



SUMMARY DOCUMENT FOR
VI ST ER STX(003): Storm Damage Repair to
Roadways, Culverts, Embankments, Bridges,
and Other Roadway Features on St. Croix,
USVI

CZM PERMIT APPLICATION
FEDERAL CONSISTENCY
DETERMINATION

APPLICANT

Government of the US Virgin Islands – Dept. of Public Works

PRIMARY CONTRACTOR

Virgin Islands Paving, Inc.

PREPARED BY

Tysam Tech, LLC.

JANUARY 18, 2022





CZM PERMIT APPLICATION
VI ST ER STX(003)
Applicant: Government of the USVI - DPW
January 18, 2022



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1.00 OVERALL PROJECT SUMMARY

Significant damage to roads, gut crossings and bridges occurred as a result of the landfall of Hurricane Maria in 2017 to the island of St. Croix, USVI. To provide the necessary repair to the damaged infrastructure, the USVI Department of Public Works (DPW) has contracted VI Paving, Inc. (VIP) to undertake the repairs at 15 different sites around St. Croix. These sites consist of different types of rehabilitation work and different project scale. Of the 15 sites, three are bridge rehabilitations, seven are culvert rehabilitations, and the remaining five are strictly roadway rehabilitations. This project is funded through the US Department of Transportation (USDOT), Federal Highway Administration, Eastern Federal Lands Highway Division and is in partnership with the USVI Department of Public Works (DPW).

The VI-ST ER STX (003) project consists of the removal of damaged asphalt and concrete pavement, pipe culverts, guardrail, retaining walls, embankment material, utility lines and poles, bridges, and other debris; and the installation of aggregate base, asphalt pavement, concrete pavement, pipe culverts, guardrail, gabion or concrete retaining wall, embankment stabilization, riprap, paved waterway, headwall, drainage inlets, cleaning drainage structures, reconditioning shoulders and ditches, replacing bridges, culvert, and utilities to provide fully functional roads, drainage systems, bridges, and utilities, complete and in place. The project also includes obtaining permits, utility coordination, right-of-way (ROW) acquisition, erosion and sediment control, temporary traffic control, pavement markings, and other miscellaneous work.

The following is a summary of the project details:

**VI ST ER STX (003) - Storm Damage Repair to Roadways, Culverts, Embankments, Bridges, and other Roadway features on St. Croix, USVI
Disaster ID# DR-4340 and VI2017-1**

Schedule A: Bridge Projects	Schedule B: Road & Culvert Rehabilitation Projects
Route 64 - East Airport Road Bridge	Route 82 - 0.5 (Chenay Bay)
Route 72 - MP 1.4 Midland Rd Bridge	Route 82 - 2.5 (Coakley Bay)
Route 7532 - 0.02	Route 82 - 3.5 (Cotton Valley)
	Route 78 - W Scenic Rd in Sweet Bottom
	Rt 80 Northshore Rd East Culverts
	Rt 80 Northshore Rd West Single Culvert
	Route 63 - MP 0.9 Concordia Rd
	Rt 732 Windsor Rd
	Route 753 Mt Welcome Rd
	Route 763 - 0.00
	Route 765 - 0.00
	Rt 80 - MP 0.8 North Shore Rd

This package submission is an application for permits for the following five (5) out of the above 15 project sites:

Schedule B: Road & Culvert Rehabilitation Projects	
Route 82 - 2.5 (Coakley Bay)	Rt 80 Northshore Rd East Culverts
Route 82 - 3.5 (Cotton Valley)	Rt 80 Northshore Rd West Single Culvert
Route 63 - MP 0.9 Concordia Rd	

2.00 CULVERT & ROAD REPLACEMENT

These 5 project locations entail the demolition and replacement of roadways along with existing culvert systems.

2.01 RT. 82 MP-2.5 EAST END ROAD – COAKLEY BAY

PROJECT SUMMARY

For this particular site location, 250 linear feet of roadway at MP 2.5 on Route 82 will be rehabilitated. The existing 18-inch reinforced concrete pipe (RCP) culvert will be removed and replaced with two 48-inch HDPE pipe culverts. Culvert inlet elevation will be lowered, and inlet width increased. The concrete headwalls on both sides of the roadway will be removed and replaced and additional rip rap will be installed at the spillway to further stabilize the culvert outlet. The damaged guardrail will also be removed and replaced.

TIMELINE

Phase 1 – Site Preparation

This phase will consist of mobilization, Erosion & Sediment control set up, along with Traffic and Pedestrian Control Plan that will follow USDOT Maintenance of Traffic (MOT) requirements.

Approximate Timeline – 14 days

Phase 2 – Demolition

This phase will begin with initial site clearing and basic grubbing, followed by demolition of the culvert, headwall and existing road structure.

Approximate Timeline – 21 days

Phase 3 – Earth and Culvert Construction

This phase will entail embankment shaping and setting, culvert installation and headwall casting. Inlet and outlet modification and installation will complete the infrastructure layout.

Approximate Timeline – 21 days

Phase 4 – Roadway Construction

This final phase will focus on roadway construction and profile, followed by installation of guardrails signage and pavement markings.

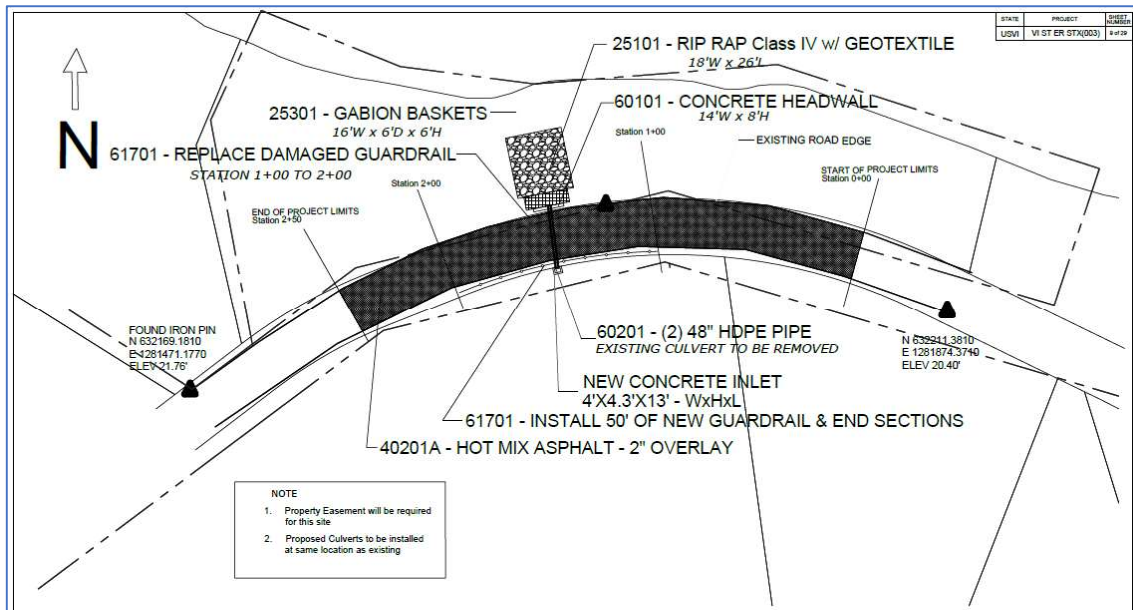
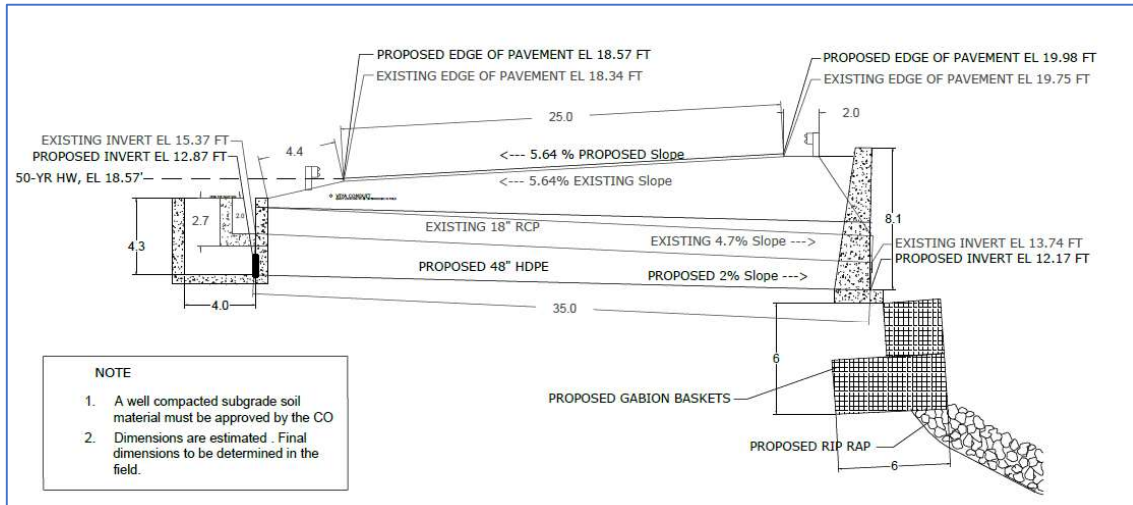
Approximate Timeline – 21 days

Total time for construction completion is estimated at 90 days.

CHANGES FROM PREVIOUS SUBMITTAL

- Damaged concrete culvert will be fully replaced and upgraded from one 18 inch culvert to two 48-inch culverts.
- New drainage and headwall supported by gabion basket substrate.
- Outlet rip rap reinforcement installed.

SITE MAPS



2.02 RT. 82 - MP 3.5 – EAST END ROAD - COTTON VALLEY

PROJECT SUMMARY

The purpose of this project location is to rehabilitate a 200-foot section of roadway, as well as replace the existing CMP culverts and damaged guardrail. To protect this section from future storm damage, the road will be raised to accommodate the larger culverts and rip rap and gabion baskets will be added to the east side of the roadway shoulder and in the culvert outlet to provide improved stability and protection of the road edge.

TIMELINE

Phase 1 – Site Preparation

This phase will consist of mobilization, Erosion & Sediment control set up, along with Traffic and Pedestrian Control Plan that will follow USDOT Maintenance of Traffic (MOT) requirements.

Approximate Timeline – 14 days

Phase 2 – Demolition

This phase will begin with initial site clearing and basic grubbing, followed by demolition of the culvert and existing road structure.

Approximate Timeline – 21 days

Phase 3 – Earth and Culvert Construction

This phase will entail embankment shaping and setting, culvert installation and headwall casting. Inlet and outlet modification and installation will complete the infrastructure layout.

Approximate Timeline – 21 days

Phase 4 – Roadway Construction

This final phase will focus on roadway construction and profile, followed by installation of guardrails signage and pavement markings.

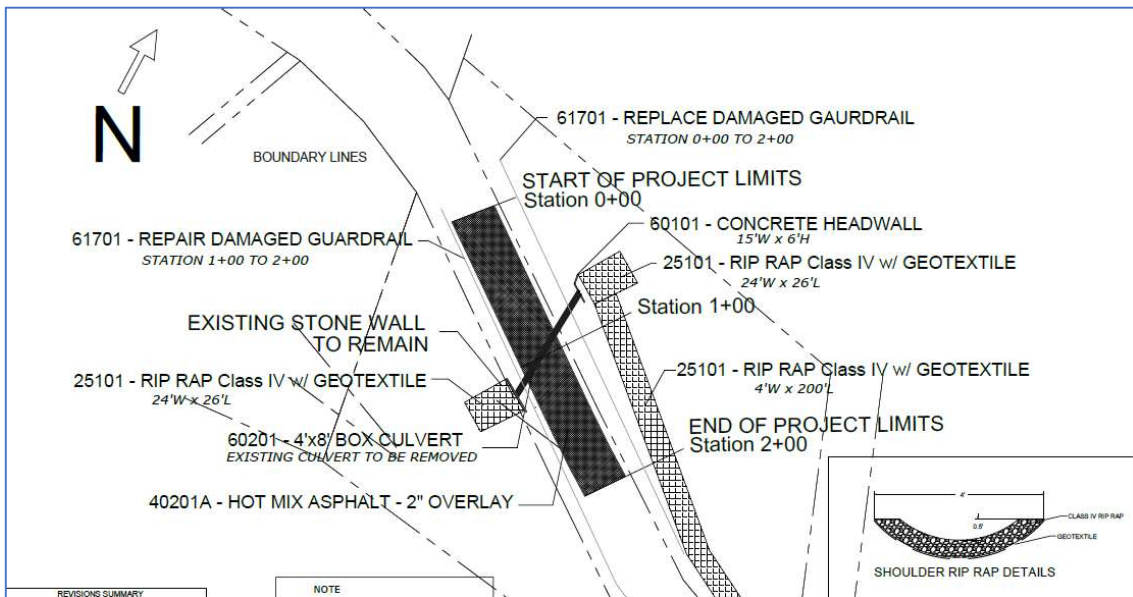
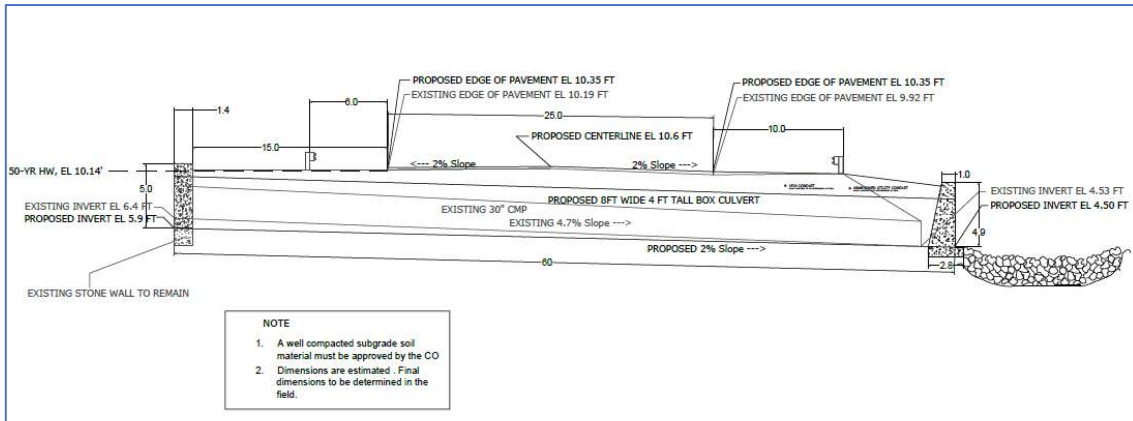
Approximate Timeline – 21 days

Total time for construction completion is estimated at 90 days.

CHANGES FROM PREVIOUS SUBMITTAL

- Increase size of existing culverts from 30 inch to a 4'x8' box culvert.
- New northside headwall and outlet structure.
- Raised elevation of road with new profile to allow for drainage.
- Rip rap spillway along north edge of road section improves shoulder structural integrity.

SITE MAPS



2.03 RT. 80 NORTHSORE RD EAST CULVERTS

For the East Culverts on Rt. 80 Northshore, 332 linear feet of roadway on Rt. 80 North Shore Road will be rehabilitated. The existing 48-inch corrugated metal pipe (CMP) culvert will be removed and replaced with three 36-inch HDPE pipe culverts. The current culvert outlet elevation is higher than the inlet elevation. This will be corrected during installation with a proposed 2% slope downward to new culvert outlet. Concrete headwalls on both sides of the roadway will be replaced and the inlet will require a drop inlet structure on the south side of the roadway. The damaged guardrail will also be removed and replaced. Gabion baskets will provide spillway structure, and additional rip rap will be installed at the culvert outlet to provide improved stability.

The proposed construction will remain within the footprint of the existing roadway.

TIMELINE

Phase 1 – Site Preparation

This phase will consist of mobilization and initial survey, Erosion & Sediment control set up, along with Traffic and Pedestrian Control Plan that will follow a USDOT compliant Maintenance of Traffic (MOT).

Approximate Timeline – 7 days

Phase 2 – Demolition

This phase will begin with initial site clearing and basic grubbing, demolition of the culvert, headwall and existing damaged road structure, and finally grading and excavation of soil and substrate will commence to prepare new structures for installation.

Approximate Timeline – 14 days

Phase 3 – Earth and Culvert Construction

This phase will entail construction and embankment shaping and setting, culvert installation and headwall casting. Inlet and Outlet modification and installation will complete the infrastructure layout.

Approximate Timeline – 21 days

Phase 4 – Roadway Construction

This final phase will focus on roadway construction and profile, guardrails, installation of signage and pavement markings.

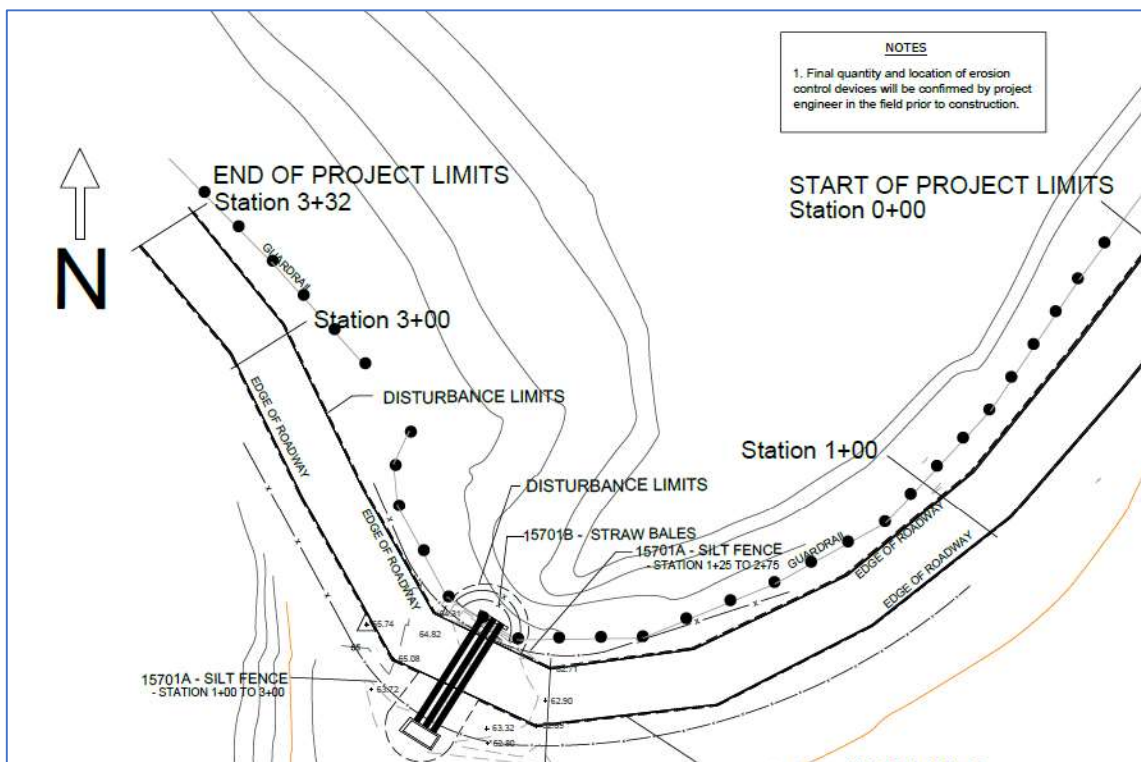
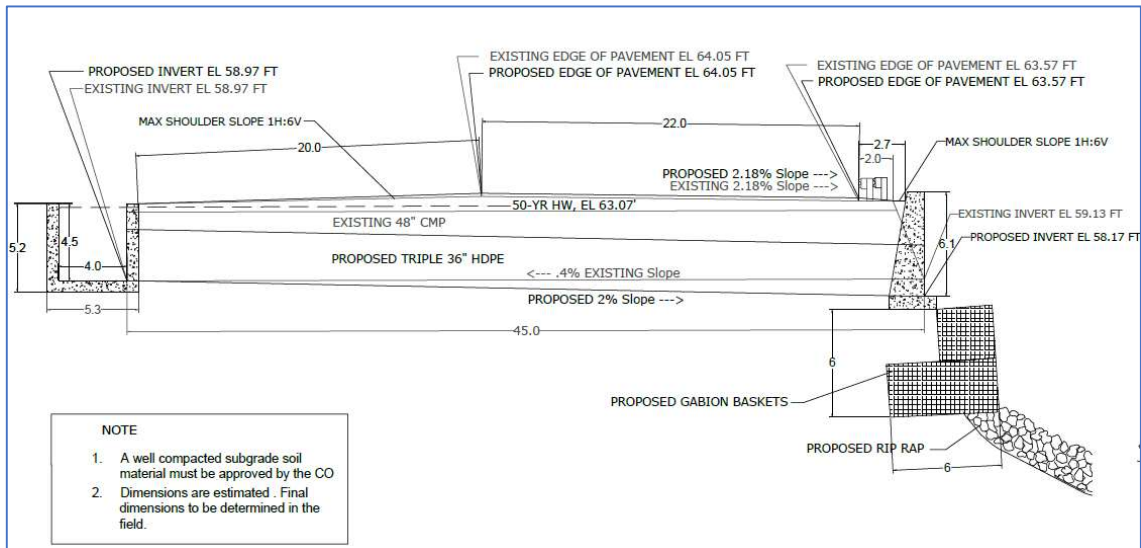
Approximate Timeline – 14 days

Total estimated time for construction completion is estimated at 49-56 days.

CHANGES FROM PREVIOUS SUBMITTAL

- Culvert size changes from one 48" CMP to three 36" HDPE culverts.
- New inlet structure on southside and headwall and outlet structure on northside.
- Raised elevation of road with new profile to allow for drainage.

SITE MAPS



2.04 RT. 80 NORTHSORE RD WEST SINGLE CULVERT

For the West Culverts on Rt. 80 Northshore, 189 linear feet of roadway on Rt. 80 North Shore Road will be rehabilitated. The existing 15-inch HDPE pipe culvert will be removed and replaced with a 24-inch HDPE pipe culvert. The concrete inlet will be increased in area to accommodate the increase pipe size, and the concrete headwall at culvert outlet will be replaced. The damaged guardrail will also be removed and replaced, and additional rip rap will be installed at the culvert outlet to provide improved stability and long-term resiliency to storm events and flooding.

The proposed construction will remain within the footprint of the existing roadway.

TIMELINE

Phase 1 – Site Preparation

This phase will consist of mobilization and initial survey, Erosion & Sediment control set up, along with Traffic and Pedestrian Control Plan that will follow a USDOT compliant Maintenance of Traffic (MOT).

Approximate Timeline – 7 days

Phase 2 – Demolition

This phase will begin with initial site clearing and basic grubbing, demolition of the culvert, headwall and existing damaged road structure, and finally grading and excavation of soil and substrate will commence to prepare new structures for installation.

Approximate Timeline – 14 days

Phase 3 – Earth and Culvert Construction

This phase will entail construction and embankment shaping and setting, culvert installation and headwall casting. Inlet and Outlet modification and installation will complete the infrastructure layout.

Approximate Timeline – 21 days

Phase 4 – Roadway Construction

This final phase will focus on roadway construction and profile, guardrails, installation of signage and pavement markings.

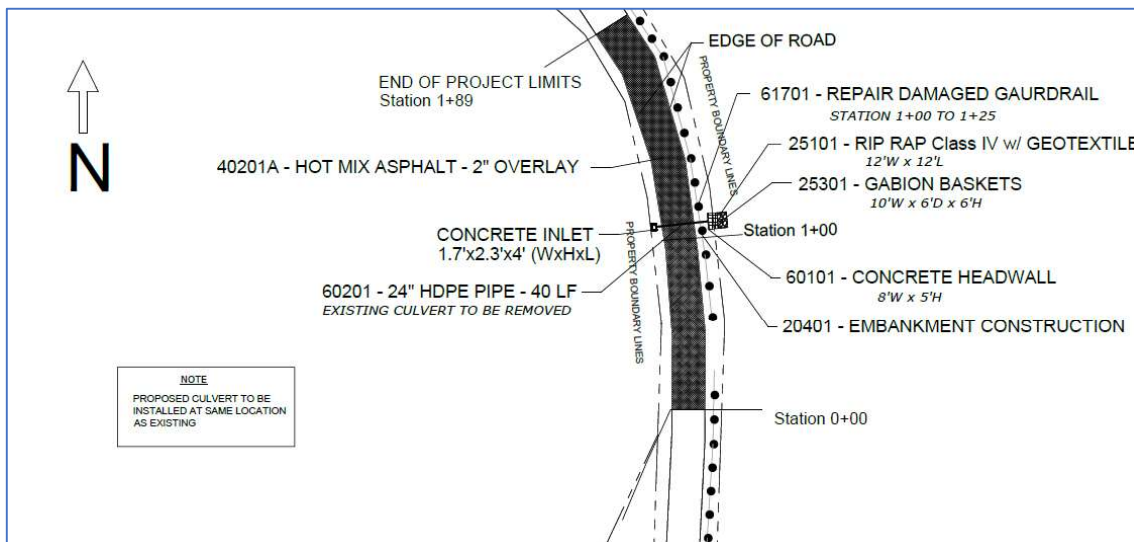
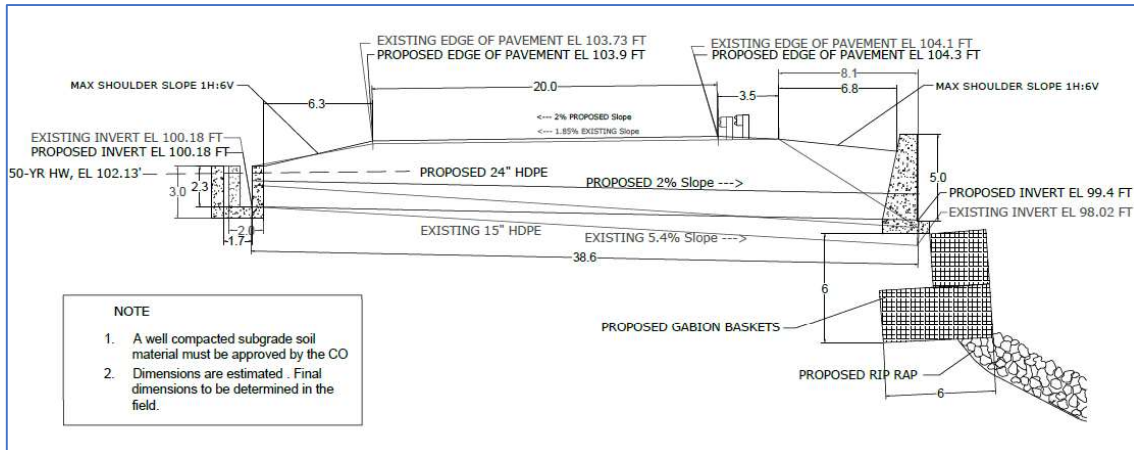
Approximate Timeline – 14 days

Total estimated time for construction completion is estimated at 49-56 days.

CHANGES FROM PREVIOUS SUBMITTAL

- Culvert size increased from 15 inch to 24 inch. Material is changed to longer lasting HDPE.
- New southside inlet structure and new northside headwall and outlet structure.
- Raised elevation of road with new profile to allow for drainage.

SITE MAPS



2.05 RT. 63 CONCORDIA ROAD

For the Rt. 63 Concordia site under project VI ST ER STX(003), 40 linear feet of roadway at MP 0.9 of Rt. 63 (Concordia Road) will be rehabilitated. This will include removal of the existing CMP culvert and replacement with three 48" HDPE pipe culverts. Concrete headwalls will be added to both the inlet and outlet of the new culvert and geotextile-lined riprap spillways will stabilize the headwall inlet and outlet. The roadway will receive six inches of asphalt (4 inches asphalt base and 2 inch surface layer) over an 8 inch minimum aggregate base to cover the new culvert trench to seal the roadway and provide a crown profile for adequate drainage.

The proposed construction will remain within the footprint of the existing roadway.

TIMELINE

Phase 1 – Site Preparation

This phase will consist of mobilization, Erosion & Sediment control set up, along with Traffic and Pedestrian Control Plan that will follow USDOT Maintenance of Traffic (MOT) requirements.

Approximate Timeline – 7 days

Phase 2 – Demolition

This phase will begin with initial site clearing and basic grubbing, followed by demolition of the culvert and existing road structure.

Approximate Timeline – 7 days

Phase 3 – Earth and Culvert Construction

This phase will entail embankment shaping and setting, culvert installation and headwall casting. Inlet and outlet modification and installation of riprap spillways will complete the infrastructure layout.

Approximate Timeline – 7 days

Phase 4 – Roadway Construction

This final phase will focus on roadway construction and profile, followed by installation of guardrails signage and pavement markings.

Approximate Timeline – 7 days

Total time for construction completion is estimated at 28 days.

CHANGES FROM PREVIOUS SUBMITTAL

- Culvert size has increased to 48" diameter pipes, and three culverts are now proposed.
- Material is changed to longer lasting HDPE.
- New northside headwall and outlet structure.
- Raised elevation of road with new profile to allow for improved drainage.
- Rip rap spillway along both east and west edge of road section improves shoulder structural integrity.

SITE MAPS

