 10/2/2024 - Observation remains. Hydroseed has not been applied to this area. 10/2/2024 - Observati
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6	Exposed sediment slope at Station 172+00 to 175+00 Priority: High	5/8/2024	5/15/2024	Install temporary sediment controls along the slope such as jute netting and/or straw following the application of seed.	 5/16/2024 - Observation remains. 5/21/2024 - Diservation remains. 5/21/2024 - Furthal germination was observed. 5/31/2024 - See previous update. 6/17/2024 - Observation remains. 6/27/2024 - The area has been regraded and loam has been spread. New trees have been planted upgradient of the swale. stabilization is still required. 7/8/2024 - The area has been regraded and loam has been spread. New trees have been planted upgradient of the swale. stabilization is still required. 7/2/2024 - Observation remains. 6/27/2024 - Observation remains. 7/2/2024 - Observation remains. 8/5/2024 - Observation remains. 8/5/2024 - Observation remains. 8/7/2024 - Observation remains. 8/7/2024 - Observation remains. 8/12/2024 - Observation remains. 8/12/2024 - Observation remains. 8/12/2024 - Observation remains. 8/2/2024 - Observation remains. 9/3/2024 - Sep revious update. 9/3/2024 - Vegetation that is present in this location generally consists of lady's thumb smartweed, a non-native species. Removal of non-native species and application of the approved seed mixture is required at this location. 9/3/2024 - Observation remains. The contractor reached out hydroseed has been applied to this area. 10/4/2024 - Hydroseed has been applied to this area. 10/2/2024 - Observation remains. See update from 10/4/2024. 10/2/2024 - Observation
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43 Cvertopped compost filte exposed soils beyond the Station 105+00 Priority: High	limits of work at	7/2024		Stabilize the area with the approved	 6/14/2024 - Observation remains. 6/17/2024 - Observation remains. 6/27/2024 - Observation remains. 6/27/2024 - Observation remains. 7/8/2024 - Observation remains. 7/22/2024 - Observation remains. 7/22/2024 - Observation remains. 8/12/2024 - Observation remains. 8/2/2024 - Observation remains. 8/2/2024 - Observation remains. 8/2/2024 - Observation remains. 9/2/2024 - Observation remains. 9/10/2024 - Observation remains. 9/2/2024 - Observation remains. 10/4/2024 - Hydroseed has been applied here; however, the contractor should provide an update on long-term slope stabilization plans. 10/4/2024 - Observation remains. Germination has not been observed. 10/2/2024 - Observation remains. Germination has been observed but the area is not considered stabilized. 10/2/2024 - Observation remains. Some germination has been observed but the area is not considered stabilized. 11/2/2024 - Observation remains. See update from 11/19/2024. 11/2/2024 - Observation remains. See update from 11/19/2024. 11/2/2024 - Observation remains. See update from 11/19/2024. 12/2/2024 - Observation remains. See update from 11/19/2024. 12/2/2024 - Obser
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V.2. On Going (Longer-Term) Compliance Items

Typically, these items require coordination with MassDEP. If so, remove once approval is obtained from MassDEP

Item	Location/ Description	Observation Date	Resolution Due Date	Recommended/Discussed Resolution	Comments/Updates
61	Invasive vegetation including Japanese knotweed (<i>Reynoutria japonica</i>), bittersweet (<i>Celastrus orbiculatus</i>), bush honeysuckle (<i>Lonicera</i> spp.), burning bush (<i>Euonymus</i> <i>alatus</i>), purple loosestrife (<i>Lythrum</i> <i>sallcaria</i>), glossy buckthorn (<i>Frangula alnus</i>) and garlic mustard (<i>Alliaria petiolata</i>) have been observed throughout the path. Priority: High	10/22/2024	10/29/2024	Invasive Species should be removed by manual and/or chemical removal methods	10/29/2024 - Invasive species are present throughout the trail both within upland and Resource Areas. Populations of glossy buckthorn and purple loosestrife are present within the wetland replication area. 11/5/2024 - Observation remains. See update from 10/29/2024. 11/12/2024 - Observation remains. Invasive species are still present throughout the trail. Some invasives have been observed with no leaves due to winter die back. 11/19/2024 - Observation remains. Further invasive species management will be required during the next growing season. 11/22/2024 - Observation remains. 11/22/2024 - Observation remains. 11/25/2024 - Observation remains. 12/2/2024 - Observation remains. 12/6/2024 - Observation remains.
57-1	Japanese hops (<i>Humulus japonicus</i>) has been observed throughout the Project and requires removal Priority: High	10/22/2024	10/29/2024	The Contractor should manage remaining Japanese hops by hand pulling and the application of herbicide.	10/22/2024 - This Action Item has been reopened due to observations of both dead and living Japanese hops in select locations along the Project. BETA and MassDOT will coordinate further with the Sudbury Conservation Agent to clarify the extents of remaining living vegetation as removal efforts progress. 10/29/2024 - Plants that were observed as alive along Route 117 during the last inspection were observed to be wilting due to winter die back. 11/5/2024 - Observation remains. See update from 10/29/2024. 11/12/2024 - Observation remains. See update from 10/29/2024. Management of Japanese hops should occur during the next growing season. 11/22/2024 - Observation remains. 11/22/2024 - Observation remains. 11/22/2024 - Observation remains. 12/2/2024 - Observation remains. 12/2/2024 - Observation remains. 12/2/2024 - Observation remains.

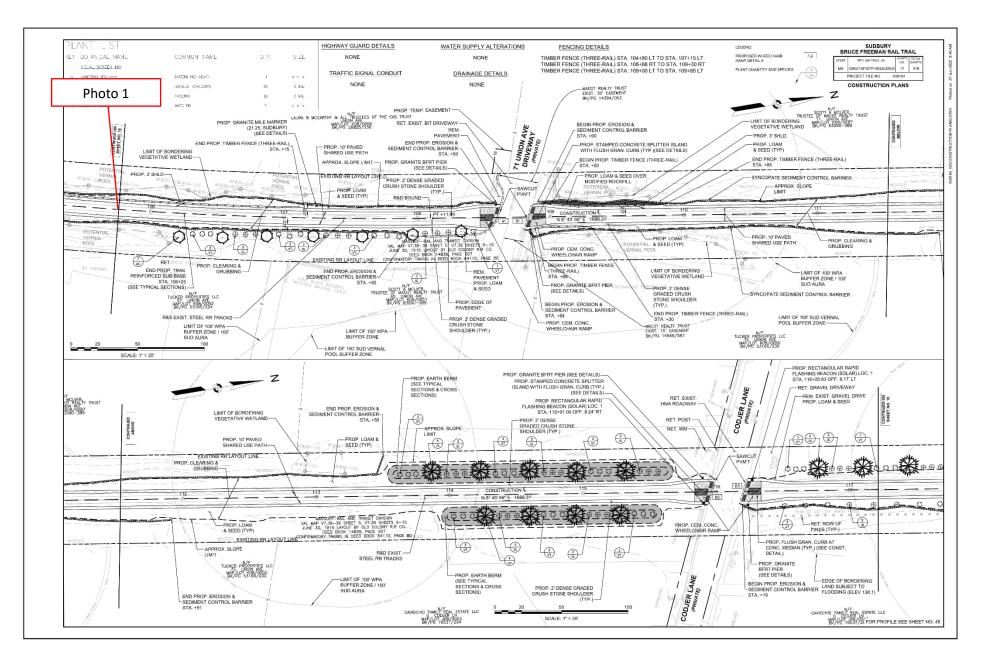
59	Multiple locations of exposed soils along the Project corridor require stabilization Priority: High	9/3/2024	9/10/2024	The contactor should apply the approved seed mixture to areas of exposed soils and place straw.	9/3/2024 - Herbicide application caused multiple areas along the path to be no longer stabilized. If thatch is present in these locations the thatch should be removed before seeding occurs. A location near Station 320+50 has been cleared outside of the limit of work and requires stabilization. Other areas along the path where seed did not germinate should be reseeded with the approved seed mix and straw should be placed on the areas of exposed soil. 9/10/2024 - Observation remains, see previous update. A few locations along the trail have been hydroseeded but a majority of the locations of exposed soil require seed and stabilization. 9/16/2024 - Observation remains. It does not appear as though any hydroseeding has been done since the last inspection. Areas throughout the trail require removal of thatch and application of seed for stabilization. 9/27/2024 - Observation remains. The contractor reached out and indicated all areas of exposed soils south of Hudson Road were not seeded using hydroseed; hydroseed was applied in a few locations, but here are still large areas of exposed soils botto that an equire seeding. Thatch was not removed in any areas before hydroseed was applied. The contractor should provide the tag from the design plans. Once vegetation has sufficiently stabilized, this item will be closed. 10/8/2024 - Observation remains. See update from 10/4/2024. No additional hydroseed has been applied since the last inspection. No germination has been observed in areas where hydroseed was applied. 10/22/2024 - Observation remains. See update from 10/4/2024. No additional hydroseed has been applied since the last inspection. No germination has been observed in areas where hydroseed was applied. 10/2/2024 - Observation remains. See update from 10/4/2024. No additional hydroseed has been applied since the last inspection. No germination has been observed in areas where hydroseed was applied. 10/2/2024 - Observation remains. See update from 10/4/2024. No additional hydroseed has been applied since the last i
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58	Crushed stone used for the dense graded crush stone shoulders has been observed as migrating both onto the path, off the sides of the path, and into the adjacent Resource Areas throughout the Project Priority: High	8/7/2024	8/14/2024	Remove all crushed stone from Resource Areas and develop a plan to cease discharges of stone.	 8/12/2024 - Crushed stone is still present in varying amounts throughout the path and on the sides of the path. 8/16/2024 - Crushed stone has been removed from some adjacent resource areas but is still observed as migrating onto and off of the path in multiple locations throughout the Project. 8/27/2024 - Crushed stone was observed as migrating both onto the path and off the side of the path in multiple locations. Stone was observed to have discharged to the cattle crossing at Station 130+50 and within the streambed at Station 2150/01 215400. Crushed stone was observed to have been placed on the root system of a fallen tree at Station 310+00 near Bank flag #BF4-108. 9/10/2024 - Observation remains. Crushed stone is still present within the cattle crossing, the streambed at Station 2150/01 21540. Crushed stone will be swept off the path prior to the opening of the trail. 9/12/2024 - Observation remains. It does not appear as though crushed stone that has migrated onto or off of the path multiple hand removed and crushed stone will be swept off the path prior to the opening of the trail. 9/23/2024 - Observation remains. It does not appear as though crushed stone that has migrated onto the path. 9/27/2024 - Observation remains. Crushed stone is still located on the side of the path in varying amounts. 10/4/2024 - Observation remains. Crushed stone is still present in multiple locations on and off the sides of the path. 10/27/2024 - Observation remains. Crushed stone is still present in multiple locations on and off the sides of the path. 10/2/2024 - Observation remains. Crushed stone is still present in multiple locations on and off the sides of the path. 10/2/2024 - Observation remains. Crushed stone is still present in multiple locations on and off the sides of the path. 10/2/2024 - Observation remains. Crushed stone is still present in multiple locations on and off the sides of the path. 10/2/202
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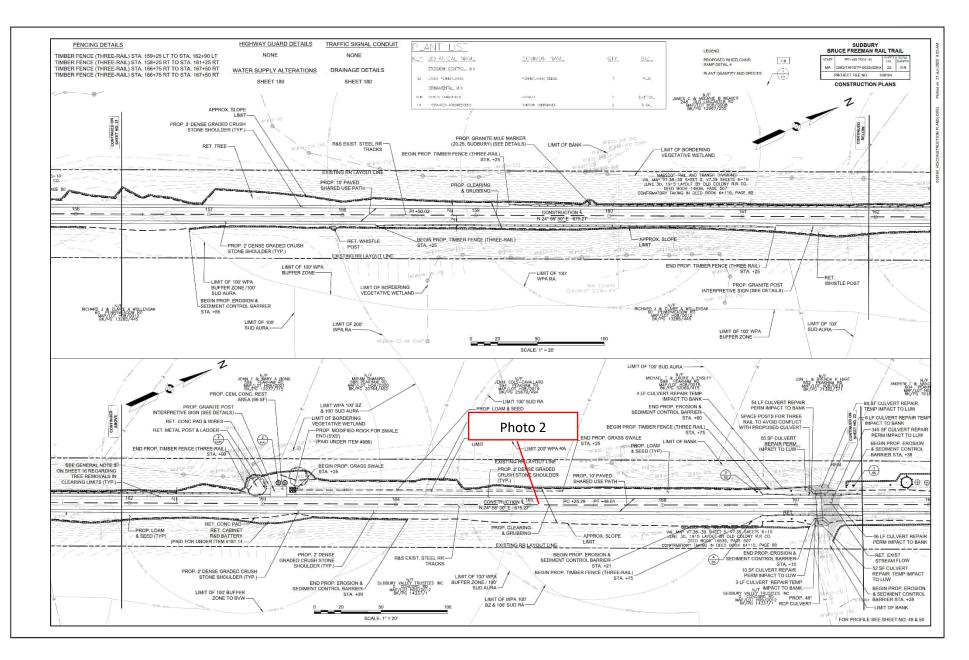
42	Riprap slope extends beyond limits of work along the WF1 Series wetland near flags 103 to 107 Priority: High	5/28/2024	plans/impacts. MassDOT should be consulted on next steps regarding	 S/31/2024 - Observation remains. G/7/2024 - Observation remains. G/17/2024 - During this inspection, additional work in support of the repair/potential replacement of an underlying pipe has was ongoing. It is recommended that the contractor confirm that they have coordinated with the Conservation Commission for this work and provide a restoration plan for the area once work is complete. G/24/2024 - During this inspection, BETA was informed that the existing cast iron pipe was replaced with a new concrete 12-inch reinforced concrete pipe. It appears that riprap was replaced along the side slopes to mirror conditions observed prior to this inspection. G/27/2024 - During this inspection, the area was observed to have been rolled and prepared for paving. Hydroseed was applied and plantings were installed. T/8/2024 - Gernination was observed and the area will be monitored for stabilization. See previous updates regarding Conservation Commission coordination. T/15/2024 - This area could not be assessed due to paving operations ongoing during the inspection. T/22/2024 - Observation remains. 8/5/2024 - Observation remains. 8/5/2024 - Observation remains. 8/2/2024 - Observation remains. 8/2/2024 - Observation remains. 8/2/2024 - Observation remains. 8/2/2024 - Observation remains. 9/10/2024 - Observation remains. 9/10/2024 - Observation remains. 9/2/2024 - Observation remains. 9

	Stream Bank has been regraded beyond the limit of work at Station 216+00 Priority: High	5/28/2024	6/4/2024	The Contractor should confirm if this work was permitted by the Conservation Commission, as it does not appear to be a part of the approved plans/impacts. MassDOT should be consulted on next steps regarding notification and potential restoration.	 5/31/2024 - Observation remains. 6/7/2024 - Observation remains. 6/1/2024 - Observation remains. 6/2/2024 - Observation remains. 6/2/2024 - Observation remains. 6/2/2024 - Observation remains. 6/2/2024 - Observation remains. 7/15/2024 - Observation remains. 7/15/2024 - This area could not be assessed due to paving operations ongoing during the inspection. 7/2/2024 - Crushed stone and sediment continue to be discharged to the stream between Stations 215+00 and 217+00 due to overtopped and undermined compost filter tubes. 7/2/2024 - Observation remains. 8/2/2024 - Observation remains. 9/2024 - Observation remains. 9/2024 - Observation remains. 9/2/2024 - Observation remains. Stone has been observed as discharging into the streambed in this location again. 9/16/2024 - Observation remains. 9/2/2024 - Observation remains. 9/2/2024 - Observation remains. 10/4/2024 - Observation remains. Stone is still present within the streambed at this location. 10/2/2024 - Observation remains. Stone is still present within the streambed at this location. 10/2/2024 - Observation remains. Stone is still present within the streambed at this location. 10/2/2024 - Observation remains. Stone is still present within the streambed at this location. 10/2/2024 - Observation
			VI Agency Submittals	(Note: only filled out for monthly	report
	Submittal	Date Submitted	Description	increase only med out for monthly	Status
			· · · · · · · · · · · · · · · · · · ·		
			VII. Attachments (#	#3 only attached with monthly rep	ort)
	d Sketch				
2. Pho	. Photographic Documentation				
3. 3 W	eek Look ahead schedule				

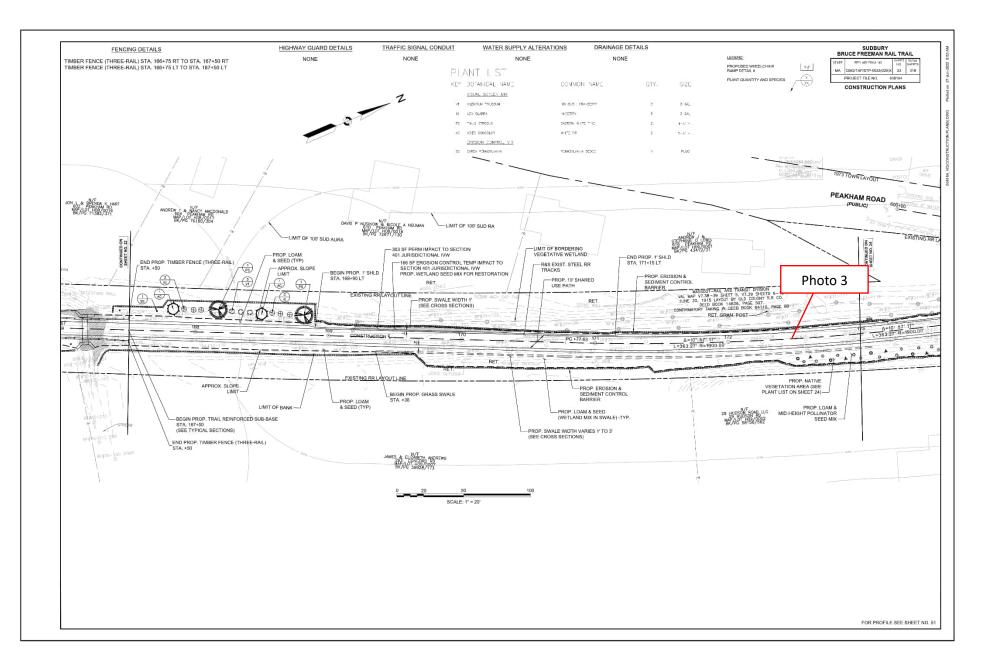




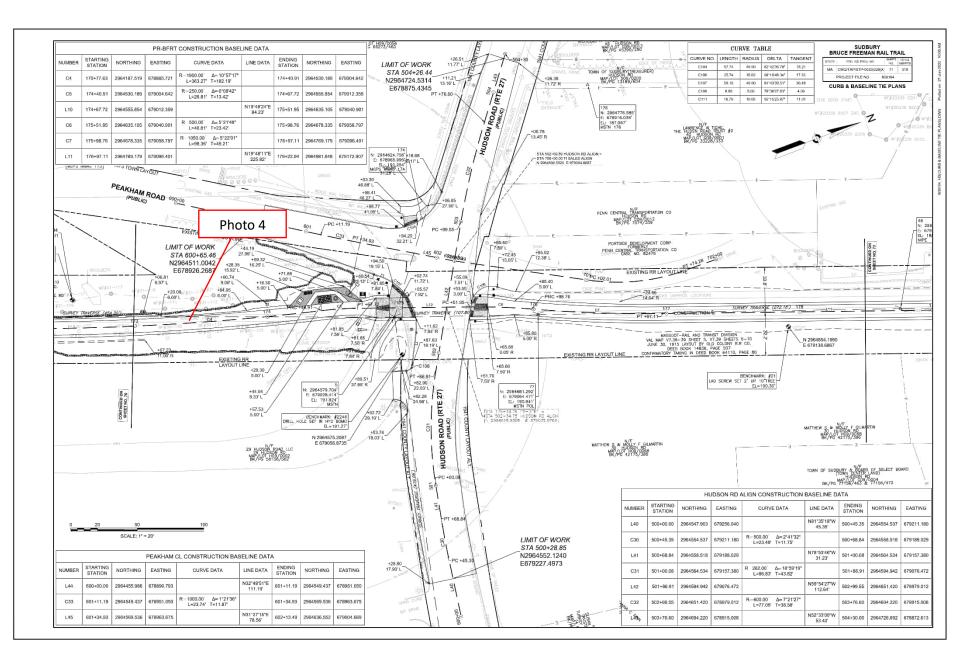




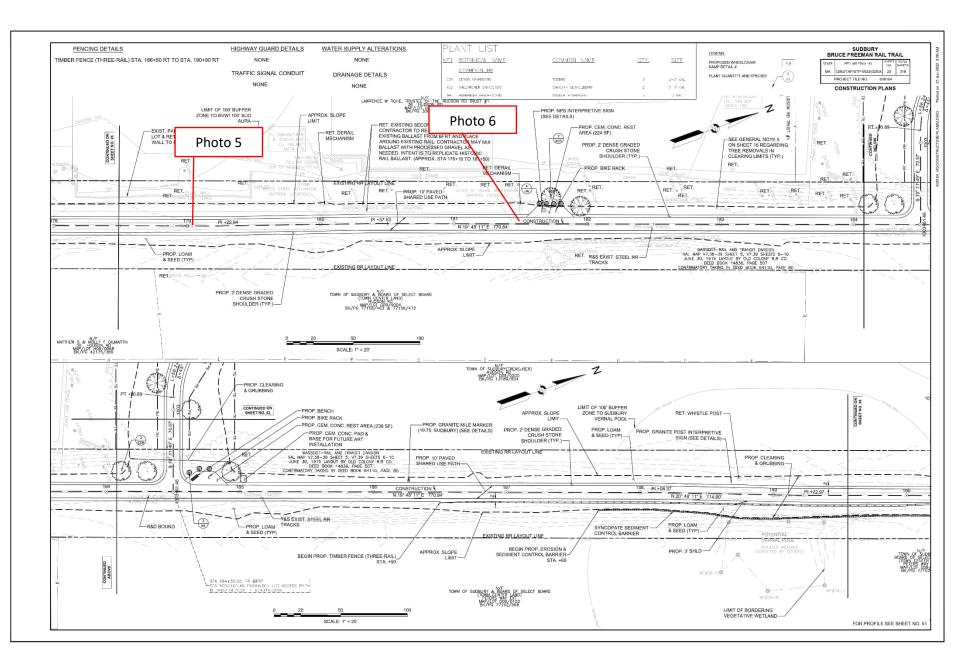
BETA IMPROVING COMMUNITIES TOGETHER



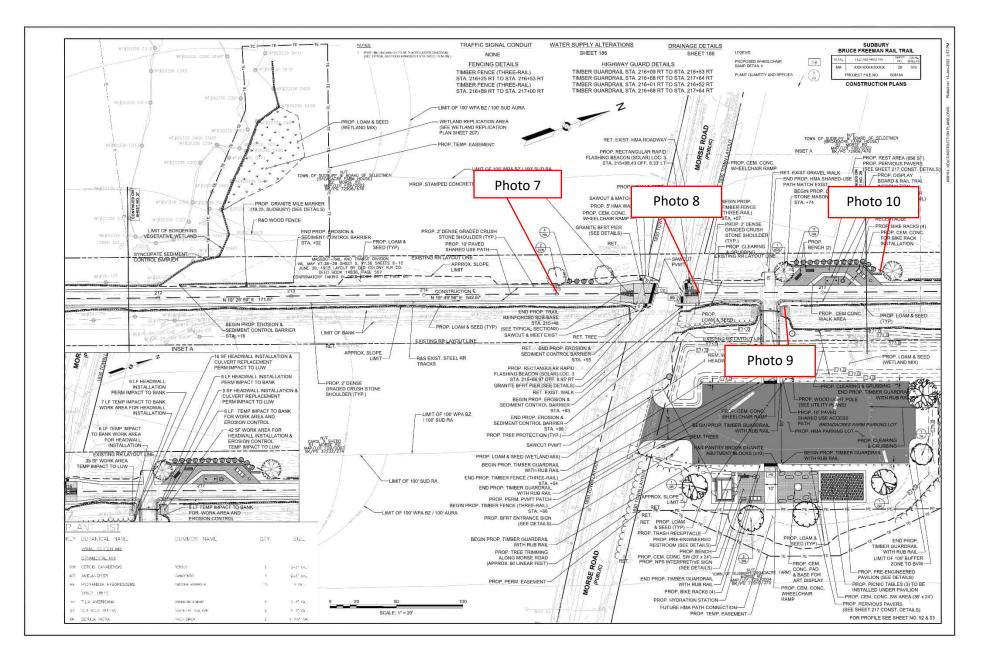




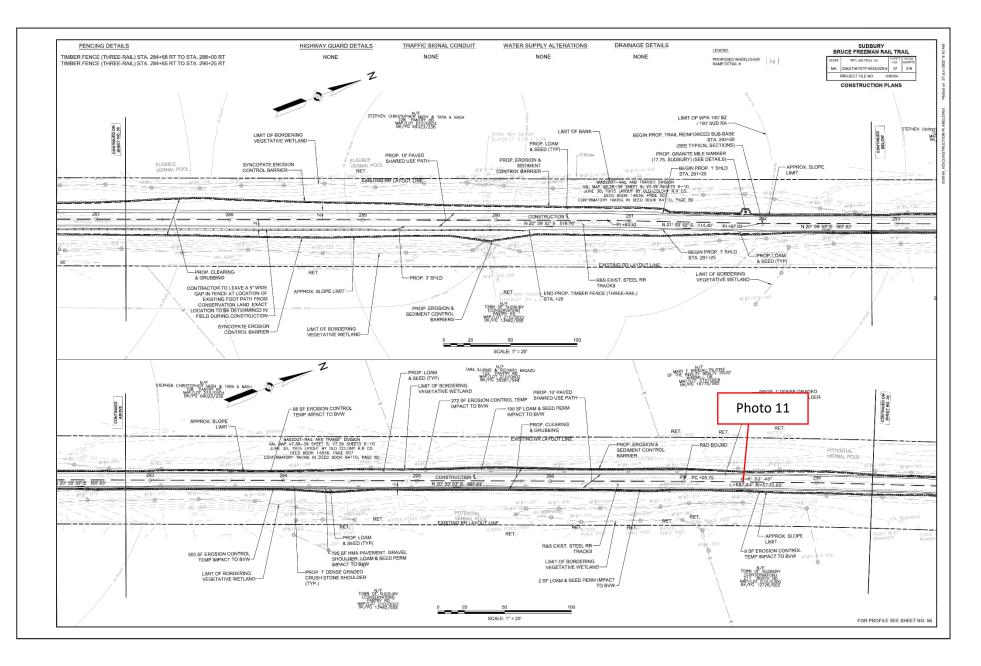
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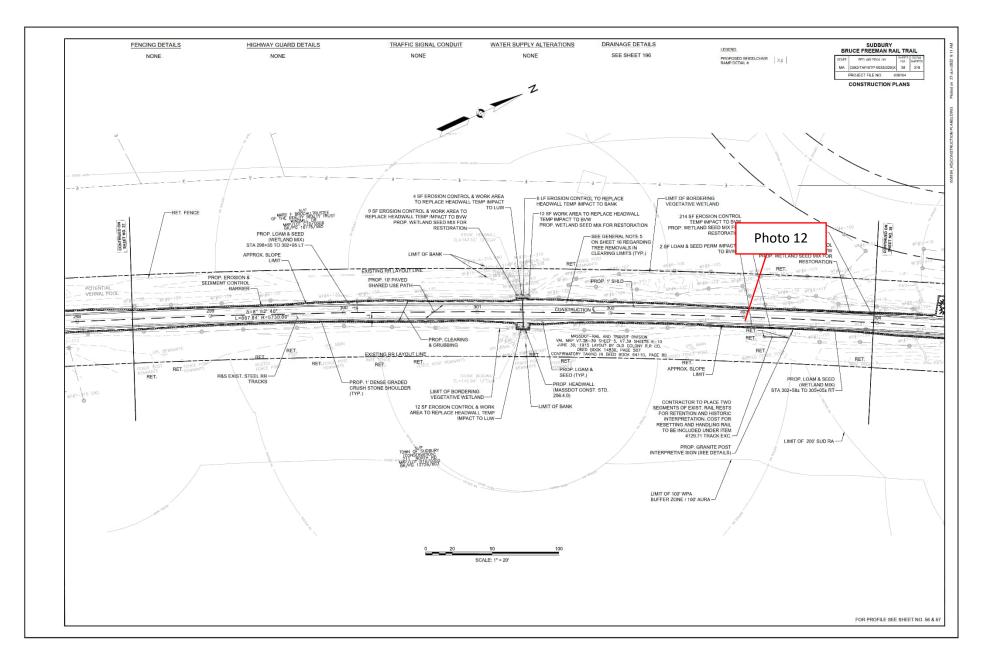




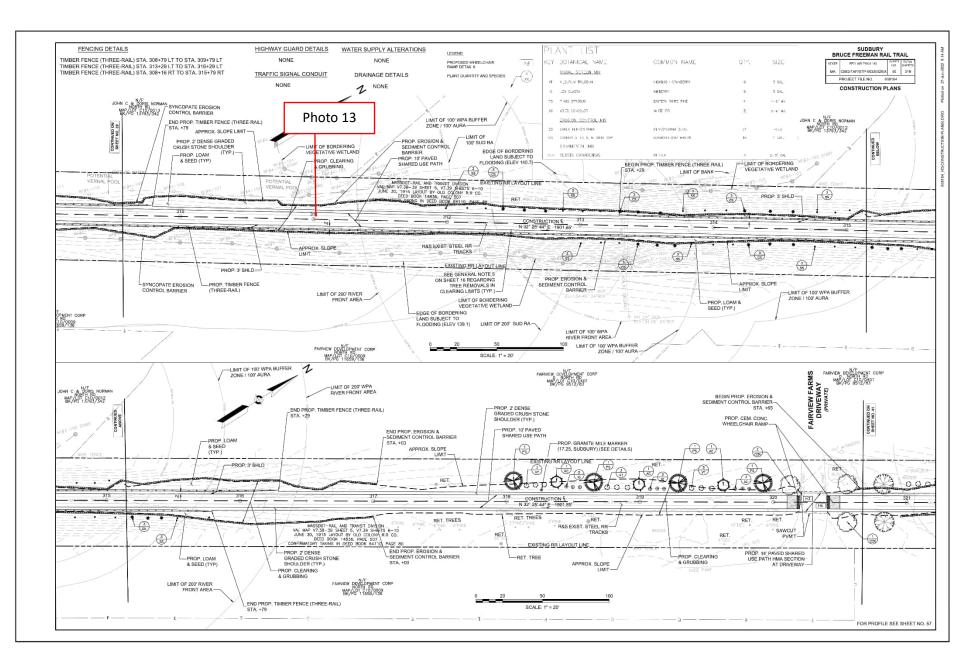




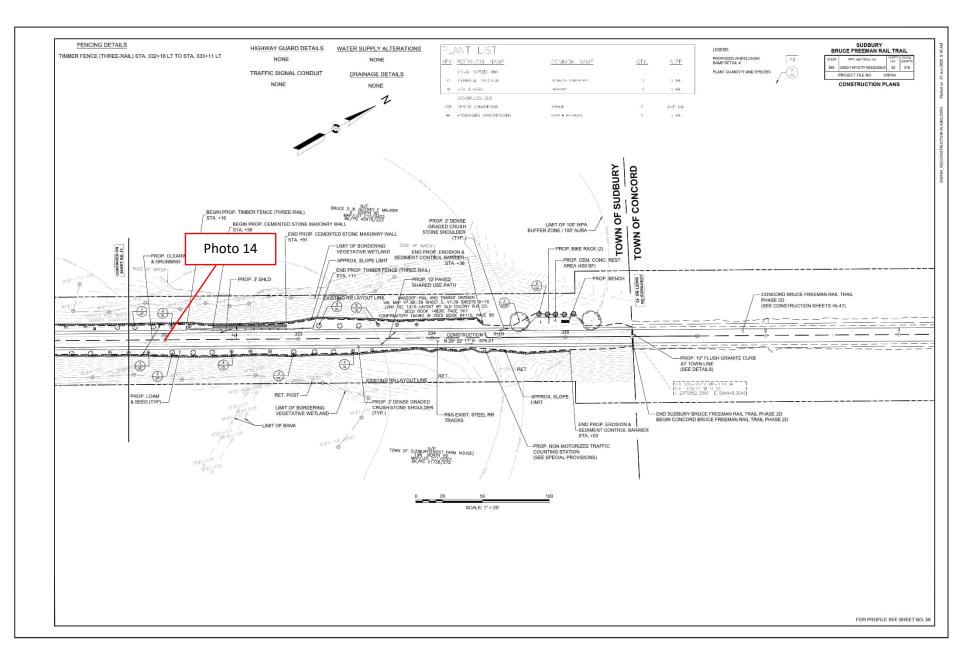




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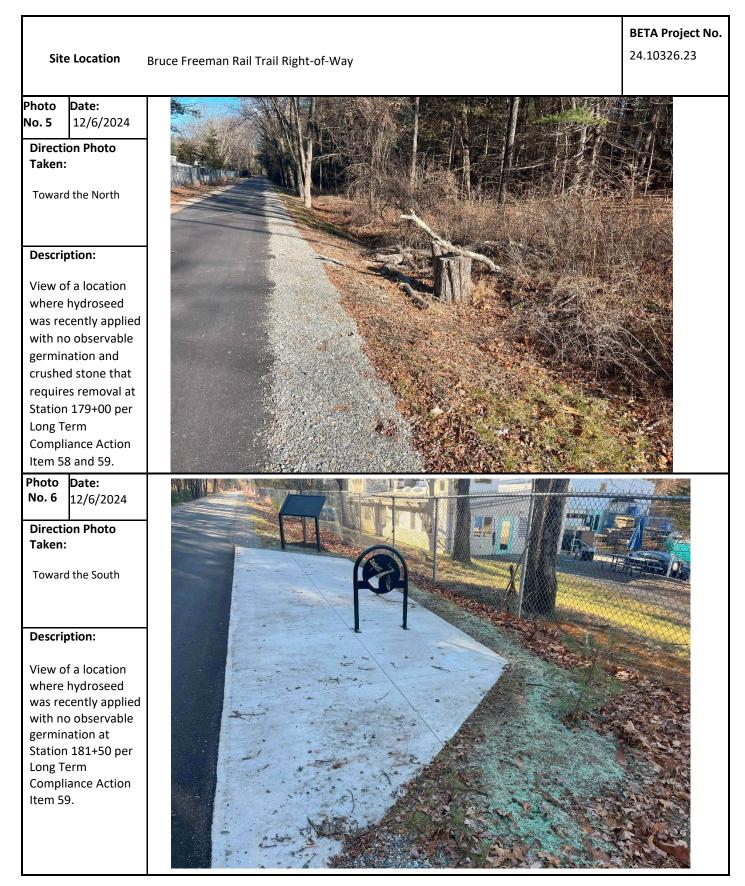


Site	e Location	Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
Photo No. 1	Date: 12/6/2024		-
Direction Photo Taken: Toward the North Description: View of the overtopped compost filter tube beyond the limits of work at Station 105+00 per Compliance Action Item 43.			
Taken	d the North		
Station require stabiliz Long T	zation per ⁻ erm liance Action		



Site Location Bruce Freeman Rail Trail Right-of-Way			BETA Project No. 24.10326.23
Photo No. 3	Date: 12/6/2024		
Direction Photo Taken:			
Towar	d the South		and a
Descri	iption:		
View of stone that is covered in leaf litter and requires			and a second
remov	val from the at Station		C C
172+0	00 to 173+00		
	ompliance n Item 53.		
Photo No. 4	Date: 12/6/2024		A THE
Direct Taken	ion Photo		
Toward the East			
Descri	iption:		Service Research
	of hydroseed		
with some germination along			
slopes at Station 172+00 to 175+00			STATE OF
per Co	ompliance		1 2 C
Action	n Item 6.		

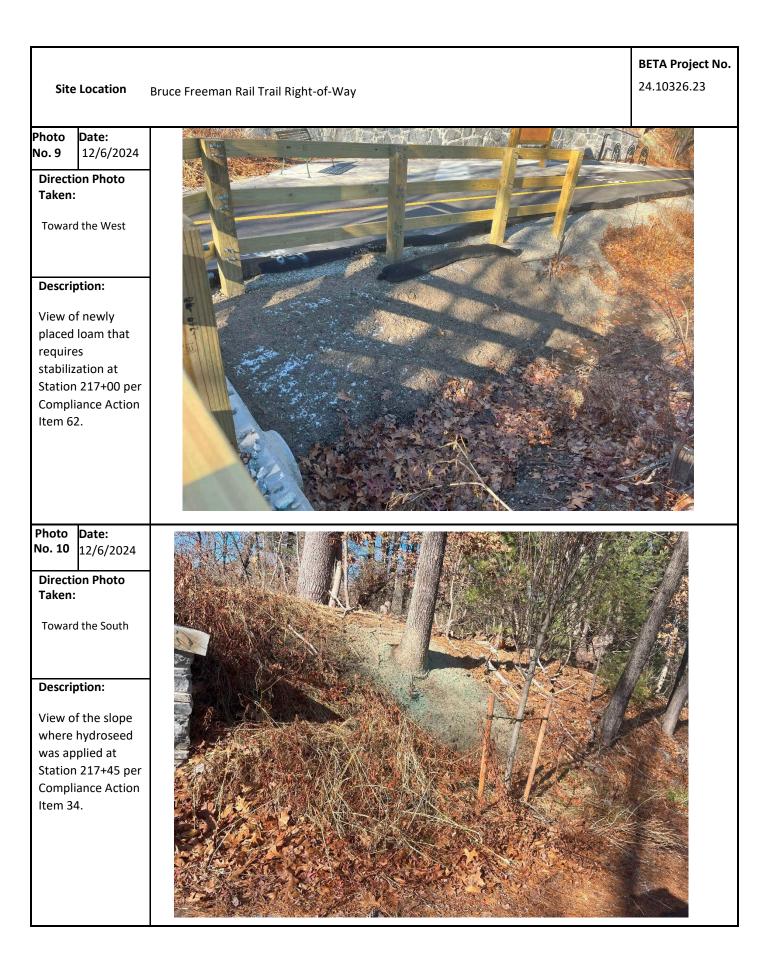






Site	Location	Bruce Freeman Rail Trail Right-of-Way	BETA Project No. 24.10326.23
	Date: 12/6/2024		
Directio Taken:	on Photo		
Toward	the North		2
Descrip	tion:		TRI
require stabiliza	loam that s		
	ance Action		
No. 8 Directio Taken:	Date: 12/6/2024 on Photo the South		
Descrip View of	tion:		
bank ha	the stream as been ed beyond		
the limi and wh stabiliza	its of work ere ation of the		
is requi Station Long Te	216+00 per erm		*
	ance Action . and 62.		







	Date:	
VO. 11	12/6/2024	11K MA
Directio Taken:	on Photo	教育理由
Toward	the North	
Descript	tion:	
View of an area of exposed soil at Station 297+50 per Long Term Compliance Action Item 59.		4
Photo I	Data	
	Date: 12/6/2024	
Directio Taken:	on Photo	
Toward the Northwest		
Descript	crushed	
stone th	nat requires I from the	
swale at Station 303+00 per Long		-
Term Co Action It	ompliance tem 58.	



