

CNZ140 Polk Co.
Easley Ford Road, Bridge Over Conasauga
River, LM 1.53
Mandatory Pre-bid Meeting
4/16/25

Prequalification

- Be sure to sign in if you are a prime contractor!
- Mandatory Pre-Bid Meeting attendance is required for pre-qualification.
- Intent of the mandatory pre-bid meeting today is to cover some of the unique project commitments we have for this project.





Project Location



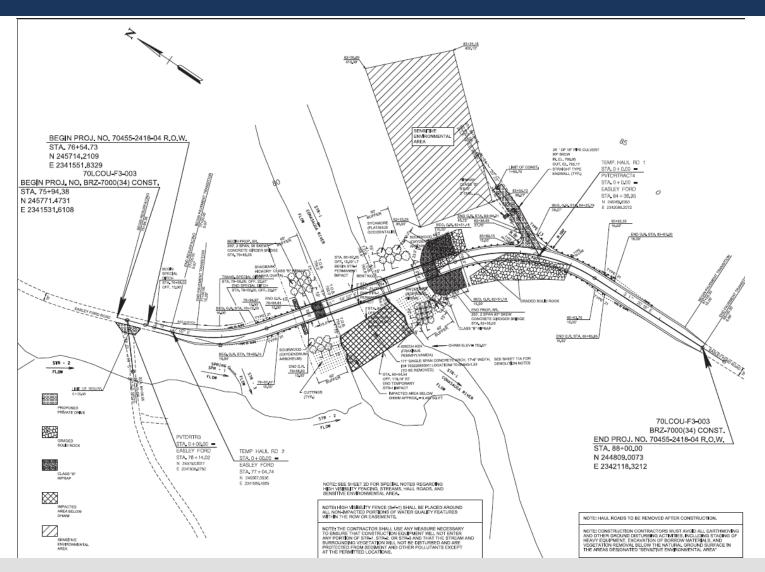


Project Overview

- Existing Structure Built in 1924-Single Span Concrete Arch Bridge-Listed as a Historic Highway Bridge
- Polk County Commission voted to demolish the structure due to maintaining the low sufficiency rating (32.3) and the posted weight limit of 5 tons.
- Environmental Impacts to the Conasauga River
 (Exceptional Tennessee Water) requires no proposed
 piers be contained in the ordinary high-water mark of the
 River.
- East proposed Roadway Approach of the structure is in a floodplain.

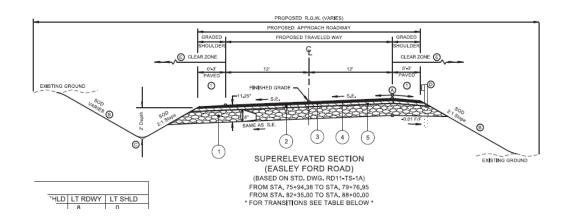


Project Overview

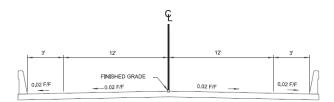




Roadway Typical Sections



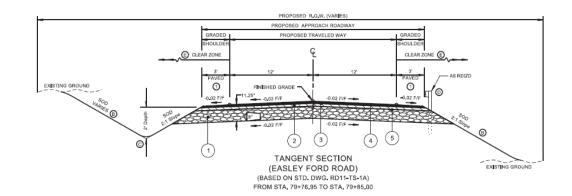
- 24' lanes and 3' shoulder roadway approaches
- 24' lanes and 3' shoulder plus parapets for proposed bridge



PROPOSED BRIDGE SECTION (EASLEY FORD ROAD) STA, 79+85,00 TO STA, 82+35,00

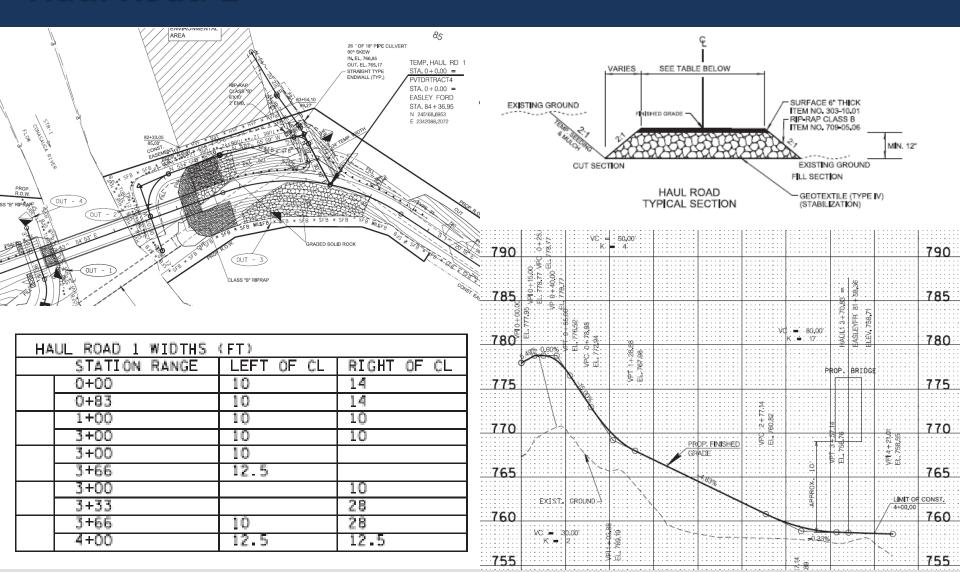
PROPOSED BRIDGE APPROACH SECTION (EASLEY FORD ROAD)

(BASED ON STRUCTURES STD. DWG, STD-1-5) STA, 79+61.00 TO STA, 79+85.00 STA, 82+35.00 TO STA, 82+59.00



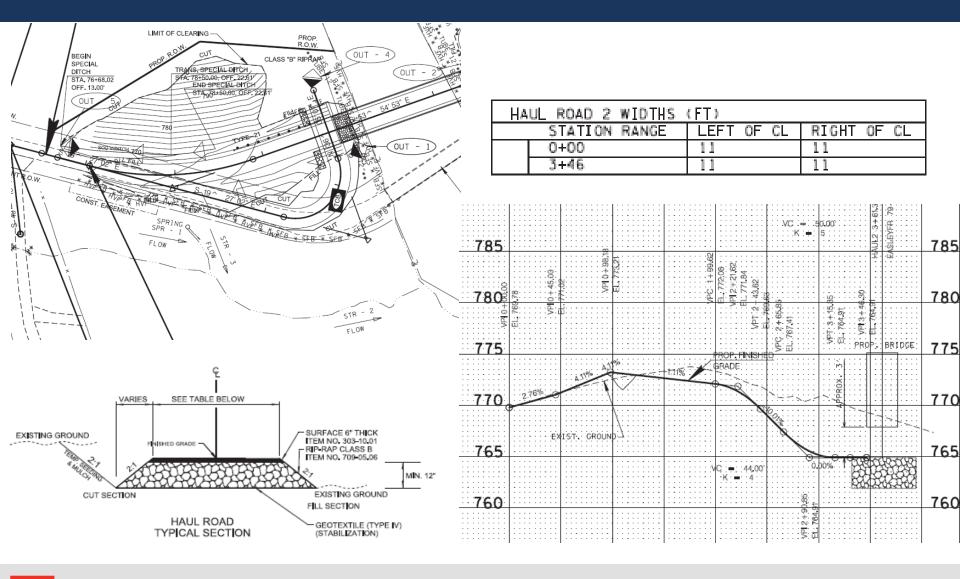


Haul Road 1





Haul Road 2





Demolition Activities and Notes

- HQ Environmental Needs to be Involved.
- Required Proposed Demolition Activities
 - Removal of Historical Bridge
 - Stream Bank Restoration
 - 3-month
 Removal Window
 - Signs and Flashing Beacons Upstream
 - No In-Stream work from Feb 1-Apr 30
- Required Bridge
 Demolition Notes
 - Contractor Fees-Blasting & TWRA

EPSC STAGE: FINAL NOTES PROPOSED DEMOLITION ACTIVITIES

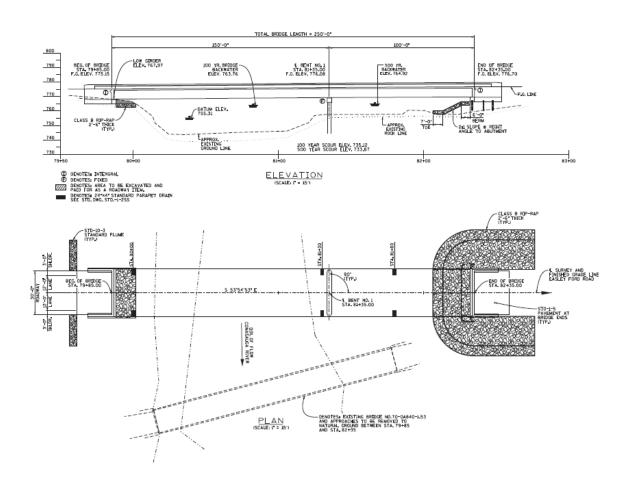
- (1) THE DECKING AND PORTIONS OF THE SUPERSTRUCTURE WILL BE SAW-CUT AND REMOVED FROM THE STRUCTURE. NETTING AND OTHER CATCHMENT WILL BE PLACED UNDER THE BRIDGE TO ENSURE THAT NO MATERIAL IS DROPPED INTO THE RIVER DURING THIS PROCESS AND TO PROTECT RIVER TRAFFIC.
- (2) THE CONCRETE ARCH STRUCTURE, DUE TO ITS DESIGN AND CURRENT CONDITION WOULD PREVENT THE SUBSTRUCTURE FROM BEING SAFELY SAWCUT AND REMOVED. THE REMOVAL OF ANY PORTION OF THE ARCH STRUCTURE WOULD RESULT IN THE COLLAPSE OF THE REMAINDER OF THE STRUCTURE.
- (3) THE BRIDGE SUBSTRUCTURE WILL BE BLASTED AND DROPPED INTO THE WATER IN LARGE SECTIONS, WHICH CAN BE LIFTED AND REMOVED FROM THE WATER WITH MECHANICAL EQUIPMENT.
- (4) THE BRIDGE MATERIAL WILL BE REMOVED USING EXCAVATORS OR OTHER MECHANICAL EQUIPMENT WHICH WILL BE STAGED ON THE BANKS. ALL EQUIPMENT WILL REMAIN ABOVE THE OHWM (ELEVATION = 783.51 FT).
- (5) THE MATERIAL WILL BE HAULED TO AN APPROVED WASTE SITE PER THE TDOT WASTE AND BORROW MANUAL.
- (B) THE BRIDGE REMOVAL WILL IMPACT APPROXIMATELY 9,400 SQ. FT. BELOW THE OHIVM
- (7) IMPACTED STREAM BANKS WILL BE RESTORED USING NATIVE VEGETATION
- (B) THE EASTERN ABUTMENT IS LOCATED IN AN UPLAND AREA. REMOVAL OF THIS ABUTMENT WILL NOT HAVE ANY IMPACTS BELOW THE OHWM.
- (9) A PORTION OF THE WESTERN ABUTMENT IS LOCATED BELOW THE OHWM. THIS ABUTMENT IS SEVERELY UNDERCUT. ONCE THIS ABUTMENT IS REMOVED, THE STREAM BANK WILL BE RESTORED TO MIMIC SURROUNDING CONTOURS AS CLOSELY AS POSSIBLE. ANY WORK BELOW THE OHWM FOR THE RESTORATION OF THE STREAM BANK WILL BE SEPARATED FROM FLOWING WATER USING STREAM DIVERSIONS, COFFER DAMS. OR OTHER STANDARD BEST MANAGEMENT PRACTICES.
- (10) THE CONTRACTOR WILL HAVE THREE MONTHS STARTING FROM THE TIME THE STRUCTURE IS DROPPED TO REMOVE ALL MATERIAL FROM THE RIVER AND COMPLETE ALL WORK BELOW THE OHWM.
- (11) SIGNS AND FLASHING BEACONS WILL BE INSTALLED UPSTREAM OF THE RIVER FOR THE DURATION OF THE REMOVAL PROCESS, FLAGGING THE DEMOLITION SITE AS A HAZARD TO RIVER TRAFFIC.
- (12) THE CONTRACTOR WILL NOTIFY THE DEPARTMENT AT LEAST TWO WEEKS PRIOR TO BLASTING SO THAT SWEEPS MAY BE CONDUCTED.
- (13) NO INSTREAM WORK WILL OCCUR DURING THE TIMEFRAME FROM FEBRUARY 18T – APRIL 30TH.

PERMITTABLE PLANS REVIEW (04-09-2024) BRIDGE DEMOLITION NOTES

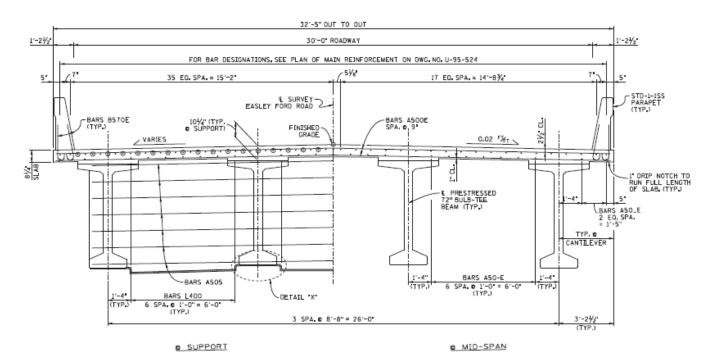
- BLASTING WILL BE ALLOWED IN THE CONASAUGA RIVER FOR THE REMOVAL OF THE EXISTING BRIDGE. THE FOLLOWING CONDITIONS, IN ADDITION TO THE PROJECT COMMITMENTS, WILL BE REQUIRED:
 - THE TDOT REGION ENVIRONMENTAL SECTION WILL SEND THE FINAL DEMOLITION PLAN TO TDEC, USFWS, USACE, TVA AND TWRA FOR THEIR APPROVAL.
 - THE CONTRACTOR WILL PROVIDE TOOT WITH TENTATIVE DATES FOR EACH BLASTING PHASE.
 - THE CONTRACTOR WILL CONTACT THE TDOT REGION ENVIRONMENTAL SECTION A MINIMUM OF TWO WEEKS BEFORE THE DATE OF EACH BLAST.
 - d. THE TDOT REGION ENVIRONMENTAL SECTION WILL CONTACT TWRA A MINIMUM OF TWO WEEKS BEFORE THE DATE OF EACH BLAST TO COORDINATE A PRE-BLAST MEETING
 - e. THE CONTRACTOR WILL BE REQUIRED TO PAY ANY FEES ASSOCIATED WITH BLASTING.
 - TWRA MAY REQUEST THE CONTRACTOR TO REIMBURSE TWRA PERSONNEL FOR THEIR TIME DURING THE BLASTING AND FOR ANY FISH KILLED DUE TO BLAST NG.
 - THE CONTRACTOR WILL SOUND (IDENTIFY DEBRIS USING SONAR) THE RIVER BOTTOM BEFORE AND AFTER DEMOLITION TO ENSURE THAT ALL MATERIAL HAS BEEN REMOVED.
 - TDOT ENVIRONMENTAL DIVISION PERSONNEL WILL BE ON-SITE DURING EACH BLAST.
 - THE CONTRACTOR IS TO USE BLASTING BMPS TO PREVEN' EXCESSIVE SEDIMENT RELEASE AND DISCHARGE OF BRIDGE MATERIALS INTO THE RIVER.
 - TWRA MAY REQUIRE THE CONTRACTOR TO USE SPECIES SPECIFIC PROTECTIVE MEASURES E.G., F-SH AND BIRD SCARE SHOTS AND TIME OF DAY RESTRICTIONS.
 - THE FINAL DEMOLITION PLAN WILL INCLUDE THE FOLLOWING CONTACT INFORMATION: TDOT PRIMARY CONTACT: HQ ENVIRONMENTAL DIVISION -TDOT.Env.Ecology@tn.gov



- Bridge Total Length 250ft
- Bridge Width =32'-5".
- Rail STD-1-1SS





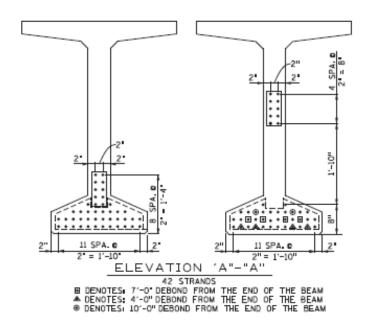


- 8.25 " Slab.
- Beam Spacing 8'-8"
- Overhang = 3'-2 1/2".
- BT-72 Beam.
- Slab F'c = 4 ksi

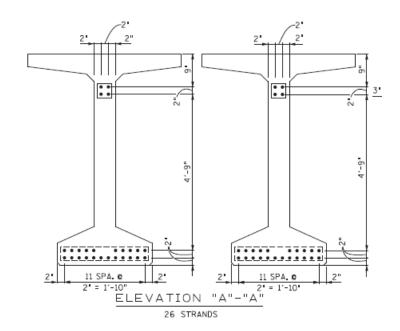
TYPICAL CROSS SECTION
(LOOKING FORWARD ON SURVEY)



Beam BT_72 6/10 Strands, 270 ksi. F'ci= 8,500 psi F'c final = 10,000 psi



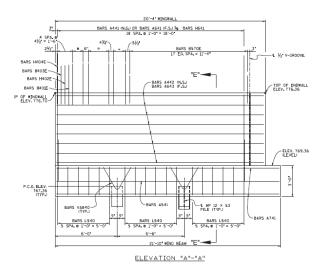
Span No. 1

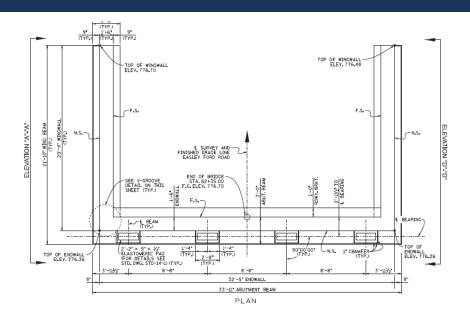


Span No. 2



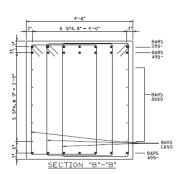
Integral Abutment
Abutment No. 1 bearing on
Rock
Abutment No. 2, End Bearing
Pile.
Piles are HS-12x53

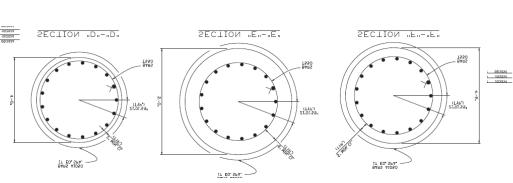


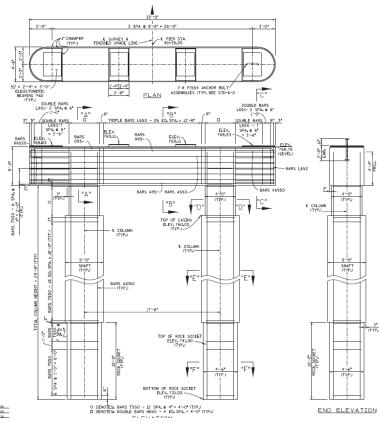




- Multi Post Pier.
- Drilled shaft Foundation
- Pier Beam Class A Concrete
- Drilled shaft SH-SCC Concrete.
- End Bearing Shaft.
- Permanent Casing.









Environmental Commitments: Historic Bridge

EDHS003

The Easley Ford Road bridge was determined eligible for listing in the National Register of Historic Places in TDOT's 2008 Historic Bridge Survey. As this bridge will be removed and replaced, and therefore no longer be eligible, TDOT will mitigate this adverse effect by nominating a similar bridge type in TDOT's Region 2 that could be listed in the National Register of Historic Places. The bridge over Camp Creek in Greene County, known locally as the Rainbow Bridge, was identified. TDOT will hire a consultant to write the National Register nomination and work with the TN-SHPO to have it listed.

EDHS002

In order to fulfill the requirements of the Executed Memorandum of Agreement between FHWA, TDOT, TN-SHPO and the Advisory Council for Historic Preservation, TDOT will hire a consultant to thoroughly document the Easley Ford Road Bridge using digital photography prior to demolition of the existing bridge.

National Historic Preservation Act (Section 106):

2023 Memorandum of Agreement among The Federal Highway Administration and The Tennessee State Historic Preservation Officer (SHPO)

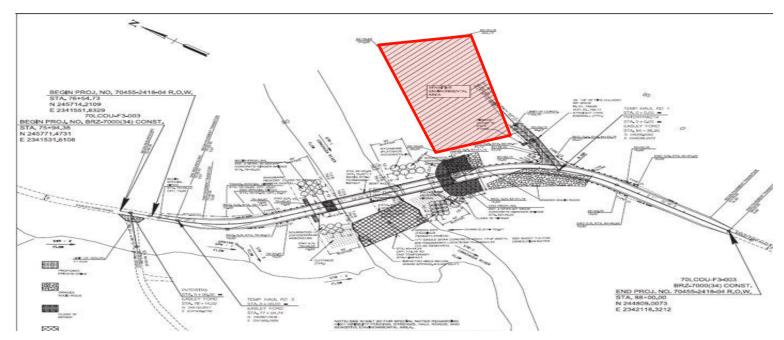
TDOT completed these commitments prior to letting.



EDHZ001

An asbestos Containing Material (ACM) survey was conducted on Bridge No. 70022680001, Easley Ford Road over Conasauga River LM 1.53 (70-0A242-01.53). No ACM was detected. No special accommodations for demolition and waste disposal are anticipated for these structures and the material can be deposited in a C&D landfill. Prior to the demolition or rehabilitation of any structure (bridge or building), the contractor is required to submit the National Emission Standards for Hazardous Air Pollutants standard 10-day notice of demolition to the TDEC Division of Air Pollution Control (per TDOT Standard Specifications for Road and Bridge Construction (January 1, 2015) Sections 107.08 D and 202.03).





EDAC001

The Sensitive Environmental Area shall be fenced with highvisibility construction fence for the duration of project activities. No vehicle traffic, no equipment storage, and no laydown is allowed within the Sensitive Environmental Area.



<u>USFWS - Endangered Species Act - Formal Consultation</u>

- 27 species and designated critical habitat for 12 species
- 1 additional species addressed through informal consultation
- USFWS GA Ecological Services Office issued Biological Opinion with an <u>incidental</u> take statement for listed species.
- Project Benefits:
 - Stabilization of eroding abutment was cited as a project benefit
 - New bridge spans the river and no instream work construction
- All adverse impacts are related to demolition of the old bridge.



<u>USFWS - Formal Consultation - Bridge Demolition</u>

The demolition of the existing bridge would be accomplished by blasting and dropping the structure into the river, followed by removal using mechanical means. Proposed demolition activities are as follows:

- The decking and portions of the superstructure will be saw-cut and removed from the structure. Netting and other catchment will be placed under the bridge to ensure that no material is dropped into the river during this process and to protect river traffic.
- The concrete arch structure and its current condition would prevent the substructure from being safely sawcut and removed. The removal of any portion of the arch structure would result in the collapse of the remainder of the structure.
- The bridge substructure will be blasted and dropped into the water in large sections, which can be lifted and removed from the water with mechanical equipment.
- The bridge material will be removed using excavators or other mechanical equipment which will be staged on the banks. All equipment will remain above the OHWM (elevation = 753.51 ft).
- The material will be hauled to an approved waste site per the TDOT Waste and Borrow Manual.



<u>USFWS - Formal Consultation - Bridge Demolition (cont.)</u>

- The bridge removal will impact approximately 9,400 sq. ft. below the OHWM.
- Impacted stream banks will be restored using native vegetation.
- The eastern abutment is located in an upland area. Removal of this abutment will not have any impacts below the OHWM.
- A portion of the western abutment is located below the OHWM. This abutment is severely undercut. Once this abutment is removed, the stream bank will be restored to mimic surrounding contours as closely as possible. Any work below the OHWM for the restoration of the stream bank will be separated from flowing water using stream diversions, coffer dams, or other standard best management practices.
- The contractor will have three months starting from the time the structure is dropped to remove all material from the river and complete all work below the OHWM.
- Signs and flashing beacons will be installed upstream of the river for the duration of the removal process, flagging the demolition site as a hazard to river traffic.



<u>USFWS - Formal Consultation - Bridge Demolition (cont.)</u>

- The contractor will notify the Department at least two weeks prior to blasting so that sweeps may be conducted.
- No instream work will occur during the timeframe from February 1st April 30th.

Alternative demolition options were reviewed, including the following:

- Coffer dams
- False work



EDEC001

No instream work, whether during construction of the new bridge or demolition of the existing bridge, will occur from February 1st to April 30th.

Instream = below the Ordinary High Water Mark elevation of 753.51'; this would include working in the stream when flows are above this elevation.

EDEC010

No motorized equipment will be operated in the Conasauga River during the proposed deconstruction of the existing bridge or the construction of the new bridge.

EDEC005

No motorized equipment will be operated in the Conasauga River during the proposed deconstruction of the existing bridge.



EDEC017

All tree clearing within project limits is <u>prohibited</u> during the period of May 15 through July 31.

EDEC015

Signs and flashing beacons will be installed upstream of the river for the duration of the removal process, flagging the demolition site as a hazard to river traffic.

EDEC009

Equipment staging areas will be located in upland locations such that no oils, coolants, or other petroleum products are allowed to enter the Conasauga River.

EDEC012

Equipment staging areas will be located in upland locations between Station 83+00 and Station 87+00 such that no oils, coolants, or other petroleum products are allowed to enter the Conasauga River.



EDEC016

Waste and/or borrow areas, if needed, will be located in non-wetland areas and are to be of sufficient distance from area streams such that no soil material is allowed to enter these streams. These areas will be stabilized as soon as practicable. Appropriate erosion and sediment control measures will be utilized in these areas to minimize soil loss.

EDEC008

In accordance with the TDOT Waste and Borrow Manual, waste and/or borrow areas, if needed, will be located in non-wetland areas and are to be of sufficient distance from area streams such that no soil material is allowed to enter these streams. These areas will be stabilized as soon as practicable. Appropriate erosion and sediment control measures will be utilized in these areas to minimize soil loss.



EDEC007

Measures will be implemented to prevent materials from the proposed construction activities from entering the Conasauga River. Measures including, but not limited to, nets, tarps, etc. to contain these materials will be used. These materials include, but are not limited to asphalt, metal and concrete debris, dust, paints, sealers, materials from sandblasting activities, etc. These materials will be contained properly and disposed of in an appropriate manner at an approved waste site.

EDEC004

When the decking and portions of the superstructure are removed from the existing structure, netting and other catchment will be placed under the bridge to ensure that no material is dropped into the river during this process and to protect river traffic.



EDEC014

The TDOT Environmental Division shall be notified at least <u>two weeks prior</u> <u>to any in-stream work</u> so that TDOT Ecology staff can coordinate a sweep for aquatic listed species in the areas proposed for in-stream activities. This notification shall be sent to TDOT Environmental via email at TDOT.ENV.Ecology@tn.gov.

EDEC003

Prior to commencement of work to deconstruct the existing structure over the Conasauga River, a mussel sweep and a fish sweep will be conducted to remove as many individuals as practicable from the right-of-way footprint around the bridge. Any mussels and fish collected would be relocated to the nearest suitable habitat whether upstream or downstream of the project area. The mussel and fish sweeps would be conducted by personnel approved by the USFWS and Tennessee Wildlife Resources Agency (TWRA). Both the methodology and the area determined for relocation would be submitted to TWRA and USFWS for approval prior to the sweep.



EDEC006

The contractor will have three months starting from the time the structure is dropped to remove all material from the river and complete all work below the OHWM.

EDEC011

The contractor will have three months starting from the time the structure is dropped to remove all material from the river and complete all work below the OHWM. The bridge material will be removed using excavators or other mechanical equipment which will be staged on the banks. All equipment will remain above the OHWM (elevation = 753.51 ft).



EDEC002

Any work below the OHWM for the restoration of the stream bank will be separated from flowing water using stream diversions, coffer dams, or other standard best management practices. A filter bag will be used to prevent any sediment or material within the stream diversion work area from entering the stream when the area is pumped to remove water.

EDEC013

After the western abutment of the existing bridge is removed, the stream bank will be restored to mimic surrounding contours as closely as possible. Stream banks impacted by the bridge removal will be restored using native vegetation.



Environmental Permits: TDEC

NPDES Construction General Permit: TNR192335

AQUATIC RESOURCE ALTERATION PERMIT NRS24.091

EFFECTIVE DATE: 2 October 2024 EXPIRATION DATE: 1 October 2029

Authorized Alterations:

STR-1, Conasauga River

Existing Conditions: 153 feet of stream = existing bridge (to be removed) out-to-out width of 17.7

feet

Authorized Conditions: 153 feet of stream = new bridge out to out width of 31.25 feet with rip rap bank stabilization at the abutments impacting up to 63 feet stream bank, and temporary impacts to 71.7 feet of stream associated with bridge removal.



Environmental Permits: TDEC ARAP (cont.)

Special Conditions:

- d. Wetlands and streams outside of the permitted impact area shall be clearly marked with signs, high visibility fencing, or similar structures so that all work performed by the contractor is solely within the permitted impact area.
- f. TDOT must adhere to any species-specific measures required by the TWRA, including the required pre-construction in-stream sweeps.



Environmental Permits: TDEC ARAP (cont.)

- g. Environmental project commitments described by TDOT in the right-ofway plans shall be adhered to, including:
- 1. No in-stream work is authorized between February 1 and April 30.
- 2. When the decking and portions of the superstructure are removed from the existing structure, netting and other catchment will be placed under the bridge to ensure that no material is dropped into the river.
- 3. Measures will be implemented to prevent materials from the authorized construction activities from entering the Conasauga River. Measures including, but not limited to, nets, tarps, etc. to contain these materials will be used. These materials include, but are not limited to asphalt, metal and concrete debris, dust, paints, sealers, materials from sandblasting activities, etc. These materials will be contained properly and disposed of in an appropriate manner at an approved waste site.



Environmental Permits: TDEC ARAP (cont.)

- h. Limited use of blasting for the demolition of the bridge will be accomplished as described and in coordination with the Tennessee Wildlife Resources Agency (TWRA), including the following conditions.
- 1. The TDOT region environmental section will contact TWRA a minimum of two weeks before the date of each blast to coordinate a pre-blast meeting.
- 2. Notification of underwater blasting shall be made to the local TDEC Environmental Field Office and the TWRA at least 3 days prior to initiation.
- 3. The contractor will sound (identify debris using sonar) the river bottom before and after demolition to ensure that all material has been removed.
- 4. TDOT environmental division personnel will be on-site during each blast.
- 5. The contractor is to use blasting BMPs to prevent excessive sediment release and discharge of bridge materials into the river



Environmental Permits: USACE Nationwide 14

SPECIAL CONDITIONS

- 1. Endangered Species: This U.S. Army Corps of Engineers (Corps) permit does not authorize you to take a threatened or endangered species, in particular the blue shiner (Cyprinella caerulea), trispot darter (Etheostoma trisella), and Conasauga logperch(Percina jenkinsi), and critical habitat for the trispot darter and Conasauga logperch. In order to legally take a listed species, you must have a separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permits, or ESA Section 7 consultation Biological Opinion with non-discretionary "incidental take" provisions with which you must comply). The Biological Opinion prepared by the U.S. Fish and Wildlife Service (USFWS) dated July 30, 2021, contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with the specified "incidental take" in the Biological Opinion (USFWS Reference Number #04EG1000-2021-F-2987). Your authorization under this Corps permit is conditional upon your compliance with all of the mandatory terms and conditions associated with incidental take of the attached Biological Opinion. These terms and conditions are incorporated by reference in this permit. Failure to comply with the commitments made in this document constitutes non-compliance with the ESA and your Corps permit. The USFWS is the appropriate authority to determine compliance with ESA.
- 2. Cultural Resources Memorandum of Agreement: The Memorandum of Agreement (MOA), entitled "Memorandum of Agreement among The Federal Highway Administration and The Tennessee State Historic Preservation Officer regarding the Proposed Replacement of Easley Ford Road Bridge Over Conasauga River, LM 1.53 Polk County, Tennessee" and signed by these entities, and the Tennessee Department of Transportation, will be implemented in its entirety. Federal Highway Administration has been designated the lead federal agency responsible for implementing and enforcing the Memorandum of Agreement as signed. If you fail to comply with the implementation and associated enforcement of MOA by November 21, 2033, U.S. Army Corps of Engineers (Corps), Nashville District, Regulatory Division may determine that you are out of compliance with the conditions of the Department of the Army permit or authorization and suspend the permit or authorization. Suspension may result in modification or revocation of the authorized work.



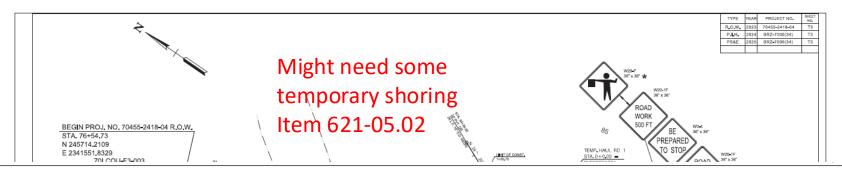
Construction Considerations

- Completion Date
 - 9.30.2027 (~ 2.4 years)
 - CPM Project Scheduling
- Special Provisions
 - 107FP
 - Environmental Permits
 - Failure to Comply on Contractor
 - 109A
 - Fuel Index
 - 109B
 - Bituminous Index
 - SP625
 - Drilled Shafts

- Environmental Division
 Staff shall be invited to
 the Pre-Construction
 Meetings to coordinate
 oversight of protected
 species requirements
 and other environmental
 commitments.
- Only prime contractors in attendance at today's meeting will be prequalified to bid.



Phase 1



PHASE 1 NOTES: MAINTAIN TRAFFIC ON EXISTING ROADWAY.

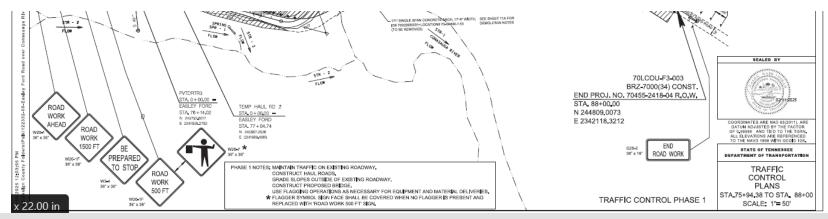
CONSTRUCT HAUL ROADS.

GRADE SLOPES OUTSIDE OF EXISTING ROADWAY.

CONSTRUCT PROPOSED BRIDGE.

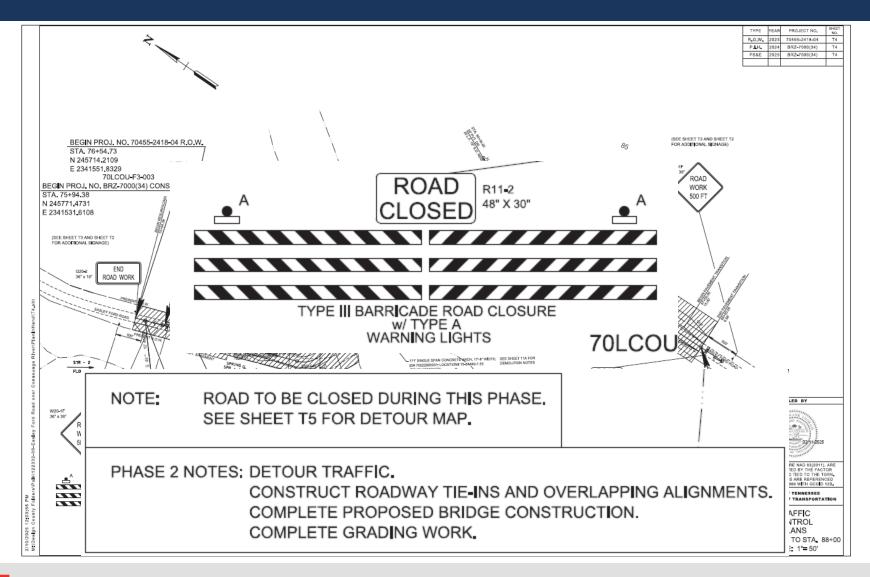
USE FLAGGING OPERATIONS AS NECESSARY FOR EQUIPMENT AND MATERIAL DELIVERIES.

★ FLAGGER SYMBOL SIGN FACE SHALL BE COVERED WHEN NO FLAGGER IS PRESENT AND REPLACED WITH 'ROAD WORK 500 FT' SIGN.



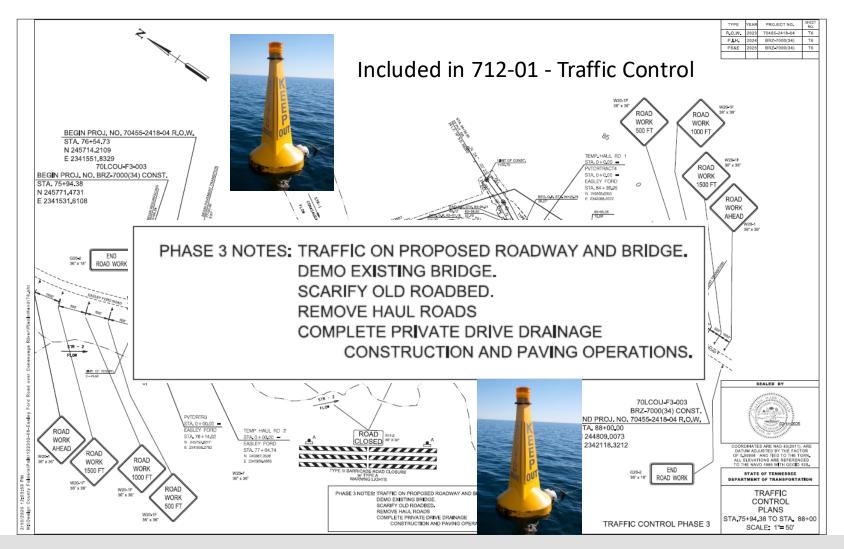


Phase 2





Phase 3





Key Takeaway

- A previous project had non-conformance issues with environmental compliance
 - There is likely to be additional scrutiny of this project
- Follow Commitments within the plans!
 - TDOT intends to uphold its commitments
 - Read the failure to comply section of SP107FP
 - In the event a Notice of Noncompliance, Notice of Violation, Notice of Deficiency, or Order is issued by any State or Federal Agency on this project, any required corrective action and all fines will be the sole responsibility of the Contractor as outlined in 107.01 of the Standard Specifications.
- Hold an Environmental Pre-construction meeting in addition to a Construction Pre-construction meeting



Questions?



