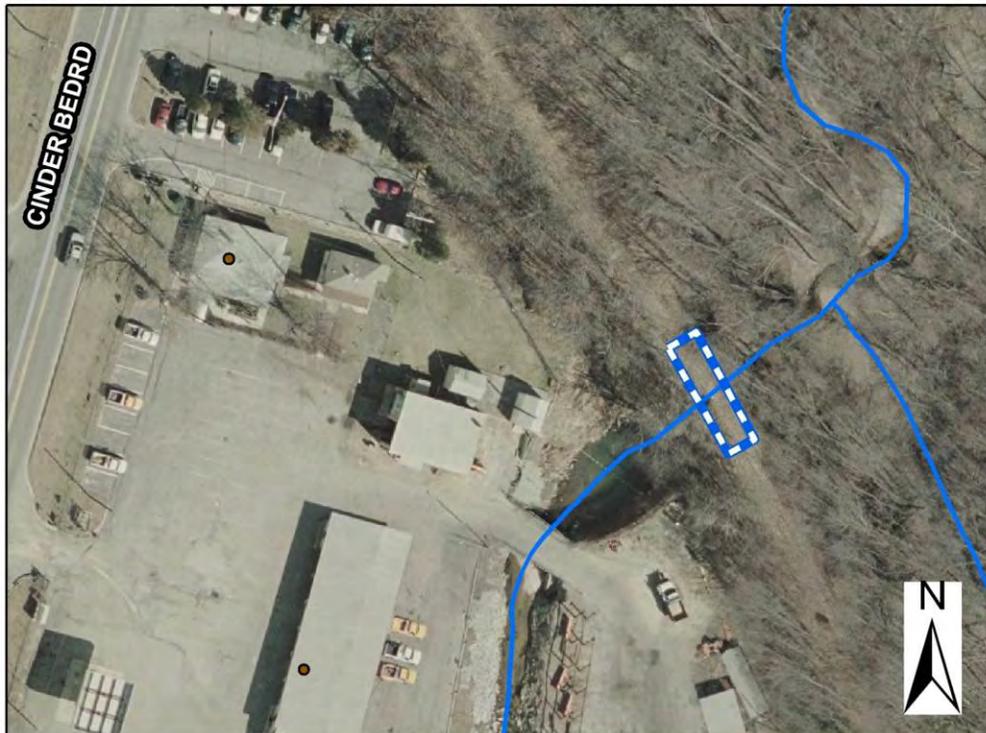


AC9600 Flood Protection/Mitigation



Address: Behind 8311 Cinder Bed Road
Location: Culvert under railroad behind Industrial Park
Land Owner: Federal
PIN: 1152 01 0001
Control Type: Water Quantity
Drainage Area: N/A
Receiving Waters: Long Branch South

Description: Based on results of watershed modeling, the culvert under the railroad behind Industrial Park overtops for both the 100-year and the 10-year events. This project will reconstruct the crossing to allow the 100-year flows to pass safely without overtopping.



Project Area Map: Conceptual plan showing potential project location

Project Benefits: Reconstructing the culvert under the railroad tracks will allow it to convey the 10- and 100-year storm without overtopping, minimize backwater effects and potentially reduce or eliminate fish passage issues at the downstream end of the culvert.

Project Design Considerations: Stormwater pond retrofit projects upstream of the crossing could impact the crossing. No projects are located within the immediate vicinity. The project site can be accessed from Cinder Bed Road. There are minimal environmental permitting requirements anticipated.

Costs:

ITEM	QUANTITY	UNITS	UNIT COST	TOTAL
Excavation	1930	CY	\$30.00	\$57,900
Stabilization graded Aggregate Base	490	CY	\$50.00	\$24,500
Structure (twin box 9 x 5)	1	LS	\$100,000.00	\$100,000
Graded Base	145	SY	\$15.00	\$2,175
Curb and Gutter	200	LF	\$30.00	\$6,000
Turf grass establishment	470	SY	\$3.00	\$1,410
Placing Topsoil	470	SY	\$5.00	\$2,350
Soil Stabilization matting	470	SY	\$5.00	\$2,350
			Initial Project Cost	\$196,685
Plantings	1	LS	5% of project (excluding pervious pavement)	\$9,834
Ancillary Items	1	LS	5% of project	\$9,834
Erosion and Sediment Control	1	LS	10% of project	\$19,669
			Base Construction Cost	\$236,022
			Mobilization (5%)	\$11,801
			Subtotal 1	\$247,823
			Contingency (25%)	\$61,956
			Subtotal 2	\$309,779
			Engineering Design, Surveys, Land Acquisition, Utility Relocations, and Permits (45%)	\$139,401
			Estimated Project Cost	\$450,000



Site Photo: Upstream endwall



Site Photo: Downstream endwall

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