SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: FRA-71-1.53

PID: 93496

Date: 12/10/18

1. Waterway Permits Time Restrictions:

A Nationwide Permit #14 (Linear Transportation Project) (NWP #14) is authorized for FRA-71-0.00, PID 93496. A copy of the NWP and authorization letter (ID LRH-2015-00666-SCR-Big Darby Creek) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: **December 10, 2018**. The permit expires: **July 12, 2023.**

A Section 401 Water Quality Certification (401 WQC) is authorized for FRA-71-0.00, PID 93496/107201 by the Ohio Environmental Protection Agency (OEPA). A copy of the authorization letter (ID No. 154752) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: **December 10, 2018**. The permit expires: **November 11, 2023.**

For authorized work in aquatic resources (including streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor's submission of a reauthorization to the waterway permit expiration date based on project constraints. If more than one permit is authorized for the project, then all permits become invalid once the first permit expires. In order for the request to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit expiration date. The Engineer will submit the request for a time extension to the Ohio Department of Transportation, Office of Environmental Services, Waterway Permits Unit (ODOT-OES-WPU) for consideration and coordination with the U.S. Army Corps of Engineers (USACE), Ohio Environmental Protection Agency (OEPA), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and Ohio Department of Natural Resources (ODNR) as appropriate.

2. Deviations From Permitted Construction Activities

No deviation from the requirements for work in aquatic resources depicted in the plans, Special Provisions, and/or Working Drawings may be made unless a modification has been submitted to ODOT-OES-WPU and approved by the appropriate agencies (i.e., USACE, OEPA, USCG, ODNR, and USFWS).

NOTE: Plan sheets submitted with (agency application) the Pre-Construction Notification application, and 401 Water Quality Certification application were approved by the USACE/OEPA and are included in these Special Provisions.

For emergency situations resulting in unanticipated impacts to aquatic resources, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT-OES-WPU (614-466-7100) must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-OES-WPU (614-466-7100) for consideration and coordination with the appropriate agencies. Notification must be made at least 90 days prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

3. In-Stream Work Restrictions

Work in the following aquatic resources is further restricted as follows:

Stream Name /Description	Location	Work restriction dates (No in-stream work permitted)
Stream 9 (Big Darby Creek)	STA 83+50	December 1 to June 30*

*Restriction dates do not apply if the stream has been dewatered prior to December 1st.

In-stream work has been defined as the placement and/or removal of fill materials (temporary or permanent) below ordinary high water of a stream. Examples of "fill" include, but are not limited to: bridge piers, abutments, culverts, rock channel protection, scour protection, and temporary access fills.

Fills placed within a stream identified in the above table (outside of the work restriction dates) can continue to be worked from during the work restriction dates, but cannot be expanded, removed, or otherwise modified (below ordinary high water) until once again outside of the work restriction dates.

4. Materials:

Materials utilized in or adjacent to aquatic resources for temporary or permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Broken asphalt is specifically excluded. Chromated Copper Arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in aquatic resources. Construction demolition debris is not authorized as a suitable material for the construction of the TAF.

5. Cultural Resources

Per CMS 107.10, if archeological sites, historical sites, or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-Cultural Resource Section at 614-466-7100. In the event of human remains are identified by OES-Cultural Resources Section, the Engineer shall also contact the Franklin County Sheriff's Office at (614) 525-3360.

6. Aquatic Resource Demarcation:

All aquatic resources indicated on the plans shall be demarcated in the field as per SS 832 prior to site disturbance. The remainder of the aquatic resources must be demarcated as to ensure avoidance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

Table D is attached and includes detailed fill quantities that are authorized within Big Darby Creek. Impacts to other resources are authorized under PID 107201.

7. Big Darby Creek Stream Surveys:

A pre-construction survey of Big Darby Creek must be conducted prior to the start of construction. After the TAF is removed and the stream bottom restored to pre-construction contours a post-construction survey of Big Darby Creek must be conducted. The survey must include elevations of the banks, profile, and cross sections of the area to be impacted by the TAF.

8. Spill containment:

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:
- 6 - 3 in. X 8 ft. Oil only socks
- 4 - 18 in. X18 in. Oil only pillows
- 2 - 5 in. X 10ft. Booms
- 50 - 16in. X 20 in. Oil only pads
- 10- Disposable Bags
- 1- 65 Gallon drum with lid
- 25 pounds of Granular Oil Absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours. All costs associated with furnishing and maintaining the above referenced spill containment kit is incidental to work.

9. Drinking Water Notification:

Due to the proximity of drinking water wells, the following individuals and the Engineer must be notified and informed of activities 30 days prior to start of construction.

Randy Brissette
ODRC Pickaway Correction
(614) 315-8933

Stephen Renner
Timberlake Water system
(614) 374-5346

Sheila Scull
Dollar General
(614) 855-4459

Muhammad Imran
Orient Sonoco
(614) 875-2242

10. Blasting:

State law requires notification to the Ohio Department of Natural Resources should blasting be required within or near stream channels (See ORC 1533.58 & CMS 107.09). Notify the Engineer, in writing, a minimum of 30 days in advance of blasting, for submission to ODOT-OES-WPU (614-466-7100) for coordination with ODNR.

11. Bridge Inspection:

Prior to the removal of bridge structures, the underside must be carefully examined for the presence of birds and bats. Should any birds or bats be found roosting on the underside of the bridge, the Contractor is required to notify the Engineer for coordination with ODOT-OES-WPU (614-466-7100).

12. Project Inspection:

Inspection of Work may include inspection by representatives of other government agencies or railroad corporations that pay a portion of the cost of the Work or regulate the Work through State and Federal law. Comments from the representatives of these agencies shall be directed to the Engineer. Please forward a copy to ODOT-OES-WPU (614-466-7100).

13. Temporary Access Fills (Stream and River Crossings and Fills)

Refer to Scenic River approved plan sheets for phasing of all TAFs (sheets 209 of 286 to 217 of 285 in the special provision attachments.)

Special Provisions Notes:

Definitions:

Hydraulic Opening
The cross-sectional area allowing an unimpeded discharge equal to twice the highest monthly flow without producing a rise in the backwater above the Ordinary High Water Mark (OHWM).

Standard Temporary Discharge
Discharge equal to twice the *highest monthly flow* without producing a rise in the backwater above the OHWM. The U.S. Geologic Service publication "Techniques for estimating Selected Streamflow Characteristics of Rural Unregulated Streams in Ohio" provides equations that estimate monthly flow for Ohio Waterways These flows are also available in a web application by USGS StreamStats, (https://water.usgs.gov/osw/streamstats/ohio.html).

Average Monthly Flow
The average monthly flow represents the estimated "normal" flow.

Temporary Access Fills (TAFs)
Include, but are not limited to, causeways, cofferdams, access pads, temporary bridges, etc. below the OHWM.

Requirements
21 calendar days prior to the initiation of any in-stream work, provide the Engineer with Working Drawings that include:

- Plan view drawing (50 scale or less) showing the location of all jurisdictional temporary fill proposed for use on the project
- Scaled cross section and profile drawing showing the OHWM and the proposed hydraulic opening.
- Calculations analyzing the hydraulic impacts of the TAF on the waterway. Include in the calculations an analysis of the hydraulic opening sized adequately to pass the Standard Temporary Discharge without producing a rise in backwater above the OHWM. Include, in the analysis, calculated channel velocities adjacent to the TAF, culvert exit velocities, calculated headwater and tailwater elevations, and any additional appropriate calculations to assess potential impacts to the waterway during normal and anticipated high flow (twice the highest monthly flow) events.
- A description of the installation and staging of all temporary fill over the life of the contract.
- A description of the removal of all temporary fill and restoration of the channel and all areas impacted by the temporary fill.
- A schedule outlining the timing of the placement and removal of all temporary fill.
- Have competent individuals prepare and check the Working Drawings and hydraulic calculations. Provide a cover sheet containing the preparer(s) and checker(s): First Name, Last Name and Initials.

The preparer(s) and checker(s) shall not be the same individual. Have an Ohio Registered Engineer review, approve, sign, seal and date the Working Drawings and hydraulic calculations according to ORC 4733 and OAC 4733-35. Include the following statement on the Working Drawings:
"These Working Drawings were prepared in compliance with the terms of these Special Provisions and all contract documents."

Do not begin in-stream work until the Engineer has accepted the Working Drawings and hydraulic calculations.

The design of the Contractor's TAF must minimize impacts to water bodies, stream banks, stream beds, and riparian zones to the maximum extent practicable.

Fording of streams and rivers is prohibited.

Construct TAFs in such a manner that will maintain flows, minimize upstream flooding, and avoid overtopping the TAF on a regular basis. ***TAFs shall be designed and constructed so that the hydraulic opening provides capacity for a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the (OHWM).***

If the OHWM is not shown on the plans, the Department will establish the OHWM based on the definition of OHWM (as defined in SS 832) or the peak discharge from the 2-year event, using the method described in the most current version of the Department's Location and Design Manual Volume II.

If the Contractor proposes a TAF which does not meet all the requirements of these Special Provisions, the Contractor must submit a request in writing for a modified TAF to the Engineer. The request must include all Working Drawings and hydraulic calculations required by these Special Provisions. The Department makes no guarantee to grant the request. The Contractor's proposed TAF request will be coordinated by OES with the USACE and the OEPA, as appropriate. The time frame allowed for the coordination of the contractor's proposed TAF will be a minimum of 60 days.

Installation of any temporary fill without appropriate authorization is strictly prohibited. All direct coordination with the USACE and/or OEPA will be performed through OES.

TAFs Construction and Payment
Begin planning and installing causeways and access fills as early in construction as possible to avoid conflicts with these Special Provisions or other environmental commitments that have been included in the construction plans.

TAFs in Streams and Rivers may include, but are not limited to, causeways, cofferdams, access pads, sheet piling, temporary bridges, etc. The Contractor must make every attempt to minimize disturbance to waterbodies, stream banks, stream beds and riparian zones during the construction, maintenance, and removal of the TAF. Construct the TAFs as narrow as practical. Install in-stream conduits parallel to the stream banks. Make the TAFs in shallow areas rather than deep pools where possible. Minimize clearing, grubbing, and excavation of stream banks, and approach sections. Construct the TAFs as to not erode stream banks or allow sediment deposits in the channel.

Prior to the initiation of any in-stream work, provide monuments in all four quadrants of the proposed TAF to visually monitor the water elevation in Big Darby Creek where the fill is permitted. Maintain the monuments throughout the project. Provide a visual mark on the monuments that identifies the elevation of the OHWM and 1 foot above the OHWM. Ensure that the monuments can be read from the bank of the waterway. Have this elevation set and certified by an Ohio Registered Surveyor. All costs associated with furnishing and maintaining the above referenced monuments is incidental to the work. Provide visual demarcation of the construction limits upstream and downstream for work in Big Darby Creek as approved by the Engineer.

Should the surface water elevation exceed the elevation 1 foot above OHWM, the Department will compensate the Contractor for repair of any resulting damage to the TAF up to the elevation of 1 foot above the OHWM, except as noted. The Department will recognize this event as an excusable, non-compensable delay in accordance with Section 108.06 of the Construction & Materials Specifications.

Follow the requirements in Item 502 for Structures for Maintaining Traffic and in Item 503 for Cofferdams and Excavation Bracing and any modifications to these items as shown in the plans. The Department will not pay for repair and maintenance of TAFs associated with Items 502 and 503 as a result of surface water elevation exceeding 1 foot above the OHWM. Compensation for damages associated with waterway flows will be provided as described in Items 502 and 503.

Construct the TAFs, not including Items 502 and 503, to a water elevation at least 1 foot (0.3 m) above the OHWM. If more than one-third the width of the stream is filled, then use culvert pipes to allow the movement of aquatic life. Ensure that any ponding of water behind the causeway and access fills will not damage property or threaten human health and safety.

The following minimum requirements apply to TAFs where culverts are used.

A. Furnish culverts on the existing stream bottom.
B. Avoid a drop in water elevation at the downstream end of the culvert that would result in an adverse impact to the waterway.
C. Furnish a sufficient number of culverts in addition to stream openings to provide a discharge equal to twice the highest monthly flow without producing a rise in the backwater above the OHWM.
D. Furnish culverts with a minimum diameter of 18 inches (0.5 m).

All TAFs must be constructed of suitable materials. Causeways and access fills must be constructed with clean, non-erodible, nontoxic Dumped Rock Fill, Type A, B, C, or D, as specified in C&MS 703.19.B. Construction demolition debris is not authorized as a suitable material for the construction of the TAF. Extend rock fill up the slope from original stream bank for 50 feet (10 m) to catch and remove erodible material from equipment.

When the work requiring TAF is complete, all portions of the TAF (including all rock and culverts) will be removed in its entirety. Do not dispose of TAF material in other aquatic resources or where erosion into another aquatic resource is possible. The stream bottom affected by the causeway and access fills will be restored to its pre-construction elevations. The TAF will not be paid as a separate item but will be included by the Contractor as part of the total project cost.

Unless specific TAF compensation is included in the plans, all environmental protection and control associated with the authorized activities, are incidental to the work within the boundaries of the aquatic resources.

14. Excavation Activities:

The intentional discharge of demolition debris from any structure (including but not limited to bridges, culverts, abutments, wing walls, piers) into Big Darby Creek is not authorized for this project. Notify the Engineer immediately in writing of any inadvertent fill discharged into Big Darby Creek. Also contact ODOT-OES-WPU at 614-466-7100 if any unintentional discharge occurs.

15. Demolition Debris:

The temporary discharge of demolition debris into Big Darby Creek (including but not limited to bridges, culverts, abutments, wing walls, piers) is conditionally authorized for this project. Demolition debris may not remain in the waterway for more than 72 hours and must be removed in its entirety. If removal of debris material cannot be achieved within 72 hours, notify the Engineer in writing and contact ODOT-OES-WPU at 614-466-7100.

16. Construction Completion Certification:

Upon completion of the work, notify the Engineer. The USACE Construction Completion Certification must be completed and signed by the Engineer then provided via US mail or email to:

Waterway Permits Program Manager
ODOT - Office of Environmental Services
1980 West Broad Street, Mail Stop 4170
Columbus, Ohio 43223
Adrienne.Earley@dot.ohio.gov

A copy of the certification has been attached to these Special Provisions.

Version: 2017

TABLE D. DISCHARGE AND FILL QUANTITIES
Minimal Degradation Alternative

STREAMS				Existing Culvert	Existing Culvert Replaced (overlap)	Permanent Fill Within/Below OHWM												Total Permanent Fill Within OHWM*			Total Temporary Fill Within OHWM*			TOTAL IMPACT (Upstream to Downstream)*	TOTAL NEW IMPACT (Total Impact - Pre-Existing Impacts)
						Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)			Proposed RCP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Misc. Grading, Etc.)										
Aquatic Resource ID	Station	Description of Impacts/ Activities Within OHWM	Total Length Within Project Area (LF)	Length (LF)	Length (LF)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Length (LF)
Stream 4	5+35	RCP, TAF, Demolition	72	0	0	/	/	/	8	0.0007	0.6	/	/	/	/	/	/	8	0.0007	0.6	10	0.0010	0.8	10	10
Stream 5	12+95	Articulating Concrete Block System, Full Culvert Replacement, Headwall Replacement, Rip Rap, RCP, Erosion Protection Mat, TAF, Demolition	455	227	227	282	0.0226	15.8	10	0.0008	**1.5**	/	/	/	80	0.0064	10.4	372	0.0298	27.7	165	0.0133	21.4	392	165
Stream 6	25+20	RCP, TAF, Demolition	99	0	0	/	/	/	8	0.0007	1.5	/	/	/	/	/	/	8	0.0007	1.5	13	0.0012	2.4	13	13
Stream 7	27+88	Partial Culvert Replacement, Headwall Replacement, Culvert Spray Liner, Rip Rap, RCP, TAF, Demolition	496	266	266	47	0.0075	7.8	18	0.0033	12.8	/	/	/	260	0.0358	12.1	301	0.0433	32.6	50	0.0092	35.6	311	45
Stream 8	35+10	Rip Rap, RCP, Partial Culvert Replacement, Headwall Replacement, TAF, Demolition	482	280	62	78	0.0048	2.4	10	0.0006	0.8	/	/	/	/	/	/	88	0.0054	3.2	31	0.0021	2.4	92	30
Stream 9 (Big Darby Creek)	83+50	RCP, TAF, Demolition	303	0	0	/	/	/	180	0.0505	244.4	/	/	/	/	/	/	180	0.0505	244.4	250	0.6500	5726.4	250	250
Stream 10	147+95	Rip Rap, RCP, Partial Culvert Replacement, Headwall Replacement, TAF, Demolition	850	234	32	85	0.0071	6.3	12	0.0011	3.1	/	/	/	/	/	/	97	0.0082	9.4	86	0.0069	18.9	136	104
Stream 11	225+40	Turf Reinforcing Mat,Full Culvert Replacement,Headwall Replacement, Grading,TAF,Demolition	397	299	299	312	0.0573	23.1	/	/	/	/	/	/	88	0.0121	6.9	395	0.0680	29.3	105	0.0145	29.2	415	116
Stream 13	118+75	Misc. Grading	116	0	0	/	/	/	/	/	/	/	/	/	1	0.0001	0.1	1	0.0001	0.1	/	/	/	1	1

TABLE D. DISCHARGE AND FILL QUANTITIES
Minimal Degradation Alternative

STREAMS				Existing Culvert	Existing Culvert Replaced (overlap)	Permanent Fill Within/Below OHWM												Total Permanent Fill Within OHWM*			Total Temporary Fill Within OHWM*			TOTAL IMPACT (Upstream to Downstream)*	TOTAL NEW IMPACT (Total Impact - Pre-Existing Impacts)
						Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)			Proposed RCP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Misc. Grading, Etc.)										
Aquatic Resource ID	Station	Description of Impacts/ Activities Within OHWM	Total Length Within Project Area (LF)	Length (LF)	Length (LF)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Length (LF)
Stream 14	56+25	Rip Rap, Headwall Replacement, Bank Redgrading, TAF, Demolition	29	0	0	30	0.0019	1.5	/	/	/	/	/	/	5	0.0003	0.3	31	0.0020	1.8	31	0.0020	1.6	31	31
Stream 15	From 56+20 to 82+00	Rip Rap,RCP,Partial Culvert Replacement,Headwall Replacement,Concrete Block Mat,Plastic Pipe Liner, Grading,TAF,Demolition	3,020	663	663	74	0.0054	3.8	31	0.0019	2.4	/	/	/	663	0.0609	6.0	744	0.0660	12.2	69	0.0047	6.1	752	89
Stream 16	44+35	Rip Rap, RCP, Partial Culvert Replacement, Headwall Replacement, TAF, Demolition	539	490	372	392	0.0252	9.7	6	0.0004	0.6	/	/	/	/	/	/	394	0.0254	10.3	36	0.0027	3.5	408	36
		SUM:				1,300	0.1318	70.4	283	0.0600	267.7	0	0.0000	0.0	1,097	0.1156	35.8	2,619	0.3001	373.1	846	0.7076	5,848.3	2,811	890

***Due to the overlap in the materials and rounding of quantities, reported individual discharges may not sum to the total reported.**

WETLANDS, JURISDICTIONAL DITCHES, PONDS				Existing Culvert	Existing Culvert Replaced (overlap)	Permanent Fill Within Wetland Boundary												Total Permanent Fill Within Wetland Boundary			Total Temporary Fill Within Wetland Boundary			TOTAL IMPACT	TOTAL NEW IMPACT (Total - Existing)
						Proposed Concrete (Includes Culvert, Piers, Walls, Abutments, etc.)			Proposed RCP			Proposed Earthen, Granular, or Embankment Fill			Proposed Other (Ripping, Blasting, Grading, Etc.)										
Aquatic Resource ID	Station	Description of Impacts/ Activities within Wetland Boundary	Total Acreage Within Project Area	Length (LF)	Length (LF)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)	Area (AC)	Area (AC)
Wetland B	101+75	Grading/Earthen Fill and Underdrain construction	0.015	NA	NA	/	0.0003	0.6	/	/	/	/	0.0144	23.2	/	0.0003	0.6	/	0.0150	24.4	/	/	/	0.0150	0.0150
Wetland H	226+50	RCP, Headwall Replacment, Grading/Earthen Fill	0.0394	NA	NA	/	0.0008	1.2	/	0.0059	14.1	/	/	/	/	0.0429	64.8	/	0.0394	80.1	/	/	/	0.0394	0.0394
Wetland J	56+20	Rip Rap	0.003	NA	NA	/	0.0030	4.8	/	/	/	/	/	/	/	/	/	/	0.0030	4.8	/	/	/	0.0030	0.0030
		SUM:				NA	0.0041	6.6	NA	0.0059	14.1	NA	0.0144	23.2	0.0	0.0432	65.4	NA	0.0574	109.3	NA	0.0000	0.0	0.0574	0.0574

LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like (specify if different, ie. concrete block matting); NA = Not Applicable

U.S. Army Corps of Engineers
Huntington District

Permit Number: LRH-2015-00666-SCR (FRA-71-1.53, PID 93496)

Name of Permittee: The Ohio Department of Transportation

Date of Issuance: 12 July 2018

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Huntington District
Ohio Regulatory Transportation Office
Building 10 / Section 10
PO Box 3990
Columbus, Ohio 43218-3990

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

_____ _____
Signature of Permittee Date

GENERAL, MAINTENANCE OF TRAFFIC DURING CONSTRUCTION

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE DISTRICT 6 PUBLIC INFORMATION OFFICER VIA EMAIL (D06.PIO@DOT.OHIO.GOV) 21 DAYS IN ADVANCE OF THE START OF CONSTRUCTION ACTIVITIES TO PROPERLY COORDINATE EFFORTS TO NOTIFY THE TRAVELING PUBLIC, INCLUDING RESIDENTS, BUSINESSES, LOCAL EMERGENCY SERVICES, LAW ENFORCEMENT, AND SCHOOLS. THE DISTRICT 6 PIO SHALL PROVIDE NOTIFICATION NO LATER THAN 15 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. IF, SUBSEQUENT TO THE ADVANCE NOTIFICATION, THE START DATE IS CHANGED, THEN A NEW SEVEN (7) DAY NOTIFICATION SHALL BE REQUIRED. THE ROAD CANNOT BE CLOSED UNLESS PRIOR NOTIFICATION HAS BEEN ACCOMPLISHED. THE SAME PARTIES SHALL BE NOTIFIED WHEN THE CLOSURE HAS CONCLUDED AND THE ROAD IS BACK OPEN TO TRAFFIC. ALL NOTIFICATIONS SHALL BE MADE UTILIZING THE TEMPLATE PROVIDED BY THE DISTRICT 6 PUBLIC INFORMATION OFFICE.

ECOLOGICAL, AGENCY COORDINATION

1. THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSE OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT WITH A TRUCK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

2. THE CONTRACTOR SHALL IMMEDIATELY REMOVE ALL COMPONENTS OF THE EXISTING BRIDGE (PIERS, ABUTMENTS, ETC.) FROM THE STREAM AND PLACE THEM IN AN UPLAND LOCATION. THE CONTRACTOR SHALL REMOVE THE ASPHALT DECK MATERIAL PRIOR TO ANY DEMOLITION ACTIVITIES. PIERS SHALL BE REMOVED DOWN TO AN ELEVATION OF 1 FOOT BELOW THE STREAM BOTTOM. THE CONTRACTOR SHALL AVOID RELEASING DECK MATERIAL INTO THE STREAM. IF ANY MATERIAL FALLS INTO THE RIVER, THE CONTRACTOR SHALL REMOVE IT IMMEDIATELY.

3. THE CONTRACTOR MUST ABIDE BY ALL STATE AND FEDERAL REQUIREMENTS FOR THE STORAGE OF FUELS, PETROCHEMICALS, EQUIPMENT AS WELL AS THESE ADDITIONAL REQUIREMENTS: IDLE EQUIPMENT (INACTIVE FOR MORE THAN 6 HOURS), PETROCHEMICALS, TOXIC/HAZARDOUS MATERIALS SHALL NOT BE STORED OR DISCHARGED IN THE 100-YEAR FLOODPLAIN, OR NEAR ANY DRAINAGE WAYS, DITCHES, OR STREAMS THAT COULD CONVEY SUCH MATERIALS INTO THE BIG DARBY CREEK (NATIONAL/STATE SCENIC RIVER) OR ANY OF ITS TRIBUTARIES. REFUELING OF EQUIPMENT SHOULD NOT OCCUR IN THE FLOODPLAIN OR NEAR ANY DRAINAGE WAYS, DITCHES, OR STREAMS.

4. MATERIAL DISPOSITION RELATED TO BIG DARBY CREEK (NATIONAL/STATE SCENIC RIVER): APRONS, SHROUDS, AND/OR OTHER CONTAINMENT DEVICES MUST BE IN PLACE DURING BRIDGE DEMOLITION, BRIDGE CONSTRUCTION, AND SURFACING ACTIVITIES TO CAPTURE FALLING DEBRIS, PAINTS, WELDING, SLAG, SEALANT OVERSPRAY, OR OTHER DEBRIS. ANY AND ALL CONSTRUCTION AND DEMOLITION DEBRIS, EARTHEN DEBRIS, CONCRETE CHUNKS, ASPHALT, GRINDINGS, CONCRETE MATERIALS, WOOD, REBAR, EXCESS ASPHALT OR CONCRETE, WOOD DEBRIS FROM CLEARING, EXCESS FILL MATERIAL, MATERIAL EXCAVATED FROM THE RIVER BOTTOM, MIXES, CEMENTS, FLUIDS, OTHER CONSTRUCTION WASTE, AND TRASH SHALL BE DISPOSED OF AT AN APPROVED UPLAND SITE OR

ECOLOGICAL, AGENCY COORDINATION (continued)

LANDFILL ABOVE 100-YEAR FLOOD ELEVATIONS. ANY DEBRIS THAT ENTERS THE RIVER MUST BE IMMEDIATELY REMOVED. DISPOSAL OF ANY SUCH MATERIALS IN WETLANDS, FLOODPLAINS, OR WITHIN 1000 FEET OF STATE SCENIC RIVERS IS PROHIBITED.

5. THE CONTRACTOR SHALL ONLY PERFORM ALL IN-STREAM WORK DURING DRY PERIOD OF EXTREMELY LOW FLOW OF THE BIG DARBY CREEK BETWEEN JULY 1 AND NOVEMBER 30.

6. ANY DISTURBED AREAS IN THE STREAM BOTTOM SHALL BE RETURNED TO PRE-CONSTRUCTION CONTOURS. STREAM BOTTOM ELEVATIONS SHALL BE DETERMINED BEFORE IN-STREAM WORK COMMENCES TO ENSURE THAT ALL FILL MATERIAL AND DEBRIS IS COMPLETELY REMOVED BEFORE CONSTRUCTION IS COMPLETE. THE CONTRACTOR WILL PROVIDE PRE AND POST-CONSTRUCTION SURVEY ELEVATIONS OF THE STREAM BOTTOM TO THE DEC TO VERIFY THIS COMMITMENT IS MET.

7. PIER CONSTRUCTION WILL UTILIZE DRILLED SHAFT CONSTRUCTION METHODS WITH HOLDING PITS. SEDIMENT LADEN WATER AND EXCESS CONCRETE WILL BE CONTAINED, STORED AND DISPOSED OF APPROPRIATELY, OFF SITE.

8. RECYCLED PORTLAND CEMENT CONCRETE (RPCC) IS NOT PERMITTED TO BE USED AS THE MATERIAL FOR ROCK CHANNEL PROTECTION (RCP) INSTALLATION FOR THE BIG DARBY CREEK BRIDGES.

9. DE-WATERING: NO WASTEWATER OF ANY KIND SHOULD BE DIRECTLY DISCHARGED INTO BIG DARBY CREEK (NATIONAL/STATE SCENIC RIVER) OR ANY OF ITS TRIBUTARY STREAMS, DRAINAGE WAYS OR DITCHES. IF DEWATERING IS NECESSARY TO FACILITATE IN-STREAM WORK OR PIER CONSTRUCTION, ALL WASTEWATER SHOULD BE PUMPED ONTO A VEGETATED AREA AT LEAST 100 FEET FROM THE RIVERBANK TO ALLOW FOR COMPLETE INFILTRATION. IF DISCHARGE TO A VEGETATED AREA IS NOT FEASIBLE, THEN WASTEWATER SHALL BE DISCHARGED INTO A SEDIMENT FILTER BAG OR INTO A TEMPORARY DETENTION/RETENTION POND WITH SUFFICIENT RETENTION TIME TO PERMIT FOR THE SETTLING OF ALL SUSPENDED SOLIDS PER THE BMP REQUIREMENTS.

10. CLEARING AND GRUBBING: ALL STREAMBANK VEGETATION SHALL BE LEFT UNDISTURBED TO THE MAXIMUM EXTENT POSSIBLE. CUTTING OR CLEARING OF ANY RIPARIAN VEGETATION WITHIN 1000 FEET OF THE BIG DARBY CREEK BEYOND THE EXISTING CONSTRUCTION LIMITS SHALL BE PROHIBITED, HOWEVER VERTICAL TRIMMING IS PERMITTED WHERE NECESSARY.

11. PAINTING AND SAND/WATER BLASTING: WHEN PAINTING, SAND OR WATER BLASTING ANY PORTION OF THE BRIDGE IS NECESSARY THEN APPROPRIATE APRONS SHALL BE UTILIZED TO PROVIDE FOR COMPLETE CONTAINMENT OF ALL PAINT DEBRIS PARTICLES AND OTHER DEBRIS. APPROPRIATE APRONS SHALL BE UTILIZED TO PROVIDE FOR COMPLETE CONTAINMENT OF ALL PAINT AND/OR SEALANT OVER-SPRAY. ANY SUCH DEBRIS SHALL BE REMOVED IMMEDIATELY FROM WITHIN 1000 FEET OF THE BIG DARBY CREEK AND DISPOSED OF AT AN APPROVED UPLAND SITE ABOVE THE 100-YEAR FLOOD ELEVATIONS. DISPOSAL IN WETLANDS, FLOODPLAINS, OR WITHIN 1000-FEET OF STATE SCENIC RIVERS IS PROHIBITED.

12. ODOT D-6 ENVIRONMENTAL COORDINATOR SHALL INVITE ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER TO THE PRE-BID AND PRE-CONSTRUCTION MEETINGS WITH THE CONTRACTOR PRESENT.

ECOLOGICAL, AGENCY COORDINATION (continued)

13. ODOT D-6 WITH OES WILL HIRE AN ENVIRONMENTAL COMMITMENT MONITOR TO CONDUCT PERIODIC INSPECTIONS OF THE PROJECT TO ENSURE ALL COMMITMENTS, INCLUDING THE SPECIAL SCENIC RIVER PROTECTION MEASURES ARE BEING MET.

14. SCENIC RIVER PROGRAM PROJECT CONDITIONS HAVE BEEN INCORPORATED INTO THE PROJECT PLANS AND WILL BE INCLUDED IN THE FINAL PROJECT PLAN SET AND WILL BE MADE AVAILABLE TO ALL CONSTRUCTION PERSONNEL THROUGHOUT THE DURATION OF THE PROJECT. THIS WILL ENSURE THAT THE CONTRACTORS UNDERSTAND SCENIC RIVER REQUIREMENTS. SPECIAL CONDITIONS WILL ALSO BE DISCUSSED AT PRE-CONSTRUCTION MEETING. THE SCENIC RIVER REQUIREMENTS WILL BE AN AGENDA ITEM AT THE D-6 PRE-CONSTRUCTION MEETING.

15. SCENIC RIVER SIGNAGE: SIGNS IDENTIFYING THE "BIG DARBY CREEK STATE AND NATIONAL SCENIC RIVER" SHALL BE INSTALLED AT ALL APPROACHES OF THE NEW BRIDGE STRUCTURES. AN ADDITIONAL SIGN STATING (BRIDGE NAME, ROAD NAME/NUMBER, AND RIVER MILE) WILL BE INSTALLED ON THE UPSTREAM SIDE OF THE NEW BRIDGE, IDENTIFYING THE STRUCTURE AND LOCATION TO BE VISIBLE TO RECREATIONAL RIVER USERS. SEE TRAFFIC CONTROL SHEET 196.

16. VISUAL COMPATIBILITY: TO MINIMIZE CONTRAST WITH THE SURROUNDING LANDSCAPE TO PROTECT AND ENHANCE THE SCENERY OF BIG DARBY CREEK, CONCRETE FORM LINERS WITH ROUGH CUT STONE FINISH SHALL BE USED ON THE BRIDGE PARAPETS. WEATHERING STEEL WILL BE UTILIZED FOR THE STEEL GIRDERS OF THE BRIDGE.

17. DISTURBANCES TO THE RIPARIAN ZONE MUST BE LIMITED TO THE ACCESS POINTS AND CONSTRUCTION LIMITS. PROVISIONS SHALL BE IN PLACE TO PROTECT REMAINING VEGETATION/TREES FROM DAMAGE BY CONSTRUCTION EQUIPMENT. THESE PROVISIONS MUST LIMIT THE REMOVAL OF RIPARIAN VEGETATION AND INCLUDE MEASURES TO AVOID DAMAGE TO REMAINING TREES (TRUNKS, BRANCHES, AND/OR ROOTS) LOCATED IN OR ADJACENT TO THE WORK AREA. THE OPERATION OF MACHINERY WITHIN THE DRIP LINE OF TREES SCHEDULED TO REMAIN MUST BE AVOIDED TO THE GREATEST EXTENT POSSIBLE. SEVERELY DAMAGED TREES (WHERE DAMAGE WOULD LEAD TO MORTALITY) MAY REMAIN ONSITE WHERE UNLIKELY TO POSE A SAFETY HAZARD TO SERVE AS NESTING CAVITIES, HOLD SOIL, AND PREVENT EROSION.

18. THE CONTRACTOR SHALL ABIDE BY THE NATIVE PLANTING PLAN INCLUDED IN THESE PLANS FOR THE RIPARIAN CORRIDOR OF BIG DARBY CREEK.

19. THE USE OF HERBICIDES IN THE RIPARIAN CORRIDOR OF BIG DARBY CREEK IS PROHIBITED. ALL FERTILIZERS SHALL BE APPLIED BY QUALIFIED PERSONNEL AND IN ACCORDANCE WITH APPLICATION GUIDELINES AND USED ONLY FOR PLANTINGS.

20. THIS PROJECT INCLUDES WORK IN AND NEAR A NATIONAL AND STATE SCENIC RIVER. THIS RESOURCE IS OF EXCEPTIONAL VALUE AND SENSITIVITY. THEREFORE ODOT DISTRICT 6 DEC AND ENVIRONMENTAL COMMITMENT MONITOR WILL ATTEND THE PRE-BID, PRE-CONSTRUCTION, AND POST-CONSTRUCTION MEETINGS WITH CONTRACTOR TO EMPHASIZE THE SENSITIVE NATURE OF BIG DARBY CREEK PROJECT AREA AND REINFORCE THE NECESSITY TO ADHERE TO ALL CMS STANDARDS AND THE ENVIRONMENTAL COMMITMENTS FOR THE PROJECT.

21. THE ODOT DISTRICT 6 ENVIRONMENTAL COORDINATOR WILL ENSURE THAT WEEKLY ENVIRONMENTAL COMPLIANCE INSPECTIONS ARE CONDUCTED BY THE ODOT ENVIRONMENTAL COMMITMENT MONITOR AND ODNR SCENIC RIVERS PROGRAM

ECOLOGICAL, AGENCY COORDINATION (continued)

REGIONAL MANAGER. FURTHER THE DEC WILL INVITE THE ODNR CENTRAL ASSISTANT REGIONAL SCENIC RIVER MANAGER TO THE WEEKLY ON-SITE INSPECTIONS.

22. THE PROJECT DESIGNER SHALL ENSURE A PASSAGEWAY WILL BE INCLUDED IN THE PROJECT PLANS FOR DEER AND OTHER TERRESTRIAL WILDLIFE UNDER THE NEW BIG DARBY CREEK BRIDGE.

23. ODOT-OES ECOLOGICAL UNIT WILL PLACE CAMERAS WITHIN VIEWING RANGE OF THE WILDLIFE PASSAGEWAY FOLLOWING COMPLETION OF CONSTRUCTION TO MONITOR UNDER CROSSING FOR USAGE AND TO GAIN STRATEGIES FOR FUTURE APPLICATION WITHIN THE STATE.

24. ODOT DISTRICT 6 DEC AND ODOT-OES WILL HOLD A PRE-BID MEETING FOR CONTRACTORS TO BECOME ACUTELY AWARE OF THE EXTENSIVE ENVIRONMENTAL COMMITMENTS ON THIS PROJECT AND THEIR ABSOLUTE AND MANDATORY ADHERENCE TO THOSE COMMITMENTS DURING CONSTRUCTION.

25. DISTURBED/EXPOSED AREAS IN THE RIPARIAN CORRIDOR (SLOPE AND BANKS) OF BIG DARBY CREEK MUST BE PROPERLY STABILIZED (SEEDED, MULCHED, OR OTHERWISE) IMMEDIATELY AFTER GRADING TO PREVENT EROSION AND ESTABLISHMENT OF INVASIVE PLANT SPECIES.

26. THE CONTRACTOR SHALL NOT USE CONSTRUCTION DEBRIS AS ROCK CHANNEL PROTECTION OR ALLOW CONSTRUCTION DEBRIS TO REMAIN IN THE VICINITY OF THE RIVER. SPOIL PILES SHALL BE COVERED OR OTHERWISE MANAGED TO REDUCE SEDIMENTATION. ALL TEMPORARY STRUCTURES MUST BE COMPLETELY REMOVED FROM THE RIVERBED/BANKS FOLLOWING PROJECT COMPLETION. TEMPORARY ROCK USED FOR ACCESS ROADS AND DOCKS OR OTHER TEMPORARY RIVER ACCESS SHALL BE REMOVED IMMEDIATELY UPON COMPLETION OF THE PROJECT AND STORED/DISPOSED OF AT AN APPROPRIATE UPLAND SITE OUTSIDE OF THE 100-YEAR FLOODPLAIN AREA.

27. THE CONTACTOR SHALL NOTIFY THE DISTRICT 6 ENVIRONMENTAL COORDINATOR [(740)-833-8065] AND ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER [(740) 258-0567] ONE (1) WEEK PRIOR TO THE COMMENCEMENT OF WORK TO NOTIFY THEM OF THE PROJECT START DATE. THE SCENIC RIVERS PROGRAM REGIONAL MANAGER WILL ALSO BE CONTACTED 1 WEEK PRIOR TO COMPLETION OF THE PROJECT TO CONDUCT A FINAL SITE INSPECTION WITH THE CONTRACTOR PRESENT.

28. THE DISTRICT 6 DEC SHALL CONTRACT FOR A GROUP 2 MUSSEL SURVEY AND RELOCATION TO BE PERFORMED DURING THE FIELD SEASON PRIOR TO THE INITIATION OF CONSTRUCTION (AFTER JULY 1 AND PRIOR TO THE BEGINNING OF IN-STREAM WORK) BY A FEDERALLY PERMITTED MALACOLOGIST. THE SALVAGE AND RELOCATION WORK PLAN WILL BE SUBMITTED FROM THE FEDERALLY PERMITTED SURVEYOR TO U.S. FISH AND WILDLIFE SERVICE (USFWS) FOR REVIEW AND APPROVAL PRIOR TO ANY SURVEY WORK. THE SURVEY WILL BE PERFORMED IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE OHIO MUSSEL SURVEY PROTOCOL (OMSP), WITH ADDITIONAL REQUIREMENTS FROM THE USFWS BIOLOGICAL ASSESSMENT THAT INCLUDES THE FOLLOWING: 1. SURVEYORS SHALL RETURN FEDERALLY LISTED MUSSELS TO THE SUBSTRATE BY HAND, PLACING THEM ON THEIR SIDE AND ALLOWING THEM TO BURROW ON THEIR OWN; 2. ANY FEDERALLY LISTED MUSSELS FOUND DURING THE SALVAGE AND RELOCATION SHALL BE TAGGED WITH A SMALL PLASTIC TAG BEARING A UNIQUE NUMBER BEFORE BEING RELOCATED; 3. ANY FEDERALLY LISTED MUSSEL FOUND THAT WAS PREVIOUSLY TAGGED AS A RESULT OF THE ALLEGHENY TRANSLOCATION, SHOULD BE RECORDED AS: "PREVIOUSLY TAGGED FROM

CALCULATED DCB CHECKED JMB

ENVIRONMENTAL GENERAL NOTES

FRA-71-1.53

ECOLOGICAL, AGENCY COORDINATION (continued)

ALLEGHENY TRANSLOCATION" AND THE GPS LOCATION RECORDED; 4. FEDERALLY LISTED MUSSELS SHALL BE RELOCATED TO ONE OR MORE APPROPRIATE UPSTREAM AREAS THAT HAVE BEEN INVESTIGATED BY A FEDERALLY PERMITTED MALACOLOGIST AND APPROVED BY THE USFWS; 5. COMMON MUSSELS CAN BE RELOCATED TO ANY AREA THAT MEETS THE REQUIREMENTS IN THE OMSP; 6. IF A DEAD, INJURED, OR SICK INDIVIDUAL OF A FEDERALLY LISTED SPECIES IS LOCATED DURING THE SURVEY, NOTIFICATION MUST BE MADE TO THE USFWS- COFO AT (614) 416-8993. CARE SHOULD BE TAKEN IN HANDLING SICK OR INJURED INDIVIDUALS AND IN THE PRESERVATION OF SPECIMENS SHOULD BE DONE IN ETHANOL. THE USFWS WILL ADVISE ODOT IF THE SPECIMENS MUST BE RETAINED OR IF AN ALTERNATIVE MEANS OF DISPOSITION IS REQUIRED.

29. IN-STREAM WORK SHALL NOT COMMENCE UNTIL THE MUSSEL SURVEY AND RELOCATION HAS BEEN COMPLETED AND USFWS AND ODNR HAVE APPROVED THE RESULTS. THE CONTRACTOR SHALL CONFIRM WITH DISTRICT 6 DEC THAT THE SURVEY WORK HAS BEEN COMPLETED AND APPROVED.

OTHER RESOURCES, DRINKING WATER

1. THE PROJECT IS LOCATED IN THE PROTECTION AREA FOR THE OHIO DEPARTMENT OF REHABILITATION AND CORRECTIONS PICKAWAY CORRECTIONS FACILITY DRINKING WATER RESOURCE AREA. TO MINIMIZE THE POTENTIAL FOR A RELEASE IN THIS SENSITIVE AREA, PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL NOT BE PERFORMED FROM STA 0+00.00 TO STA 77+15.03. SPILLS OF FUELS, OILS, CHEMICALS OR OTHER MATERIALS THAT COULD POSE A THREAT TO THE DRINKING WATER SOURCE AREA SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHALL CONTACT OHIO EPA SPILL REPORTING 24 HOUR EMERGENCY SERVICE CALL: 1-800-282-9378 FOR CLEANUP OF THE SPILL.

2. THE PROJECT IS LOCATED IN THE PROTECTION AREA FOR THE TIMBERLAKE WATER SYSTEM DRINKING WATER RESOURCE AREA. TO MINIMIZE THE POTENTIAL FOR A RELEASE IN THIS SENSITIVE AREA, PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL NOT BE PERFORMED FROM STA 77+15.03 TO STA 126+44.06. SPILLS OF FUELS, OILS, CHEMICALS OR OTHER MATERIALS THAT COULD POSE A THREAT TO THE DRINKING WATER SOURCE AREA SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHALL CONTACT OHIO EPA SPILL REPORTING 24 HOUR EMERGENCY SERVICE CALL: 1-800-282-9378 FOR CLEANUP OF THE SPILL.

SECTION 4F, IDENTIFIED SECTION 4(F) PROPERTIES

1. THE CONTRACTOR SHALL NOT STAGE AND/OR STORE CONSTRUCTION EQUIPMENT OUTSIDE PROPOSED CONSTRUCTION LIMITS OR WITHIN BATTELLE DARBY CREEK METRO PARK PROPERTY BOUNDARIES

2. THE CONTRACTOR SHALL CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT, THE ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER, AND ODNR DIVISION OF STATE PARKS AND WATERCRAFT.

3. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE APPROPRIATE WARNING SIGNS AND BUOYS IN BIG DARBY CREEK WITH THE ODNR DIVISION OF STATE PARKS AND WATERCRAFT FOR WATERCRAFT SAFETY.

SECTION 4F, IDENTIFIED SECTION 4(F) PROPERTIES (continued)

4. PROTECTION OF CANOE AND KAYAK TRAFFIC BY USE OF APRONS WILL BE MAINTAINED THROUGHOUT CONSTRUCTION ASSOCIATED WITH THE BRIDGES OVER BIG DARBY CREEK.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF APPROPRIATE SIGNAGE OF TAKE-OUT/PORTAGE LOCATIONS FOR RIVER USERS OF BIG DARBY CREEK UPSTREAM AND/OR DOWNSTREAM OF THE CONSTRUCTION LIMITS AT THE IR 71 BRIDGES OVER BIG DARBY CREEK 10 DAYS PRIOR TO THE CLOSURE OF THE STREAM CHANNEL. THE CLOSURE SHALL LAST NO MORE THAN A TOTAL OF THREE (3) DAYS AND WILL OCCUR DURING OFF-PEAK TIMES TO BEST ACCOMMODATE CANOE AND KAYAK TRAFFIC.

6. THE ODNR DIVISION OF STATE PARKS AND WATERCRAFT, ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER, AND DISTRICT 6 ENVIRONMENTAL COORDINATOR SHALL BE NOTIFIED AT A MINIMUM OF 15 DAYS IN ADVANCE OF THE START OF CONSTRUCTION ACTIVITIES RELATED TO THE BRIDGE REPLACEMENT OVER BIG DARBY CREEK.

7. THE CONTRACTOR SHALL PROVIDE NOTICE OF THE PROJECT'S CONSTRUCTION SCHEDULE AND POTENTIAL FOR USERS TO ENCOUNTER PARTIAL CLOSURES AT THE BIG DARBY CREEK BRIDGES NO LESS THAN 48 HOURS PRIOR TO CONSTRUCTION ACTIVITIES. NOTICES SHALL BE POSTED IN AN AREA THAT CAN BE SEEN BY USERS OF THE BIG DARBY CREEK, BOTH UPSTREAM AND DOWNSTREAM.

8. THE CONTRACTOR WILL NOTIFY DISTRICT 6 PUBLIC INFORMATION OFFICER VIA EMAIL (D06.PIO@DOT.OHIO.GOV); TRAPPER JOHNS CANOE LIVERY OPERATOR AT (614) 877-4321 OR TJ@TRAPPERJOHNSCANOEING.COM; THE ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER (HEATHER DOHERTY AT 740-258-0567 OR HEATHER.DOHERTY@DNR.STATE.OH.US; METRO PARKS MANAGER, PARK OPERATIONS (DOUG YABLONSKI) AT 614-895-6205 OR YABLONSKI@METROPARKS.NET, PARK MANAGER- BATTELLE DARBY CREEK METRO PARK (KEVIN KASNYIK) AT 614-878-1076 OR KASNYIK@METROPARKS.NET, NO LATER THAN TEN (10) DAYS PRIOR TO THE CLOSURE OF THE STREAM CHANNEL OF BIG DARBY CREEK.

9. THE CONTRACTOR SHALL NOTIFY THE ODNR SCENIC RIVERS PROGRAM REGIONAL MANAGER AT A MINIMUM OF SEVEN (7) DAYS PRIOR TO PROJECT COMPLETION TO CONDUCT A FINAL SITE INSPECTION WITH THE CONTRACTOR PRESENT.

PERMITS, WATERWAY PERMITS

1. ODOT SHALL OBTAIN ALL APPROPRIATE WATERWAY PERMITS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND ALL SPECIAL PROVISIONS FOR WATERWAY PERMITS WILL BE INCLUDED IN THE PROJECT PLANS. THE CONTRACTOR IS NOT PERMITTED TO WORK BELOW THE ORDINARY HIGH WATER MARK UNTIL THE PERMITS ARE RECEIVED.

PERMITS, STORM WATER PERMITS

1. ODOT SHALL PREPARE AND SUBMIT THE NOI TO THE OEPA AND SHALL BE RESPONSIBLE FOR OBTAINING THE NPDES PERMIT PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE PERMIT SPECIAL PROVISIONS SHALL BE ADHERED TO AND INCLUDED IN THE PROJECT PLANS.

2. ODOT DISTRICT 6 SHALL DEVELOP A STORM WATER POLLUTION PREVENTION PLAN AND BMP SITE PLAN AND SHALL COORDINATE WITH APPROPRIATE AGENCIES PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES.

PERMITS, FLOODPLAINS

1. THE PROJECT DESIGNER SHALL DELINEATE THE 100-YEAR FLOODPLAIN AND DELINEATE THE LIMITS OF 1,000 FEET FROM THE BANK OF THE BIG DARBY CREEK IN THE PROJECT PLANS.

CALCULATED DCB
CHECKED JMB

ENVIRONMENTAL GENERAL NOTES

FRA-71-1.53

ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED

ITEM 601, TIED CONC. BLOCK MAT, TYPE 2 PER DM-4.1

PLEASE SEE DESIGNER NOTE CONCERNING POSSIBLE USE OF TYPE D BARRIER FOR PIER PROTECTION

* NOTE: EXERCISE CAUTION WHEN WORKING NEAR EXISTING SPREAD FOOTINGS. VIBRATORY ROLLERS MAY CAUSE STRESS CRACKING TO FOOTING.

HARRISBURG-GEORGESVILLE RD

60" CONC

Ex SH

Ex LA-R/W

ITEM 601, TIED CONC. BLOCK MAT, TYPE 2 PER DM-4.1

EC-7

BRIDGE NO. FRA-71-0144 (NO WORK)

R-5 REM EX BARRIER

GR-2 GR, TYPE MGS

R-3 REM EX GR

STA 79+00.00, 20.75' LT AND 56.75', END PVMT SHIFT

CONST. LIMITS

REM EX GR R-7

STA 80+50.00, 68.75' LT BEGIN SHLD TAPER

STA 80+91.89, 7.75' LT BEGIN SHLD TAPER

MATCH LINE - STA 76+00 - I-71 - SEE SHEET 129

STA 76+29.45, ℄ IMPACT ATT., TYPE 1 (BIDIRECTIONAL)

STA 76+98.71, 8.83' LT AA, MGS TYPE T

STA 77+60.33 LENGTH OF NEED

SOUTHBOUND I-71

PROP UD

GR-6

GR, TYPE MGS

SEE NOTE ABOVE

GR, BARRIER DESIGN TYPE MGS

GR-7

EC-4

RS-1

RS-2

CB-3

C-1 STA 80+95, 7.68' LT BEGIN TYPE 4-C CURB

GR-4

PROP UD

EC-6

GR, BARRIER DESIGN TYPE MGS

S 59° 37' 35" W

GR, TYPE MGS GR-5

CB-8

℄ CONST. I-71

R-9

15" TYPE C

STA 76+50.00 9.34' RT

CABLE BARRIER GR-3

STA 76+83.54 LENGTH OF NEED

PC STA 77+15.03

STA 77+42, 8.39' RT AA, MGS TYPE T

15" TYPE B BORE OR JACK

PROP UD

REM EX GR R-8

C-2 STA 80+95, 6.75' RT BEGIN TYPE 4-C CURB

CB-3A

15" TYPE B

MATCH LINE - STA 81+00 - I-71 - SEE SHEET 135

RS-3 RS-4

NORTHBOUND I-71

SS-4

SS-5

CB-3A

BORED OR JACKED

GR, TYPE MGS GR-1

PROP UD

C-3 STA 80+95, 70.75' LT BEGIN TYPE 4-C CURB

15" TYPE F

EC-5

REM EX GR

REM EX BARRIER

R-2

R-4

15" TYPE F

HW 2.1

REM EX GR R-6

P.I. STA 116+90.94
Δ = 35° 53' 14" (RT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 3,975.91'
L = 7,690.13'
E = 627.72'
C = 7,565.04'
C.B. = N 77° 34' 12" E

STA 79+00.00, 20.75' RT AND 56.75' RT, END PVMT SHIFT

STA 80+79.00, 8.75' RT AND 68.75' RT BEGIN SHLD TAPER

STA 80+89.00, 6.75' RT AND 70.75' RT END SHLD TAPER

15" TYPE F

HW 2.1

CONST. LIMITS

HARRISBURG-GEORGESVILLE RD

Ex LA-R/W

STREAM 15

WETLAND A

Ex SH

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-3	℄ REFERENCES AND BENCHMARKS
133	PROFILES
134	ESTIMATED QUANTITIES
181	UNDERDRAIN DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DCB
CHECKED JMB

PLAN - I-71
STA 76+00 TO STA 81+00

FRA-71-1.53

132
285

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-3	℄ REFERENCES AND BENCHMARKS
136	PROFILES
137	ESTIMATED QUANTITIES
182	UNDERDRAIN DETAILS
203-204	STRUCTURE FRA-71-0153

ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 11' UNLESS NOTED

ITEM 601, TIED CONC. BLOCK MAT, TYPE 2 PER DM-4.1

PRESSURE RELIEF JOINT TYPE A PER BP-2.3

Ex LA-R/W

Ex CH

BIG DARBY CREEK

WETLAND I

REM EX FENCE R-10C

PR FENCE, TYPE 47RA F-2

CONST. LIMITS

STA 81+04, 70' LT BEGIN TYPE 4-C CURB

STA 81+35, 70.75' LT END SHLD TAPER, END MGS BTA, TYPE 2, BEGIN SINGLE SLOPE CONCRETE BRIDGE RAILING

EC-7 R-7 REM EX GR C-4 GR-2 GR, TYPE MGS

PROP UD PR-2 RS-8 RS-1 RS-2 C-1 RS-7 E

CB-3 GR, BARRIER DESIGN TYPE MGS GR-7 A

CB-3A C-2 RS-6 B

REM EX FENCE R-10B

12" CMP (REM)

RCP TYPE A, 3'-0" THICK W/ FABRIC FILTER EC-8

R-9

SOUTHBOUND I-71

RCP TYPE A, 3'-0" THICK W/ FABRIC FILTER EC-9

℄ CONST. I-71

82 83 84

REM EX GR R-8 PR-1 PROP UD RS-4 RS-3 RS-5 C D

NORTHBOUND I-71

CB-3A C-3 REM EX GR R-6 GR, TYPE MGS GR-1

BRIDGE NO. FRA-71-0153

SS-5 REM EX FENCE R-10A STREAM 15

PR FENCE, TYPE 47RA F-1

CONST. LIMITS

P.I. Sta. 116+90.94
Δ = 35° 53' 14" (RT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 3,975.91'
L = 7,690.13'
E = 627.72'
C = 7,565.04'
C.B. = N 77° 34' 12" E
e_{max}=0.020

Ex SH

Ex CH

MATCH LINE - STA 81+00 - I-71 - SEE SHEET 132

REM EX FENCE R-10D

PR FENCE, TYPE 47RA F-4

STA 85+06, 6.75' LT AND 70.75' LT END SINGLE SLOPE CONCRETE BRIDGE RAILING, BEGIN MGS BTA, TYPE 1 (BARRIER DESIGN 6.75' LT ONLY)

EC-11

STA 85+40, 70.75' LT BEGIN SHLD TAPER

STA 85+50, 68.75' LT END SHLD TAPER

R-14 REM EX GR GR-8 GR, TYPE MGS

C-5 F PROP UD RS-9 PR-3 R-12 RS-13

REM EX GR RS-14 RS-10 C-6 EC-13 G CB-3A PROP UD

R-11 SS-7 H EC-14

(REM) 15" B 15" C 12" CMP (REM) CB-8

RS-11 EC-10 GR-9 GR, BARRIER DESIGN TYPE MGS

PR-4 RS-15 PROP UD

GR, TYPE MGS RS-16

STA 85+10, 6.75' RT AND 70.75' RT, BEGIN SHLD TAPER

CB-3A GR-10

RS-12 C-7 PROP UD

REM EX GR R-13

STA 85+34, 70.22' RT END 4-C CURB EC-12

HW-2.1 SS-6

STA 85+08, 70.75' RT END SINGLE SLOPE CONCRETE BRIDGE RAILING, BEGIN 4-C CURB AND MGS BTA, TYPE 2 15" TYPE F

PR FENCE, TYPE 47RA F-3

STA 86+00.00, 8.75' AND 68.75' RT, END SHLD TAPER

MATCH LINE - STA 86+00 - I-71 - SEE SHEET 138

Ex LA-R/W

(A) STA 81+10, 6.75' RT, END GR, BARRIER DESIGN TYPE MGS, BEGIN MGS BTA, TYPE 1, BARRIER DESIGN

(B) STA 81+35, 6.75' RT, END MGS BTA, TYPE 1, BARRIER DESIGN END TYPE 4-C CURB, BEGIN SINGLE SLOPE CONCRETE BRIDGE RAILING

(C) STA 81+09, 70.75' RT, END GR, TYPE MGS, BEGIN MGS BTA, TYPE 1

(D) STA 81+35, 70.75' RT, END MGS BTA, TYPE 1, END TYPE 4-C CURB, BEGIN SINGLE SLOPE CONCRETE BRIDGE RAILING

(E) STA 81+35, 6.75' LT, END TYPE 4-C CURB, BEGIN SINGLE SLOPE CONCRETE BRIDGE RAILING

(F) STA 85+31.53, 70.75' LT END TYPE 4-C CURB

(G) STA 85+53, 6.75' LT END TYPE 4-C CURB

(H) STA 85+60, 6.75, BEGIN SHLD TAPER STA 85+70, 8.75, END SHLD TAPER

HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED DCB CHECKED JMB

PLAN - I-71 STA 81+00 TO STA 86+00

FRA-71-1.53

135 285

X:\4037000\12957.15\93496\roadway\sheets\93496GP018.dgn Sheet 6/29/2018 4:40:50 PM 1598anm

ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED

ROCK CHANNEL PROTECTION, TYPE C w/FILTER

Ex LA-R/W

STA 87+00.00, 20.75' LT BEGIN PAVEMENT SHIFT

STA 88+53.04, 72.34' LT AA, MGS TYPE B

GR-8 GR, TYPE MGS

R-14 REM EX GR

CONST. LIMITS

PROP UD

SOUTHBOUND I-71

STA 88+18.38, 7.97' LT IMPACT ATT., TYPE 1 (BIDIRECTIONAL)

REM EX GR R-12

EC-15

RS-13 RS-14

GR, BARRIER DESIGN, TYPE MGS GR-9

(REM) R-15

℄ CONST. I-71

STA 89+50.00 9.34' RT

CABLE BARRIER GR-11

CB-8

15" TYPE C

SS-7

12" CONC (REM)

STA 89+00.00 7.15' RT

℄ MEDIAN TURNAROUND SEE SHEET 187 FOR DETAILS

NORTHBOUND I-71

RS-15 RS-16

15" TYPE B

REM EX GR R-13

GR, TYPE MGS GR-10

HW-2.1 OR 2.2

15" CONC (REM)

15" TYPE C

P.I. Sta. 116+90.94
Δ = 35° 53' 14" (RT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 3,975.91'
L = 7,690.13'
E = 627.72'
C = 7,565.04'
C.B. = N 77° 34' 12" E
e_{max}=0.020

STA 90+86.19, 74.75' RT AA, MGS TYPE T

MATCH LINE - STA 86+00 - I-71 - SEE SHEET 135

MATCH LINE - STA 91+00 - I-71 - SEE SHEET 141

12' 36' 12'

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-3	℄ REFERENCES AND BENCHMARKS
139	PROFILES
140	ESTIMATED QUANTITIES
183	UNDERDRAIN DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DCB
CHECKED JMB

PLAN - I-71
STA 86+00 TO STA 91+00

FRA-71-1.53

138
285

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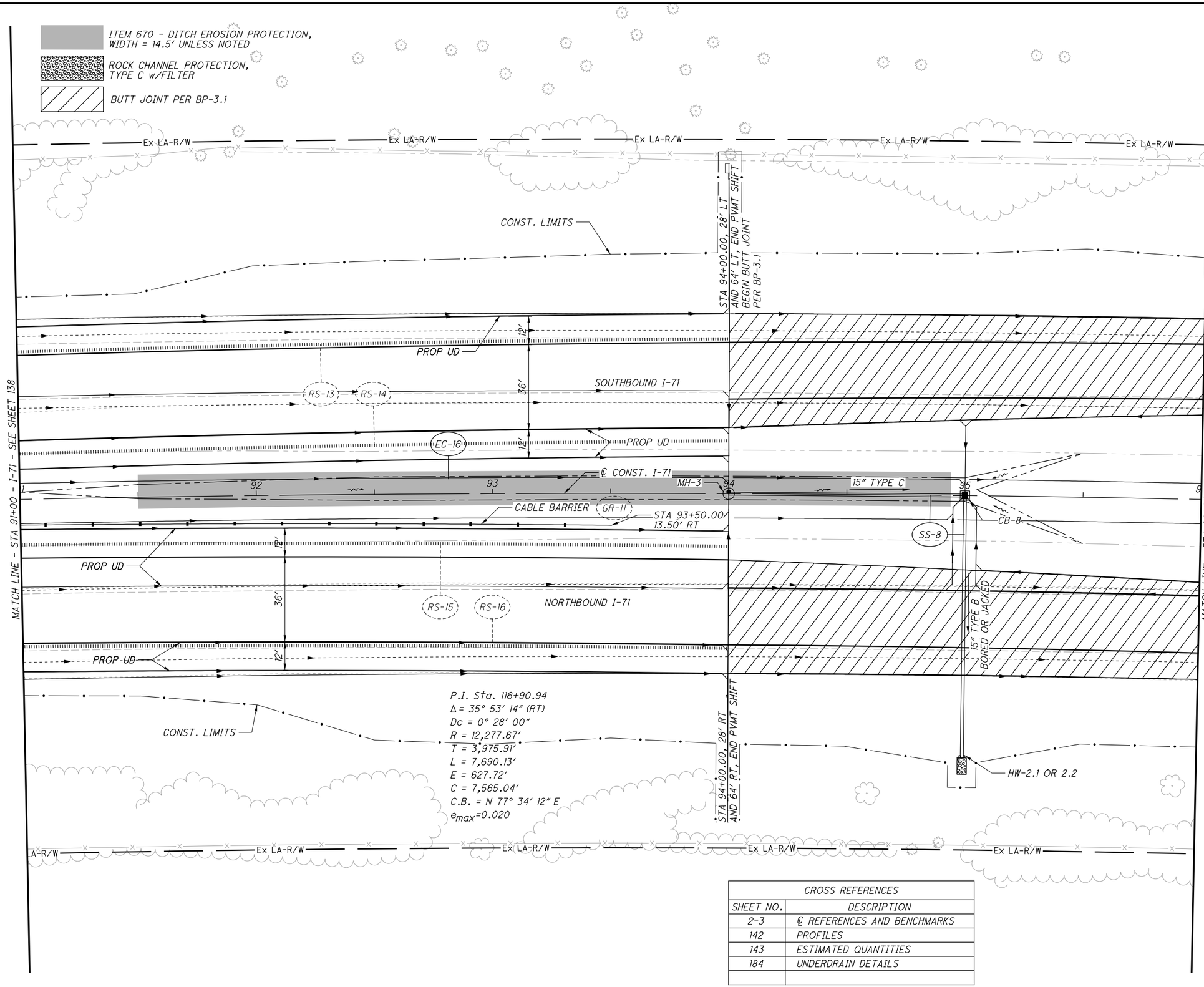

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-3	℄ REFERENCES AND BENCHMARKS
142	PROFILES
143	ESTIMATED QUANTITIES
184	UNDERDRAIN DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED DCB
CHECKED JMB

PLAN - I-71 STA 91+00 TO STA 96+00

FRA-71-1.53

141
285

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ITEM 670 - DITCH EROSION PROTECTION, WIDTH = 14.5' UNLESS NOTED

BUTT JOINT PER BP-3.1

Ex LA-R/W

END PROJECT STA 96+80.00 SLM 1.83

BEGIN PROJECT STA 96+80.00 SLM 1.83

E120 (525)

E081 (090)

CONST. LIMITS

PROP UD

10.6'

23.0'

4.3'

SOUTHBOUND I-71

SAW CUT

6

97

98

99

100

SS-9

12" CONC

SS-10

15" CONC

PROP UD

3.2'

24.2'

10.8'

NORTHBOUND I-71

CONST. LIMITS

P.I. Sta. 116+90.94
Δ = 35° 53' 14" (RT)
Dc = 0° 28' 00"
R = 12,277.67'
T = 3,975.91'
L = 7,690.13'
E = 627.72'
C = 7,565.04'
C.B. = N 77° 34' 12" E
e_{max}=0.020

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
2-3	℄ REFERENCES AND BENCHMARKS
145	PROFILES
146	ESTIMATED QUANTITIES
185	UNDERDRAIN DETAILS

N

0 10 20 40 HORIZONTAL SCALE IN FEET

CALCULATED DCB CHECKED JMB

PLAN - I-71
STA 96+00 TO STA 101+00

FRA-71-1.53

144
285

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Native Seed Mix		
Common Name	**Species Name**	**% Seed Mix**
Virginia Wild Rye	*Elymus virginicus*	20.00
Indian Grass	*Sorghastrum nutans*	16.00
Deertoungue	*Panicum clandestinum*	15.00
Big Bluestem	*Andropogon gerardii*	12.50
Switch Grass	*Panicum virgatum*	8.00
Partridge Pea	*Chamaercrista fasciculata*	5.00
Autum Bentgrass	*Agrostis perennans*	4.00
Blue Vervain	*Verbena hastata*	4.00
Black Eyed Susan	*Rudbeckia hirta*	3.00
Ox Eye Sunflower	*Heliopsis helianthoides*	3.00
New England Aster	*Aster novae-angliae*	2.30
Soft Rush	*Juncus effusus*	2.00
Bonset	*Eupatorium perfoliatum*	1.00
Joe Pye Weed	*Eupatorium fistulosum*	1.00
Blue False Indigo	*Baptisia australis*	1.00
New York Ironweed	*Vernonia noveboracensis*	1.00
Great Blue Lobelia	*Lobelia siphilitica*	0.50
Wild Bergamot	*Monarda fistulosa*	0.50
Grass Leaved Goldenrod	*Euthamia graminifolia*	0.20
	TOTAL	100.00
Zone 1 Planting Area = 0.30 AC.		

1. *PERMANENT NATIVE SEED MIX SHOULD BE BROADCAST AT A RATE OF 30 LB/ACRE.*
2. *PERMANENT SEED MIXTURES SHALL BE RIPARIAN BUFFER MIX, AVAILABLE FROM ERNST CONSERVATION NURSERY OR APPROVED EQUAL. SEED MIXES HAVE BEEN LISTED IN THE TABLE ABOVE.*
3. *ALL SEED IS TO BROADCAST AND RAKED INTO SOIL.*

- *PLANTING ZONE 1 - SEEDING*

BIG DARBY CREEK

I.P.S.

HORIZONTAL SCALE IN FEET
0

CALCULATED | CHECKED

PLANTING PLAN
STA 81+00 TO STA 86+00

FRA-71-1.53

202
285

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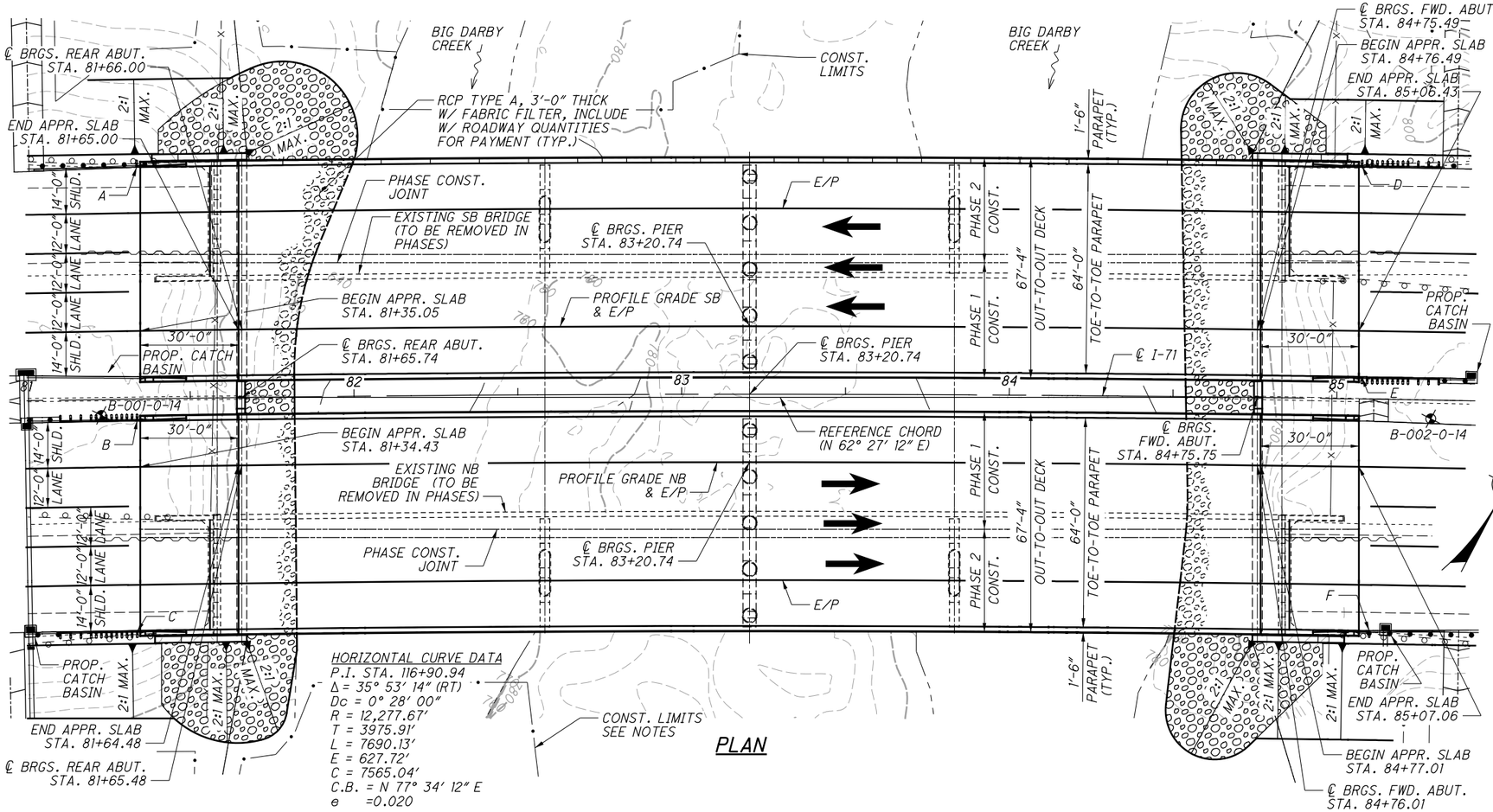
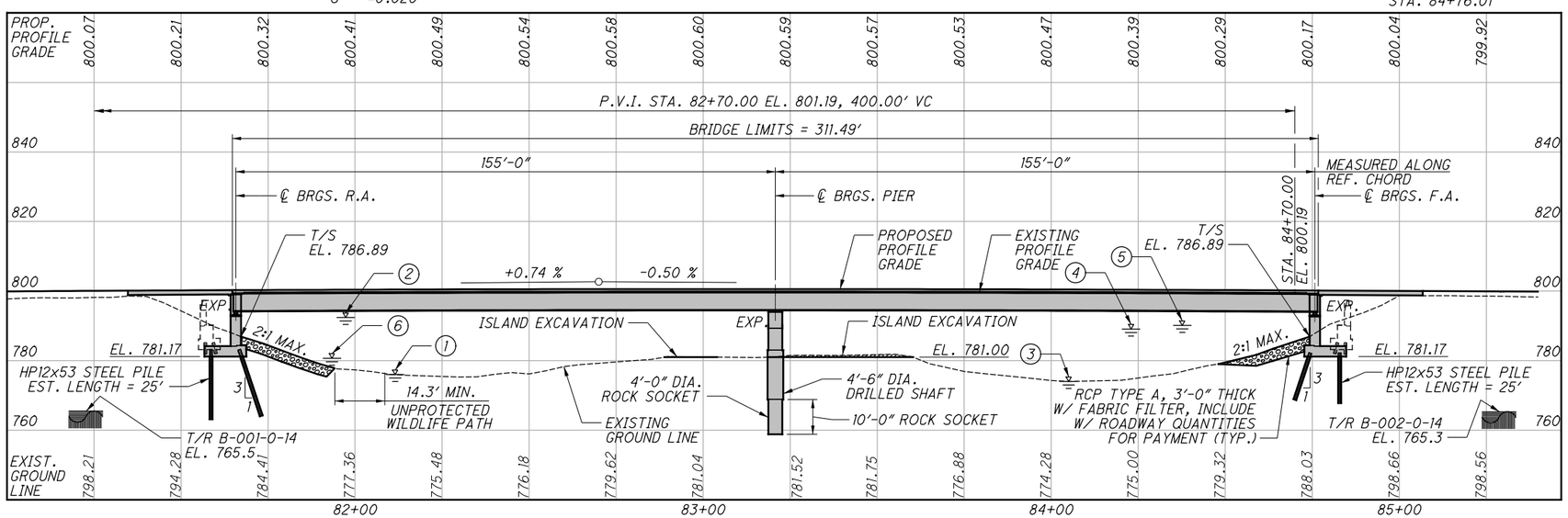


PLAN



PROFILE ALONG PROFILE GRADE LINE SB

BENCHMARK DATA

BM #1 STA. 67+71.02, EL. 797.22, 0.02' LT., CONC. MONUMENT
BM #2 STA. 76+70.85, EL. 799.25, 0.05' RT., CONC. MONUMENT
BM #3 STA. 93+71.58, EL. 798.81, 0.04' RT., CONC. MONUMENT
BM #4 STA. 101+71.41, EL. 796.63, 0.03' RT., CONC. MONUMENT

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 5 OF 1369.

NOTES

EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

FOR REFERENCE CHORD DIAGRAM, SEE SHEET 2/78.

FOR CONSTRUCION AND ISLAND EXCAVATION LIMITS, SEE SHEET 3/78.

DESIGN TRAFFIC:
2017 ADT = 44,670 2017 ADTT = 13,401
2037 ADT = 64,070 2037 ADTT = 19,221
DIRECTIONAL DISTRIBUTION = 55%

LEGEND

- BORING LOCATION
- LIMITS OF ROCK CHANNEL PROTECTION
- ISLAND EXCAVATION (TO EL. 781.0)

HYDRAULIC DATA

DRAINAGE AREA = 495 SQ. MILES
Q (50) = 30800 CFS V (50) = 10.40 FT/S
Q (100) = 38000 CFS V (100) = 11.97 FT/S
STRUCTURE CLEARS THE 50 YEAR DESIGN HW BY 5.34 FEET.

1. - NORMAL WATER EL. 776.0
2.- MAX. RECORD H.W. EL. 792.4 (1959 FLOOD EL.)
3.- FLOW LINE EL. 774.0±
4.- 50 YR. H.W. EL. 789.09 LEFT BRIDGE, 788.33 RIGHT BRIDGE
5.- 100 YR. H.W. EL. 790.13 LEFT BRIDGE, 789.04 RIGHT BRIDGE
6.- O.H.W.M. EL. 780.7

EXISTING STRUCTURE

TYPE: CONTINOUS WELDED STEEL GIRDER WITH CONCRETE DECK AND SUBSTRUCTURE
SPANS: 100'-0"± - 125'-0"± - 100'-0"± C/C BRGS.
ROADWAY: 33'-6"± T/T BARRIER
LOADING: CF-2000 (57) ADEQUATE FOR AASHO ALTERNATE LOADING
SKEW: 0°-00'±
APPROACH SLABS: AS-1-54 (25'-0"±) SPECIAL
ALIGNMENT: 0° - 28'± CURVE RIGHT
CROWN: 0.016 FT/FT NORMAL CROWN
STRUCTURAL FILE NUMBER: 2506785L/2506815R
DATE BUILT: 1964
DISPOSITION: TO BE REPLACED

PROPOSED STRUCTURE

TYPE: TWO-SPAN CONTINUOUS A709-50W/HPS 70W STEEL PLATE GIRDER WITH COMPOSITE REINFORCED COMCRETE DECK ON SEMI-INTEGRAL ABUTMENTS AND REINFORCED CONCRETE CAP AND COLUMN PIER.
SPANS: 155'-0" - 155'-0" C/C BRGS. ALONG REF. CHORD
ROADWAY: 64'-0" TOE/TOE PARAPET
LOADING: HL-93, 60 PSF FWS
SKEW: 0°-00'
APPROACH SLABS: 30'-0" LONG (AS-1-81)
ALIGNMENT: 0° - 28' CURVE RIGHT
SUPERELEVATION: 0.02 FT/FT
COORDINATES: LATITUDE 39°49'16" N
LONGITUDE 83°10'11" W

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 792-5900 PHONE
(614) 792-5901 FAX

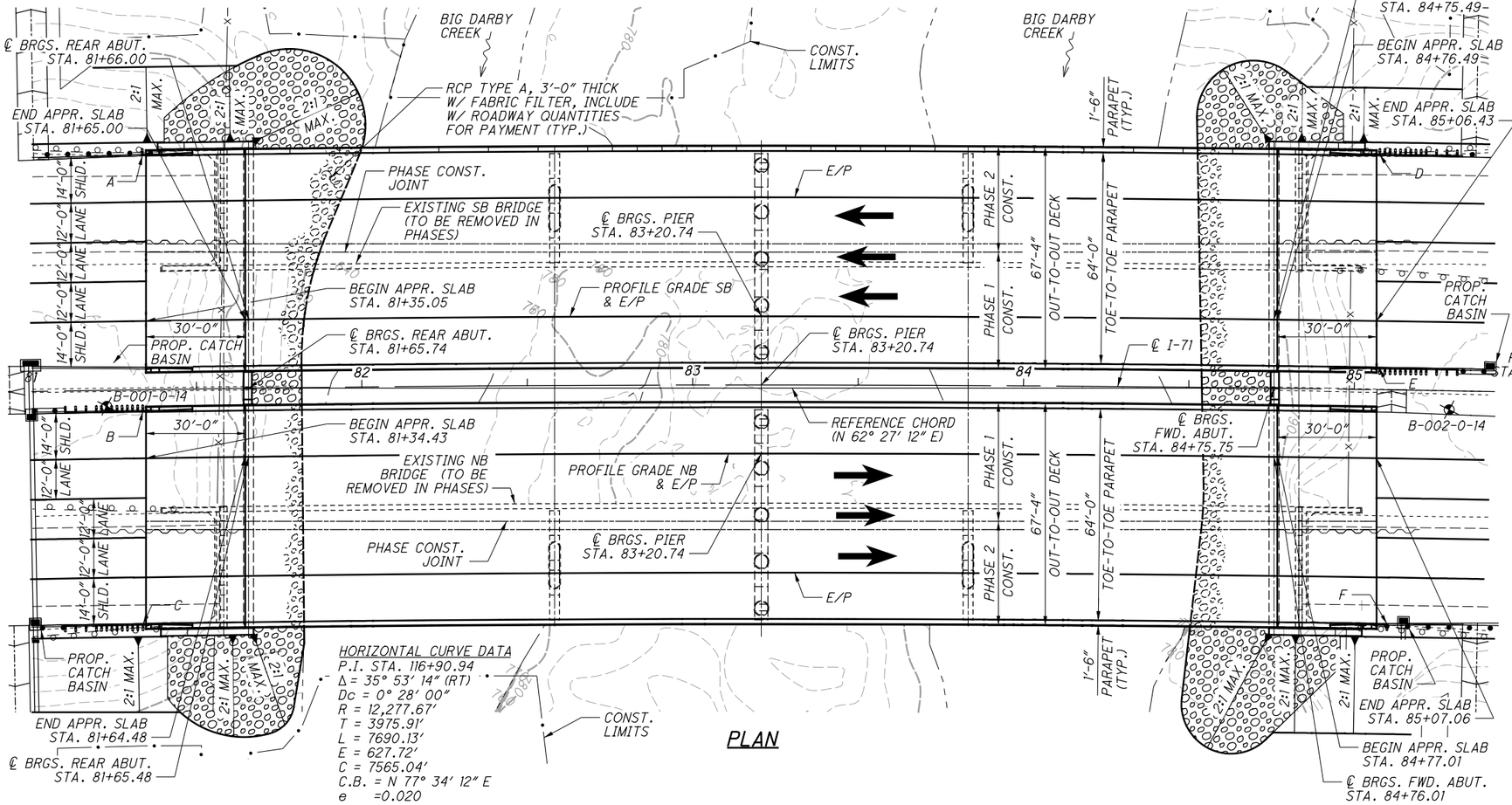
DESIGNED LYH | DRAWN DJC | REVIEWED KVB | DATE 8/1/2016
CHECKED CMH | REVISED | STRUCTURE FILE NUMBER 2506786

FRANKLIN COUNTY
STA. 81+65.00
STA. 84+76.49

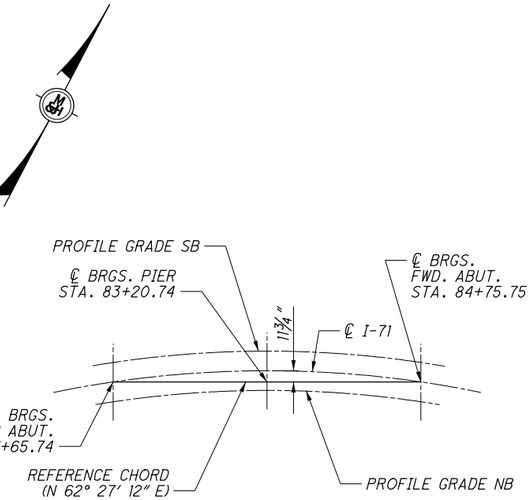
SITE PLAN
BRIDGE NO. FRA-71-0153 L/R
OVER BIG DARBY CREEK

FRA-71-1.53
PID No. 93496

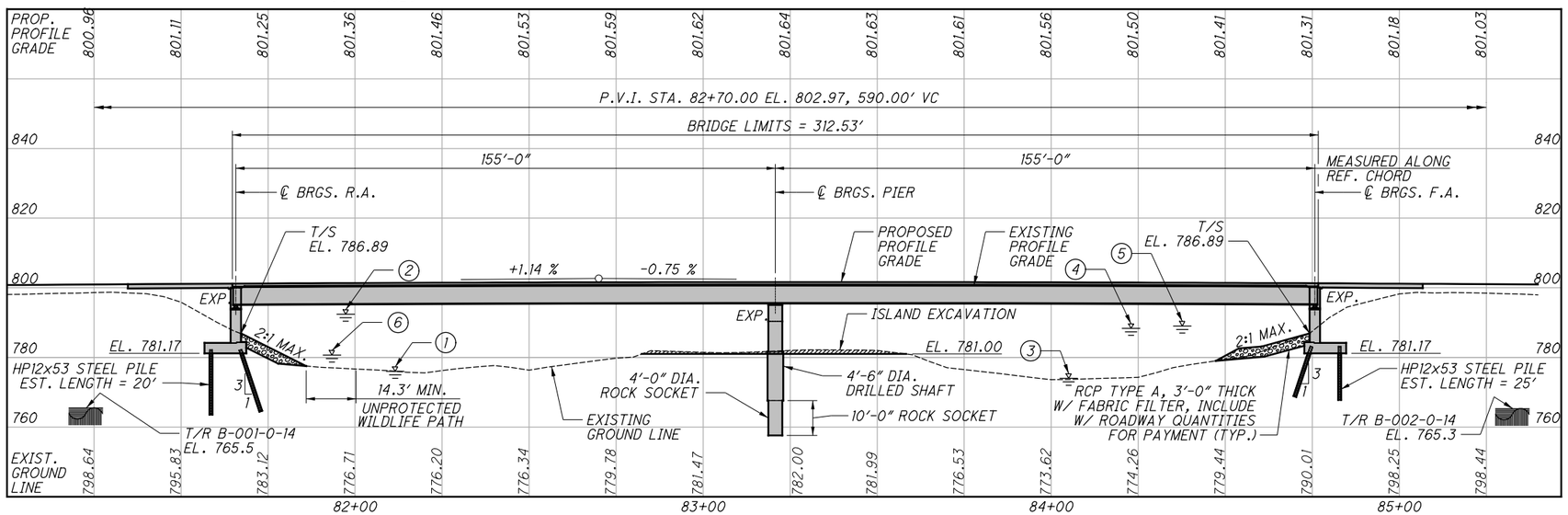
1 / 78
203 / 285



PLAN



REFERENCE CHORD DIAGRAM



PROFILE ALONG PROFILE GRADE LINE NB

℄ GUARDRAIL POST STATIONING

A: 81+34.68
B: 81+33.68
C: 81+32.70
D: 85+06.64
E: 85+07.60
F: 85+10.97

NOTE:

FOR EXISTING, PROPOSED STRUCTURE BLOCK, & HYDRAULIC DATA SEE SHEET 1/78.

FOR THIS PROJECT, PERMITS FOR SECTIONS 401 AND 404 OF THE CLEAN WATER ACT, ARE BASED ON THE LIMITS OF TEMPORARY CONSTRUCTION FILL PLACED IN "WATERS OF THE UNITED STATES" AS SHOWN BELOW. IF EITHER OF THE LIMITS PROVIDED ARE EXCEEDED, THEN A 404/401 PERMIT MODIFICATION WILL BE REQUIRED. IF A PERMIT MODIFICATION IS REQUIRED, REFER TO SUPPLEMENTAL SPECIFICATION 832.09 FOR THE APPLICATION REQUIREMENTS.

PLAN AREA OF TEMPORARY FILL MATERIAL = 0.65 ACRES

TOTAL VOLUME OF TEMPORARY FILL MATERIAL = 5726.4 CY

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 792-5800 PHONE
(614) 792-5901 FAX

DESIGNED LYH | DRAWN DJC | REVIEWED KVB | DATE 8/1/2016
CHECKED CMH | REVISED | STRUCTURE FILE NUMBER 2506816

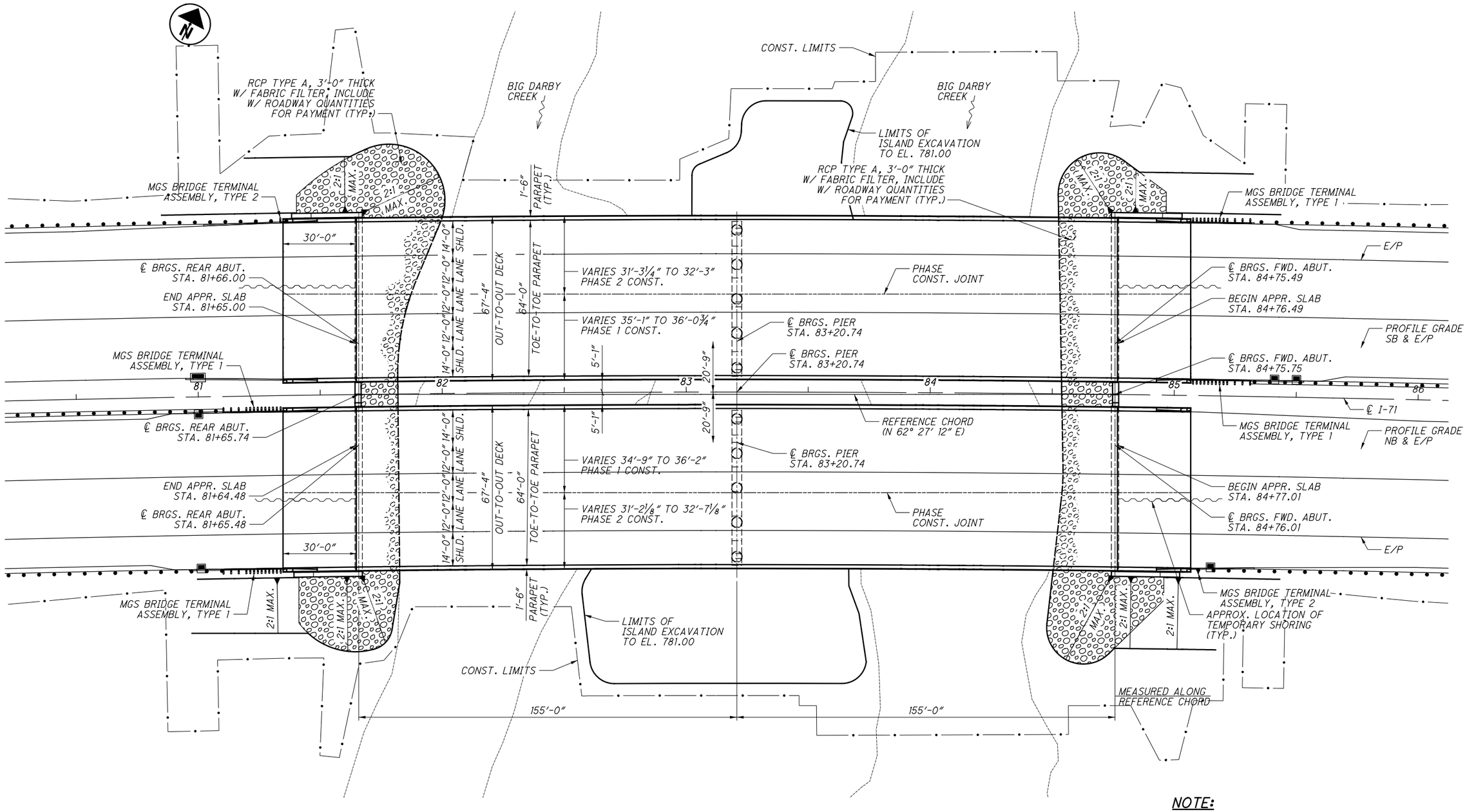
FRANKLIN COUNTY
STA. 81+64.48
STA. 84+77.01

SITE PLAN
BRIDGE NO. FRA-71-0153 L/R
OVER BIG DARBY CREEK

FRA-71-1.53
PID No. 93496

2 / 78

204
285



NOTE:

1. FOR TEMPORARY SHORING DETAILS, SEE SHEETS 17/78 & 18/78.

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 792-5900 PHONE
(614) 792-5901 FAX

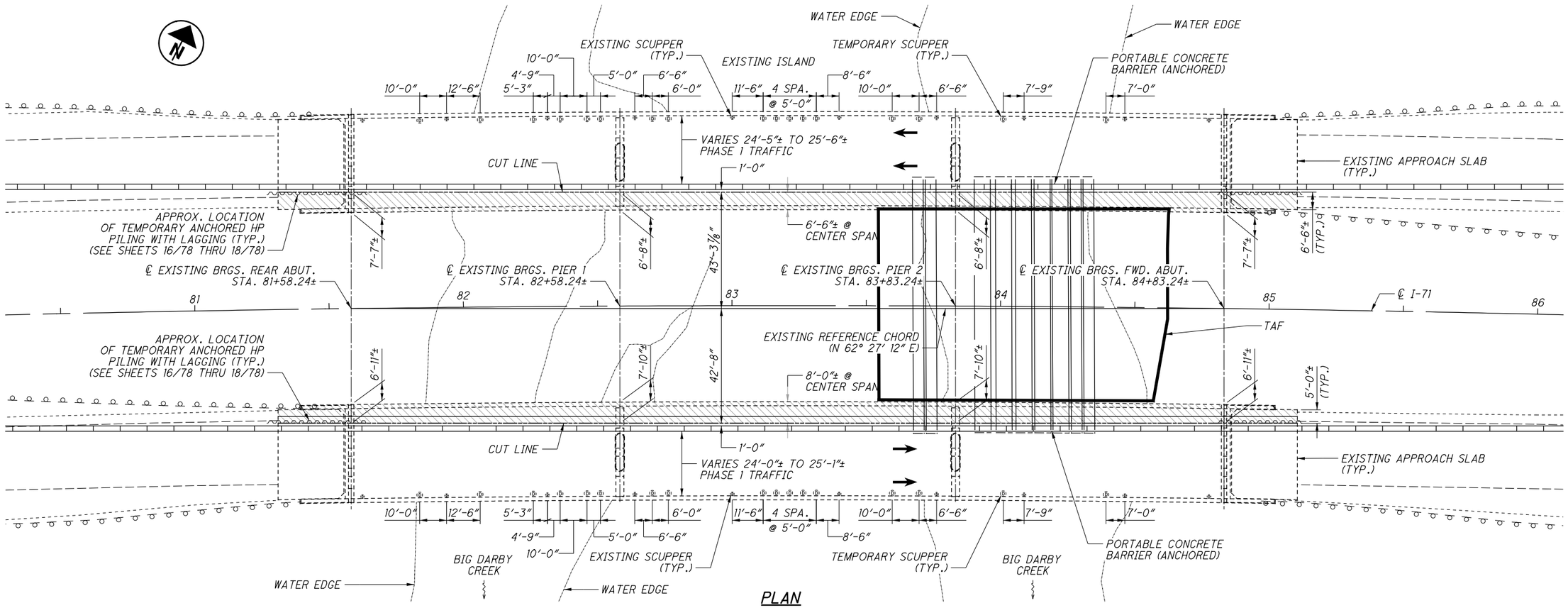
DESIGNED	DRAWN	REVIEWED	DATE
LYH	DJC	KVB	6/30/2015
CHECKED	REVISED	STRUCTURE FILE NUMBER	
CMH		2506786L/2506816R	

GENERAL PLAN

BRIDGE NO. FRA-71-0153 L/R
OVER BIG DARBY CREEK

FRA-71-1.53

PID No. 93496



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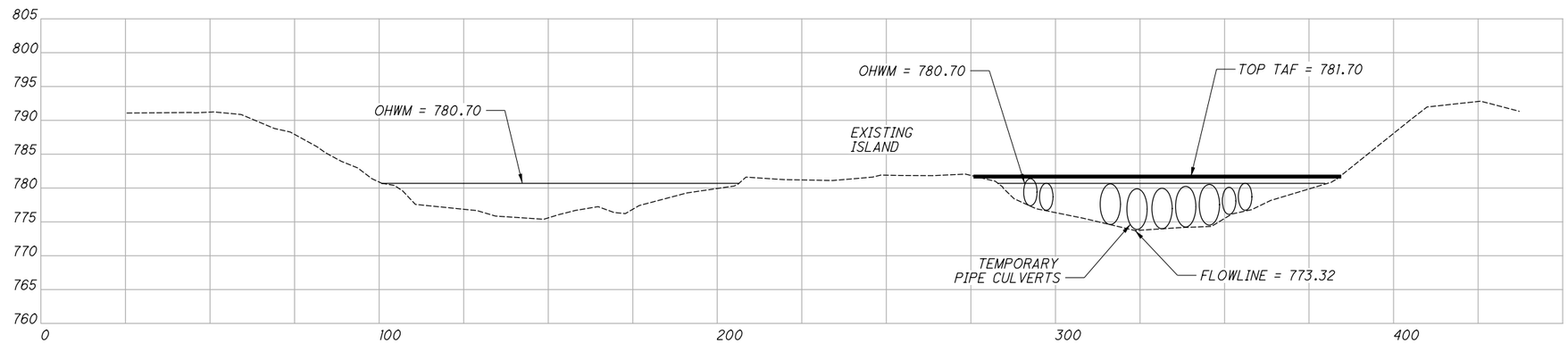


ELEVATION VIEW

LEGEND:

- PORTION OF STRUCTURE TO BE REMOVED
- TAF - TEMPORARY ACCESS FILL
- OHWM - ORDINARY HIGH WATER MARK

NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 15/78.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE AT PROPOSED PIER.
3. FOR TEMPORARY SCUPPER DETAIL, SEE SHEET 15/78.
4. THE TEMPORARY ACCESS FILL SHALL ACCOMODATE A FLOW RATE (Q) EQUAL TO TWICE THE HIGHEST MEAN MONTHLY FLOW SUCH THAT THE BACKWATER ELEVATION DOES NOT EXCEED THE OHWM. Q FOR THIS LOCATION IS: 2 x 957 = 1914 CFS.

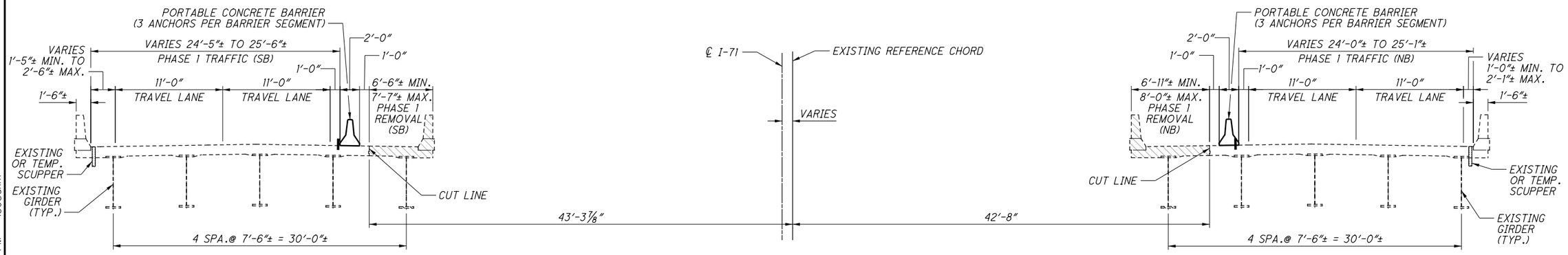
DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 792-5800 PHONE
(614) 792-5901 FAX

DESIGNED	DRAWN	REVIEWED	DATE
DJC	DJC	KVB	8/1/2016
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RLC		2506786L/2506816R	

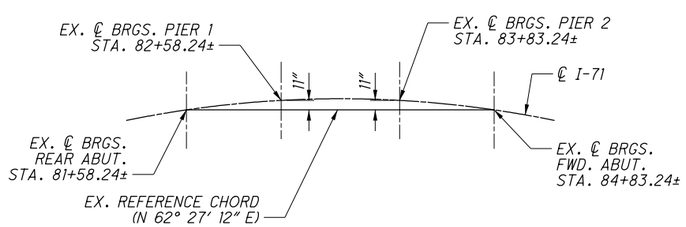
PHASE CONSTRUCTION DETAILS

BRIDGE NO. FRA-71-0153 L/R
OVER BIG DARBY CREEK

FRA-71-1.53
PID No. 93496



PHASE 1 TRAFFIC & REMOVAL



EXISTING REFERENCE CHORD DIAGRAM

LEGEND:

▨ - PORTION OF STRUCTURE TO BE REMOVED

NOTES:

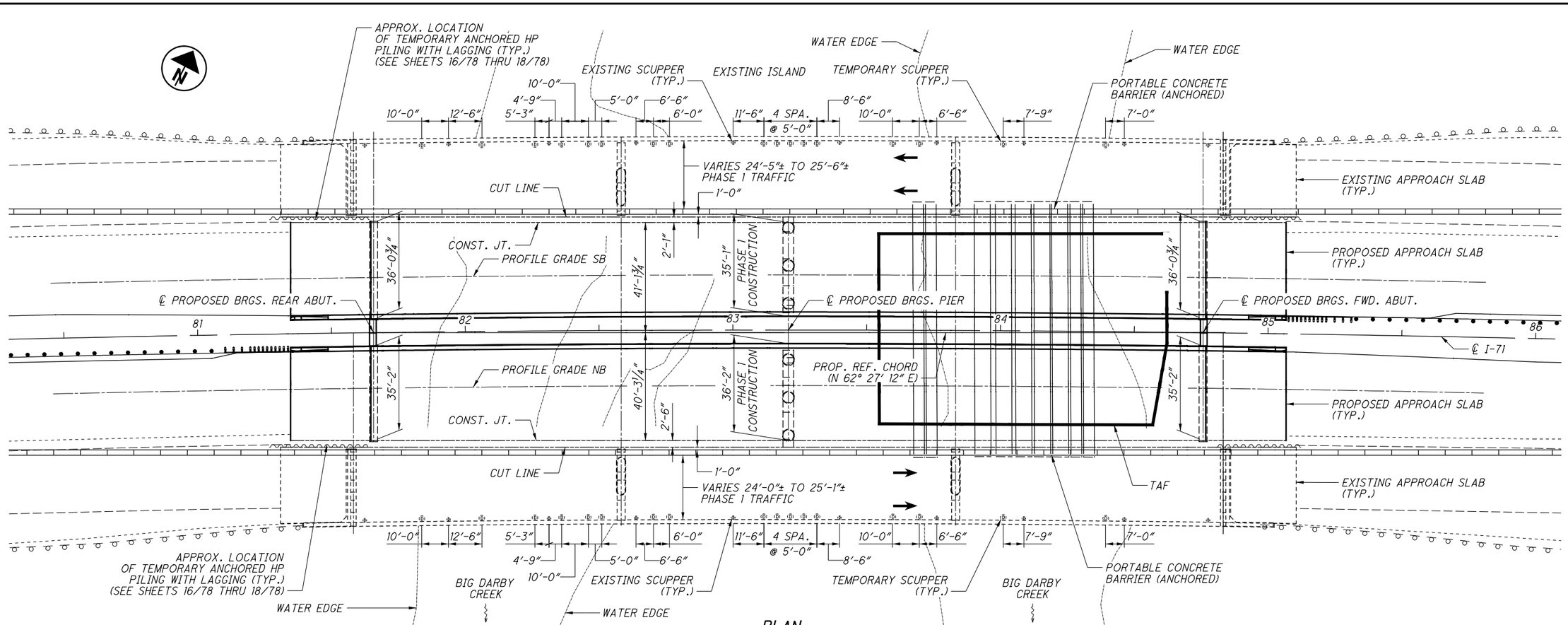
1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 15/78.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE AT PROPOSED PIER.
3. FOR TEMPORARY SCUPPER DETAIL, SEE SHEET 15/78.

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 792-5800 PHONE
(614) 792-5901 FAX

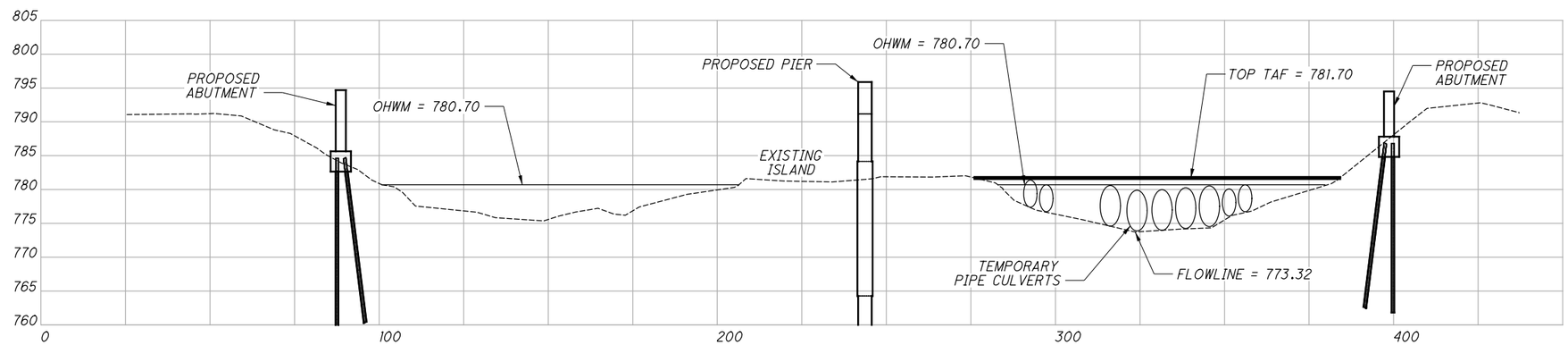
REVIEWED	DATE	STRUCTURE FILE NUMBER
KVB	8/1/2016	2506786L/2506816R
DRAWN		REVISED
DJC		
DESIGNED		CHECKED
DJC		RLC

PHASE CONSTRUCTION DETAILS
BRIDGE NO. FRA-71-0153 L/R
OVER BIG DARBY CREEK

FRA-71-1.53
PID No. 93496



PLAN



ELEVATION

LEGEND:

TAF - TEMPORARY ACCESS FILL

OHWM - ORDINARY HIGH WATER MARK

NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 15/78.
2. FOR TEMPORARY SCUPPER DETAIL, SEE SHEET 15/78.
3. THE TEMPORARY ACCESS FILL SHALL ACCOMODATE A FLOW RATE (Q) EQUAL TO THE HIGHEST MEAN MONTHLY FLOW SUCH THAT THE BACKWATER ELEVATION DOES NOT EXCEED THE OHWM. Q FOR THIS LOCATION IS 1914 CFS.

DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 792-5800 PHONE
(614) 792-5901 FAX

DESIGNED	DRAWN	REVIEWED	DATE
DJC	DJC	KVB	8/1/2016
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RLC		2506786L/2506816R	

PHASE CONSTRUCTION DETAILS

BRIDGE NO. FRA-71-0153 L/R
OVER BIG DARBY CREEK

FRA-71-1.53
PID No. 93496

9 / 78

211
285

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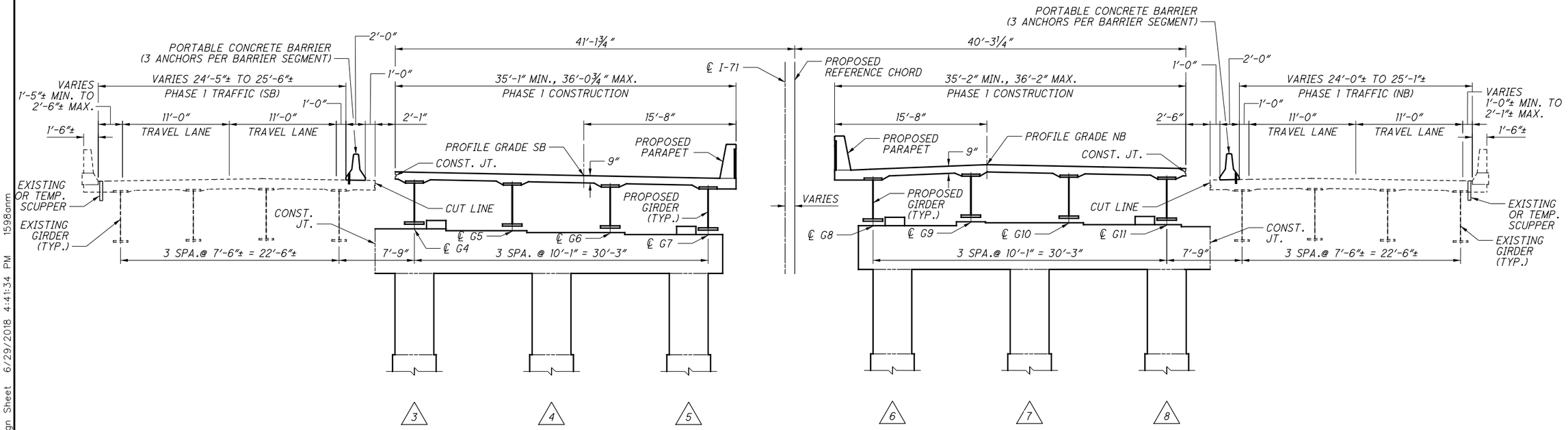


PHASE 1 TRAFFIC & CONSTRUCTION

LEGEND:

⟨#⟩ - DRILLED SHAFT NUMBER

NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 15/78.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE AT PROPOSED PIER.
3. FOR TEMPORARY SCUPPER DETAIL, SEE SHEET 15/78.

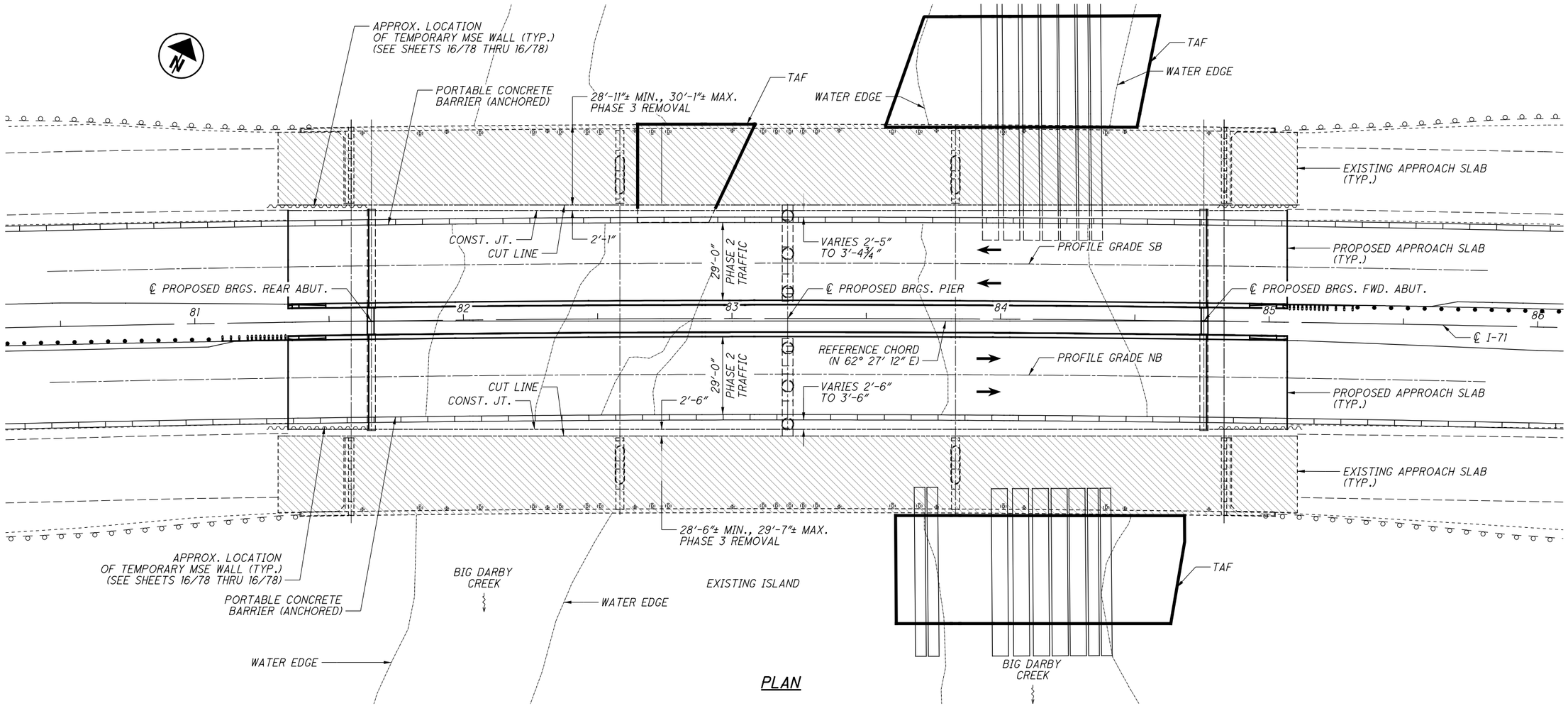
DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 792-5800 PHONE
(614) 792-5901 FAX

DESIGNED	DRAWN	REVIEWED	DATE
DJC	DJC	KVB	8/1/2016
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RLC		2506786L/2506816R	

PHASE CONSTRUCTION DETAILS

BRIDGE NO. FRA-71-0153 L/R
OVER BIG DARBY CREEK

FRA-71-1.53
PID No. 93496



LEGEND:

- PORTION OF STRUCTURE TO BE REMOVED
- TAF - TEMPORARY ACCESS FILL
- OHWM - ORDINARY HIGH WATER MARK

NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 15/78.
2. FOR TEMPORARY SCUPPER DETAIL, SEE SHEET 15/78.
3. THE TEMPORARY ACCESS FILL SHALL ACCOMODATE A FLOW RATE (Q) EQUAL TO THE HIGHEST MEAN MONTHLY FLOW SUCH THAT THE BACKWATER ELEVATION DOES NOT EXCEED THE OHWM. Q FOR THIS LOCATION IS 1914 CFS.

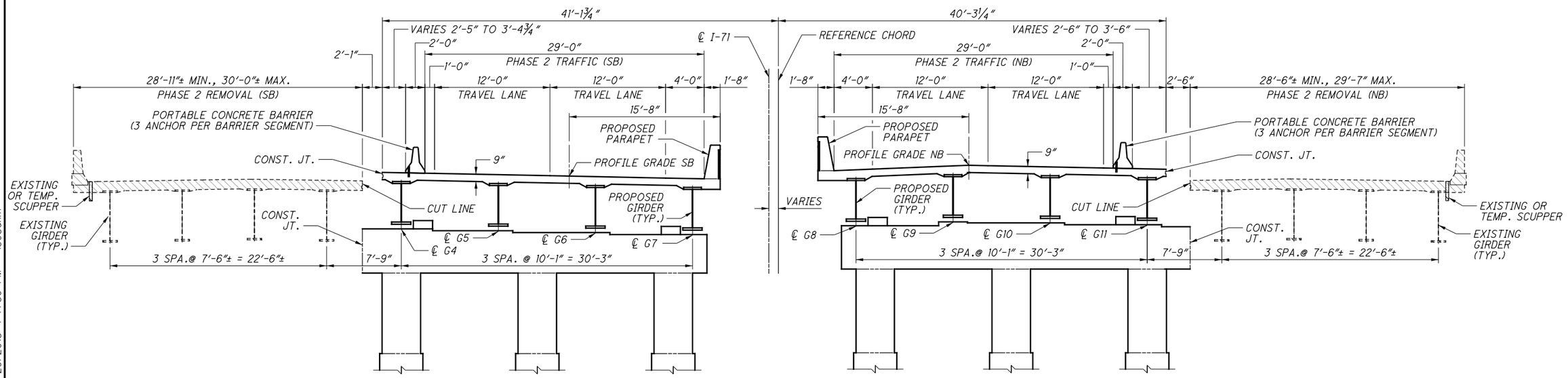
DESIGN AGENCY
Mead & Hunt
4700 LAKEHURST CT, STE 110
DUBLIN, OH 43016
(614) 792-5800 PHONE
(614) 792-5901 FAX

DESIGNED	DRAWN	REVIEWED	DATE
DJC	DJC	KVB	8/1/2016
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RLC		2506786L/2506816R	

PHASE CONSTRUCTION DETAILS

BRIDGE NO. FRA-71-0153 L/R
OVER BIG DARBY CREEK

FRA-71-1.53
PID No. 93496



PHASE 3 TRAFFIC & REMOVAL

LEGEND:

- ▨ - PORTION OF STRUCTURE TO BE REMOVED
- △# - DRILLED SHAFT NUMBER

NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 15/78.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE AT PROPOSED PIER.

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DJC	DJC	KVB	8/1/2016
CHECKED	REVISED	STRUCTURE FILE NUMBER	
RLC		2506786L/2506816R	

PHASE CONSTRUCTION DETAILS

BRIDGE NO. FRA-71-0153 L/R
OVER BIG DARBY CREEK

FRA-71-1.53
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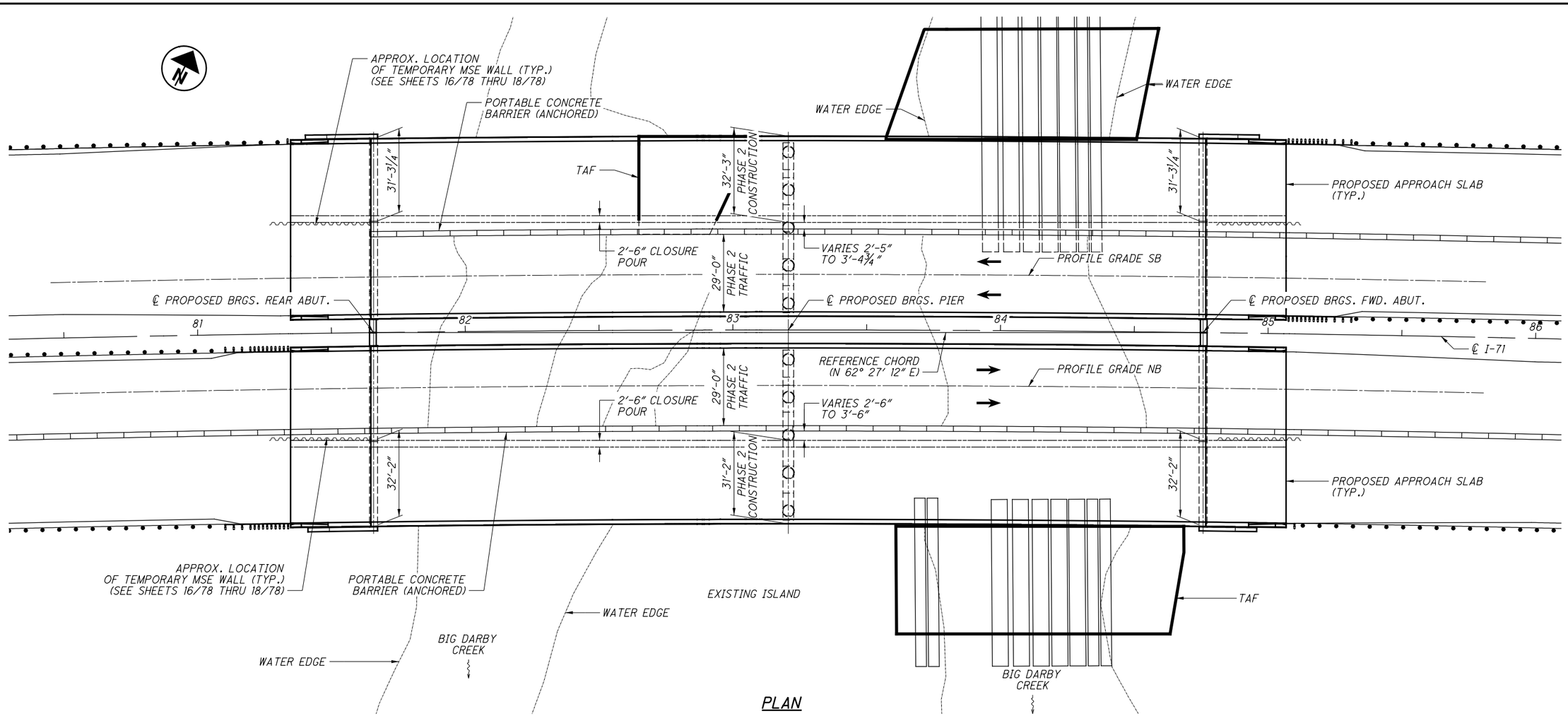
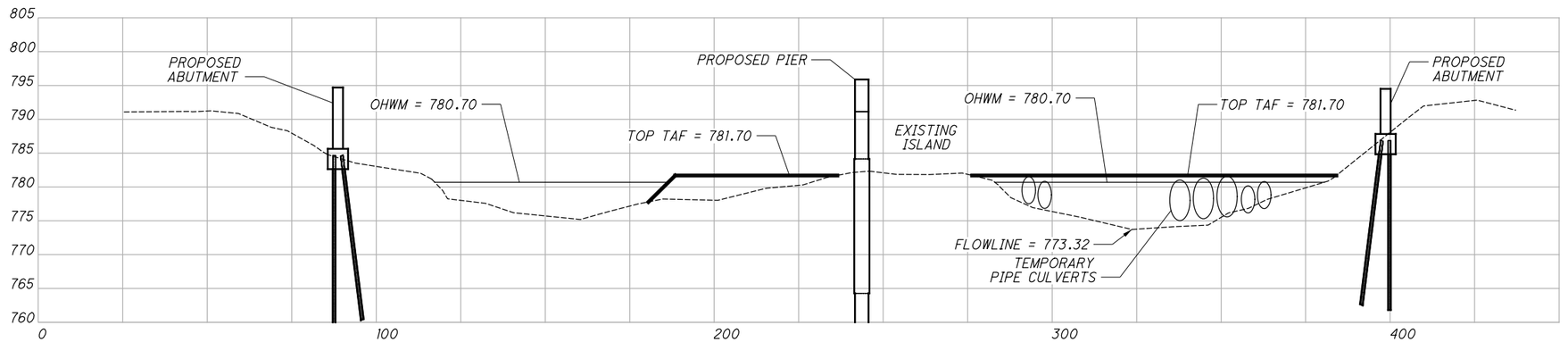


PLAN



ELEVATION VIEW

LEGEND:

TAF - TEMPORARY ACCESS FILL

OHWM - ORDINARY HIGH WATER MARK

NOTE:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 15/78.
2. 3. THE TEMPORARY ACCESS FILL SHALL ACCOMODATE A FLOW RATE (Q) EQUAL TO THE HIGHEST MEAN MONTHLY FLOW SUCH THAT THE BACKWATER ELEVATION DOES NOT EXCEED THE OHWM. Q FOR THIS LOCATION IS 1914 CFS.

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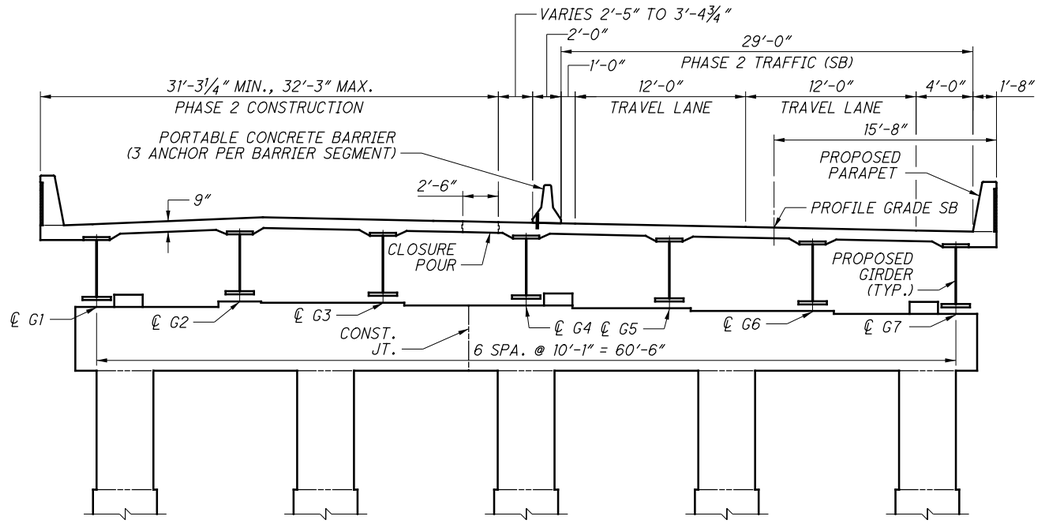

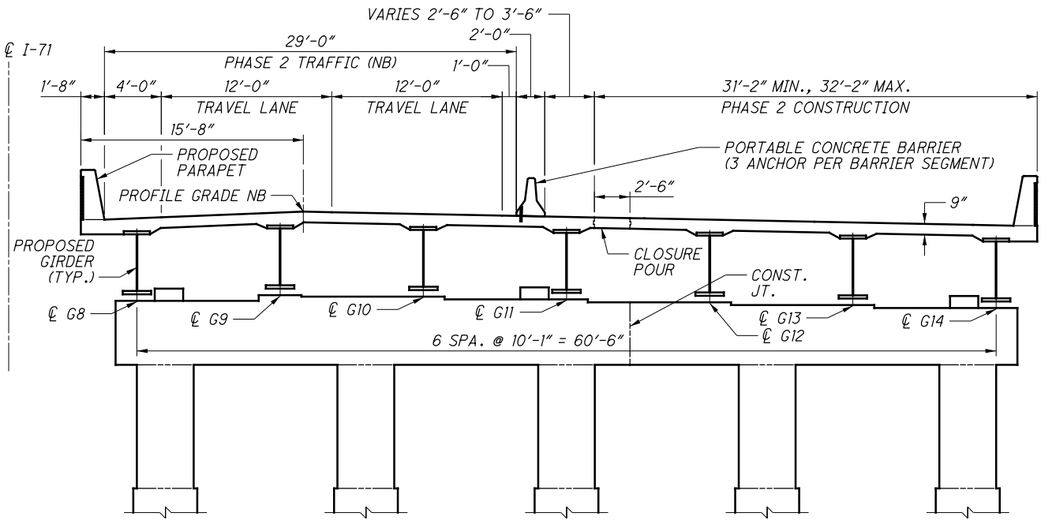

1 2 3 4 5 6 7 8 9 10

PHASE 3 TRAFFIC & CONSTRUCTION

LEGEND:

△# - DRILLED SHAFT NUMBER

NOTES:

1. FOR PHASE CONSTRUCTION NOTES, SEE SHEET 15/78.
2. ALL PHASE CONSTRUCTION DETAILS SHOWN ARE AT PROPOSED PIER.

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COSNTRUCTION SEQUENCE

PHASE 1 TRAFFIC & REMOVAL:

1. CLEAN EXISTING SCUPPERS, INSTALL TEMPORARY SCUPPERS (AS SHOWN ON SHEET 7/78), INSTALL PORTABLE CONCRETE BARRIER AND MAINTAIN TRAFFIC AS SHOWN ON SOUTHBOUND AND NORTHBOUND BRIDGES. INSTALLATION OF TEMPORARY SCUPPERS AND CLEANING OF EXISTING SCUPPERS SHALL BE DONE PRIOR TO SHIFTING TRAFFIC.
2. CONSTRUCT TEMPORARY SHORING PER DETAILS ON SHEETS 16/78 THRU 18/78.
3. REMOVE APPROACH SLAB, PARAPET, AND DECK SLAB ON THE RIGHT PORTION OF THE SOUTHBOUND BRIDGE AND LEFT PORTION OF THE NORTHBOUND BRIDGE AS SHOWN.
4. REMOVE THE RIGHT EXTERIOR GIRDER AND BEARING ASSEMBLIES OF THE SOUTHBOUND BRIDGE AND THE LEFT EXTERIOR GIRDER AND BEARING ASSEMBLIES OF THE NORTHBOUND BRIDGE.
5. REMOVE THE WINGWALLS AND ABUTMENTS ON THE RIGHT PORTION OF THE SOUTHBOUND BRIDGE AND LEFT PORTION OF THE NORTHBOUND BRIDGE.

PHASE 1 TRAFFIC & CONSTRUCTION:

1. CONSTRUCT RIGHT PORTION OF THE SOUTHBOUND BRIDGE AND LEFT PORTION OF THE NORTHBOUND BRIDGE OF THE PROPOSED FORWARD ABUTMENT, REAR ABUTMENT, AND WINGWALLS.
2. CONSTRUCT DRILLED SHAFTS 3 THRU 5 AND RIGHT PORTION OF THE PIER CAP FOR THE SOUTHBOUND BRIDGE AND SHAFTS 6 THRU 8 AND LEFT PORTION OF THE PIER CAP FOR THE NORTHBOUND BRIDGE.
3. INSTALL BEARING ASSEMBLIES FOR GIRDERS 4, 5, 6, AND 7 FOR THE SOUTHBOUND BRIDGE AND GIRDERS 8, 9, 10, AND 11 FOR THE NORTHBOUND BRIDGE.
4. ERECT GIRDERS 4 THRU 11 AND INSTALL SHEAR CONNECTORS AND CROSSFRAMES.
5. CONSTRUCT DECK SLAB, PARAPET, AND APPROACH SLAB OF THE RIGHT PORTION OF THE SOUTHBOUND BRIDGE AND LEFT PORTION OF THE NORTHBOUND BRIDGE.

PHASE 2 TRAFFIC & REMOVAL:

1. RELOCATE PORTABLE CONCRETE BARRIERS AND MAINTAIN TRAFFIC AS SHOWN ON SOUTHBOUND AND NORTHBOUND BRIDGES. ON THE SOUTHBOUND BRIDGE, CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING RUNOFF LEFT OF THE PORTABLE CONCRETE BARRIER ONTO THE RIGHT PORTION OF THE BRIDGE.
2. REMOVE APPROACH SLAB, PARAPET, AND DECK SLAB ON THE LEFT PORTION OF THE SOUTHBOUND BRIDGE AND RIGHT PORTION OF THE NORTHBOUND BRIDGE AS SHOWN, INCLUDING EXISTING AND TEMPORARY SCUPPERS.
4. REMOVE EXISTING GIRDERS AND BEARING ASSEMBLIES ON THE LEFT PORTION OF THE SOUTHBOUND BRIDGE AND RIGHT PORTION OF THE NORTHBOUND BRIDGE.
5. REMOVE THE WINGWALLS AND ABUTMENTS ON THE LEFT OF THE SOUTHBOUND BRIDGE AND THE RIGHT OF THE NORTHBOUND BRIDGE.
6. REMOVE EXISTING SOUTHBOUND AND NORTHBOUND BRIDGE PIERS 1 AND 2.

PHASE 2 TRAFFIC & CONSTRUCTION:

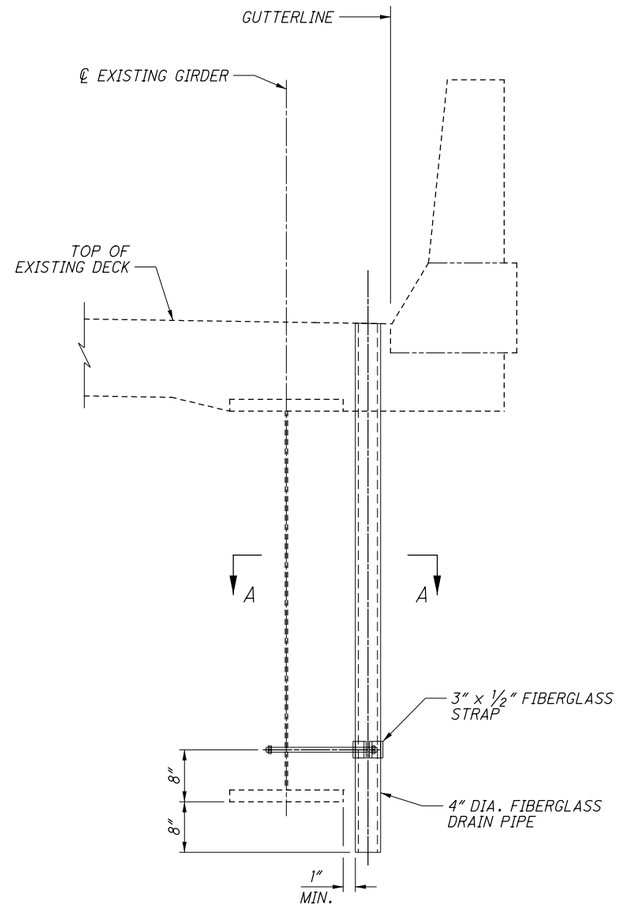
1. CONSTRUCT LEFT PORTION OF THE PROPOSED FORWARD ABUTMENT, REAR ABUTMENT, AND WINGWALLS FOR THE SOUTHBOUND BRIDGE AND RIGHT PORTION OF THE PROPOSED FORWARD ABUTMENT, REAR ABUTMENT AND WINGWALLS FOR THE NORTHBOUND BRIDGE.
2. CONSTRUCT DRILLED SHAFTS 1 & 2 AND LEFT PORTION OF PIER CAP FOR THE SOUTHBOUND BRIDGE AND SHAFTS 9 & 10 AND RIGHT PORTION OF THE PIER CAP FOR THE NORTHBOUND BRIDGE.
3. INSTALL BEARING ASSEMBLIES FOR GIRDERS 1, 2, AND 3 OF THE SOUTHBOUND BRIDGE AND GIRDERS 12, 13, AND 14 OF THE NORTHBOUND BRIDGE.
4. ERECT GIRDERS 1, 2, 3, 12, 13, AND 14, INSTALL SHEAR CONNECTORS AND CROSSFRAMES EXCEPT BETWEEN GIRDERS 3 AND 4 OF THE SOUTHBOUND BRIDGE AND GIRDERS 11 AND 12 OF THE NORTHBOUND BRIDGE.
5. CONSTRUCT DECK SLAB, PARAPET, AND APPROACH SLAB OF THE LEFT PORTION OF THE SOUTHBOUND BRIDGE AND RIGHT PORTION OF THE NORTHBOUND BRIDGE.
6. ERECT AND PERMANENTLY ATTACH CROSS-FRAMES BETWEEN GIRDERS 3 & 4 AND GIRDERS 11 & 12 AND CONSTRUCT CLOSURE POURS.
7. COMPLETE SLOPE PROTECTION OF THE SOUTHBOUND AND NORTHBOUND BRIDGES.

PHASE 3 & 4:

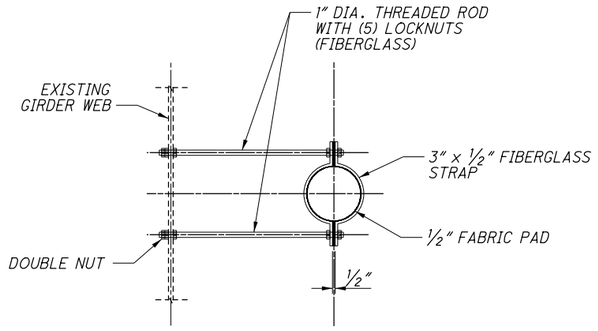
1. NO BRIDGE WORK TO BE PERFORMED. SEE ROADWAY AND MAINTNANCE OF TRAFFIC PLANS FOR WORK AND DETAILS TO BE PERFORMED.

NOTES:

1. PORTABLE CONCRETE BARRIER IS CARRIED IN THE ROADWAY PLANS FOR PAYMENT.
2. FOR MAINTENANCE OF TRAFFIC DETAILS, SEE ROADWAY PLANS.
3. FOR ADDITIONAL PORTABLE CONCRETE BARRIER DETAILS, SEE STANDARD DRAWING PCB-1-91.
4. INCLUDE COST FOR FABRICATION, INSTALLATION AND REMOVAL OF TEMPORARY SCUPPERS WITH ITEM 202, STRUCTURE REMOVED, OVER 20' SPAN, AS PER PLAN.



TEMPORARY SCUPPER DETAIL



SECTION A-A

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