

Level 2 Categorical Exclusion Reevaluation

SR0080 Section 365

I-80 Canoe Creek Bridges Project

Beaver Township, Clarion County

October 2022

Prepared by:
District 10-0
2550 Oakland Avenue
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LEVEL 2 CATEGORICAL EXCLUSION REEVALUATION
for the
SR 0080 SECTION 365 CLARION COUNTY
INTERSTATE 80 CANOE CREEK BRIDGES PROJECT

MPMS #90021

Prepared by:
US Department of Transportation
Federal Highway Administration
and
Pennsylvania Department of Transportation
Engineering District 10-0

Pursuant to 42 U.S.C. 4332(2)(c) and, as applicable:
Executive Order 11990, Protection of Wetlands; Executive Order 11988, Floodplain Management;
Executive Order 12898, Environmental Justice; and 49 U.S.C. Section 303(c), Section 4(f)

Level 2 CE Reevaluation Approval

As supported by the attached Categorical Exclusion Reevaluation, this project qualifies for a Level 2 Categorical Exclusion in accordance with 23 CFR 771.117(d), Item Number 13. Furthermore, the project will not result in any of the four circumstances cited in 23 CFR 771.117(b).

County: Clarion **SR/Sec:** 0080/365 **MPMS:** 90021 **Project:** I-80 Canoe Creek Bridges

Prepared By: Diane Nulton, HDR

Title: Senior Environmental Project Manager **Date:** 10/6/2022

Approved

By: JONATHAN P CRUM Digitally signed by JONATHAN P CRUM
Date: 2022.10.19 10:45:59 -04'00'

Title: **Date:**

The following individuals concurred with the statement above.

Environmental Manager: *Drew Ames* **Date:** 10/14/22

Bureau Director: *Christine Norris* **Date:** 10/14/22

HDTs: Eastern Region: **Brian Shunk** Digitally signed by Brian Shunk
Date: 2022.10.17 14:06:44 -04'00' **Date:** 10/17/22

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ACRONYMS AND ABBREVIATIONS

ALPP	Agricultural Land Preservation Policy
AOC	Areas of Concern
APE	Area of Potential Effect
ATON	Aids to Navigation
BMPs	Best Management Practices
CCCD	Clarion County Conservation District
CE	Categorical Exclusion
CFR	Code of Federal Regulations
CRPs	Cultural Resource Professionals
CWF	Cold Water Fishes
DCNR	Department of Conservation & Natural Resources
DEP	Department of Environmental Protection
E&S	Erosion & Sedimentation
EA	Environmental Assessment
EB	Eastbound
ECMTS	Environmental Commitments & Mitigation Tracking System
EDD	Environmental Due Diligence
ESA	Environmental Site Assessment
ESF	Environmental Stewardship Fund Act
EV	Exceptional Value
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
GFS	Girder-Floorbeam-Stringer
GG2	Growing Greener Bond Fund
H&H	Hydrology and Hydraulics
HOV	High Occupancy Vehicle
HQ	High Quality
HQ-CWF	High Quality-Cold Water Fishes

I-79	Interstate 79
I-80	Interstate 80
I-99	Interstate 99
Key 93	Keystone Recreation, Park and Conservation Fund
LOD	Limits of Disturbance
LWCF	Land and Water Conservation Fund
MBP3	Major Bridge Public Private Partnership
MF	Migratory Fishes
MIT	Massachusetts Institute of Technology
MPO	Metropolitan Planning Organization
MSATs	Mobile Source Air Toxics
NAC	Noise Abatement Criteria
NAAQS	National Ambient Air Quality Standards
NB	Northbound
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	The National Register of Historic Places
OSHA	Occupational Safety and Health Administration
P3	Public Private Partnership
PA	Pennsylvania
PADEP	Pennsylvania Department of Environmental Protection
PAGWIS	Pennsylvania Groundwater Information System
PASPGP	Pennsylvania State Programmatic General Permit
PCSM	Post Construction Stormwater Management
PEL	Alternative Funding Planning and Environmental Linkages Study
PEM	Palustrine Emergent
PennDOT	Pennsylvania Department of Transportation
PFBC	Pennsylvania Fish and Boat Commission

PFO	Palustrine Forested
PNDI	Pennsylvania Natural Diversity Inventory
PSA	Project Study Area
PSS	Palustrine Scrub Shrub
RFFAs	Reasonably Foreseeable Future Actions
RIRA	Recreational Improvement and Rehabilitation Act
ROW	Right-of-Way
SB	Southbound
SR	State Route
TCE	Temporary Construction Easement
TIP	Transportation Improvement Program
TMC	Traffic Management Center
TNM	Traffic Noise Model
TOYRs	Time-of-Year Restrictions
TSF	Trout Stocked Fishes
TYP	Twelve Year Program
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UST	Underground Storage Tank
UNT	Unnamed Tributary
VMT	Vehicle Miles Traveled
WB	Westbound
WSE	Water Surface Elevation
WUS	Waters of the United States
WWF	Warm Water Fishes

1.0 INTRODUCTION

This Level 2 Categorical Exclusion (CE) Reevaluation has been prepared to replace the Environmental Assessment (EA) previously made available on April 19, 2022, because PennDOT is no longer going to toll the Canoe Creek Bridges. This CE Reevaluation compares the effects of the Build Alternative without tolling to the No Build (or do nothing) Alternative.

Project History

The Canoe Creek bridges, which were originally constructed in 1966, have experienced wear and are approaching the end of their serviceable lifespan.

As a result, the Pennsylvania Department of Transportation (PennDOT) in coordination with the Federal Highway Administration (FHWA) prepared a CE in accordance with the National Environmental Policy Act (NEPA). The CE was approved in April 2020, and the project moved into the final design phase.

In fall of 2020, PennDOT began a statewide Planning and Environmental Linkages (PEL) study to identify potential funding options to fill an \$8.1 billion (and growing) funding gap for maintaining and improving the State's highways and bridges. The *Alternative Funding PEL Study* identified near-term and long-term potential funding solutions that could be implemented. Tolling major bridges and using the toll money to cover the costs of rehabilitating or replacing and maintaining the bridge over a period of time was identified as a near-term solution that could be implemented relatively quickly. In February 2021, PennDOT identified nine candidate bridges for tolling, one of which was the Interstate 80 (I-80) Canoe Creek Bridges project.

Upon identification as a candidate bridge, the effects of tolling the I-80 Canoe Creek bridges were evaluated, including: effects on low-income persons using the bridges, effects associated with constructing toll equipment, and effects associated with people choosing to divert onto local roadways to avoid paying the toll. A low-income program was adopted to off-set effects on low-income persons and improvements along diversion routes were incorporated into the project to off-set the effects on local roadways. Diversion route improvements included:

- Construct safety improvements at the SR 66/SR 322 intersection, potentially including signal upgrades, geometric improvements, or a roundabout, with improvements to be determined following additional study.
- Signalize intersection of SR 208/Railroad Street and SR 322 in Shipperville Borough to reduce delays caused by turning trucks.
- Upgrade traffic signals at three signalized intersections (SR 208/SR 338, SR 208 (School Street)/SR 322, and SR 66/SR 322), including installation of emergency vehicles signal preemption to improve response times.
- Repave SR 3007 and SR 338 from I-80 to SR 208 to accommodate increased truck traffic.
- Remove vegetation at SR 338/SR 3007 intersection to improve sight distance issues at stop sign.

An EA comparing the effects of the No Build Alternative and the Build Alternative with bridge tolling was prepared and was made available for official public review and comment on April 19, 2022. A Public Hearing was held on May 4, 2022.

On May 18, 2022, as a result of a lawsuit, the court issued an injunction and all work related to the Major Bridge Public Private Partnership (MBP3) initiative ceased. Other litigation resulted in a ruling on the viability of the MBP3

Supporting documentation for Chapter 1 includes:

- *Alternative Funding: Planning and Environmental Linkages Study* (September 2021)
- *I-80 Canoe Creek Bridges CE 1b Evaluation* (Approved April 2020)

as a Public-Private Transportation Project (P3). Subsequently, Act 84 of 2022 amended the P3 law and revoked PennDOT's ability to implement mandatory tolls such as the proposed bridge tolling under the MBP3, but preserved the contract resulting from the MBP3.

As a result of the lawsuits and the subsequent enactment of Act 84 of 2022, PennDOT is moving the I-80 Canoe Creek Bridges project forward, but without tolling. Since tolling will not be initiated, diversion of traffic onto local roads to avoid the tolls will not occur; therefore, the proposed improvements along the diversion routes will no longer be included in the project.

The PennDOT MBP3 was established to accelerate the replacement or rehabilitation of major bridges. Under MBP3, PennDOT entered into an agreement with a Development Entity to design, build, finance, and maintain (DBFM) a "package" (or group) of PennDOT bridges – including the I-80 Canoe Creek Bridges. PennDOT will repay the amounts financed by the Development Entity through recurring availability payments over 30 years. Act 84 of 2022 authorizes the bridges identified in the MBP3 to be carried out via DBFM by the Development Entity, without mandatory tolling.

Funding to make the availability payments will consist of a blend of federal and state funds that could have been used on other projects. PennDOT will take advantage of additional funding opportunities arising out of the federal Infrastructure Investment Jobs Act ("IIJA"), also known as the Bipartisan Infrastructure Law ("BIL") and potentially supplemented by funds that are currently included in the outer years of the Twelve Year Program (TYP) or by the deferral or elimination of some other (TYP) projects. NOTE: IIJA (BIL) funding was not available at the start of MBP3, but those additional funding sources will provide additional opportunities for PennDOT to pursue the Build Alternative without tolling with less effect to other projects.

This CE Reevaluation documents and compares the effects associated with the No Build Alternative and the Build Alternative without tolling. Effects associated with constructing tolling equipment, improving diversion routes, and paying tolls have been removed from the document.

The comments received during the EA comment period (April 19 to May 19, 2022), including testimony and comments received at the public hearing, have been reviewed and considered. The overwhelming majority of comments received during the EA comment period were related to tolling and diversion of traffic, and are no longer applicable to the project since tolling is no longer being implemented. Comments received on the EA relevant to the project without tolling were considered and additional information incorporated into the respective sections within this document as appropriate.

2.0 I-80 CANOE CREEK BRIDGES PROJECT OVERVIEW

2.1 Project Bridges

The I-80 Canoe Creek bridges are dual multi-span structures, one eastbound (EB) and one westbound (WB), that were built in 1966, were extended in 1985 and underwent multiple retrofits for fatigue-induced cracking since 2013. These bridges cross over Canoe Creek and SR (State Route) 4005 (Tippecanoe Road) in Beaver Township, Clarion County. Combined, they will carry an estimated average of 30,075 vehicles per day by 2025. About 44 percent of the traffic on the bridges is truck traffic. **Figure 1 – Project Location Map** shows the location of the I-80 Canoe Creek bridges and the Project Study Area (PSA).

2.2 Project Purpose and Needs

Purpose: The purpose of the project is to provide a safe, reliable, and efficient crossing of I-80 over SR 4005 (Tippecanoe Road) and Canoe Creek that addresses the project needs and meets applicable design requirements with respect to speed limit and geometry, while improving safety along the corridor.

Needs: The I-80 EB and WB Canoe Creek bridges were originally constructed in 1966. In 1985, additional spans were added to each end of the bridges. The bridges are functionally obsolete due to their curb-to-curb width and have nonredundant critical elements based on the original Girder-Floorbeam-Stringer (GFS) superstructure limits. Both structures possess problematic fatigue details which have received multiple retrofits during the service lives of the structures. Standard inspection frequency for bridge structures is 24 months. Recent bridge inspection data indicates the EB bridge to be in fair condition and is on a 12-month inspection frequency schedule. The WB bridge is listed as poor condition and on a 6-month inspection frequency schedule. The existing structure type, fatigue details and frequency of inspection further underline the urgency to address these issues.

2.3 Project Setting and Distinct Project Features

The general site topography is forested rural woodlands with rolling hills. The bridge structures are located along a horizontal tangent bound by reverse horizontal curves. The western curvature is substandard by current design criteria. The EB and WB alignments are vertically bifurcated with elevation differences in excess of 20 feet and exhibit varying vertical curvatures and grades. The variable geometry presents significant design challenges with respect to balancing cuts and fills and resolution of the proposed geometry within design criteria for both final design and maintenance of traffic. The Tippecanoe Furnace is a documented cultural resource located along the northwest corner of the WB structure. The design approach will prioritize avoidance as the primary means of minimizing impacts to the resource. In addition, Canoe Creek has a High-Quality, Cold Water Fishes designation and is listed as both stocked and wild trout waters.

Describe the involvement with utilities with this project:

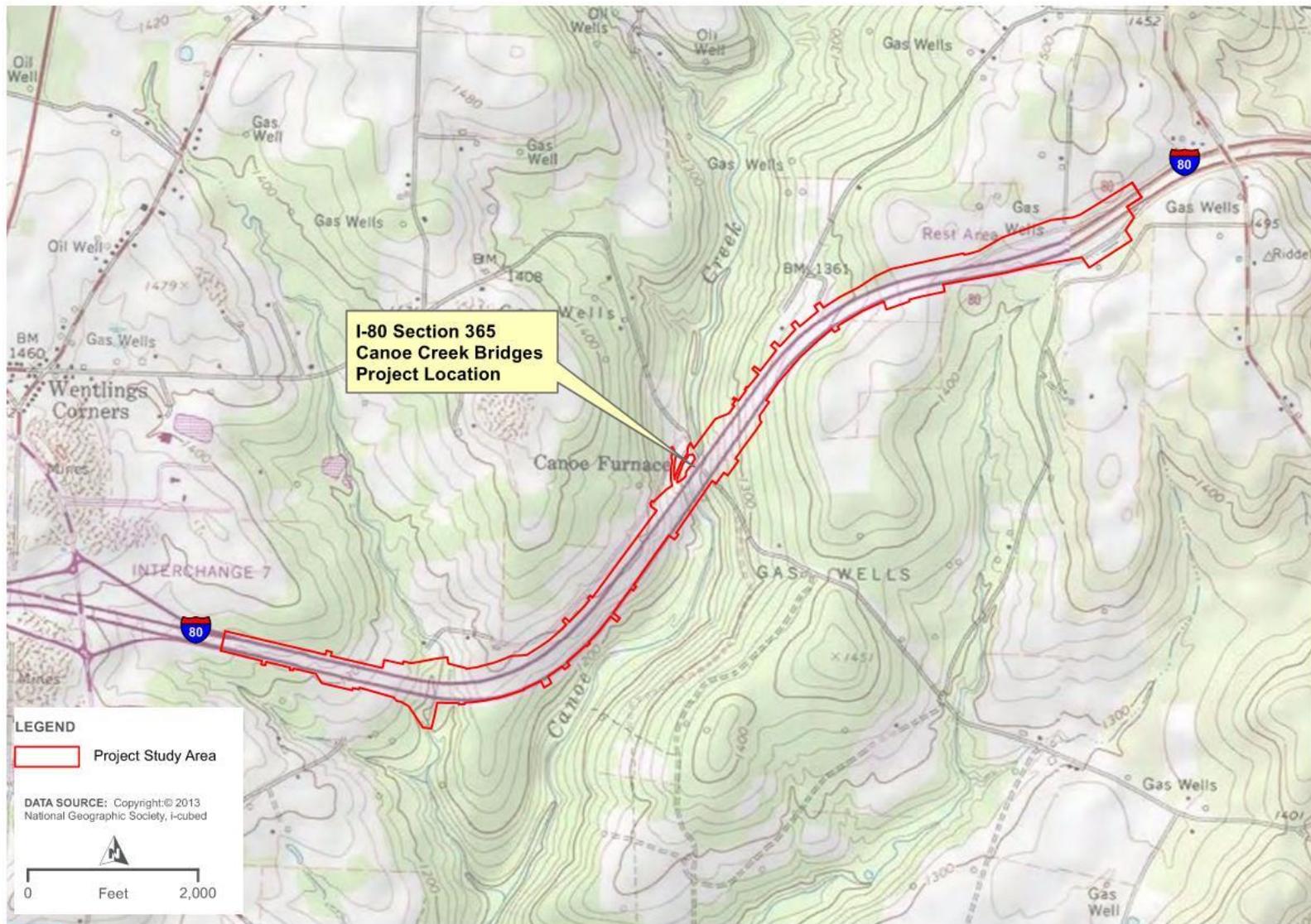
Minor involvement with utilities, public and private, is anticipated in the immediate vicinity of the bridge structures and the proximity of SR 4005 beneath the I-80 structure.

Describe the involvement with any railroad (active or inactive) including all rail lines, crossings, bridges, or signals:

There would be no involvement with active or inactive railroads.

Describe changes to access control:

No changes to access control are needed.



**I-80 CANOE CREEK BRIDGE REPLACEMENT PROJECT
PROJECT LOCATION MAP**



3.0 ALTERNATIVES

3.1 No-Build Alternative

Under the no-build alternative, regular maintenance would be assumed to occur. This alternative would fail to address other project needs such as fixing the nonredundant critical elements of the bridge and addressing the identified bridge and roadway deficiencies. The I-80 Canoe Creek Bridges are nearing the end of their useful life. Currently, the EB bridge is in fair condition, and the WB bridge is in poor condition, and both require more frequent inspections than the standard 24-month schedule. Without replacement, these bridge structures will need more frequent maintenance and repairs. However, such maintenance can only extend the service life of these bridges for so long before they are at risk of failure.

I-80 is the longest east-west interstate in the Commonwealth of Pennsylvania. Within Pennsylvania, I-80 extends 311 miles across the northern tier of Pennsylvania, providing access to Ohio and Midwestern states to the west and New Jersey, the New York City Metropolitan Area and New England to the east. In the project area, the I-80 corridor is the only interstate serving the local area. Interstate 79 (I-79) is about a 45-minute drive west and Interstate 99 (I-99) is about an hour and half drive east of the project area. As a critical link in daily travel and the regional and national highway network, allowing the deterioration of these bridges to reach a level of failure is not reasonable; therefore, due to the project needs, the no-build alternative would not be a reasonable alternative.

The no-build alternative is presented in this CE Reevaluation as a baseline for comparison purposes only.

3.2 Proposed Action

The project will consist of the replacement of the I-80 Canoe Creek Bridges EB & WB (SR 0080 Section 365) in Beaver Township, Clarion County over SR 4005 (Tippecanoe Rd) and Canoe Creek. During the replacement of the bridges, two lanes of traffic EB and WB must be maintained at all times. The anticipated limit of project is approximately three miles along Interstate 80 bound between the Knox interchange and the weigh stations (mile marker 53.5 to mile marker 56.5) featuring the two parallel structures (~1,160' each) that carry the interstate over SR 4005 (Tippecanoe Road) and Canoe Creek.

The proposed bridges will include two parallel 5-span steel girder structures having a length of 1,160 feet each measured between centerline of bearings for each abutment. The proposed structures will have a 59'-4 1/2" out to out width and 56'-0" curb-to-curb width including two 12-foot traffic lanes, a 24-foot right shoulder and an 8-foot left shoulder. Both structures will have a total clear span width of 1153'-0" measured between faces of each substructure units. The WB structure will be placed at the same location as existing. The EB structure will be moved approximately 40 feet upstream with respect to the existing structure. The proposed I-80 roadway typical section is comprised of two 12-foot lanes, a 12-foot outside shoulder and an 8-foot inside shoulder (4 feet paved, 4 feet graded).

The proposed project will also include the rehabilitation of Thompson Hill Culvert, an existing 17'x10' reinforced concrete arch culvert that carries an Unnamed Tributary to Canoe Creek under I-80. The existing wingwalls at the inlet and outlet of the culvert will be replaced with new reinforced cast-in-place wingwalls and permanent soldier piles, respectively.

Two lanes of traffic in both directions will be maintained on I-80 during construction using temporary lane shifts and temporary cross overs. There may be some short-term intermittent detours on SR 4005 (Tippecanoe Road). A map of the detour route is included in Appendix A – Engineering Information.

Additional information is provided in **Table 1**, Appendix A – Engineering Information, Appendix B – Project Design Exhibit, and Appendix C – Design Plans.

Table 1
Construction Station and Length

Limits of Work (Segment/Offset)		Construction Stations	
Start:	End:	Start:	End:
0534/2517	0560/2293	221+00 (EB)	352+00 (EB)
0541/0578	0565/0533	220+00 (WB)	351+50 (WB)
Total Length:			
12,890 feet (EB); 12,890 feet (WB)			

The bridge replacement and roadway work will impact four parcels. Temporary Construction Easements (TCEs) will be acquired from the four parcels. Permanent Right-of-Way (ROW) is also required from one of the four parcels (0.28 acre sliver take near the southeast quadrant of the I-80 EB bridge). There are no relocations or displacements.

3.3 Impact Summary Table

**Table 2
Impact Summary Table**

Environmental Resource Category	No-Build Alternative¹	Proposed Action	Mitigation for Proposed Action
Aquatic Resources			
Streams, Rivers, & Watercourses	No Impact	Streams: HQ-CWF, stocked trout, wild trout 1,954 linear feet permanent impact 2,182 linear feet temporary impact	Proposed stream mitigation will be accomplished both on-site and off-site. Stream banking credits have been purchased. No work will be permitted in streams from February 15 to June 1 (for stocked trout) and October 1 to December 31 (for wild trout).
Wild & Scenic Rivers and Streams	Not Present	Not Present	None
Navigable Waterways	Not Present	Not Present	None
Groundwater	No Impact	No Impact	None
Wetlands	No Impact	Wetlands: 0.085 acre permanent impact 0.36 acre temporary impact	For permanent impact, credits debited from PennDOT's Clarion County Wetland Bank Site. Wetlands in the project study area not impacted will be delineated with protective orange construction fence. All temporarily impacted wetlands will be restored and reseeded.

Environmental Resource Category	No-Build Alternative¹	Proposed Action	Mitigation for Proposed Action
Floodplains	No Impact	No significant floodplain encroachment would occur.	None
Soil Erosion and Sedimentation	No Impact	Erosion and Sediment (E&S) Control Plan will be implemented during construction.	All disturbed areas will be stabilized upon completion of the project. The E&S Control Plan and Post Construction Stormwater Management (PCSM) Plan will be incorporated into the construction contract.
Land Use			
Agricultural Resources	No Impact	No Impact	None
Vegetation	No Impact	Minor impacts to herbaceous rangeland, deciduous forest land and roadside vegetation.	Care will be taken not to transplant roots or seeds of noted invasive, non-native plants during earth moving operations. All disturbed areas will be restored and revegetated with non-invasive vegetation species as part of construction.
Geologic Resources	Not Present	Not Present	None
Parks and Recreation Facilities	Not Present	Not Present	None
State Forest and Gamelands	Not Present	Not Present	None
Wilderness, Natural, & Wild Areas	Not Present	Not Present	None

Environmental Resource Category	No-Build Alternative¹	Proposed Action	Mitigation for Proposed Action
Hazardous or Residual Waste Sites	No Impact	No Impact	None
Wildlife			
Wildlife Refuges & Critical Habitat	Not Present	Not Present	None
Threatened & Endangered Species	Not Present	Potential impact to tri-colored bat	USFWS coordination for tri-colored bat: During final design, the project team will initiate conferencing with USFWS regarding the project's potential effects to the tri-colored bat and measures to avoid and minimize harm.
Cultural Resources			
Archaeological Resources	No Historic Properties Affected	No Historic Properties Affected	Tippecanoe Furnace site remains will be fenced off and avoided. The portion of the Edenburg Well site beyond the APE will be fenced off and avoided.
Historic Resources	No Historic Properties Affected	No Historic Properties Affected	None
Section 4(f) Resources	Not Present	Not Present	None
Air Quality and Noise			
Air Quality	No Impact	Exempt; no impact	None

Environmental Resource Category	No-Build Alternative¹	Proposed Action	Mitigation for Proposed Action
Noise	No Impact	Type III Project; Noise analysis not required	None
Socioeconomic Areas			
Regional & Community Growth	No Impact	No Impact	None
Public Facilities & Services	No Impact	Positive Impacts: Access for public facilities and services will be improved due to design improvements resulting from the project.	None
Community Cohesion	No Impact	No Impact	None
Right-of-Way Acquisitions	No Impact	4 parcels: 1 parcel with Required ROW (sliver take) and TCE; 3 parcels with TCEs	Property acquisitions will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970, as amended; Title VI of the Civil Rights Act of 1964; and the Pennsylvania Eminent Domain Code of 1964. <ul style="list-style-type: none"> • While no residential relocations are anticipated, any individual or family displaced by the project would be offered the full extent of benefits and payments. • Provisions would be made to ensure that any person with a disability who is displaced is offered replacement housing that meets any special needs. Based on current design

Environmental Resource Category	No-Build Alternative¹	Proposed Action	Mitigation for Proposed Action
			plans, no displacements are anticipated.
Displacements	No Impact	No relocation of people, businesses, or farms	None
Aesthetics	No Impact	No impact	None
Environmental Justice	No Impact	No disproportionately high and adverse effects on low-income or minority populations have been identified	None

Footnote:

¹ While the No-Build Alternative would not directly affect resources, should the bridge deteriorate to the point where it would have to be weight-posted, closed, or should it experience a partial collapse, there would be impacts to the resources below the bridge. A full or partial closure would have a profound effect on commerce reliant on I-80 and would detour vehicles onto local roads.

4.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

4.1 Aquatic Resources

	PRESENCE	IMPACTS
STREAMS, RIVERS & WATERCOURSES	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	
Intermittent (streams only)	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes
Perennial	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes
Wild trout streams	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes
Stocked trout streams	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes

Identify all streams and their classifications per Chapter 93 of 25 PA Code (e.g. CWF, WWF, HQ, EV)

Field investigations conducted September 24, September 26, 2019, April 6, 2021, and April 7, 2021 identified twenty jurisdictional watercourses within the project study area. These streams included Canoe Creek and unnamed tributaries (UNTs) to Canoe Creek.

The Pennsylvania Code Title 25, Chapter 93 Water Quality Standards, identifies the management designation for Canoe Creek is High Quality-Cold Water Fishes (HQ-CWF). All unnamed tributaries to Canoe Creek will also carry the same management designation as Canoe Creek (HQ-CWF).

Linear feet of Streams permanently impacted: 1,954

Describe Any Permanent Impacts

Approximately 160 linear feet of permanent impacts to Canoe Creek are anticipated due to I-80 bridges spanning over Canoe Creek.

Approximately 1,794 linear feet of permanent impacts to UNTs to Canoe Creek are anticipated due to fill placement, pier placement, and Thompson Hill Culvert extension.

Supporting documentation for Chapter 4.1 includes:

- *I-80 Canoe Creek Bridges Aquatic Resource Report (May 2021)*
- *I-80 Canoe Creek Bridges H&H report (August 2020)*
- *I-80 Canoe Creek Bridges ESC Plan (August 2021)*

Describe Any Temporary Impacts

Approximately 2,182 linear feet of temporary impacts to streams are anticipated. These impacts will include temporary roads/stream crossings for construction access, installation of temporary erosion and sediment controls, construction activities associated with the I-80 bridge structures, temporary stream relocations, roadway drainage updates under I-80, and construction activities associated with replacement of existing pipe structures.

Is mitigation incorporated? No Yes

Proposed Project Specific Restoration/Enhancement: 670 linear feet

Advanced Compensation/Banking: 95 linear feet

Mitigation Remarks

Proposed stream mitigation will be accomplished both on-site and off-site. On-site mitigation will include channel relocation with stream improvements such as streambank stabilization, enhanced floodplain connectivity, riparian buffer improvements, and flow diversity. In addition to the on-site stream mitigation, stream banking credits will be purchased from Robinson Fork Mitigation Bank Phase I (RFMB1), an accredited stream mitigation bank, to account for impacts that could not be made up on-site due to the location and available reclamation space within the project boundaries. RFMB1 is a permitted compensatory mitigation bank

operated by First Pennsylvania Resource, L.L.C, a wholly owned subsidiary of Resource Environmental Solutions, L.L.C. Appendix D includes documentation regarding the stream mitigation bank.

Stream mitigation plans are included in the waterway permit application for the project. The details of mitigation have been determined through consultation with permitting agencies.

Canoe Creek is identified by the Pennsylvania Fish and Boat Commission (PFBC) as both a "Stocked Trout Water" and a "Wild Trout Water" (naturally reproducing) within the project area. As a result, no work will be permitted in Canoe Creek from February 15th to June 1st (for stocked trout) and October 1st to December 31st (for wild trout). This in-stream restriction also applies to UNTs to Canoe Creek.

PRESENCE

IMPACTS

FEDERAL WILD & SCENIC RIVERS & STREAMS

Not Present Present

No Yes

Remarks

Review of the USGS Quadrangle and Federal Wild and Scenic Rivers System website has confirmed there are no Federal Wild and Scenic Rivers and Streams within the project area.

PRESENCE

IMPACTS

STATE SCENIC RIVERS & STREAMS

Not Present Present

No Yes

Remarks

Review of the USGS Quadrangle and Department of Conservation & Natural Resources (DCNR) Scenic Rivers website has confirmed there are no State Wild and Scenic Rivers and Streams within the project area.

PRESENCE

IMPACTS

NAVIGABLE WATERWAYS

Not Present Present

No Yes

Remarks

Review of the PFBC website confirmed that there are no water trails located within the project study area. There are no navigable watercourses which require U.S. Coast Guard Coordination within the project area. PFBC has confirmed that Aids to Navigation (ATON) Plan is not required.

PRESENCE

IMPACTS

OTHER SURFACE WATERS

Not Present Present

No Yes

Remarks

Review of google earth aerial mapping and field investigations confirmed that there are no other surface waters within the project area.

PRESENCE

IMPACTS

GROUNDWATER RESOURCES

Not Present Present

State, County, Municipal, or

Local Public Supply Wells

Not Present Present

No Yes

Residential Well

Not Present Present

No Yes

Well Head Protection Area

Not Present Present

No Yes

Springs, Seeps

Not Present Present

No Yes

Potable Water Source Not Present Present No Yes
 Sole Source and/or Exceptional Value Aquifers Not Present Present No Yes

Describe Any Permanent and Temporary Impacts

None anticipated

Is mitigation incorporated? No Yes

Remarks

Review of the PaGWIS website has confirmed that three private residential wells are located within close proximity of the project area. All three wells are located on the north side of Interstate 80. However, due to the project scope associated with the project, the residential wells are not expected be impacted by the proposed project. The three wells are located at the following coordinates: (41.18361 -79.5275) (41.1975 -79.5014) (41.19 -79.5167)

	PRESENCE	IMPACTS
WETLANDS	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	
Open Water	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Vegetated		
Emergent	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes
Scrub Shrub	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Forested	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Exceptional Value	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes

Documentation

- Data Forms
- Wetland Identification and Delineation Report
- Conceptual Mitigation Plan
- 404 (b)(1) Alternative Analysis
- Jurisdictional Determination Functional
- Assessment Analysis

Methodology

Field investigations conducted September 24, 2019, September 26, 2019, April 6, 2021, and April 7, 2021 identified and delineated eighteen wetlands within the project study area. All wetlands were classified as palustrine emergent (PEM) wetlands. Field investigations were conducted in accordance with the methodology described in the US Army Corps of Engineers (USACE Corp of Engineers Wetland Delineation Manual (Technical Report Y-81-1) and the USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0), Pennsylvania Department of Environmental Protection (PADEP), Chapter 105 regulations, Section 404 of the Federal Clean Water Act, and the Pennsylvania Department of Transportation (PennDOT) Publication No. 325. The wetlands within the Project Study Area are associated with naturally reproducing trout waters, and therefore are designated as Exceptional Value (EV).

Number of Wetlands permanently impacted: 5

Acreage of Wetlands permanently impacted: 0.085

Describe Any Permanent Impacts

Overall, the proposed project will result in approximately 0.085 acres of permanent wetland impacts. Generally, the impact is due to fill material encroachments associated with I-80 roadwork, Thompson Hill Culvert extension, and new ROW fence.

Describe Any Temporary Impacts

Overall, the proposed project will result in approximately 0.36 acres of temporary wetland impacts. Temporary impacts will occur due to the necessity of temporary access through wetland boundaries, implementation of E&S controls within wetlands, and roadway cut slopes and drainage activities. These impacts will be minimized to the greatest extent possible through the implementation of an approved E&S control plan.

Is mitigation incorporated? No Yes

Banking: 0.085 acre

Bank to be Debited: PennDOT's Clarion County Wetland Bank Site (Appendix D)

Mitigation Remarks

- Permanent impacts to wetlands will be mitigated by utilizing credits from PennDOT's Clarion County Wetland Bank Site (see Appendix D).
- Wetlands within the project study area not impacted by the project will be delineated with protective orange construction fence.
- Upon completion of construction, all temporarily impacted wetlands will be restored and reseeded.

Executive Order 11990 Compliance

Compliance requires the determination that there is no practicable alternative to the proposed construction in wetlands and the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

Options/design modifications were investigated to avoid impacts to wetlands: Yes No N/A

There are no practicable alternatives to construction within the wetlands: Yes No N/A

Alternative chosen (proposed project) includes all practicable measures to minimize harm to wetlands:

Yes No N/A

	PRESENCE	IMPACTS
COASTAL ZONE	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes

Remarks

There are no coastal zones located within the project area.

	PRESENCE	IMPACTS
FLOODPLAINS	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes

No significant floodplain encroachment would occur.

Describe Any Permanent and Temporary Impacts

Review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the project determined that a FEMA 100-year floodplain (Zone A) has been established for Canoe Creek and an unnamed tributary to Canoe Creek within the project area.

Based on the Hydrology and Hydraulics (H&H) analysis conducted for the project, the project will have no significant floodplain encroachment, as defined in 23 CFR Part 650, Subpart A, Section 650.105(q), since the project

will not: (1) Have a significant potential for interruption or termination of a transportation facility which is needed for emergency vehicles or provides a community's only evacuation route, (2) Have a significant risk, (3) Have a significant adverse impact on natural and beneficial flood plain values. The H&H report is in the project technical files.

Is mitigation incorporated? No Yes

SOIL EROSION & SEDIMENTATION

Are there activities that could cause erosion or sedimentation and would require E&S Controls?

Yes No N/A

Documentation

- Coordination w/County Conservation
- District E&S Control Plan
- NPDES Stormwater Construction Permit

Is mitigation incorporated? No Yes

Remarks

The Erosion and Sedimentation (E&S) Control Plan was developed and submitted to the Clarion County Conservation District (CCCD) for review and approval. The NPDES permit application, which includes the E&S Control Plan and Post Construction Stormwater Management (PCSM) Plan was approved by PA DEP on March 28, 2022. The E&S Control Plan and PCSM Plan will be incorporated into the construction contract.

4.2 Land

	PRESENCE	IMPACTS
AGRICULTURAL RESOURCES	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	
Productive Agricultural Land	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Agricultural Security Areas	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Prime Agricultural Land	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Agricultural Conservation Easements	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Farmland Enrolled in Preferential Tax Assessments	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Agricultural Zoning	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Soil Capability Classes I, II, III, IV	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Prime or Unique Soil Statewide or Locally Important	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes
Soils	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes

Describe Any Permanent and Temporary Impacts

None anticipated

Is mitigation incorporated? No Yes

Remarks

Examination of USDA NRCS web soil survey mapping for the project study area identified four Prime Farmland soil types and eight Farmland of Statewide Importance soil types that will be impacted. These soil classifications are protected under the Farmland Protection Policy Act (FPPA). However, bridge replacements on alignment are exempt from FPPA provisions as per Farmland Protection Policy Manual, 523.11, C. Activities Not Subject to Provisions of FPPA, (10) Restoration, maintenance, renovation, or replacement of existing structures prior to the time of Federal Assistance.

Site visits have confirmed that no active agricultural land is present within the project study area; therefore, there will be no impact to Agricultural Land Preservation Policy (ALPP) Prime Agricultural Land. This project is in conformance with 4 Pa Code Chapter 7, Section 7.301 et seq., ALPP. Additionally, this project is an upgrade of existing transportation facility and is exempt from Acts 43 and 100 per the Pennsylvania Agricultural Resources Handbook, Publication 324, Table 2.

	PRESENCE	IMPACTS
VEGETATION	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	
Landscaped	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Agricultural	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes
Forest Land	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes
Rangeland	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes
Other (describe in remarks)	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input type="radio"/> No <input checked="" type="radio"/> Yes

Describe Any Permanent and Temporary Impacts

Vegetation within the project corridor primarily consists of herbaceous rangeland, deciduous forest land and roadside vegetation along Interstate 80. Permanent and Temporary impacts will occur to the project corridor vegetation to construct project improvements. This includes roadside vegetation as well as land below and adjacent to the I-80 bridges for crane placement and other construction vehicle access.

Invasive Non-Native Plants are Present

Mitigation:

Are measures being taken to minimize movement of invasive plant parts (roots, tubers, seeds)? Yes No

Will native plants be used in project landscaping or mitigation? Yes No

Other? Yes No

Describe Mitigation

In accordance with PennDOT’s invasive species guidance (Publication 756, 2014), care will be taken not to transplant roots or seeds of noted invasive, non-native plants during earth moving operations. Re-vegetation of impacted areas will be implemented through the E&S plan. Prior to completion of construction, all remaining areas of earth disturbance will be restored by re-seeding with standard PennDOT seed formulas. These seed formulas may contain native plant species; but per Executive Order 13112, will avoid those plant species that are listed on the Noxious Weed Control List.

Remarks

Herbaceous rangeland, deciduous forest land, and roadside vegetation are present along the project corridor. Invasive species were noted during field delineation of wetlands and streams. The following invasive species

were observed: Multiflora Rose (*Rosa multiflora*), Autumn Olive (*Elaeagnus umbellate*), Canada Thistle (*Cirsium arvense*), Reed Canarygrass (*Phalaris arundinacea*), and Common reed (*Phragmites australis*).

	PRESENCE	IMPACTS
GEOLOGIC RESOURCES	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	

Remarks

According to the DCNR Heritage Geology Sites website, there are no Heritage Geology Sites in the project area. Additionally, the project area is not located near an Outstanding Scenic Geological Feature according to review of the Outstanding Scenic Geological Features of Pennsylvania Part 2.

	PRESENCE	IMPACTS
PARKS & RECREATION FACILITIES	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	

Remarks

There are no properties within the project area afforded protection under one or more federal and/or state recreation grants.

	PRESENCE	IMPACTS
FOREST & GAMELANDS	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	

Remarks

A review of Google Maps, the PA Gazetteer (DeLorme 2012), aerial imagery, PennDOT One Map, and the results of the field reconnaissance did not identify any State Forests or State Gamelands within the PSA.

	PRESENCE	IMPACTS
WILDERNESS, NATURAL & WILD AREAS	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	

Remarks

Review of USGS mapping, PADEP eMap, and site investigations confirmed there are no Federal and/or State Wilderness, Natural or Wild Areas within the project area.

	PRESENCE	IMPACTS
NATIONAL NATURAL LANDMARKS	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes

Remarks

There are no national natural landmarks present within the project area.

	PRESENCE	IMPACTS
HAZARDOUS OR RESIDUAL WASTE SITES	<input type="radio"/> Not Present <input checked="" type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes

Documentation

- Phase I
- Phase II
- Phase III
- Other
- No Documentation Required

Supporting documentation for Chapter 4.2 includes:

- *I-80 Canoe Creek Bridges Phase I Waste Site Investigation (November 2019)*

Describe Any Permanent and Temporary Impacts

None anticipated

Is remediation/mitigation incorporated? No Yes Unknown at this time

Remarks

A Phase I Environmental Site Assessment (ESA) was conducted in accordance with PennDOT Publication 281, "Waste Site Evaluation Procedures for the Highway Development Process" to determine if hazardous, residual, or municipal waste sites exist within the study area. Three potential Areas of Concern (AOC) that were identified in the Alternatives Analysis phase of the project were investigated. The Phase I ESA included site reconnaissance on September 27, 2019, environmental database review, historical data review, and personal interviews. The Phase I ESA findings and conclusions resulted in recommendations of no further action required at this time.

RECOMMENDATION 1: AOC-1 (north of I-80 WB between STA 239+00 and STA 242+00)

The site conditions at the two private properties located within the AOC indicate a significant likelihood of contamination exists outside the proposed ROW that may impact soil or groundwater within the ROW. However, no excavations are planned for the area and application of fill will be limited to the ROW. Therefore, no further action is required at this time. However, if future design includes excavations within the ROW, a Phase II will be required to investigate any impacts from the adjacent properties prior to construction activities.

RECOMMENDATION 2: AOC-2 (Canoe Creek valley under I-80 EB bridge between STA 287+00 and STA 289+00)

No indications of contamination were present within the AOC that would necessitate any further investigation. Therefore, no further action is required.

RECOMMENDATION 3: AOC-3 (north of I-80 WB between STA 309+00 and STA 310+50)

The orange-stained water within the perennial stream is indicative of acid mine drainage. As required in Section 6.0 of Pub. 281, the district environmental manager should notify the district geotechnical manager of the field observations. Other than the orange-stained water within the stream, there are no indications of contamination within the ROW. Therefore, no further action is required at this time.

4.3 Wildlife

PRESENCE

IMPACTS

WILDLIFE & HABITAT

Not Present Present

Remarks

The results of the field reconnaissance and review of the Pennsylvania Gazetteer (DeLorme 2015), US Fish and Wildlife Service and Nature Conservancy Map Portals did not identify any wildlife sanctuaries, wildlife refuges, unique or critical habitat, or wildlife preserves in the vicinity of the PSA.

**THREATENED & ENDANGERED
PLANTS & ANIMALS**

PRESENCE

- Not Present
- Present
- No Coordination
Needed

IMPACTS

- No Potential Impacts
- Potential Impacts with Avoidance Measures
- Potential Impacts with Conservation Measures
- Potential Impacts

Documentation

- PNDI ER Receipt

The Pennsylvania Natural Diversity Inventory (PNDI) review for the project PSA determined that there are no known impacts anticipated to threatened and endangered species and/or special concern species and resources within the project area. No further review is required at this time. The PNDI receipt is valid for two years and is included in Appendix E.

PNDI 739742, 8/4/2021. I-80 Canoe Creek Bridges Project

Although not addressed in the PNDI review, a decision is expected in 2023 to list the tri-colored bat as Endangered. A mitigation commitment is added to Chapter 7.0: During final design, the project team will initiate conferencing with USFWS regarding the project’s potential effects to the tri-colored bat and measures to avoid and minimize harm.

4.4 Cultural Resources

Were Cultural Resource Professionals (CRPs) needed for project scoping? Yes No

CRP Scoping Field View Date: 07/26/17

CRP Architectural Historian in Attendance: CRP Architectural Historian was not present at scoping field view.

CRP Archaeologist in Attendance: Susanne Haney

Was a Project Early Notification / Scoping Results Form completed? Yes No

Is the project exempted from review by the District Designee or CRP as per Appendix C of the Statewide Section 106 Programmatic Agreement? Yes No

Is the project exempted from review by the District Designee or CRP as per Stipulation III of the Emergency Relief Projects Programmatic Agreement (2005)? Yes No

	<u>PRESENCE</u>				<u>LEVEL OF EFFECTS</u>		
	Not Present	Potentially Eligible Resource Present	Eligible Resource Present	Listed Resource Present	No Historic Properties Affected	No Adverse Effect	Adverse Effect
CULTURAL RESOURCES	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Archaeology</u>							
Pre-Contact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contact Native American:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Historic:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>Above-Ground Historic Properties</u>							
Structure/Building:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
District:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Documentation

For projects not having a known adverse effect, one from each column:

Above-Ground Historic Properties

- Above-Ground Historic Properties Field Assessment and Finding
- Above-Ground Historic Properties Finding Letter
- Section 106 (Above-Ground Historic Properties) Effect Concurrence Letter
- TE Project Field Assessment and Finding Checklist

Archaeology

- Archaeology Field Assessment and Finding
- Archaeology Finding Letter
- Section 106 (Archaeology) Effect Concurrence Letter
- TE Project Field Assessment and Finding Checklist
- Deferred Archaeological Testing Form
- Project Specific Programmatic Agreement

Supplemental documentation should be completed as warranted:

- Historic Structures Survey / Determination of Eligibility Report
- Phase IA Archaeological Sensitivity Report
- Geomorphological Survey Report
- Archaeological Disturbance Report
- Archaeology Identification (Phase I) Report
- Archaeology Negative Survey Form
- Archaeology Evaluation (Phase II) Report
- Combined Archaeology Identification/Evaluation Report
- Determination of Effects Report
- (Bridge) Feasibility Report
- Other

Are mitigation and/or standard treatments required? No Yes

Describe Mitigation / Standard Treatments

One previous recorded historic industrial site, 36CL0198 Tippecanoe Furnace was re-located via pedestrian survey. The 36CL0198 Tippecanoe Furnace site is located almost entirely within Commonwealth-owned existing

ROW; however, during construction the furnace remains will be fenced off and avoided. Any intact soils at the site or in the immediate vicinity will either be fenced off and avoided or protected using geotextile and the appropriate amount of fill.

Of the areas with intact soils, there are two areas, designated Area A and Area B, that are going to be impacted and were deemed to contain intact soils with archaeological potential. A Phase I survey consisting of sub-surface excavation was conducted within these areas. One previously unrecorded site with pre-contact and historic components, 36CL0211 Edenburg Well site was identified. However, the portion of the site within the Area of Potential Effects (APE) does not contribute to the site's overall eligibility. During construction, in order to prevent inadvertent disturbance, the portion of the site beyond the APE will be fenced off and avoided.

Remarks, Footnotes, Supplemental Data

Section 106 cultural resource documentation is located in PATH at <https://path.penndot.gov/ProjectDetails.aspx?ProjectID=51252>. The combined findings document was posted to Project Path on 4/10/2020. Cultural resources findings addendums were posted 1/26/2022 for the toll facility and proposed traffic improvements along the diversion route. A subsequent addendum was posted on 8/5/2022 to remove the toll facility and diversion route traffic improvements from the proposed project.

4.5 Section 4(f) Resources

	PRESENCE	USE
SECTION 4(f) RESOURCES	<input checked="" type="radio"/> Not Present <input type="radio"/> Present	<input checked="" type="radio"/> No <input type="radio"/> Yes

Remarks

Review of on-line resources Pennsylvania Department of Environmental Protection (PADEP) EMapPA website, PADCNR website, PGC website) and field investigations confirmed there are no resources protected under Section 4(f)/Section 2002 within the project area.

4.6 Air Quality and Noise

AIR QUALITY

Is the project exempt from regional ozone conformity analysis and a CO, PM10 & PM2.5 Hot-Spot analysis? Yes No

Mobile Source Air Toxics (MSATs)

Is the project exempt from an analysis for MSATs based on Pub #321? Yes No

Remarks

The project is a bridge replacement with safety improvements including bridge and shoulder widening. A review of PennDOT Publication 321, Project-Level Air Quality Handbook (October 2017), indicates that the proposed project is exempt from Project-level analysis and Regional Conformity Analysis. The project will not add travel lanes and will not result in changes in traffic volumes, vehicle mix, location of existing facility or other factor that would cause an increase in emissions relative to existing conditions.

NOISE

Is the project a:

A. Type I Project? Yes No

B. Type II Project? Yes No

C. Type III Project? Yes No

The project meets the criteria for a Type III project established in 23 CFR 772. Therefore, the project requires no analysis for highway traffic noise impacts. Type III projects do not involve added capacity, construction of new through lanes or auxiliary lanes, changes in the horizontal or vertical alignment of the roadway or exposure of noise sensitive land uses to a new or existing highway noise source.

PennDOT acknowledges that a noise analysis is required if changes to the proposed project result in reclassification to a Type I project.

4.7 Socioeconomic Areas

REGIONAL & COMMUNITY GROWTH

Will the project induce impacts (positive and negative) on planned growth, land use, or development patterns for the area? Yes No

Is the project consistent with planned growth? Yes No

Basis of this determination:

The project is programmed on the 2023-2026 Interstate Transportation Improvement Program (TIP). The project replaces existing infrastructure and is not anticipated to induce growth.

Will the project induce secondary growth? Yes No

PUBLIC FACILITIES & SERVICES

Will the project induce negative impacts on health and educational facilities; public utilities; fire, police, and emergency services; civil defense; religious institutions; or public transportation? Yes No

Does the project incorporate bicycle or pedestrian facilities into the overall design or operations (including construction)? Yes No

A review of the PA Gazetteer (DeLorme 2015), aerial imagery, PennDOT OneMap, and the results of the field reconnaissance did not identify any bicycle or pedestrian facilities within or adjacent to the Project Study Area.

Will the project have a positive impact to the public facilities and services listed above? Yes No

The proposed bridge replacement project will maintain a reliable crossing over SR 4005 and Canoe Creek, while also widening bridge curb-to-curb width and roadway shoulders, having a positive impact to public facilities and services.

COMMUNITY COHESION

Will the project induce impacts to community cohesion? Yes No

Will the project induce impacts to the local tax base or property values? Yes No

ENVIRONMENTAL JUSTICE (See Chapter 6.0 of this CE Reevaluation)

RIGHT-OF-WAY ACQUISITIONS OR DISPLACEMENTS OF PEOPLE, BUSINESSES OR FARMS

How many parcels require right-of-way acquisition, either partial or total? 4 partial parcels

The P3 development entity will be responsible for final design and construction of the project. If area is required outside of the defined Project Study Area, the P3 development entity is required to coordinate with PennDOT to determine necessary NEPA Reevaluation studies and documentation (Chapter 7.0, Environmental Commitments and Mitigation).

Describe the extent and locations of acquisitions. Indicate for each acquisition whether it is temporary or permanent.

ROW for purposes of TCEs will be acquired from four parcels. Permanent ROW is also required from one of the four parcels (0.28 acre sliver take near the southeast quadrant of the I-80 EB bridge). There are no relocations or displacements.

Will the project require the relocation of people, businesses, or farms? Yes No

Will the project induce impacts to economic activity, including employment gains and losses? Yes No

Mitigation

Property acquisitions conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970, as amended; Title VI of the Civil Rights Act of 1964; and the Pennsylvania Eminent Domain Code of 1964.

- While no residential relocations are anticipated, any individual or family displaced by the project would be offered the full extent of benefits and payments.
- Provisions would be made to ensure that any person with a disability who is displaced is offered replacement housing that meets any special needs. Based on current design plans, no displacements are anticipated

MAINTENANCE AND OPERATING COSTS OF THE PROJECT AND RELATED FACILITIES

Will the project induce increases of operating or maintenance costs? Yes No

AESTHETIC AND OTHER VALUES

Will the project be visually intrusive to the surrounding environment? Yes No

Will the project include "multiple use" opportunities? Yes No

Will the project involve "joint development" activities? Yes No

4.8 Permits Checklist

No Permits Required

United States Army Corps of Engineers Section 404 and/or Section 10 Permit

Individual

Nationwide

PASPGP

DEP Waterway Encroachment (105) Permit

Standard

Small Project

General

Other

DEP 401 Water Quality Certification

Coast Guard Permit

NPDES Permit

General

Individual

Exempt

Other Permits

Remarks, Footnotes, Supplemental Data

The NPDES permit was approved on 3/28/2022. The Section 404 and Chapter 105 permits (waterway permits) were authorized on 9/14/2022. The P3 Development Entity will be required to amend the permits as appropriate to include additional impacted areas and/or aquatic resources if area is required outside of the PSA delineated in this CE Reevaluation.

Permit conditions will be added to the Environmental Commitments & Mitigation Tracking System (ECMTS) as mitigation commitments. ECMTS is a computer application for tracking mitigation commitments from inception during preliminary design through construction, to be used by construction inspectors to ensure mitigation measures are completed as intended for protection of environmental resources.

5.0 PUBLIC INVOLVEMENT

	#	Comments
<input checked="" type="checkbox"/> Plans Display	2	See Remarks
<input checked="" type="checkbox"/> Public Officials Meetings	2	See Remarks
<input checked="" type="checkbox"/> Public Meetings	2	See Remarks
<input checked="" type="checkbox"/> Public Hearing	1	EA Public Hearing 5/4/2022; See Remarks
<input checked="" type="checkbox"/> Special Purpose Meetings (specify)	2	Diversion Route Workshop 7/26/2021 and follow-up briefing 11/1/2021. See Remarks
<input type="checkbox"/> Section 106 Public Involvement / Consulting Parties (specify)		
<input checked="" type="checkbox"/> Section 106 Tribal Consultation (specify Tribe(s) contacted and Tribal response)		Absentee-Shawnee Tribe of Indians of Oklahoma; Delaware Nation, Oklahoma; Delaware Tribe of Indians; Eastern Shawnee Tribe of Oklahoma; Seneca Nation of Indians; Seneca-Cayuga Nation; Shawnee Tribe; Tonawanda Band of Seneca; Tuscarora Nation
<input checked="" type="checkbox"/> Environmental Justice Community Involvement		Knowledgeable Parties emails and flyers, see Remarks
<input type="checkbox"/> Other information dissemination activities (specify)		
<input checked="" type="checkbox"/> Commitment for Further Public Involvement		The contractor will continue to coordinate with local municipalities and the public.

Remarks

A Public Officials /Public Plans Display meeting was held September 5, 2019 at the Knox Volunteer Fire Company, Knox, PA. The Public Officials Meeting was held from 4:00-5:00 PM, followed by the general public meeting from 5:30-7:30 PM. The project team was available to describe the project including scope of work, construction sequence, traffic control, and bridge construction techniques, and answer questions. Display boards were provided, and comments requested.

Public outreach activities were conducted beginning in November 2020 for the PennDOT Pathways program under an Alternative Funding PEL Study. After the CE for the I-80 Canoe Creek Bridges project was approved, the project was identified as a candidate for bridge tolling through PennDOT Pathways Program: The Major Bridge P3 Initiative in February 2021. Additional public outreach effort was conducted for the I-80 Canoe Creek Bridges project.

- Project information was posted on a project-specific website in February 2021 at <https://www.penndot.pa.gov/RegionalOffices/district-10/ConstructionsProjectsAndRoadwork/Pages/I-80-Canoe-Creek.aspx>
- A diversion route workshop was conducted on July 26, 2021 to gather additional information regarding potential issues along the diversion routes.
- The diversion route workshop attendees were invited to attend a follow-up briefing on November 1, 2021, to review the proposed diversion route improvements included in the public meeting materials.
- A project-specific virtual public meeting was held from November 1, 2021 to December 1, 2021. The online meeting was comprised of text, graphics and videos that provided a project overview and explained the project purpose and need, project design, proposed funding, traffic studies and associated diversion route improvements, environmental studies, comment process and next steps. The online meeting website provided a comment form that allowed individuals to submit their comments directly within the virtual public meeting. The website also noted other ways in which comments could be submitted, including the comment form on the general project website, project phone number, project email and a physical mailing address.
- An in-person public open house was held on Monday November 8, 2021 at Keystone Elementary School in Knox, PA. At the in-person public open house display boards were provided for project purpose and need, project design, proposed funding, traffic studies and associated diversion route improvements, environmental studies, and schedule. Comment forms were provided for individuals to submit their comment while in attendance or at their convenience. While the comment period for the public meeting has closed, the online meeting materials are available for reference via the project website. In-person meeting materials were printed versions of the online content. Public involvement documentation is located in the project's technical file.

Supporting documentation for Chapter 5 includes:

- *I-80 Canoe Creek Bridges Project Public Meeting Summary (September 2019)*
- *I-80 Canoe Creek Bridges Project Virtual Public Meeting (November 1 to December 1, 2021)*
- *I-80 Canoe Creek Public Meeting Summary (January 2022)*

Prior to and during the public comment period for the second public meeting, the project team executed several outreach strategies to maximize public participation at the public meeting or online consultation of the Virtual Public Meeting on project website. The outreach activities are listed in **Table 3**.

**Table 3
Public Outreach Activities for Public Meeting**

Outreach Type	Number of Recipients	Type of Recipients	Date Sent
Virtual Public Meeting Website	N/A	-General Public via https://www.penndot.pa.gov/RegionalOffices/district-10/ConstructionsProjectsAndRoadwork/Pages/I-80-Canoe-Creek-VPM.aspx	Launched 11/1/21
Postcard	4,438	- General Public - Mailed via Every Door Direct Mail Service - Sent to all postal routes within the direct project area and along the diversion route.	Mailed week of 10/25/21
Legal Ad	Print circulation approx. 6,800	- General Public - Placed in <i>The Clarion News</i>	Ran 10/21/21
Stakeholder & Public Mailing List Email	148	- Key stakeholders, legislators and those who requested to be put on the project's mailing list. - Email with information about the virtual public meeting and in-person open house.	11/1/21
Knowledgeable Parties Email & Flyer	8	- Knowledgeable parties identified in environmental justice analysis - Email with information about virtual and in-person meetings, along with a flyer to be distributed in the community and copies of social media art for sharing	11/1/21
News Release	N/A	- Sent to area media to distribute via news stories and calendars of events for the general public.	11/1/21
Public Officials Briefing	N/A	- Invited public officials to a pre-launch briefing to get a first look at the materials to launch in the virtual public meeting	11/1/21 at 9:30 a.m.
Social Media Posts	23,516 people reached	- Social media posts on PennDOT social media regarding how to participate in the public meeting and comment period - 257 engagements across three posts	11/1/21, 11/8/21, 11/29/21

An EA comparing the effects of the No Build Alternative and the Build Alternative with bridge tolling was prepared and was made available for official public review and comment on April 19, 2022. A Public Hearing was held on May 4, 2022. The comments received during the EA comment period (April 19 to May 19, 2022), including testimony and comments received at the public hearing, have been reviewed, considered, and where appropriate, additional information was incorporated into this CE Reevaluation. During the public comment period for the EA, the project team executed several outreach strategies to maximize public participation as listed in **Table 4**.

**Table 4
Public Outreach Activities for the EA**

Outreach Type	Number of Recipients	Type of Recipients	Date Sent
Virtual Public Hearing Website	N/A	<ul style="list-style-type: none"> General Public via https://www.penndot.pa.gov/RegionalOffices/district-10/ConstructionsProjectsAndRoadwork/Pages/I-80-Canoe-Creek.aspx 	4/19/22
Postcard	4,438	<ul style="list-style-type: none"> General Public Mailed via Every Door Direct Mail Service Sent to all postal routes within the direct project area and along the diversion route. 	Mailed week of 4/18/22
Legal Ad	Print circulation approx. 6,800	<ul style="list-style-type: none"> General public Placed in <i>The Clarion News</i> 	Ran 4/19/22
Stakeholder & Public Mailing List Email	265	<ul style="list-style-type: none"> Key stakeholders, legislators and those who requested to be put on the project's mailing list. Email with information about the Virtual Open House and Public Hearing. 	4/19/22
Knowledgeable Parties Email & Flyer	7	<ul style="list-style-type: none"> Knowledgeable parties identified in environmental justice analysis Email with information about virtual open house and in-person hearing, along with a flyer to be distributed in the community and copies of social media art for sharing 	4/19/22
News Release	N/A	<ul style="list-style-type: none"> Sent to area media to distribute via news stories and calendars of events for the general public. 	4/19/22
Social Media Posts	3,532 3,580	<ul style="list-style-type: none"> Social media posts on PennDOT social media regarding how to participate in the public hearing and comment period 	4/29/2022 4/27/2022
Elected Official Notification	Key Elected Officials List	<ul style="list-style-type: none"> Elected officials (State and Local) Direct reach out by D10 	4/18/22

On May 18, 2022, as a result of a lawsuit, the court issued an injunction and all work related to the MBP3 initiative ceased. Subsequently, Act 84 of 2022 amended the P3 law and revoked PennDOT's ability to implement mandatory tolls such as the proposed bridge tolling under the MBP3 initiative. As a result of the lawsuits and the subsequent enactment of Act 84 of 2022, PennDOT is moving the I-80 Canoe Creek Bridges project forward, but without tolling.

As the project is reverting back to a bridge replacement with associated approach roadway work, this CE Reevaluation was prepared to document the current effects of the Build Alternative without tolling. The project team completed outreach in September 2022 to educate and inform the public about the CE Reevaluation with the removal of tolling. Outreach activities are summarized in **Table 5**.

**Table 5
Public Outreach Activities for the CE Reevaluation**

Outreach	Audience & Subject
News Releases	Two news releases to media: <ol style="list-style-type: none"> 1. Statewide release regarding removal of tolling from MBP3 program. 2. I-80 Canoe Creek Bridges Project specific release with information on the new CE Reevaluation.
Email Blasts	Two email blasts to mailing list sign-ups: <ol style="list-style-type: none"> 1. Statewide email blast regarding removal of tolling from MBP3 program. 2. I-80 Canoe Creek Bridges Project specific email blast with information on the new CE Reevaluation.
Social Posts	Two social posts on Facebook and Twitter. <ol style="list-style-type: none"> 1. Statewide social post regarding removal of tolling from MBP3 program. 2. I-80 Canoe Creek Bridges Project specific social post with information on the new CE Reevaluation.
Bridge Website Update & Online Educational Resource	The bridge project website was updated to include information on the project’s current status, description and history. An online educational resource about the CE Reevaluation and Potential Impacts was also developed to provide information to the public on what is presented in the CE Reevaluation. A comment form was available on the website for those who wished to provide feedback on the project. Comments were considered as the CE Reevaluation was finalized.

Public involvement documentation covering the NEPA process for the project is located in the project technical files.

6.0 ENVIRONMENTAL JUSTICE

Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority and Low-Income Populations* (February 11, 1994), directs federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority and low-income populations. To achieve effective and equitable decision-making, the U.S. Department of Transportation (USDOT) identifies three fundamental principles of environmental justice to consider in all USDOT programs, policies, and activities:

Supporting documentation for Chapter 6 includes:

- *I-80 Canoe Creek Environmental Justice Analysis* (February 2022)

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on environmental justice communities of concern.
- To ensure the opportunity for full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or substantial delay in the receipt of benefits by any environmental justice community of concern.

The *I-80 Canoe Creek Environmental Justice Analysis*, February 2022, was prepared to address the effects of bridge tolling and associated traffic diversion to avoid tolls on low-income and minority populations; a copy is included in the project technical files. While bridge tolling is no longer under consideration, the report contains relevant background information describing low income and minority populations in the vicinity of the proposed project.

The Environmental Justice analysis for the project was performed by completing the following process:

- **Step 1: Define the Study Area.** Consistent with NEPA practices, identify the reasonable and logical boundaries by considering the potential for direct and indirect impacts related to the project.

The project study area includes approximately 3 miles of I-80 between the Knox interchange and the weigh stations to the east (mile marker 53.5 to mile marker 56.5) and involves the replacement of the bridges carrying the interstate over SR 4005 (Tippecanoe Road) and Canoe Creek.

- **Step 2: Identify Low-income and Minority Populations.** Collect recent data on race, color, national origin, income, tribal governments, and seasonal and migrant workers in the study area, and apply FHWA and PennDOT methodology to identify low-income and minority populations.

Low-income and minority populations are identified in the *I-80 Canoe Creek Environmental Justice Analysis*, February 2022.

- **Step 3: Solicit Input from Low-income and Minority Populations.** Using PennDOT's *Public Involvement Handbook* and other environmental justice outreach guidance, identify appropriate outreach techniques. Through targeted outreach to potentially affected low-income and minority populations, identify transportation needs and concerns about the project to inform Steps 4, 5, and 6.

Public outreach was conducted throughout the development of the project including plans display/public meetings and additional stakeholder outreach targeted to parties knowledgeable about environmental justice issues (see Chapter 5.0).

- **Step 4: Evaluate Adverse and Beneficial Effects.** Analyze whether the project would create impacts to communities or populations in the near, medium, or long term. Then, with input from the community, assess whether the impacts are adverse, beneficial, or both.

Since the project involves on-location reconstruction of existing roadway and replacement of existing bridges in a rural setting, the effects on the local community are minimal. During construction, some diversion through the community may occur as some travelers may opt to avoid the construction zone even with two lanes largely being retained in each direction; however, once the project is completed the reconstructed roadway and replaced bridges would provide improved service along the I-80 corridor.

- **Step 5: Identify Disproportionately High and Adverse Effects.** Determine whether adverse effects are predominately borne by low-income persons and minorities, and if these effects are more or greater than those effects borne by the general population.

As a result of this analysis and associated outreach effort, no disproportionately high and adverse effects on low-income or minority populations have been identified for the I-80 Canoe Creek Bridges Project since adverse effects to these populations are not anticipated as a result of the project.

- **Step 6. Evaluate Mitigation Measures.** If adverse effects would be predominately borne by low-income and minority populations and are more or greater in magnitude than the adverse effect that would be suffered by the general population, consult with the community to identify measures to avoid, minimize, or mitigate the impacts. Determine whether the mitigation measures are practical. Practical mitigation measures are those that are: effective and do not create other adverse effects that are more severe; feasible in terms of implementation and operation; and cost effective, while maintaining the financial viability of the project.

As no disproportionately high and adverse effects on low-income or minority populations are anticipated to occur, evaluation of mitigation measures was not necessary.

- **Step 7: Re-evaluate Disproportionately High and Adverse Effects and Document Decision.** If practical mitigation measures have been identified, re-evaluate whether adverse effects borne by low-income and minority populations are appreciably more severe or greater than those effects borne by non-environmental justice populations.

Re-evaluation of effects on low-income and minority populations was not necessary.

7.0 ENVIRONMENTAL COMMITMENTS AND MITIGATION

The mitigation measures summarized in this section shall be incorporated into the project's design documents. In order to track and transfer mitigation commitments through the project development process, Environmental Commitments & Mitigation Tracking System (ECMETS) documentation shall be prepared and submitted through the appropriate channels as the project moves through Final Design and Construction.

Impacts and mitigation commitments are based on Preliminary Design and may change as the project moves through Final Design and Construction. Final design information and final mitigation commitments will be included in the ECMETS documentation.

STREAMS

Permanent Stream Impacts: 1,954 linear feet

Proposed Project Specific Restoration/Enhancement: 670 linear feet

Advanced Compensation/Banking: 95 linear feet

Mitigation Remarks:

Proposed stream mitigation will be accomplished both on-site and off-site. On-site mitigation will include channel relocation with stream improvements such as streambank stabilization, enhanced floodplain connectivity, riparian buffer improvements, and flow diversity. In addition to the on-site stream mitigation, stream banking credits have been purchased from Robinson Fork Mitigation Bank Phase I (RFMB1), an accredited stream mitigation bank, to account for impacts that could not be made up on-site due to the location and available reclamation space within the project boundaries.

Stream mitigation plans are included in the waterway permit application for the project. The details of mitigation have been determined through consultation with permitting agencies.

No work will be permitted in Canoe Creek and UNTs to Canoe Creek from February 15 to June 1 (for stocked trout) and October 1 to December 31 (for wild trout).

WETLANDS

Permanent Wetland Impacts: 0.085 acre

Project Specific Replacement/Construction: 0 acres

Banking: 0.085 acre

Bank to be Debited: PennDOT's Clarion County Wetland Bank Site

Mitigation Remarks:

- Permanent impacts to wetlands will be mitigated by utilizing credits from PennDOT's Clarion County Wetland Bank Site.
- Wetlands within the project study area not impacted by the project will be delineated with protective orange construction fence.
- Upon completion of construction, all temporarily impacted wetlands will be restored and reseeded.

SOIL EROSION & SEDIMENTATION

All disturbed areas will be stabilized upon completion of the project.

The E&S Control Plan and PCSM Plan will be incorporated into the construction contract.

COMMITMENTS FOR FURTHER PUBLIC INVOLVEMENT

The contractor will continue to coordinate with local municipalities and the public.

VEGETATION

In accordance with PennDOT's invasive species guidance (Publication 756, 2014), care will be taken not to transplant roots or seeds of noted invasive, non-native plants during earth moving operations. Re-vegetation of impacted areas will be implemented through the E&S plan. Prior to completion of construction, all remaining areas of earth disturbance will be restored by re-seeding with standard PennDOT seed formulas. These seed formulas may contain native plant species; but per Executive Order 13112, will avoid those plant species that are listed on the Noxious Weed Control List.

THREATENED & ENDANGERED PLANTS & ANIMALS

USFWS coordination for tri-colored bat:

During final design, the project team will initiate conferencing with USFWS regarding the project's potential effects to the tri-colored bat and measures to avoid and minimize harm.

CULTURAL RESOURCES

One previous recorded historic industrial site, 36CL0198 Tippecanoe Furnace was re-located via pedestrian survey. The 36CL0198 Tippecanoe Furnace site is located almost entirely within Commonwealth-owned existing ROW; however, during construction the furnace remains will be fenced off and avoided. Any intact soils at the site or in the immediate vicinity will either be fenced off and avoided or protected using geotextile and the appropriate amount of fill.

Of the areas with intact soils, there are two areas, designated Area A and Area B, that are going to be impacted and were deemed to contain intact soils with archaeological potential. A Phase I survey consisting of sub-surface excavation was conducted within these areas. One previously unrecorded site with pre-contact and historic components, 36CL0211 Edenburg Well site identified.

However, the portion of the site within the APE does not contribute to the site's overall eligibility. During construction, in order to prevent inadvertent disturbance, the portion of the site beyond the APE will be fenced off and avoided.

NON-RESOURCE SPECIFIC MITIGATION COMMITMENTS

- The P3 Development Entity will be required to amend the NPDES and waterway permits as appropriate to include additional impacted areas and/or aquatic resources if area is required outside of the PSA delineated in this CE Reevaluation.
- The NPDES and waterway permit conditions will be added to ECMTS as mitigation commitments.
- If the P3 Development Entity requires area outside of the PSA delineated in this CE Reevaluation, the P3 Development Entity is required to coordinate with PennDOT to determine necessary NEPA Reevaluation studies and documentation.

This NEPA Reevaluation may include but not be limited to:

- Delineation of aquatic resources in accordance with USACE protocol;
- Phase I ESA or Environmental Due Diligence (EDD) statement;
- PNDI review and coordination with resource protection agencies;
- Section 106 Consultation; and

- Public outreach.
 - Property acquisitions will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970, as amended; Title VI of the Civil Rights Act of 1964; and the Pennsylvania Eminent Domain Code of 1964. Any individual or family displaced by the project would be offered the full extent of benefits and payments. Provisions would be made to ensure that any person with a disability who is displaced is offered replacement housing that meets any special needs.
-

Appendix A
Engineering Information

Project Identification

Originating Office: District 10-0

Date: 04/17/20

Federal Project Number: N/A

Township/Municipality: Beaver Township

Local Name: I-80 Canoe Creek Bridges

Limits of Work (Segment/Offset)

Start:	End:
0534/2517	0570/1477
0541/0578	0565/1556

Construction Stations

Start:	End:
221+00 EB	356+58 EB
220+00 WB	355+07 WB

Total Length: 13,558 EB; 13,507 WB ft

Date of First Federal Authorization for Preliminary Engineering:

12/28/2016

Date of Federal Authorization Time Extension(s) for Preliminary Engineering(if applicable):

N/A

Design Criteria

Roadway Description: SR 0080

Functional Classification: Freeways/Interstates

Urban Rural

Current ADT: 30,075 (2025)

Design Year No-Build ADT: N/A

Current LOS: N/A

Design Year Build ADT: 44,254 (2045)

Design Year Build LOS: N/A

DHV: 3133

Truck %: 44

D (Directional Distribution) %: 53

Design Speed: 75 mi/h

Posted Speed: 70 mi/h

Required Minimum Widths

Lane Width: 12 ft

Shoulder Width: 12 RT / 8 LT ft

Bridge Curb-to-Curb: 56 ft

Design Exception Required?

Yes No

Typology: Limited Access Freeway – Rural Interstate

Topography: Level Rolling Mountainous

Proposed Design Criteria: New and Reconstruction

Traffic Control Measures

The following traffic control measures will be implemented:

- Temporary Bridge(s)
- Temporary Roadway
- Detour
- Ramp Closure
- Other (specify)
- None

Other Description: Use of Crossovers

Provisions for access by local traffic will be made and so posted.

True False

Through-traffic dependent business will not be adversely affected.

True False

There will be no interference with any local special event or festival.

True False

There will be no substantial environmental consequences associated with the traffic control measure(s).

True False

There is no substantial controversy associated with the traffic control measure(s).

True False

There are no substantial impacts to bicycle or pedestrian routes.

True False

Approximate length of planned detour: 13.5

Detour Map

Make the selection that best describes the planned detour:

- Detour will use local roads with no improvements.
- Detour will involve improvements to local roads with no resulting impacts on safety or the environment.
- Detour will involve improvements to local roads and will impact safety and/or the environment.
- Detour will use only state owned roads.

Describe impacts

Detour is for SR 4005 and will only be short-term events as required for Structure removal and erection.

Estimated Costs

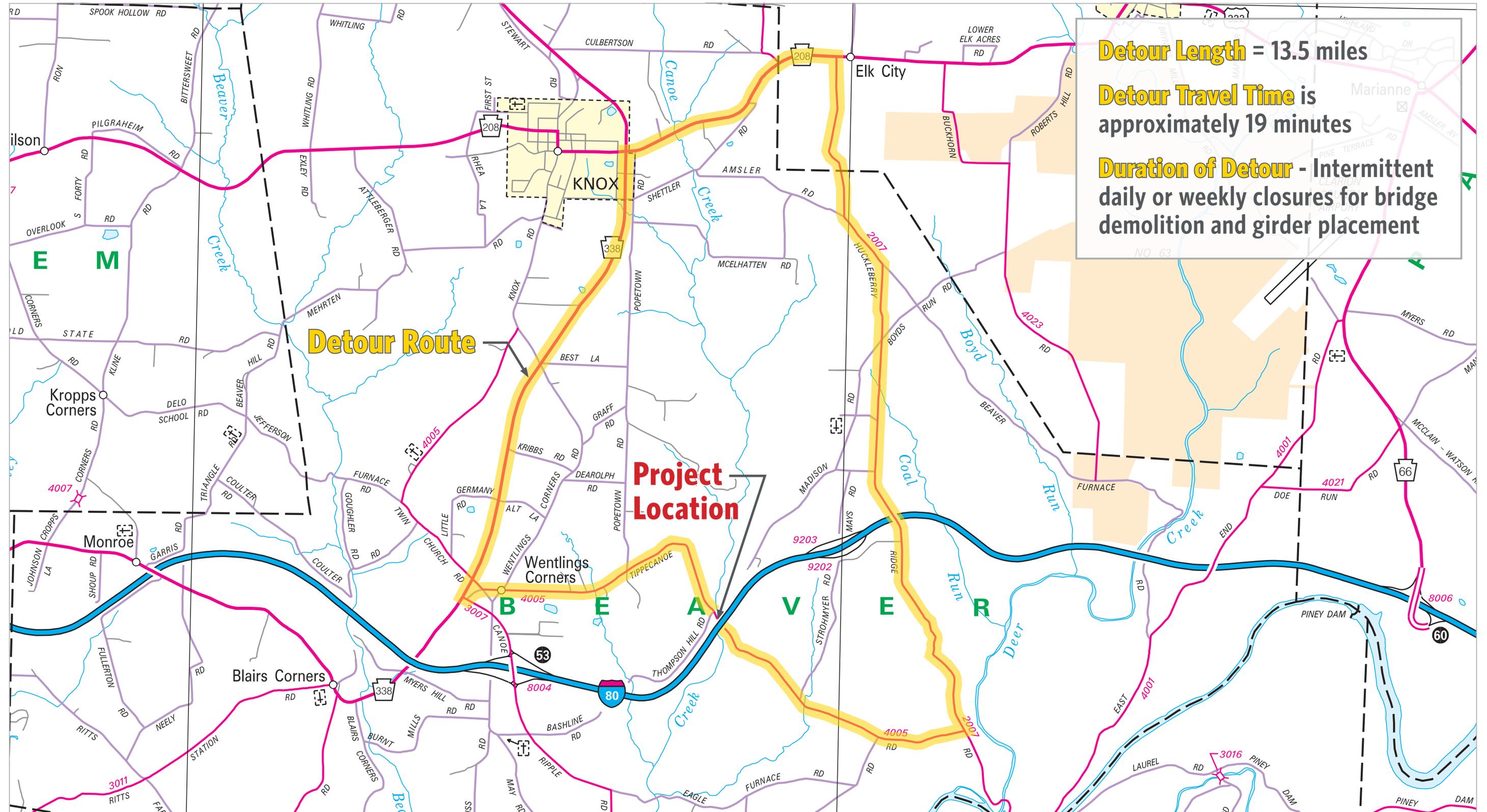
Engineering: \$ 7,592,000

Right-of-Way: \$ 90,000

Construction: \$ 123,807,000

Utilities: \$ 200,000

Tippecanoe Road (SR 4005) Detour



Roadway

Roadway Description

Interstate 80

	Existing	Proposed
Number of Lanes:	2	2
Lane Width:	12 ft	12 ft
Shoulder Width:	8 RT / 4 LT ft	12 RT / 8 LT ft
Median Width:	varies ft	varies ft
Sidewalk Width:	0 ft	0 ft
Bicycle Lane Width:	0 ft	0 ft
Clear Zone Width:	32 ft	32 ft

Structure

BMS Number: 16-0080-0550-0825

BRKEY: 10944

Description:

Structure crosses SR 4005 (Tippecanoe Road) and Canoe Creek

	Existing	Proposed
Structure Type:	Girder-Floorbeam-Stringer	Multi-Girder
Weight Restrictions:	n/a ton	n/a ton
Height Restrictions:	n/a ft	n/a ft
Curb to Curb Width:	32 ft	56 ft
Lane Width:	12 ft	12 ft
Shoulder Width:	4 ft	24/8 ft
Sidewalk Width:	n/a ft	n/a ft
Total Bridge Width*:	36.5 ft	59.4 ft

***Total Bridge Width is measured from outside of barrier to outside of barrier, which should include sidewalks, when present.**

Under Clearance:	100 ft	99.5 ft
Lateral Clearance:	52 ft	56.2 ft
Sufficiency Rating:	83.9	
Structure Length:	1156 ft	1160 ft

BMS Number: 16-0080-0551-0910

BRKEY: 10945

Description:

Structure crosses SR 4005 (Tippecanoe Road) and Canoe Creek

	Existing	Proposed
Structure Type:	Girder-Floorbeam-Stringer	Multi-Girder
Weight Restrictions:	n/a ton	n/a ton
Height Restrictions:	n/a ft	n/a ft
Curb to Curb Width:	32 ft	56 ft
Lane Width:	12 ft	12 ft
Shoulder Width:	4 ft	24/8 ft
Sidewalk Width:	n/a ft	n/a ft
Total Bridge Width*:	36.5 ft	59.4 ft

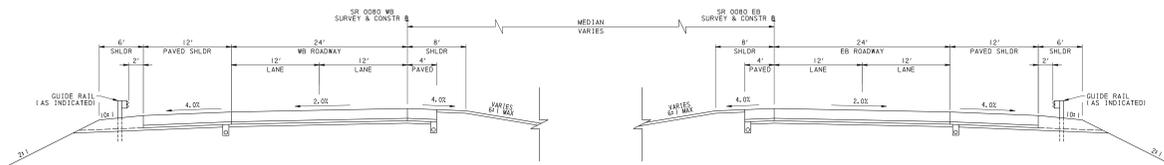
***Total Bridge Width is measured from outside of barrier to outside of barrier, which should include sidewalks, when present.**

Under Clearance:	100 ft	98.4 ft
Lateral Clearance:	27 ft	55.6 ft
Sufficiency Rating:	55	
Structure Length:	1090 ft	1160 ft

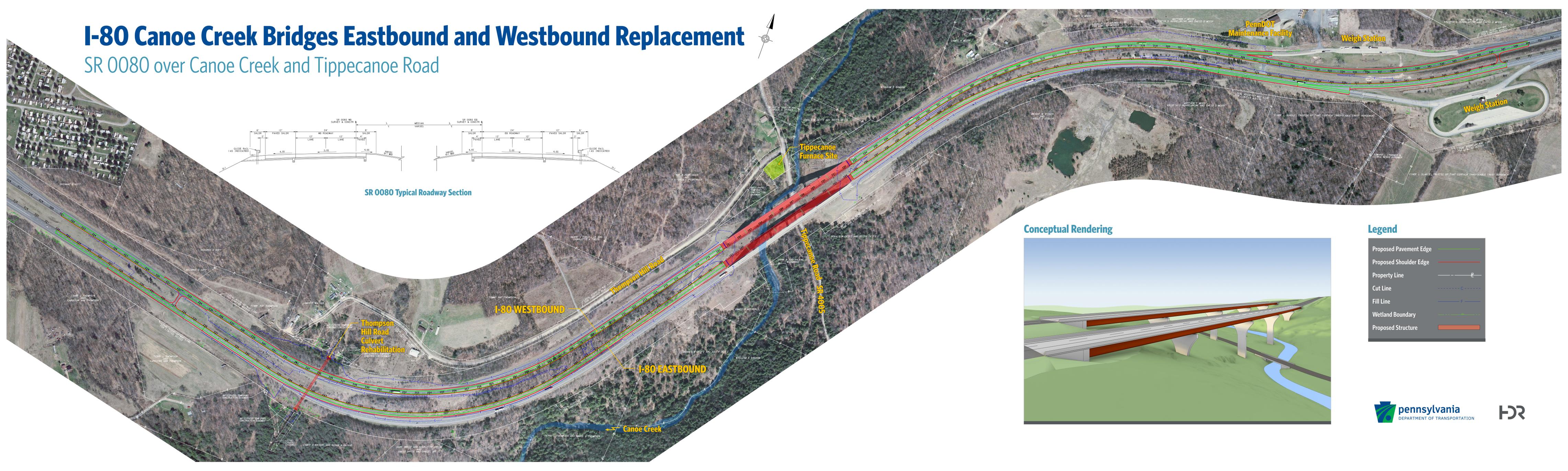
Appendix B
Project Design Exhibit

I-80 Canoe Creek Bridges Eastbound and Westbound Replacement

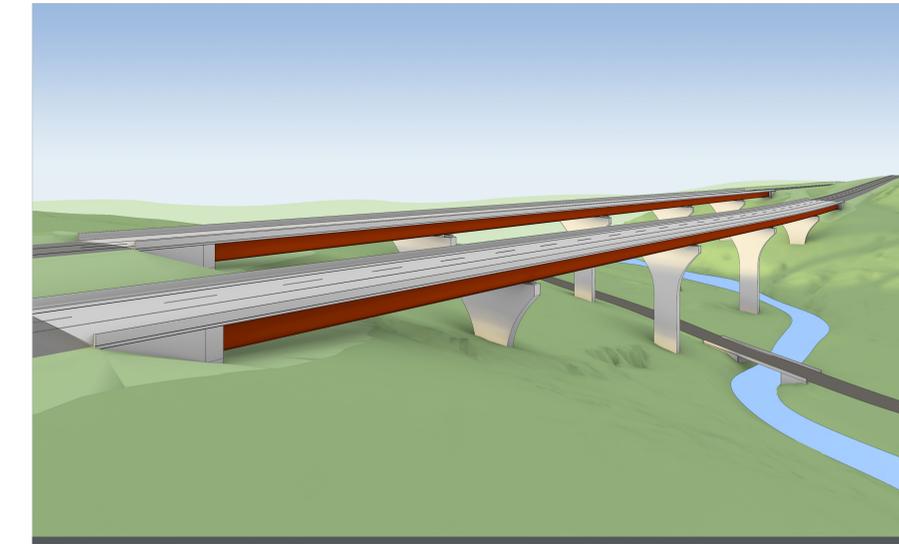
SR 0080 over Canoe Creek and Tippecanoe Road



SR 0080 Typical Roadway Section



Conceptual Rendering

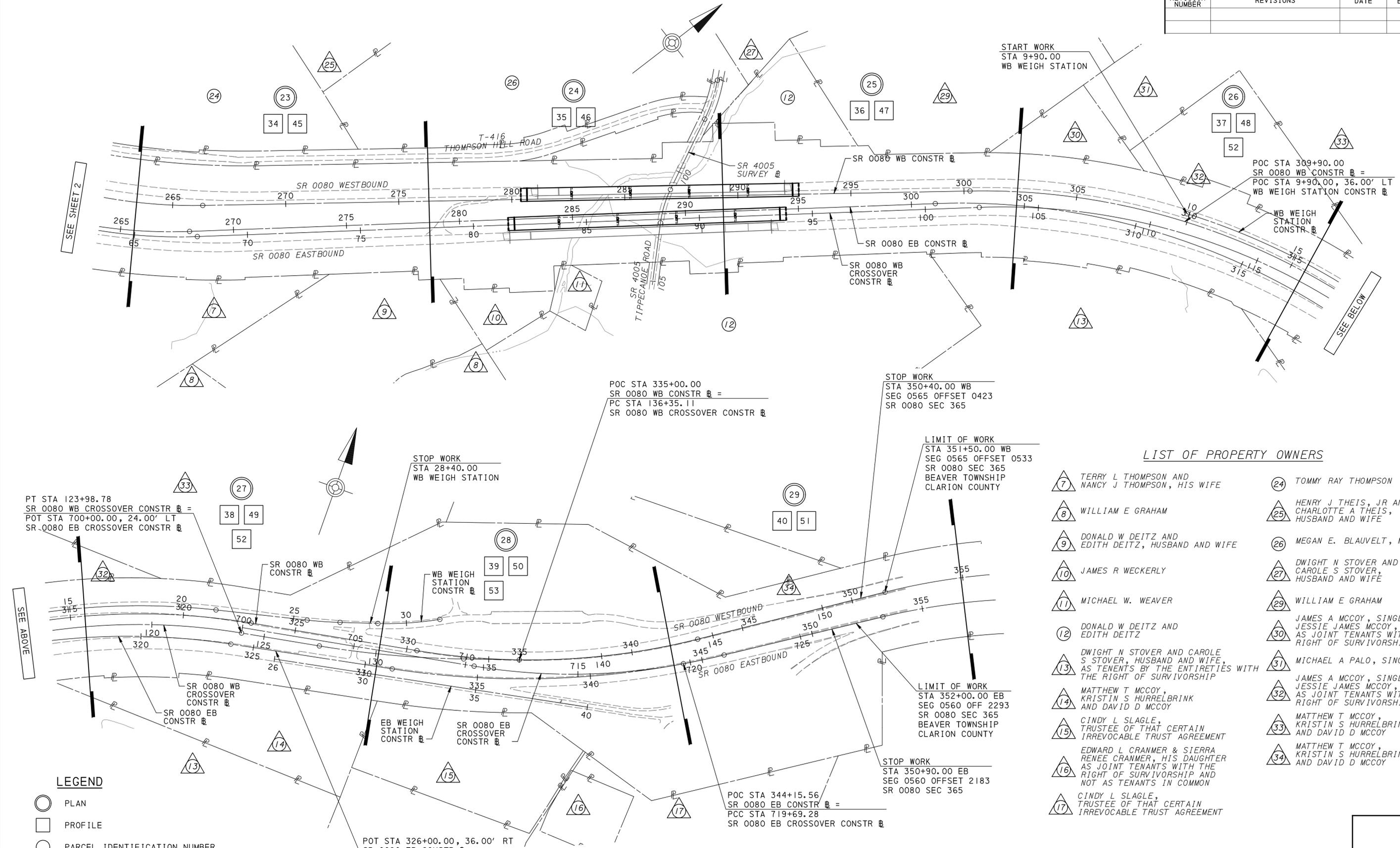


Legend

Proposed Pavement Edge	
Proposed Shoulder Edge	
Property Line	
Cut Line	
Fill Line	
Wetland Boundary	
Proposed Structure	

Appendix C
Design Plans

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	3 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



LIST OF PROPERTY OWNERS

- | | | | |
|----|--|----|--|
| 7 | TERRY L THOMPSON AND NANCY J THOMPSON, HIS WIFE | 24 | TOMMY RAY THOMPSON |
| 8 | WILLIAM E GRAHAM | 25 | HENRY J THEIS, JR AND CHARLOTTE A THEIS, HUSBAND AND WIFE |
| 9 | DONALD W DEITZ AND EDITH DEITZ, HUSBAND AND WIFE | 26 | MEGAN E. BLAUVELT, MARRIED |
| 10 | JAMES R WECKERLY | 27 | DWIGHT N STOVER AND CAROLE S STOVER, HUSBAND AND WIFE |
| 11 | MICHAEL W. WEAVER | 29 | WILLIAM E GRAHAM |
| 12 | DONALD W DEITZ AND EDITH DEITZ | 30 | JAMES A MCCOY, SINGLE, AND JESSIE JAMES MCCOY, SINGLE, AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP |
| 13 | DWIGHT N STOVER AND CAROLE S STOVER, HUSBAND AND WIFE, AS TENENTS BY THE ENTIRETIES WITH THE RIGHT OF SURVIVORSHIP | 31 | MICHAEL A PALO, SINGLE |
| 14 | MATTHEW T MCCOY, KRISTIN S HURRELBRINK AND DAVID D MCCOY | 32 | JAMES A MCCOY, SINGLE, AND JESSIE JAMES MCCOY, SINGLE, AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP |
| 15 | CINDY L SLAGLE, TRUSTEE OF THAT CERTAIN IRREVOCABLE TRUST AGREEMENT | 33 | MATTHEW T MCCOY, KRISTIN S HURRELBRINK AND DAVID D MCCOY |
| 16 | EDWARD L CRANMER & SIERRA RENEE CRANMER, HIS DAUGHTER AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP AND NOT AS TENANTS IN COMMON | 34 | MATTHEW T MCCOY, KRISTIN S HURRELBRINK AND DAVID D MCCOY |
| 17 | CINDY L SLAGLE, TRUSTEE OF THAT CERTAIN IRREVOCABLE TRUST AGREEMENT | | |

PT STA 123+98.78
 SR 0080 WB CROSSOVER CONSTR =
 POT STA 700+00.00, 24.00' LT
 SR 0080 EB CROSSOVER CONSTR

STOP WORK
 STA 28+40.00
 WB WEIGH STATION

POC STA 335+00.00
 SR 0080 WB CONSTR =
 PC STA 136+35.11
 SR 0080 WB CROSSOVER CONSTR

STOP WORK
 STA 350+40.00 WB
 SEG 0565 OFFSET 0423
 SR 0080 SEC 365

LIMIT OF WORK
 STA 351+50.00 WB
 SEG 0565 OFFSET 0533
 SR 0080 SEC 365
 BEAVER TOWNSHIP
 CLARION COUNTY

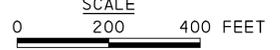
LIMIT OF WORK
 STA 352+00.00 EB
 SEG 0560 OFF 2293
 SR 0080 SEC 365
 BEAVER TOWNSHIP
 CLARION COUNTY

STOP WORK
 STA 350+90.00 EB
 SEG 0560 OFFSET 2183
 SR 0080 SEC 365

POC STA 344+15.56
 SR 0080 EB CONSTR =
 PCC STA 719+69.28
 SR 0080 EB CROSSOVER CONSTR

POT STA 326+00.00, 36.00' RT
 SR 0080 EB CONSTR =
 POT STA 26+00.00
 EB WEIGH STATION CONSTR

INDEX MAP (2 OF 2)



- LEGEND**
- PLAN
 - PROFILE
 - PARCEL IDENTIFICATION NUMBER
 - △ PARCEL IDENTIFICATION NUMBER-NO TAKE

SHEET LIMIT

USER: JIBONO PLOT DRIVER: Pcmndot... PLOT DATE: 12-06-2021 2:21:36 PM
 PATH: C:\pwworking\jibono\1\10381977... MODEL: Dwg.fault
 FILE: 0080-CANOE-EB-10X02.dgn

TABULATION OF OVERALL LENGTH

SR 0080 EB STA 221+00.00 TO STA 352+00.00 = 13,100.00 FT = 2.481 MILES
 SR 0080 WB STA 220+00.00 TO STA 351+50.00 = 13,150.00 FT = 2.491 MILES
 TOTAL = 26,250.00 FT = 4.972 MILES

TABULATION OF CONSTRUCTION LENGTH

SR 0080 EB STA 222+00.00 TO STA 350+90.00 = 12,890.00 FT = 2.441 MILES
 SR 0080 WB STA 221+00.00 TO STA 350+40.00 = 12,940.00 FT = 2.451 MILES
 TOTAL = 25,830.00 FT = 4.892 MILES

LIST OF EQUALITIES

NONE

LIST OF TIE-STATIONS

SR 0080 EB SURVEY # STA 541+84.62 = SR 0080 EB CONSTR # STA 241+84.62
 SR 0080 WB SURVEY # STA 555+02.93 = SR 0080 WB CONSTR # STA 254+95.20
 SR 0080 WB SURVEY # STA 540+77.44 = SR 0080 WB CONSTR # PC STA 240+77.44
 SR 0080 EB CONSTR # STA 324+50.39 = SR 0080 EB SURVEY # STA 542+22.77
 SR 0080 WB CONSTR # STA 323+02.07 = SR 0080 WB SURVEY # STA 453+39.05

PUBLIC UTILITIES

DAN STOVER, INC
 PO BOX 810
 KNOX, PA 16232
 CURT STOVER
 PHONE: 814-221-5080
 CDSTOVER@WINDSTREAM.NET

COLUMBIA GAS OF PENNSYLVANIA
 HUNTER JACKOVITZ
 2021 WEST STATE STREET
 NEW CASTLE, PA 16101
 PHONE: 724-636-9960
 HJACKOVITZ@NISOURCE.COM

DEITZ GAS AND OIL, INC.
 2729 GOURLEY ROAD
 SLIGO, PA 16255
 JEFF DEITZ
 PHONE: 814-229-2296
 JWDSHELL@WINDSTREAM.NET

CENTRAL ELECTRIC CORPORATION
 716 ROUTE 368
 PO BOX 329
 PARKER, PA 16049-0329
 CHAD MASTER
 CMASTER@CENTRAL.COOP

WINDSTREAM KINETIC BY WINDSTREAM
 98 INDUSTRIAL PARK ROAD
 BROOKVILLE, PA 15825
 BRIAN COOK
 PHONE: 814-849-3558
 BRIAN.A.COOK@WINDSTREAM.COM

PA ONE-CALL TOLL-FREE TELEPHONE
 NUMBER 1-800-242-1776 DESIGNER
 SERIAL NOS.
 20173462166
 20173462601
 20173481915
 20201391256
 20201391431
 FOR BEAVER TOWNSHIP

PRIVATE UTILITIES

PENNDOT UNDERGROUND ELECTRIC

PENNDOT UNDERGROUND TELEPHONE

DETAILS, OTHER THAN THOSE INDICATED, ARE ON THE FOLLOWING STANDARD DRAWINGS:

- RC-10M (1) JUNE 1, 2010
- RC-11M (2) JUNE 1, 2010
- RC-12M (2) FEB. 8, 2019
- RC-13M (1) JUNE 1, 2010
- RC-20M (13) DEC. 17, 2019
- RC-22M (6) FEB. 8, 2019
- RC-23M (3) FEB. 8, 2019
- RC-24M (3) FEB. 19, 2021
- RC-25M (4) FEB. 8, 2019
- RC-27M (2) JUNE 1, 2010
- RC-30M (5) DEC. 17, 2019
- RC-31M (2) JUNE 1, 2010
- RC-33M (2) JUNE 1, 2010
- RC-40M (1) FEB. 8, 2019
- RC-45M (20) FEB. 19, 2021
- RC-46M (34) FEB. 19, 2021
- RC-50M (18) FEB. 19, 2021
- RC-51M (14) FEB. 19, 2021
- RC-54M (12) DEC. 17, 2019
- RC-60M (3) JUNE 1, 2010
- RC-70M (3) FEB. 8, 2019
- RC-71M (4) AUG. 4, 2017
- RC-72M (7) FEB. 8, 2019
- RC-73M (4) FEB. 8, 2019
- RC-75M (1) JUNE 1, 2010
- RC-77M (1) DEC. 17, 2019
- TC-8600 (13) JUNE 13, 2013
- TC-8602 (4) JUNE 13, 2013
- TC-8604 (4) JUNE 13, 2013
- TC-8700C (12) JUNE 13, 2013
- TC-8701A (13) JUNE 13, 2013
- TC-8701D (13) JUNE 13, 2013

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	4 OF 53

BEAVER TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY	APPD

GENERAL NOTES

THE LEGAL RIGHT-OF-WAY ON SR 0080, FORMERLY LR 1009, FROM STATION 221+00 EB TO STATION 242+00 EB, FROM STATION 297+50 EB TO STATION 352+00 EB, FROM STATION 220+00 WB TO STATION 241+50 WB, AND FROM STATION 286+75 WB TO STATION 351+50 WB VARIES BASED ON THE PLAN OF LR 1009, SECTION 8 R/W, SIGNED ON OCTOBER 28, 1964 AND RECORDED IN THE CLARION COUNTY RECORDER'S OFFICE IN VOLUME 4, BOOK 1.

THE LEGAL RIGHT-OF-WAY ON SR 0080, FORMERLY LR 1009, FROM STATION 242+00 EB TO STATION 297+50 EB AND FROM STATION 241+50 WB TO STATION 286+75 WB IS VARIABLE BASED ON THE PLAN OF SR 0080, SECTION 365 R/W SIGNED ON AND RECORDED IN THE CLARION COUNTY RECORDER'S OFFICE IN

THIS IS A FEDERAL-AID PROJECT AND AS SUCH IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF THE FEDERAL HIGHWAY ADMINISTRATION AND THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION.

TEMPORARY CONSTRUCTION EASEMENT. AN EASEMENT TO USE THE LAND AS NECESSARY DURING CONSTRUCTION OF THE PROJECT. THE EASEMENT IS REQUIRED ONLY UNTIL THE CONSTRUCTION OR WORK INDICATED BY THE PLAN IS COMPLETED, UNLESS SOONER RELINQUISHED IN WRITING BY THE DEPARTMENT.

CHANNEL EASEMENT. AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF THE COURSE OF THE CHANNEL.

THE PROJECT SURVEY IS BASED UPON THE NATIONAL GEODETIC REFERENCE SYSTEM (FORMERLY USC&GS).

THE HORIZONTAL SURVEY INFORMATION IS BASED UPON THE STATE PLANE COORDINATE SYSTEM NORTH ZONE (NAD83).

COMBINED SCALE FACTOR = 0.999908490

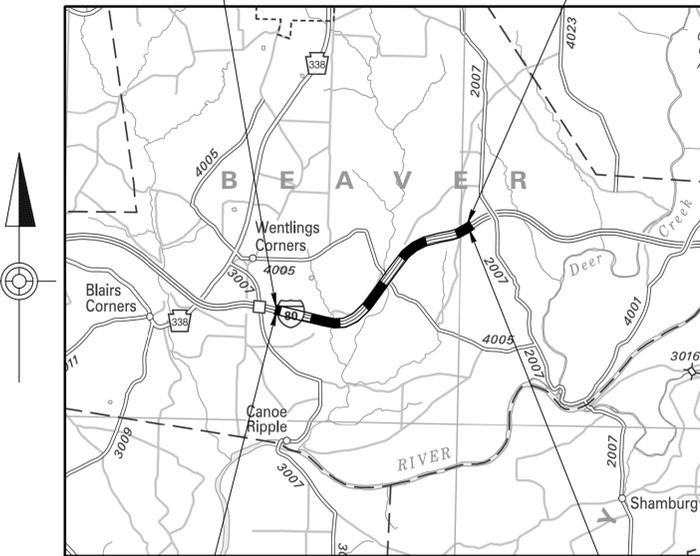
THE VERTICAL CONTROL IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM (NAD83).

ALL CURVE DATA IS BASED ON THE ARC DEFINITION UNLESS OTHERWISE INDICATED.

TEN WORKING DAYS PRIOR TO EXCAVATION, THE CONTRACTOR MUST CONTACT THE PA ONE CALL SYSTEM, INC., PHONE 1-800-242-1776, SERIAL NO. ----- FOR BEAVER TOWNSHIP.

LIMIT OF WORK
 STA 220+00.00 WB
 SEG 0541 OFF 0578
 SR 0080 SEC 365
 BEAVER TOWNSHIP
 CLARION COUNTY

LIMIT OF WORK
 STA 351+50.00 WB
 SEG 0565 OFF 0533
 SR 0080 SEC 365
 BEAVER TOWNSHIP
 CLARION COUNTY



LIMIT OF WORK
 STA 221+00.00 EB
 SEG 0534 OFF 2517
 SR 0080 SEC 365
 BEAVER TOWNSHIP
 CLARION COUNTY

LIMIT OF WORK
 STA 352+00.00 EB
 SEG 0560 OFF 2293
 SR 0080 SEC 365
 BEAVER TOWNSHIP
 CLARION COUNTY

LEGEND

- ===== LIMITED ACCESS HIGHWAY
- ===== STATE ROUTE
- TOWNSHIP ROAD
- TOWNSHIP BOUNDARY
- MUNICIPAL BOUNDARY
- PROJECT

SCALE

0 1 2 3 MILES

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 MODEL: DeFault

SUMMARY OF PROJECT COORDINATES

BASED ON STATE PLANE COORDINATES - NORTH ZONE NAD83

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SR 0080 EB CONSTR #	200+03.02	POT	375991.2715	1475118.5719	
	241+84.62	PC	375020.1028	1479185.8315	S 76°34'14" E
	256+73.96	PI	374674.2047	1480634.4545	
	268+05.69	PT	375887.0611	1481498.8234	
	301+05.90	PC	378574.6046	1483414.1607	N 35°28'35" E
	313+11.49	PI	379556.3824	1484113.8464	
	323+99.29	PT	379783.7050	1485297.8110	
	331+21.16	PC	379919.8195	1486006.7368	N 79°07'53" E
	338+69.65	PI	380060.9518	1486741.7962	
	345+99.40	PT	380469.0684	1487369.2286	
	353+21.73	PC	380862.9236	1487974.7356	N 56°57'28" E
	374+31.13	PI	382013.0845	1489742.9755	
	389+73.22	PT	380692.1826	1491387.5912	S 51°13'47" E
390+27.63	POT	380658.1110	1491430.0126		
SR 0080 WB CONSTR #	200+00.00	POT	376066.2142	1475202.3291	
	240+77.44	PC	375163.5374	1479178.5911	S 77°12'35" E
	255+19.70	PI	374844.2433	1480585.0712	
	266+33.11	PT	376003.1316	1481443.6240	
	300+27.17	PC	378730.3176	1483464.0373	N 36°31'57" E
	312+22.04	PI	379690.4205	1484175.3216	
	323+02.07	PT	379901.2841	1485351.4422	
	330+45.29	PC	380032.4442	1486083.0058	N 79°50'08" E
	336+79.80	PI	380144.4176	1486707.5523	
	342+96.52	PT	380495.7775	1487235.8917	
	351+51.13	PC	380969.0184	1487235.8917	N 56°22'30" E
	372+83.19	PI	382149.6571	1489722.8279	
	388+32.24	PT	380814.5608	1491385.1164	S 51°13'47" E
389+63.01	POT	380732.6727	1491487.0729		
WB WEIGH STATION CONSTR #	9+90.00	PC	379429.3922	1484129.4316	N 54°51'37" E
	15+79.56	PI	379768.7273	1484611.5447	
	21+54.72	PT	379903.6667	1485185.4548	N 76°46'08" E
	25+60.38	PC	379996.5148	1485580.3465	
	26+33.35	PI	380013.2156	1485651.3764	
	27+06.23	PT	380035.7061	1485720.7906	N 72°02'51" E
	28+73.56	PC	380087.2825	1485879.9756	
	30+11.51	PI	380129.8020	1486011.2074	
	31+48.64	PT	380196.1486	1486132.1529	N 61°15'09" E
31+51.26	POT	380197.4093	1486134.4511		
EB WEIGH STATION CONSTR #	26+00.00	POT	379786.1964	1485501.7107	
	40+00.00	POT	380050.1763	1486876.5978	N 79°07'53" E
SR 0080 EB CROSSOVER CONSTR #	700+00.00	POT	379869.1980	1485321.6464	
	710+38.76	PC	380052.5328	1486344.0957	N 79°50'04" E
	715+08.86	PI	380135.5034	1486806.8184	
	719+69.28	PCC	380372.5737	1487212.7668	N 59°42'56" E
	720+61.22	PI	380418.9381	1487292.1590	
	721+53.12	PT	380469.0684	1487369.2286	N 56°57'28" E
	728+75.45	POT	380862.9236	1487974.7356	
SR 0080 WB CROSSOVER CONSTR #	0+00.00	POT	376066.2142	1475202.3291	
	23+60.20	PC	375543.7043	1477503.9680	S 77°12'35" E
	26+02.62	PI	375490.0375	1477740.3687	
	28+44.41	PT	375407.5807	1477968.3299	
	32+65.33	PC	375264.4090	1478364.1443	S 70°06'51" E
	34+85.84	PI	375189.4026	1478571.5082	
	37+05.89	PT	375138.1870	1478785.9907	
	41+57.00	PC	375033.4133	1479224.7660	S 76°34'12" E
	56+46.36	PI	374687.4988	1480673.4000	
	67+78.09	PT	375900.3670	1481537.7773	
	102+38.78	PC	378718.5993	1483546.2529	N 35°28'35" E
	113+76.16	PI	379644.8328	1484206.3537	
	123+98.78	PT	379845.5748	1485325.8822	
	127+47.95	PC	379907.2023	1485669.5759	N 79°50'04" E
	130+69.17	PI	379963.8951	1485985.7486	
	133+89.20	PT	380066.8286	1486290.0248	
	136+35.11	PC	380145.6302	1486522.9660	N 71°18'35" E
	140+35.64	PI	380273.9809	1486902.3765	
	144+31.63	PT	380495.7775	1487235.8917	
	152+86.23	POT	380969.0184	1487947.5032	N 56°22'30" E

NOTE: FOUR (4) PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

SUMMARY OF PROJECT COORDINATES

BASED ON STATE PLANE COORDINATES - NORTH ZONE NAD83

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
UPSTREAM CONSTR #	10+00.00	POT	375255.5884	1479627.3266	N 14°12'47" W
	10+24.94	PI	375279.7677	1479621.2024	N 3°22'59" E
	10+50.33	PI	375305.1125	1479622.7007	N 12°36'58" E
	10+75.20	PI	375329.3789	1479628.1320	N 22°04'28" E
	10+99.47	PI	375351.8693	1479637.2528	N 24°41'45" E
	10+99.71	PI	375352.0916	1479637.3550	
	11+50.00	POT	375399.2110	1479654.9157	N 20°26'23" E
DOWNSTREAM CONSTR #	20+00.00	POT	374794.7956	1479517.9330	S 11°32'53" W
	20+24.37	PI	374770.9171	1479513.0540	
	20+49.60	PI	374746.8935	1479505.3560	S 17°46'02" W
	20+74.14	PI	374723.4721	1479498.0430	S 17°20'25" W
	20+99.38	PI	374699.2664	1479490.8690	S 16°30'31" W
	21+49.15	PI	374651.2723	1479477.7020	S 15°20'29" W
	21+50.00	POT	374650.4287	1479477.6247	S 5°13'59" W
	459+00.00	POT	376598.5151	1471211.5860	
	460+76.18	PC	376485.3185	1471346.5893	S 50°01'16" E
	471+87.64	PI	375771.2016	1472198.2771	
SR 0080 EB SURVEY #	481+72.16 BK =	PT	375910.1293	1473301.0165	
	481+71.91 AHD				N 82°49'10" E
	491+78.62	PC	376035.9638	1474299.8282	
	495+95.32	PI	376088.0500	1474713.2630	
	500+03.02	PT	375991.2715	1475118.5719	S 76°34'14" E
	543+91.00	PC	374972.1709	1479386.5705	
	553+59.37	PI	374747.2678	1480328.4658	
	561+83.45	PCC	375374.1710	1481066.5312	N 49°39'21" E
	566+58.53	PI	375681.7239	1481428.6193	
	571+28.75 BK =	PT	376068.6037	1481704.3377	
	571+63.12 AHD				N 35°28'35" E
	602+96.62 BK =	POT	378620.3856	1483522.9215	
	430+03.02	PC	378623.0661	1483524.8318	
	441+69.90	PI	379573.3175	1484202.0495	
	452+22.77	PT	379793.3404	1485347.9952	
	458+93.54	PC	379919.8195	1486006.7368	N 79°07'53" E
	466+42.03	PI	380060.9518	1486741.7962	
	473+71.78	PT	380469.0684	1487369.2286	N 56°57'28" E
	480+94.11	PC	380862.9236	1487974.7356	
502+03.51	PI	382013.0845	1489742.9755		
517+45.59	PT	380692.1826	1491387.5912	S 51°13'47" E	
518+00.00	POT	380658.1110	1491430.0126		
SR 0080 WB SURVEY #	459+00.00	POT	376697.1836	1471278.9274	
	460+27.79	PC	376615.0778	1471376.8504	S 50°01'16" E
	470+00.52	PI	375990.0957	1472122.2320	
	478+67.62	PT	376092.0590	1473089.5995	N 83°58'59" E
	488+60.71	PC	376196.1563	1474077.2138	
	492+40.27	PI	376235.9425	1474454.6814	
	496+13.00 BK =	PT	376151.9145	1474824.8219	
	496+12.89 AHD				S 77°12'35" E
	541+81.23	PC	375140.5601	1479279.8052	
	551+00.38	PI	374937.0749	1480176.1513	
	558+94.56	PCC	375510.6374	1480894.3913	N 51°23'25" E
	563+91.27	PI	375820.5884	1481282.5254	
	568+82.43 BK =	PT	376219.4967	1481578.4812	
	569+18.00 AHD				N 36°34'20" E
	600+04.70 BK =	POT	378698.4452	1483417.6484	
	430+00.00 AHD				
	430+74.24	PC	378758.0717	1483461.8861	
	442+29.58	PI	379685.9305	1484150.2777	
	452+74.07	PT	379889.8170	1485287.4827	N 79°50'08" E
	460+82.28	PC	380032.4442	1486083.0058	
467+16.79	PI	380144.4176	1486707.5523		
473+33.51	PT	380495.7775	1487235.8917	N 56°22'30" E	
481+88.12	PC	380969.0184	1487947.5032		
503+20.18	PI	382149.6571	1489722.8279		
518+69.23	PT	380814.5608	1491385.1164	S 51°13'47" E	
520+00.00	POT	380732.6727	1491487.0729		

NOTE: FOUR (4) PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	5 OF 53

BEAVER TOWNSHIP

REVISION NUMBER	REVISIONS	DATE	BY	APPD

SUMMARY OF PROJECT COORDINATES

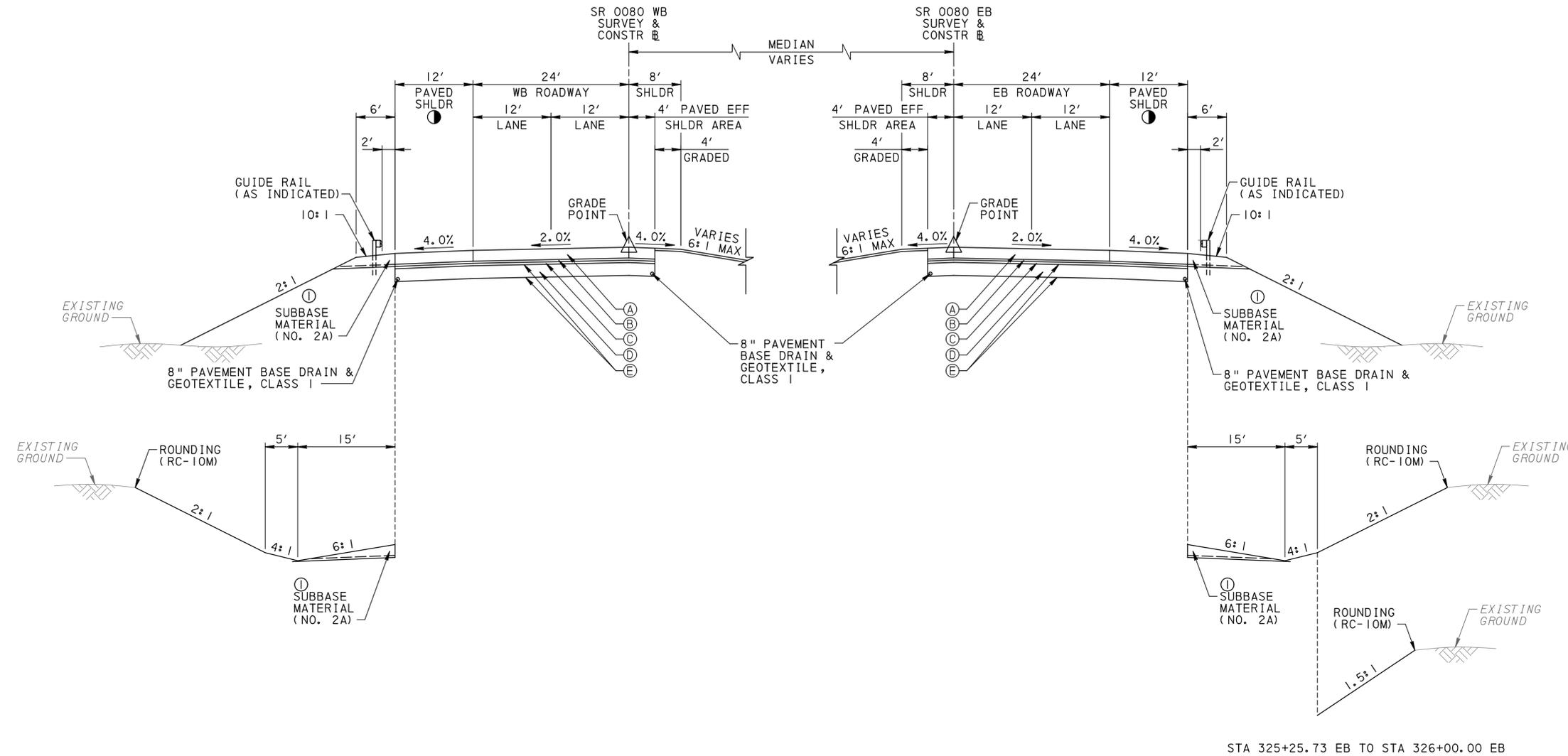
BASED ON STATE PLANE COORDINATES - NORTH ZONE NAD83

RTE	STATION	POINT	COORDINATES		BEARING
			NORTH	EAST	
SR 4005 SURVEY #	95+14.84	POT	378176.5752	1482365.5238	
	95+59.06	PC	378143.7310	1482395.1323	S 42°02'03" E
	96+50.26	PI	378075.9895	1482456.2000	
	97+40.33	PT	377994.2763	1482496.7109	
	100+86.18	PC	377684.4160	1482650.3299	S 26°22'15" E
	101+63.53	PI	377615.1180	1482684.6856	
	102+39.53	PT	377560.2996	1482739.2519	
	105+15.40	POT	377364.7799	1482933.8727	S 44°52'05" E

NOTE: FOUR (4) PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO (2) PLACES.

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	6 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



- ① SUBBASE MATERIAL (NO. 2A) INCIDENTAL TO SUBBASE 4" DEPTH (NO. 2A).
- ② SEE CROSS SECTIONS.
- * SLOPE THE SHOULDER ON THE LOW SIDE OF A SUPERELEVATED SECTION THE SAME RATE AS THE PAVEMENT WHEN THE RATE OF PAVEMENT CROSS SLOPE EXCEEDS 4.0%.
- ▲ SLOPE THE SHOULDER ON THE HIGH SIDE AT 2.0% DOWN WHEN SUPERELEVATION IS 2.0% TO 6.0%. WHEN SUPERELEVATION IS GREATER THAN 6.0% REFER TO DETAIL A.
- PROPOSED SHOULDER WIDTH VARIES FROM 12' TO 24' FROM STA 273+00 TO STA 282+00, EB AND FROM STA 271+00 TO STA 280+00 WB. PROPOSED SHOULDER WIDTH VARIES FROM 24' TO 12' FROM STA 295+00 TO STA 304+00 EB AND FROM STA 293+00 TO STA 302+00, WB.

- PAVEMENT DESIGN:**
- (A) ITEM 9000-0001: PLAIN CEMENT CONCRETE PAVEMENT, 14" DEPTH
 - (B) ITEM 0360-0001: ASPHALT TREATED PERMEABLE BASE COURSE, 4" DEPTH
OR
ITEM 0303-0001: CEMENT TREATED PERMEABLE BASE COURSE, 4" DEPTH
 - (C) ITEM 0350-0104: SUBBASE 4" DEPTH (NO. 2A)
 - (D) ITEM 4205-0200 SELECTED BORROW EXCAVATION 206 ROCK, 2' DEPTH
 - (E) ITEM 0212-0014: GEOTEXTILE, CLASS 4, TYPE A

SR 0080 TYPICAL TANGENT SECTION

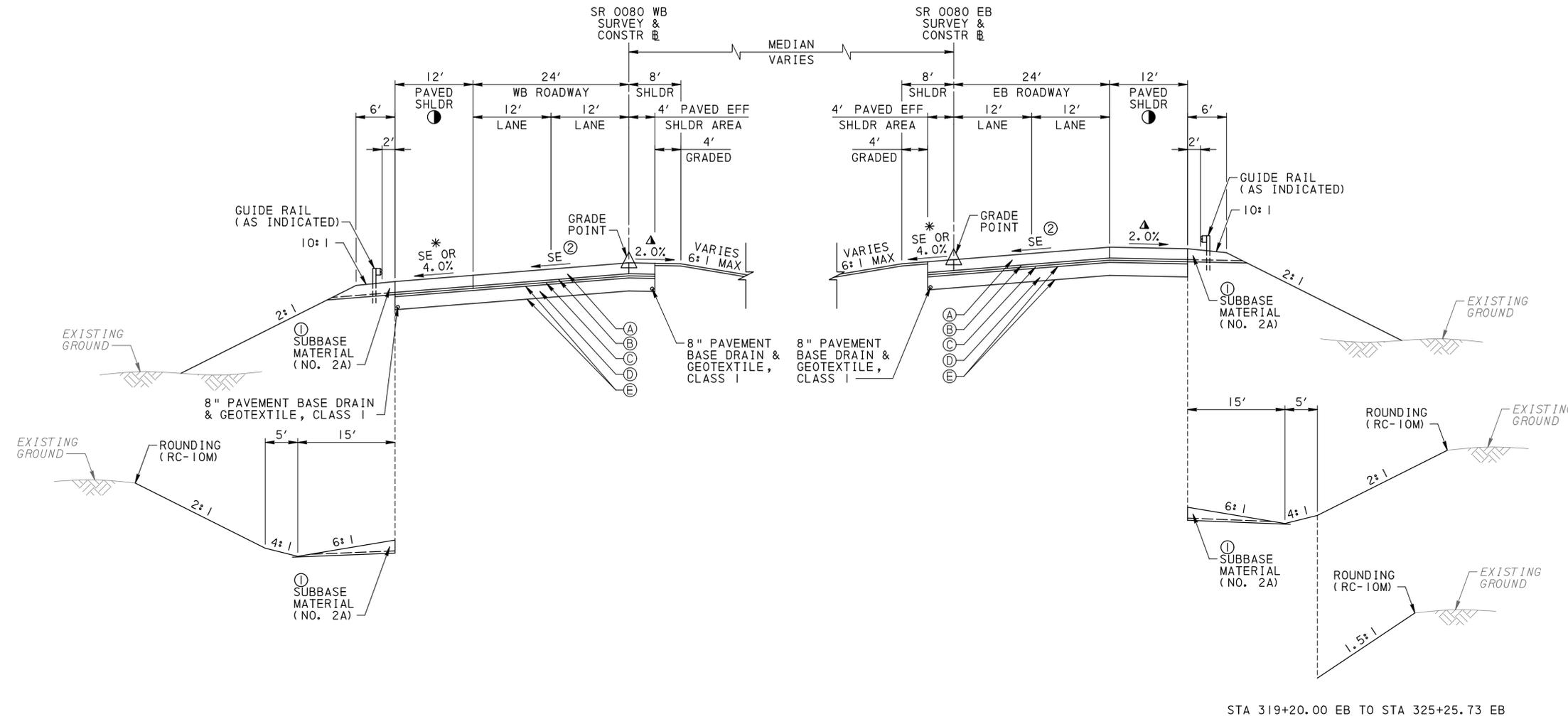
NOT TO SCALE

SR 0080 STA 236+00.00 EB TO STA 238+37.00 EB
 SR 0080 STA 271+53.31 EB TO STA 282+15.83 EB
 SR 0080 STA 294+44.17 EB TO STA 299+79.46 EB
 SR 0080 STA 325+25.73 EB TO STA 326+00.00 EB

SR 0080 STA 239+00.00 WB TO STA 239+19.40 WB
 SR 0080 STA 267+91.15 WB TO STA 280+40.83 WB
 SR 0080 STA 292+69.17 WB TO STA 297+11.16 WB
 SR 0080 STA 326+18.08 WB TO STA 328+00.00 WB

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 MODEL: DeFault

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	7 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



- ① SUBBASE MATERIAL (NO. 2A) INCIDENTAL TO SUBBASE 4" DEPTH (NO. 2A).
- ② SEE SUPERELEVATION TABLE.
- * SLOPE THE SHOULDER ON THE LOW SIDE OF A SUPERELEVATED SECTION THE SAME RATE AS THE PAVEMENT WHEN THE RATE OF PAVEMENT CROSS SLOPE EXCEEDS 4.0%.
- ▲ SLOPE THE SHOULDER ON THE HIGH SIDE AT 2.0% DOWN WHEN SUPERELEVATION IS 2.0% TO 6.0%. WHEN SUPERELEVATION IS GREATER THAN 6.0% REFER TO DETAIL A.
- PROPOSED SHOULDER WIDTH VARIES FROM 12' TO 24' FROM STA 273+00 TO STA 282+00, EB AND FROM STA 271+00 TO STA 280+00 WB. PROPOSED SHOULDER WIDTH VARIES FROM 24' TO 12' FROM STA 295+00 TO STA 304+00 EB AND FROM STA 293+00 TO STA 302+00, WB.

- PAVEMENT DESIGN:**
- (A) ITEM 9000-0001: PLAIN CEMENT CONCRETE PAVEMENT, 14" DEPTH
 - (B) ITEM 0360-0001: ASPHALT TREATED PERMEABLE BASE COURSE, 4" DEPTH
OR
ITEM 0303-0001: CEMENT TREATED PERMEABLE BASE COURSE, 4" DEPTH
 - (C) ITEM 0350-0104: SUBBASE 4" DEPTH (NO. 2A)
 - (D) ITEM 4205-0200: SELECTED BORROW EXCAVATION 206 ROCK, 2' DEPTH
 - (E) ITEM 0212-0014: GEOTEXTILE, CLASS 4, TYPE A

SR 0080 TYPICAL SUPERELEVATED SECTION

NOT TO SCALE

SR 0080 STA 238+37.00 EB TO STA 271+53.31 EB
 SR 0080 STA 299+79.46 EB TO STA 325+25.73 EB

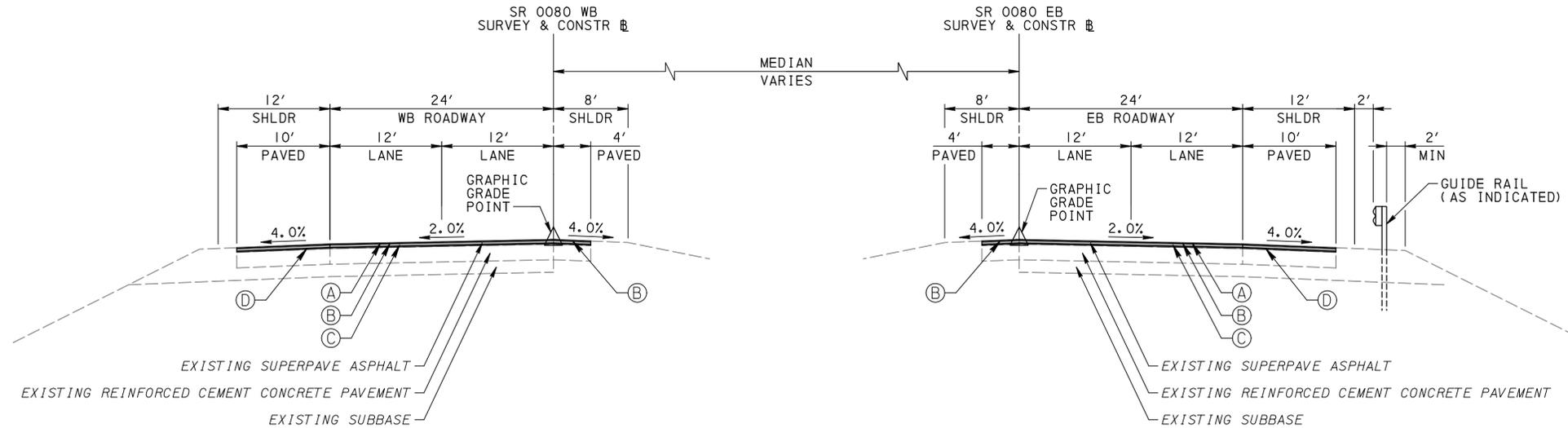
SR 0080 STA 239+19.40 WB TO STA 267+91.15 WB
 SR 0080 STA 297+11.16 WB TO STA 326+18.08 WB

SUPERELEVATION TABLE

BASELINE	STATION	CROSS SLOPE	NOTES	BASELINE	STATION	CROSS SLOPE	NOTES
SR 0080 WB CONSTR	239+19.40	-2.0%	BEGIN SUPERELEVATION TRANSITION	SR 0080 EB CONSTR	238+37.00	-2.0%	BEGIN SUPERELEVATION TRANSITION
	242+03.76	-8.0%	BEGIN FULL SUPERELEVATION		243+10.94	8.0%	BEGIN FULL SUPERELEVATION
	265+06.79	-8.0%	BEGIN SUPERELEVATION TRANSITION		266+79.37	8.0%	BEGIN SUPERELEVATION TRANSITION
	267+91.15	-2.0%	BEGIN NORMAL CROWN		271+53.31	-2.0%	BEGIN NORMAL CROWN
	297+11.16	-2.0%	BEGIN SUPERELEVATION TRANSITION		299+79.46	-2.0%	BEGIN SUPERELEVATION TRANSITION
	301+37.70	7.0%	BEGIN FULL SUPERELEVATION		302+16.43	-7.0%	BEGIN FULL SUPERELEVATION
	321+91.54	7.0%	BEGIN SUPERELEVATION TRANSITION		322+88.76	-7.0%	BEGIN SUPERELEVATION TRANSITION
	326+18.08	-2.0%	BEGIN NORMAL CROWN		325+25.73	-2.0%	BEGIN NORMAL CROWN
	329+49.10	-2.0%	BEGIN SUPERELEVATION TRANSITION		328+74.84	-2.0%	BEGIN SUPERELEVATION TRANSITION
	331+28.29	-6.2%	BEGIN FULL SUPERELEVATION		331+99.16	5.2%	BEGIN FULL SUPERELEVATION
342+03.52	-6.2%	BEGIN SUPERELEVATION TRANSITION	345+21.40	5.2%	BEGIN SUPERELEVATION TRANSITION		
343+92.71	-2.0%	BEGIN NORMAL CROWN	348+45.72	-2.0%	BEGIN NORMAL CROWN		

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	8 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



SR 0080
TYPICAL TANGENT MILL AND OVERLAY SECTION

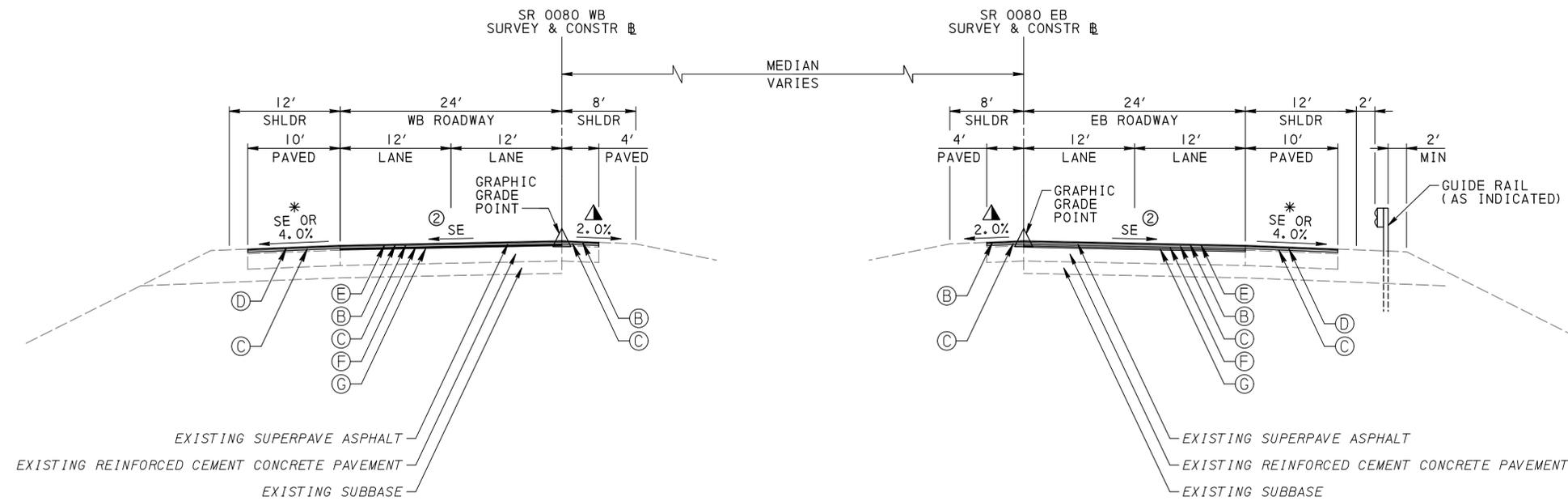
NOT TO SCALE

SR 0080 STA 222+00.00 EB TO STA 236+00.00 EB
 SR 0080 STA 326+00.00 EB TO STA 328+74.84 EB
 SR 0080 STA 348+45.72 EB TO STA 349+00.00 EB
 SR 0080 STA 221+00.00 WB TO STA 239+00.00 WB
 SR 0080 STA 328+00.00 WB TO STA 329+49.10 WB
 SR 0080 STA 342+92.71 WB TO STA 349+25.00 WB

- ② SEE CROSS SECTIONS.
- * SLOPE THE SHOULDER ON THE LOW SIDE OF A SUPERELEVATED SECTION THE SAME RATE AS THE PAVEMENT WHEN THE RATE OF PAVEMENT CROSS SLOPE EXCEEDS 4.0%.
- ▲ SLOPE THE SHOULDER ON THE HIGH SIDE AT 2.0% DOWN WHEN SUPERELEVATION IS 2.0% TO 6.0%. WHEN SUPERELEVATION IS GREATER THAN 6.0% REFER TO DETAIL A.
- PLACE ASPHALT TACK COAT BETWEEN ALL LAYERS OF ASPHALT.

PAVEMENT DESIGN:

- Ⓐ ITEM 0491-0017: MILLING OF ASPHALT PAVEMENT SURFACE, 4" DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR
- Ⓑ ITEM 0419-1326: STONE MATRIX ASPHALT MIXTURE DESIGN, WEARING COURSE, RPS PG 64E-22, 9.5 MM MIX, 1 1/2" DEPTH SRL-E
- Ⓒ ITEM 0413-6087: SUPERPAVE ASPHALT MIXTURE DESIGN, BINDER COURSE, PG 64E-22, >= 30 MILLION ESALS, 19.0 MM MIX, 2 1/2" DEPTH
- Ⓓ ITEM 0413-0428: SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE, PG 64E-22, 10 TO < 30 MILLION ESALS, 9.5 MM MIX, 1 1/2" DEPTH, SRL-H
- Ⓔ ITEM 0491-0017: MILLING OF BITUMINOUS PAVEMENT SURFACE, VARIABLE DEPTH, MILLED MATERIAL RETAINED BY CONTRACTOR
- Ⓕ ITEM 0413-1030: ASPHALT MIXTURE DESIGN, WEARING COURSE, (SCRATCH), PG 64S-28, 10 TO < 30 MILLION ESALS, 9.5 MM MIX, SRL-E
- Ⓖ ITEM 0413-2130: SUPERPAVE ASPHALT MIXTURE DESIGN, WEARING COURSE (LEVELING), PG 64E-22 >= 30 MILLION ESALS, 9.5 MM MIX SRL-E



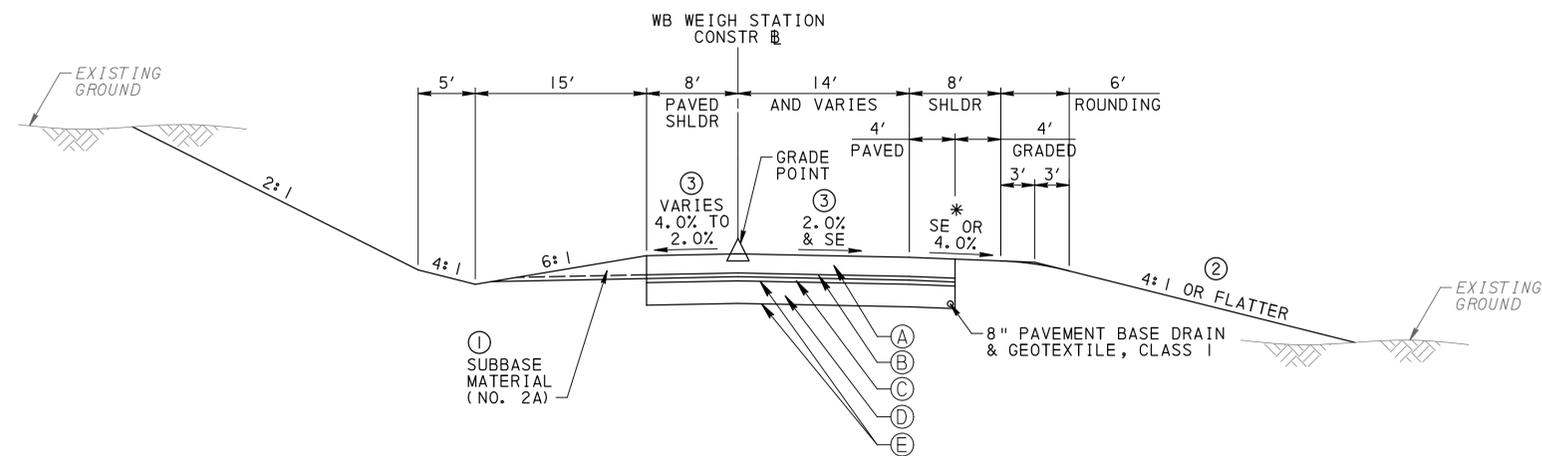
SR 0080
TYPICAL SUPERELEVATED MILL AND OVERLAY SECTION

NOT TO SCALE

SR 0080 STA 328+74.84 EB TO STA 345+48.72 EB
 SR 0080 STA 329+49.10 WB TO STA 342+92.71 WB

USER: JBONO PLOT DRIVER: PenPlot.PDF - Mono.plt
 PATH: c:\pwworking\101\10381977\FILE:0080-CANOE-RD-TYP02.dgn
 PLOT DATE: 12-09-2021 11:54:57 PM
 MODEL: DeFault

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	9 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



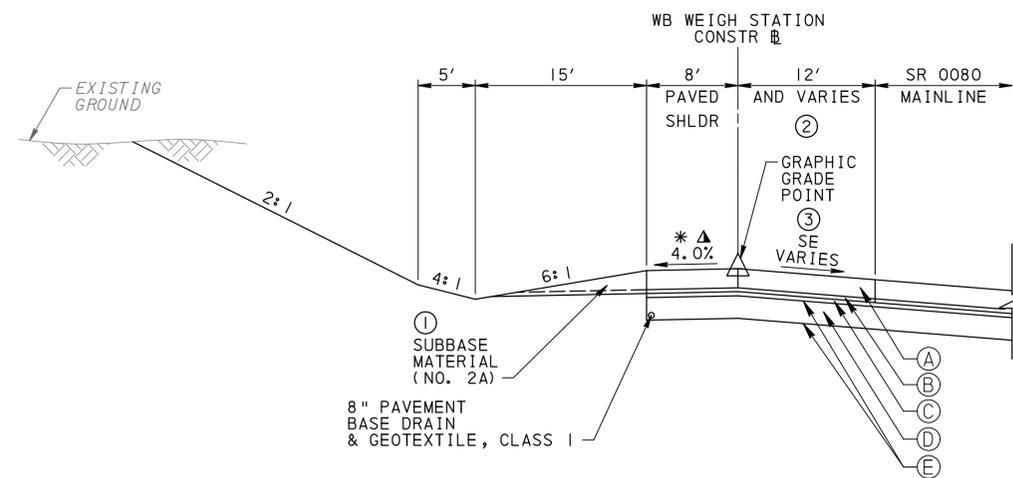
TYPICAL RAMP SECTION

NOT TO SCALE
WB WEIGH STATION
STA 22+64.85 TO 28+40.00

- ① SUBBASE MATERIAL (NO. 2A) INCIDENTAL TO SUBBASE 4" DEPTH (NO. 2A).
- ② ROUNDING IS NOT REQUIRED FOR SLOPES 6:1 OR FLATTER, SEE CROSS SECTIONS.
- ③ SEE RAMP CROSS SECTIONS.
- * SLOPE THE SHOULDER ON THE LOW SIDE OF A SUPERELEVATED SECTION THE SAME RATE AS THE PAVEMENT WHEN THE RATE OF PAVEMENT CROSS SLOPE EXCEEDS 4.0%.
- ▲ SLOPE THE SHOULDER ON THE HIGH SIDE AT 2.0% DOWN WHEN SUPERELEVATION IS 2.0% TO 6.0%. WHEN SUPERELEVATION IS GREATER 6.0% REFER TO DETAIL A.

PAVEMENT DESIGN:

- Ⓐ ITEM 9000-0001: PLAIN CEMENT CONCRETE PAVEMENT, 14" DEPTH
- Ⓑ ITEM 0360-0001: ASPHALT TREATED PERMEABLE BASE COURSE, 4" DEPTH
OR
ITEM 0303-0001: CEMENT TREATED PERMEABLE BASE COURSE, 4" DEPTH
- Ⓒ ITEM 0350-0104: SUBBASE 4" DEPTH (NO. 2A)
- Ⓓ ITEM 4205-0200 SELECTED BORROW EXCAVATION 206 ROCK, 2' DEPTH
- Ⓔ ITEM 0212-0014: GEOTEXTILE, CLASS 4, TYPE A

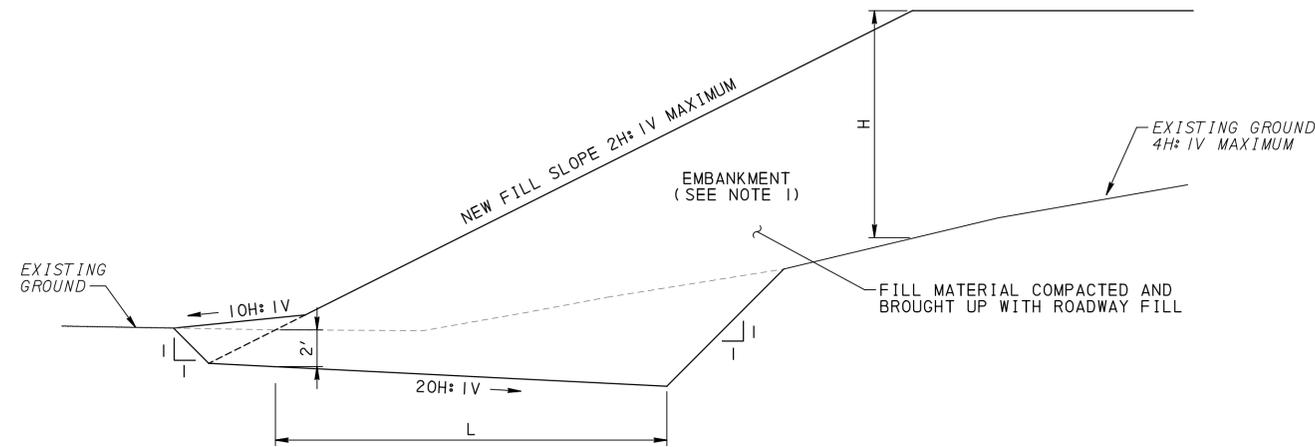


**TYPICAL SUPERELEVATED RAMP SECTION
ADJACENT TO MAINLINE PAVEMENT**

NOT TO SCALE
WB WEIGH STATION
STA 9+90.00 TO 22+64.85

USER: J8080 PLOT DRIVER: Pmndot.PDF_Memo.plt DATE: 12-06-2021 2:23:16 PM
PATH: c:\pwworking\esri\apps\arcgis\bin\arc2d\arc2d.plt
FILE: 0080-CANOE-RD-TYP03.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	10 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



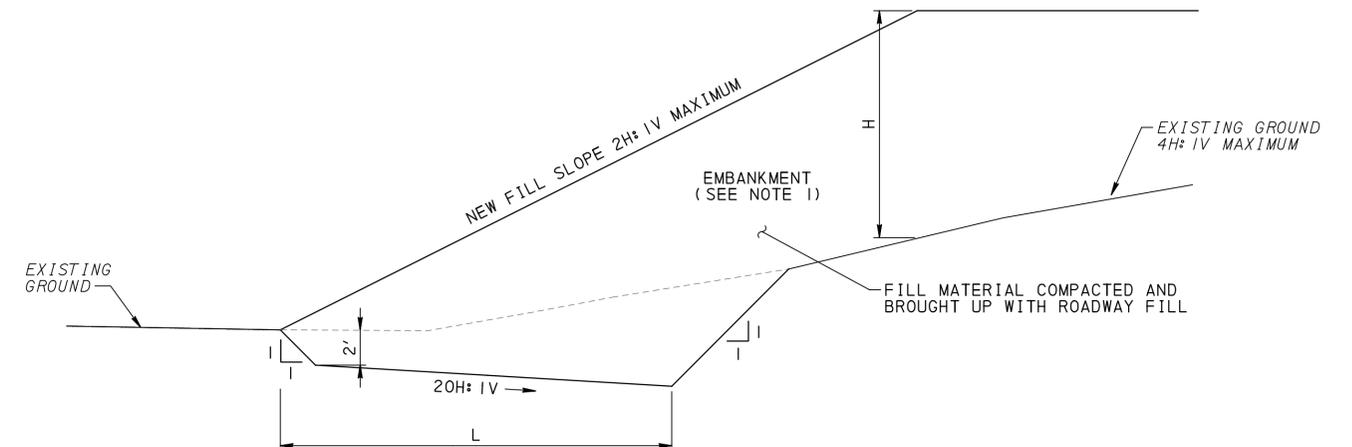
SIDE HILL TOE BENCH DETAIL 1

NOT TO SCALE
AS SHOWN ON CROSS SECTIONS

ROADWAY BASELINE	STATION	OFFSET	PROPOSED SLOPE (H:V)	MINIMUM TOE WIDTH, L (FEET)
S.R. 0080 EB	279+75 TO 281+75	LEFT	2H:1V	12
S.R. 0080 WB	278+75 TO 280+39	LEFT	2H:1V	12
	278+00 TO 279+75	RIGHT	2H:1V	12

NOTES:

- EMBANKMENT FROM AVAILABLE EXCAVATION OR FOREIGN BORROW EMBANKMENT.



SIDE HILL TOE BENCH DETAIL 2

NOT TO SCALE
AS SHOWN ON CROSS SECTIONS

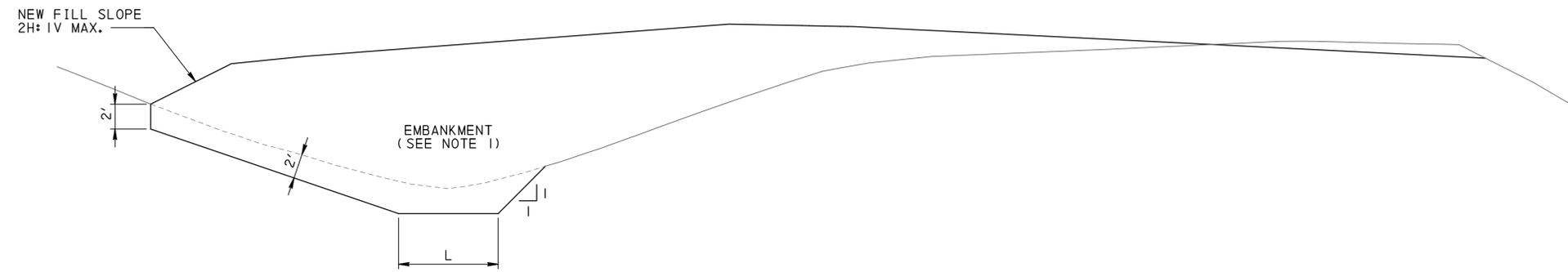
ROADWAY BASELINE	STATION	OFFSET	PROPOSED SLOPE (H:V)	MINIMUM TOE WIDTH, L (FEET)
S.R. 0080 EB	295+00 TO 303+00	LEFT	2H:1V	16
S.R. 0080 WB	247+25 TO 247+75	LEFT	2H:1V	12
	294+00 TO 296+50	RIGHT	2H:1V	16

NOTES:

- EMBANKMENT FROM AVAILABLE EXCAVATION OR FOREIGN BORROW EMBANKMENT.

USER: JBONO PLOT DRIVER: Pcmdot_PDF_Memo.plt PLOT DATE: 12-06-2021 2:23:22 PM
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 MODEL: 0080.fault

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	11 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



SIDE HILL TOE BENCH DETAIL 3

NOT TO SCALE
AS SHOWN ON CROSS SECTIONS

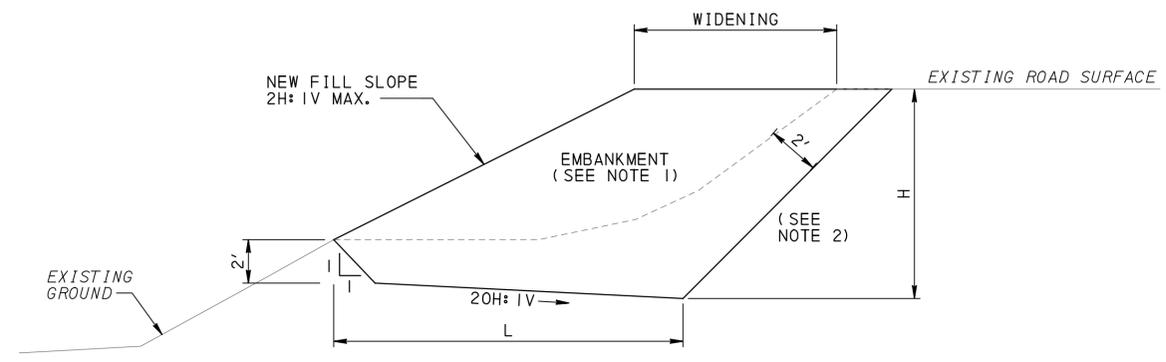
ROADWAY BASELINE	STATION	OFFSET	PROPOSED SLOPE (H:V)	MINIMUM TOE WIDTH, L (FEET)
S.R. 0080 EB	265+75 TO 269+75	LEFT	2H:1V	8

NOTES:

- EMBANKMENT FROM AVAILABLE EXCAVATION OR FOREIGN BORROW EMBANKMENT.

USER: JBONO | PLOT DRIVER: Pcmdot.pdf | PLOT DATE: 12-06-2021 | 2:23:24 PM
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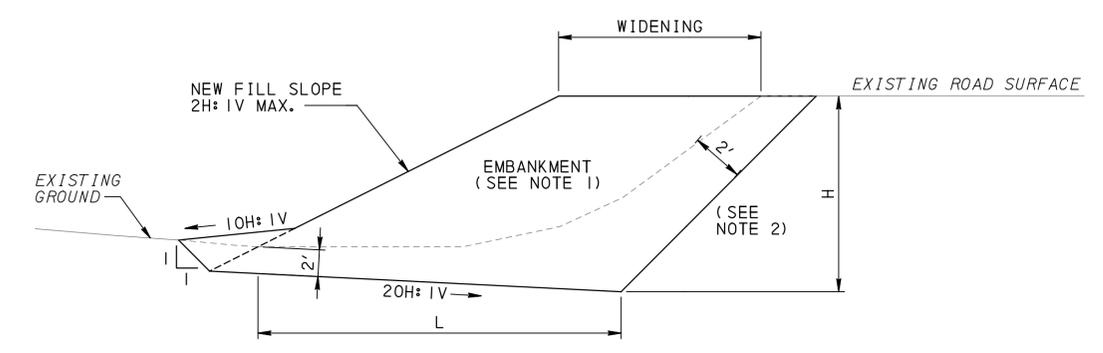
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	12 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



SLIVER FILLS DETAIL 1
 (H<12')
 NOT TO SCALE
 AS SHOWN ON CROSS SECTIONS

ROADWAY BASELINE	STATION	OFFSET	PROPOSED SLOPE (H:V)	MINIMUM TOE WIDTH, L (FEET)
S.R. 0080 WB	239+00 TO 239+25	LEFT	2H: 1V	12
	255+00 TO 257+25	RIGHT	2H: 1V	8
	292+71 TO 294+25	LEFT	2H: 1V	12

- NOTES:**
- EMBANKMENT FROM AVAILABLE EXCAVATION OR FOREIGN BORROW EMBANKMENT.
 - FOR H<12', SLOPE TO MAXIMUM 1H: 1V OR MATCH THE EXISTING SLOPE TO MAINTAIN MINIMUM 2' CUT INTO EXISTING EMBANKMENT.



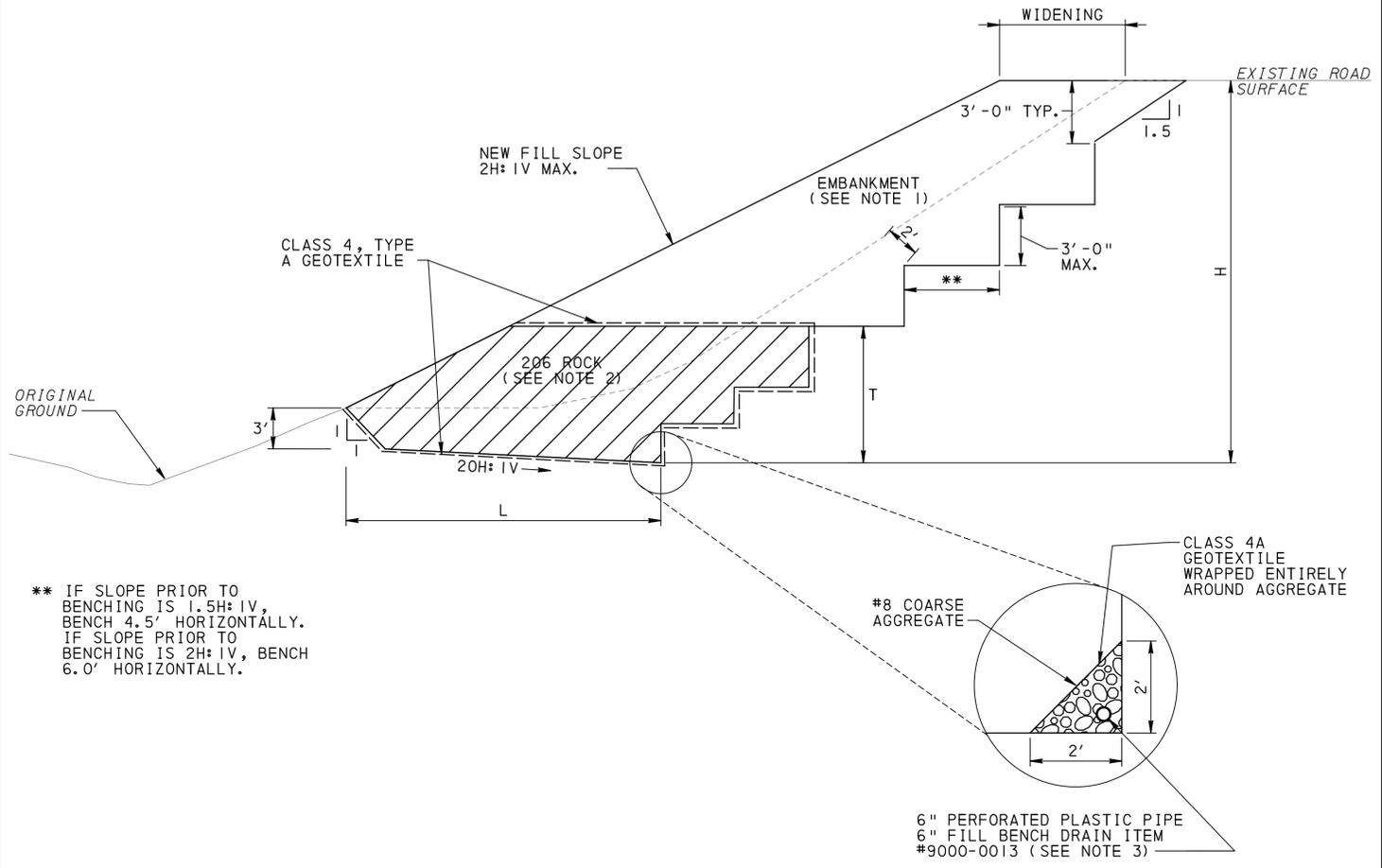
SLIVER FILLS DETAIL 2
 (H<12')
 NOT TO SCALE
 AS SHOWN ON CROSS SECTIONS

ROADWAY BASELINE	STATION	OFFSET	PROPOSED SLOPE (H:V)	MINIMUM TOE WIDTH, L (FEET)
S.R. 0080 EB	236+00 TO 241+25	RIGHT	2H: 1V	12

- NOTES:**
- EMBANKMENT FROM AVAILABLE EXCAVATION OR FOREIGN BORROW EMBANKMENT.
 - FOR H<12', SLOPE TO MAXIMUM 1H: 1V OR MATCH THE EXISTING SLOPE TO MAINTAIN MINIMUM 2' CUT INTO EXISTING EMBANKMENT.

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 FILE: 0080-CANOE-RD-DET01.dgn

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	13 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

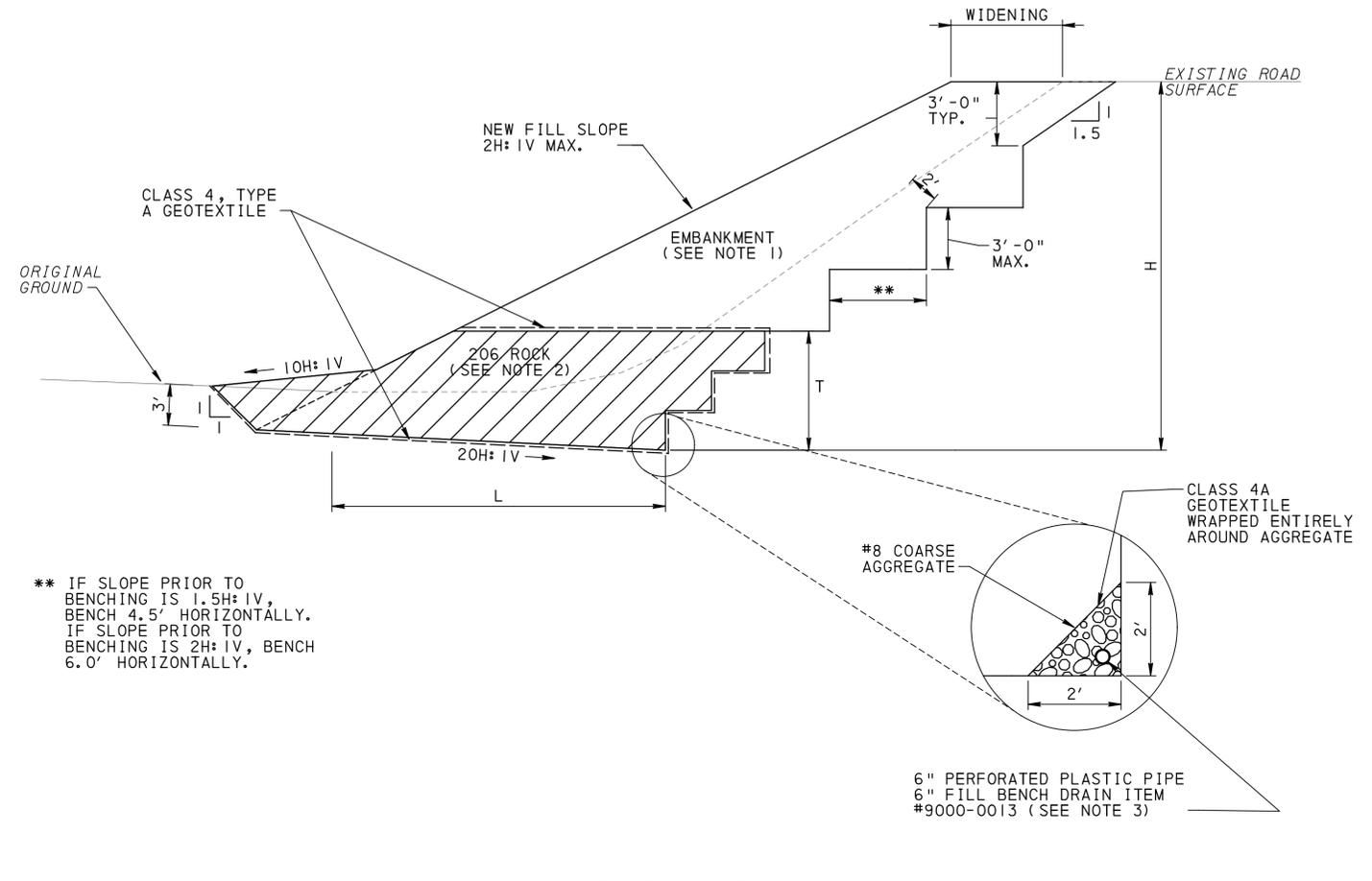


** IF SLOPE PRIOR TO BENCHING IS 1.5H:1V, BENCH 4.5' HORIZONTALLY. IF SLOPE PRIOR TO BENCHING IS 2H:1V, BENCH 6.0' HORIZONTALLY.

SLIVER FILLS DETAIL 3
(H > 12')
NOT TO SCALE
AS SHOWN ON CROSS SECTIONS

ROADWAY BASELINE	STATION	OFFSET	PROPOSED SLOPE (H:V)	MINIMUM TOE WIDTH, L (FEET)	MINIMUM TOE THICKNESS, T (FEET)
S.R. 0080 EB	241+25 TO 242+25	RIGHT	2H:1V	18	15
S.R. 0080 WB	241+75 TO 242+75	LEFT	2H:1V	25	15
	245+20 TO 247+25	LEFT	2H:1V	24	12
	257+25 TO 267+25	RIGHT	2H:1V	10	6

- NOTES:**
- EMBANKMENT FROM AVAILABLE EXCAVATION OR FOREIGN BORROW EMBANKMENT.
 - PROVIDE ROCK IN CONFORMANCE WITH SPECIAL PROVISION "4205-0200, SELECTED BORROW EXCAVATION, 206 ROCK" TO CONSTRUCT NEW EMBANKMENT.
 - OUTLET DRAIN TO APPROPRIATE WATERWAY.



** IF SLOPE PRIOR TO BENCHING IS 1.5H:1V, BENCH 4.5' HORIZONTALLY. IF SLOPE PRIOR TO BENCHING IS 2H:1V, BENCH 6.0' HORIZONTALLY.

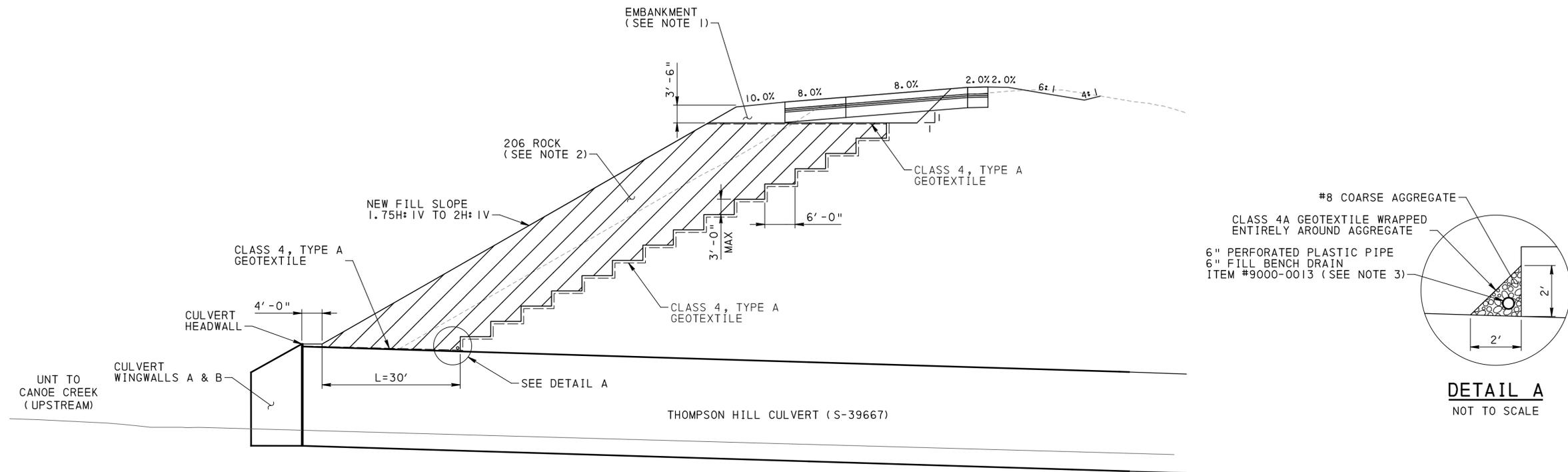
SLIVER FILLS DETAIL 4
(H > 12')
NOT TO SCALE
AS SHOWN ON CROSS SECTIONS

ROADWAY BASELINE	STATION	OFFSET	PROPOSED SLOPE (H:V)	MINIMUM TOE WIDTH, L (FEET)	MINIMUM TOE THICKNESS, T (FEET)
S.R. 0080 EB	242+25 TO 243+75	RIGHT	2H:1V	18	15
S.R. 0080 WB	239+25 TO 240+25	LEFT	2H:1V	18	15
	240+25 TO 241+75	LEFT	2H:1V	25	15
	242+75 TO 244+75	LEFT	2H:1V	24	12

- NOTES:**
- EMBANKMENT FROM AVAILABLE EXCAVATION OR FOREIGN BORROW EMBANKMENT.
 - PROVIDE ROCK IN CONFORMANCE WITH SPECIAL PROVISION "4205-0200, SELECTED BORROW EXCAVATION, 206 ROCK" TO CONSTRUCT NEW EMBANKMENT.
 - OUTLET DRAIN TO APPROPRIATE WATERWAY.

USER: JBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:23:26 PM
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 MODEL: de.fault

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	14 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



CULVERT STEEPENED ROCK EMBANKMENT DETAIL

NOT TO SCALE
AS SHOWN ON CROSS SECTIONS

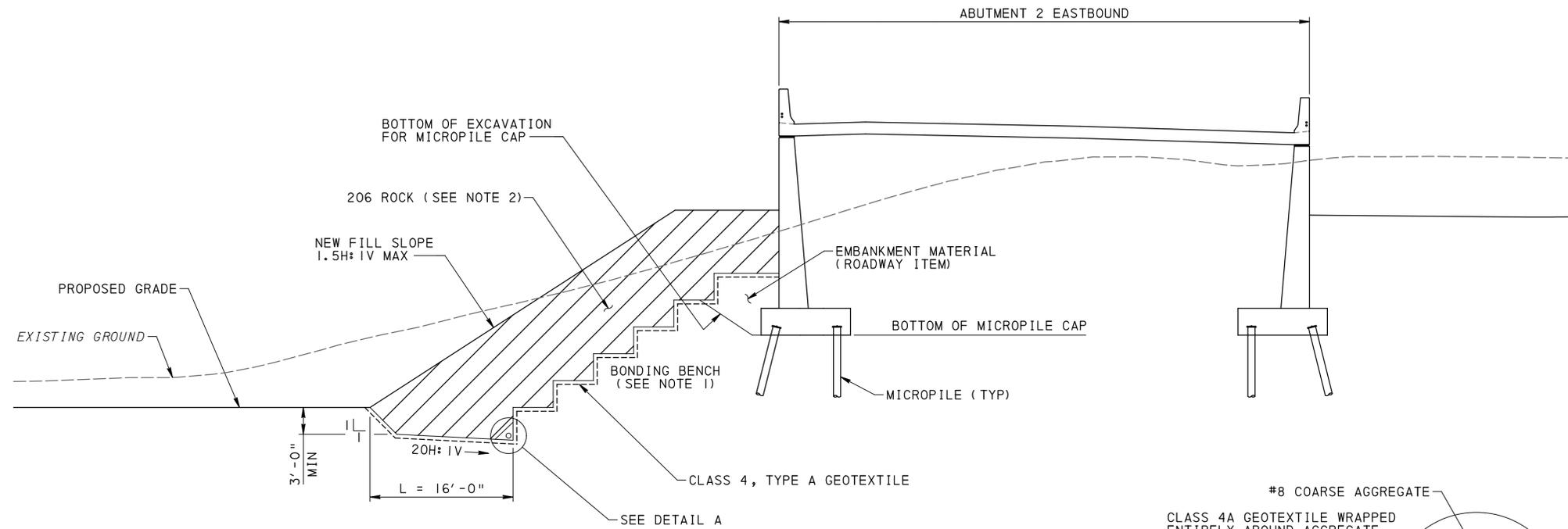
ROADWAY BASELINE	STATION	OFFSET	PROPOSED SLOPE (H:V)	MINIMUM BASE WIDTH, L (FEET)
S.R. 0080 WB	244+75 TO 245+20	LEFT	VARIES FROM 1.75H:1V TO 2H:1V	30

NOTES:

- EMBANKMENT FROM AVAILABLE EXCAVATION OR FOREIGN BORROW EMBANKMENT.
- PROVIDE ROCK IN CONFORMANCE WITH SPECIAL PROVISION "4205-0200, SELECTED BORROW EXCAVATION, 206 ROCK" TO CONSTRUCT NEW EMBANKMENT.
- OUTLET DRAIN TO APPROPRIATE WATERWAY.

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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	15 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

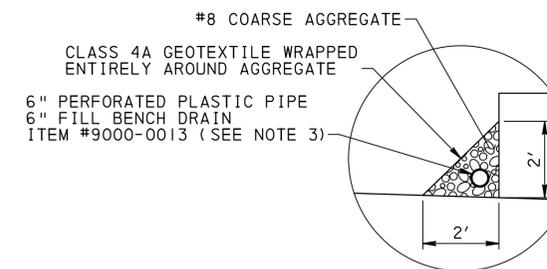


NOTES:

1. CONSTRUCT SIDE HILL BENCH OF NEW STEEPENED EMBANKMENT AT MINIMUM 4.5' HORIZONTALLY TO MAXIMUM 3.0' VERTICALLY.
2. PROVIDE ROCK IN CONFORMANCE WITH SPECIAL PROVISION "4205-0200, SELECTED BORROW EXCAVATION, 206 ROCK" TO CONSTRUCT NEW EMBANKMENT.
3. OUTLET DRAIN TO APPROPRIATE WATERWAY.

ABUTMENT STEEPENED ROCK EMBANKMENT DETAIL
NOT TO SCALE

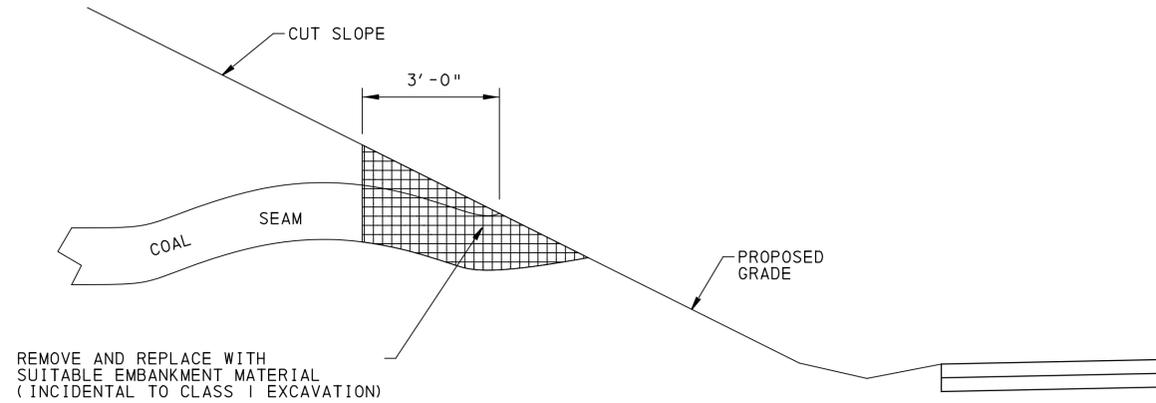
ROADWAY BASELINE	STATION	OFFSET	PROPOSED SLOPE (H:V)	MINIMUM TOE WIDTH, L (FEET)
S.R. 0080 EB	293+50 TO 294+50	LEFT	1.5H: 1V	16



DETAIL A
NOT TO SCALE

USER: JBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:23:29 PM
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 MODEL: Dxfout1

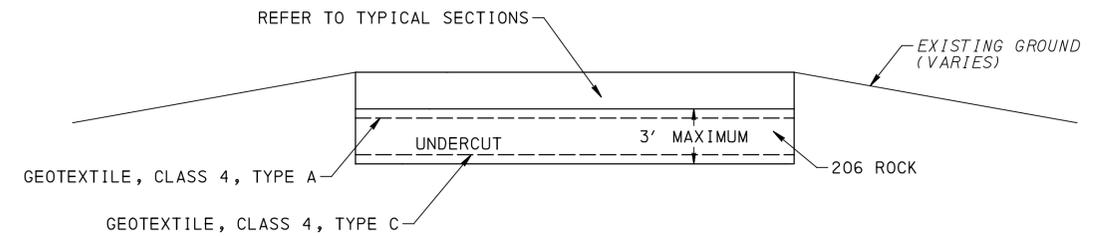
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	16 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



REMOVE AND REPLACE EXPOSED COAL

NOT TO SCALE
AS DIRECTED

ROADWAY BASELINE	STATION LIMITS	OFFSET	PROPOSED SLOPE (H:V)	REFERENCED BORINGS
S.R. 0080 EB	319+00 TO 326+00	LEFT	2H: 1V	CCB-010, CCB-028 CCB-029, CCB-030
S.R. 0080 EB	319+00 TO 326+00	RIGHT	1.5H: 1V	CCB-010, CCB-028 CCB-029, CCB-030
S.R. 0080 WB	317+00 TO 324+00	RIGHT	2H: 1V	CCB-028, CCB-029



UNDERCUT IN SOFT SOIL

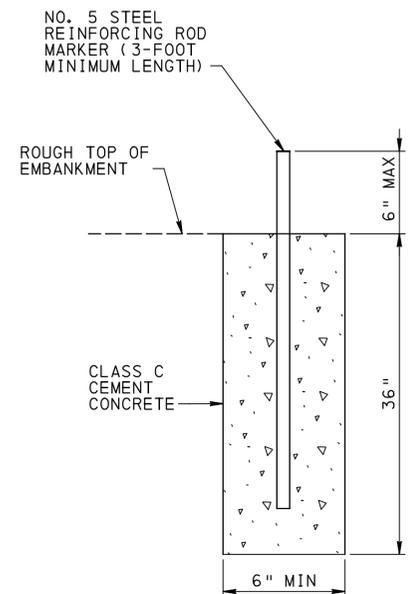
NOT TO SCALE
AS DIRECTED

NOTES:

1. PLACE UNDERCUT IN SOFT SOILS, AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
2. ALL UNDERCUT DEPTHS MAY BE MODIFIED BY THE ENGINEER TO SUIT FIELD CONDITIONS.
3. EXCAVATION PAID AS CLASS 1 EXCAVATION.
4. BACKFILL UNDERCUT WITH SUITABLE MATERIAL, UNLESS DIRECTED OTHERWISE. COMPACT ACCORDING TO SECTION 206.
5. PROVIDE POSITIVE DRAINAGE AS DIRECTED. OUTLET TO APPROPRIATE WATERWAY.

USER: JBONO PLOT DRIVER: PennDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:23:30 PM
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	17 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



SURFACE MONUMENT DETAIL
 NOT TO SCALE
 ITEM# 9000-0017

- NOTES:
1. INSTALL MONUMENTS AS REQUIRED BY THE SPECIAL PROVISION "ITEM 9000-0017 SURFACE MONUMENTS" AT THE LOCATIONS AND OFFSETS SPECIFIED OR AS-DIRECTED BY THE ENGINEER.
 2. EACH MONUMENT IS TO BE PROTECTED BY A 3-FOOT HIGH, FLORESCENT PLASTIC, MESH FENCE PLACED AT A 2.5-FOOT RADIUS AROUND THE MONUMENT.

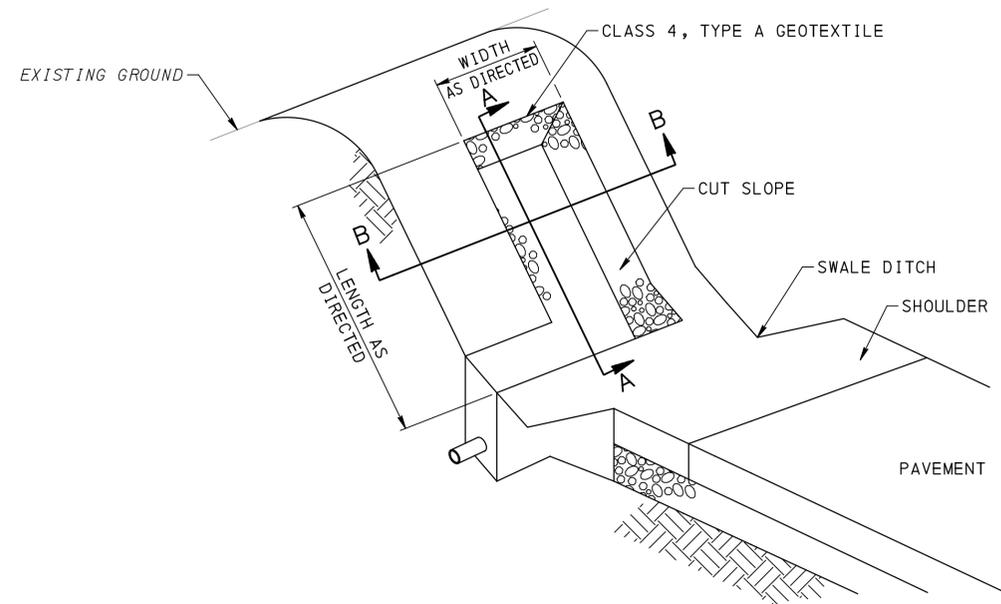
SURFACE MONUMENT LOCATIONS				
ROADWAY BASELINE	AREAS	STATION	OFFSET	DESIGNATION
SR 0080 EB	EB-1	241+00	30' RIGHT	SM-1
		241+50	30' RIGHT	SM-2
		242+50	30' RIGHT	SM-3
		243+50	30' RIGHT	SM-4
		244+00	30' RIGHT	SM-5
SR 0080 EB	EB-2	266+00	B. L.	SM-6
		267+00	B. L.	SM-7
		268+00	B. L.	SM-8
		269+00	B. L.	SM-9
		270+00	B. L.	SM-10
SR 0080 WB	WB-1	239+00	30' LEFT	SM-11
		240+00	30' LEFT	SM-12
		241+00	30' LEFT	SM-13
		242+00	30' LEFT	SM-14
		243+00	30' LEFT	SM-15
		244+00	30' LEFT	SM-16
		245+00	30' LEFT	SM-17
		245+50	30' LEFT	SM-18
		246+00	30' LEFT	SM-19
		247+00	30' LEFT	SM-20
SR 0080 WB	WB-2	255+00	B. L.	SM-21
		255+50	B. L.	SM-22
		256+50	B. L.	SM-23
		257+50	B. L.	SM-24
		258+50	B. L.	SM-25
		259+50	B. L.	SM-26
		260+50	B. L.	SM-27
		261+50	B. L.	SM-28
		262+50	B. L.	SM-29
		263+50	B. L.	SM-30
264+50	B. L.	SM-31		
265+50	B. L.	SM-32		
266+50	B. L.	SM-33		
267+00	B. L.	SM-34		

SETTLEMENT MONITORING SCHEDULE				
DEVICE	BEFORE EMBANKMENT PLACEMENT	DURING EMBANKMENT PLACEMENT	POST FINAL CONSTRUCTION (FIRST 30 DAYS)	POST FINAL CONSTRUCTION (30+ TO 90 DAYS)
SURFACE MONUMENTS	NA	NA	INITIAL READING + DAILY FOR 1ST WEEK + THEN WEEKLY	ONCE EVERY TWO WEEKS

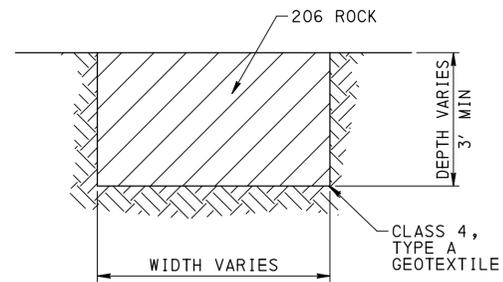
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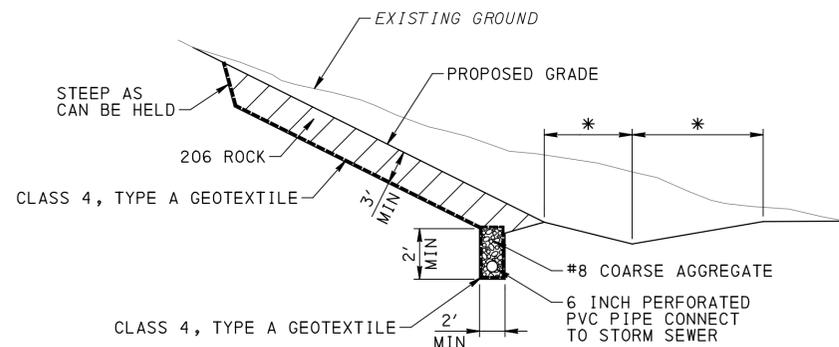
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	18 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



ISOMETRIC VIEW



SECTION B-B



* SEE CROSS SECTIONS FOR DITCH DIMENSIONS

SECTION A-A

BLANKET DRAIN TREATMENT DETAIL

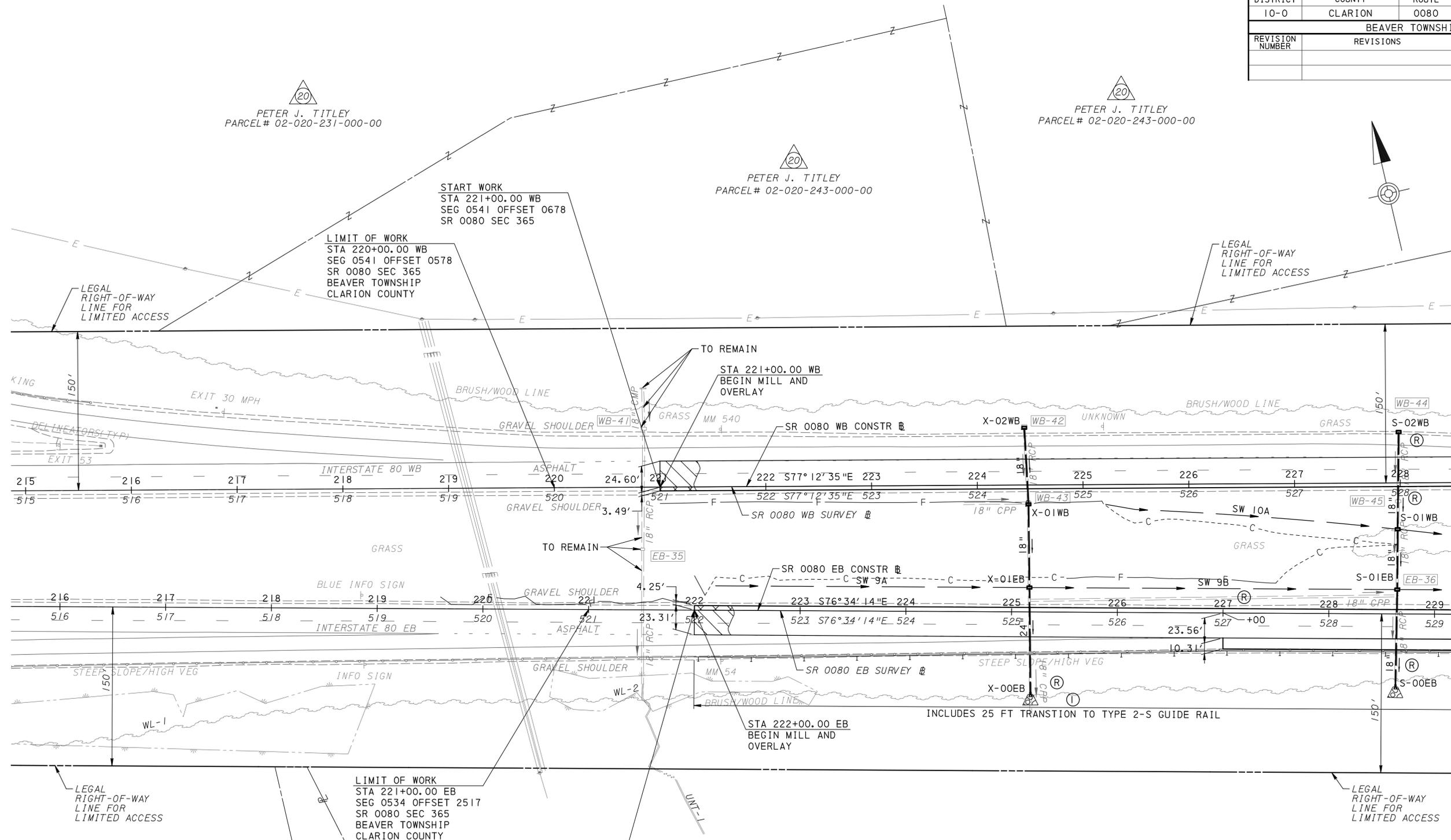
NOT TO SCALE
AS DIRECTED

NOTES:

1. PROVIDE A 6-INCH MINIMUM OVERLAP OF THE GEOTEXTILE.
2. BLANKET DRAIN TREATMENT WILL BE REQUIRED AS NECESSARY WHEN SEEPS ARE ENCOUNTERED DURING CONSTRUCTION.

USER: JBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:23:33 PM
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 MODEL: Default

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	19 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



USER: JBONO PLOT DRIVER: Pmndot.plt PLOT DATE: 12-06-2021 2:23:40 PM
 PATH: c:\pwworking\ng\veg\10\10381977\ FILE: 0080-CANOE-RD-PLN01.dgn
 MODEL: de fault

- LEGEND**
- MILL AND OVERLAY
 - FULL DEPTH RECONSTRUCTION
 - INLET
 - 18" STORM PIPE
 - MANHOLE
 - OUTLET PROTECTION
 - REMOVE STRUCTURE
 - UTILITY TEST HOLE

- GUIDE RAIL LEGEND**
- ① TYPE 31-S GUIDE RAIL
 - ② TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
 - ③ PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
 - ④ BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
 - ⑤ THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET

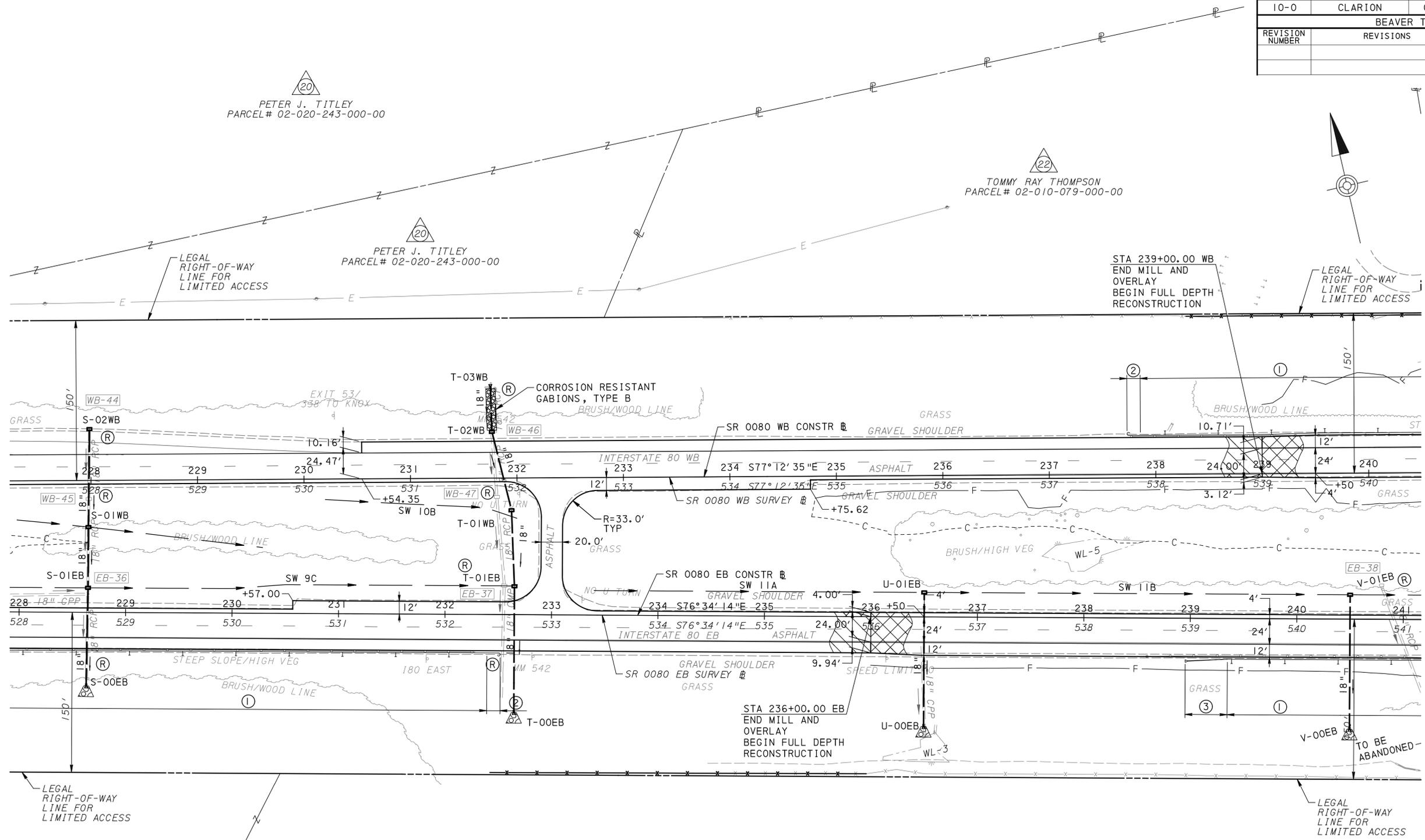


DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 EASTBOUND PROFILE, SEE SHEET 30 FOR SR 0080 WESTBOUND PROFILE, SEE SHEET 41

SEE SHEET 20

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	20 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



USER: JIBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:23:47 PM
 PATH: c:\pwworking\ng\veg\10\1\gd38\1977\ MODEL: DeFault
 FILE: 0080-CANOE-RD-PL-NO2.dgn

SEE SHEET 19

SEE SHEET 21

- LEGEND**
- MILL AND OVERLAY
 - FULL DEPTH RECONSTRUCTION
 - INLET
 - 18" STORM PIPE
 - MANHOLE
 - OUTLET PROTECTION
 - REMOVE STRUCTURE
 - UTILITY TEST HOLE

TERRY L. THOMPSON, JR. AND CAROLYNN ANN THOMPSON, A MARRIED COUPLE
 PARCEL# 02-020-021-000-00

TERRY L. THOMPSON, JR. AND CAROLYNN ANN THOMPSON, A MARRIED COUPLE
 PARCEL# 02-020-026-000-00

- GUIDE RAIL LEGEND**
- ① TYPE 31-S GUIDE RAIL
 - ② TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
 - ③ PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
 - ④ BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
 - ⑤ THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET



DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 EASTBOUND PROFILE, SEE SHEET 31 FOR SR 0080 WESTBOUND PROFILE, SEE SHEET 42

SR 0080 EASTBOUND CONSTR # SURVEY #
 SR 0080 EASTBOUND SURVEY #
 SR 0080 WESTBOUND SURVEY #

PI STA 256+73.96 Δ = 67°57'11" LT
 T = 1489.35' L = 2621.07'
 R = 2210.00' E = 455.01'
 SE = 8.0%
 PC STA 241+84.62
 PT STA 268+05.69

PI STA 553+59.37 Δ = 53°46'25" LT
 T = 968.37' L = 1792.45'
 R = 1909.86' E = 231.47'
 PCC STA 561+83.45

PI STA 551+00.38 Δ = 51°24'00" LT
 T = 919.15' L = 1713.33'
 R = 1909.86' E = 209.67'
 PCC STA 558+94.56

SR 0080 WESTBOUND CONSTR #
 PI STA 255+19.70 Δ = 66°15'28" LT
 T = 1442.27' L = 2555.68'
 R = 2210.00' E = 428.98'
 SE = 8.0%
 PC STA 240+77.44
 PT STA 266+33.11

PROPOSED STRUCTURE DATA (REHABILITATED)
 SR 0080 OVER UNT TO CANOE CREEK
 STA 245+61.56 EB
 STA 244+95.68 WB
 TYPE - REINFORCED CONCRETE ARCH
 CLEAR SPAN - 17'-0"
 SKEW - 80°18'07" LT (EB); TANGENT TO #
 SKEW - 78°35'32" LT (WB); TANGENT TO #
 UNDER CLEAR - 12'-4" DS (EFFECTIVE RISE)
 CLEAR ROADWAY WIDTH - 44'-0" EB
 CLEAR ROADWAY WIDTH - 44'-0" WB
 STRUCTURE S-39667
 RECOMMENDED

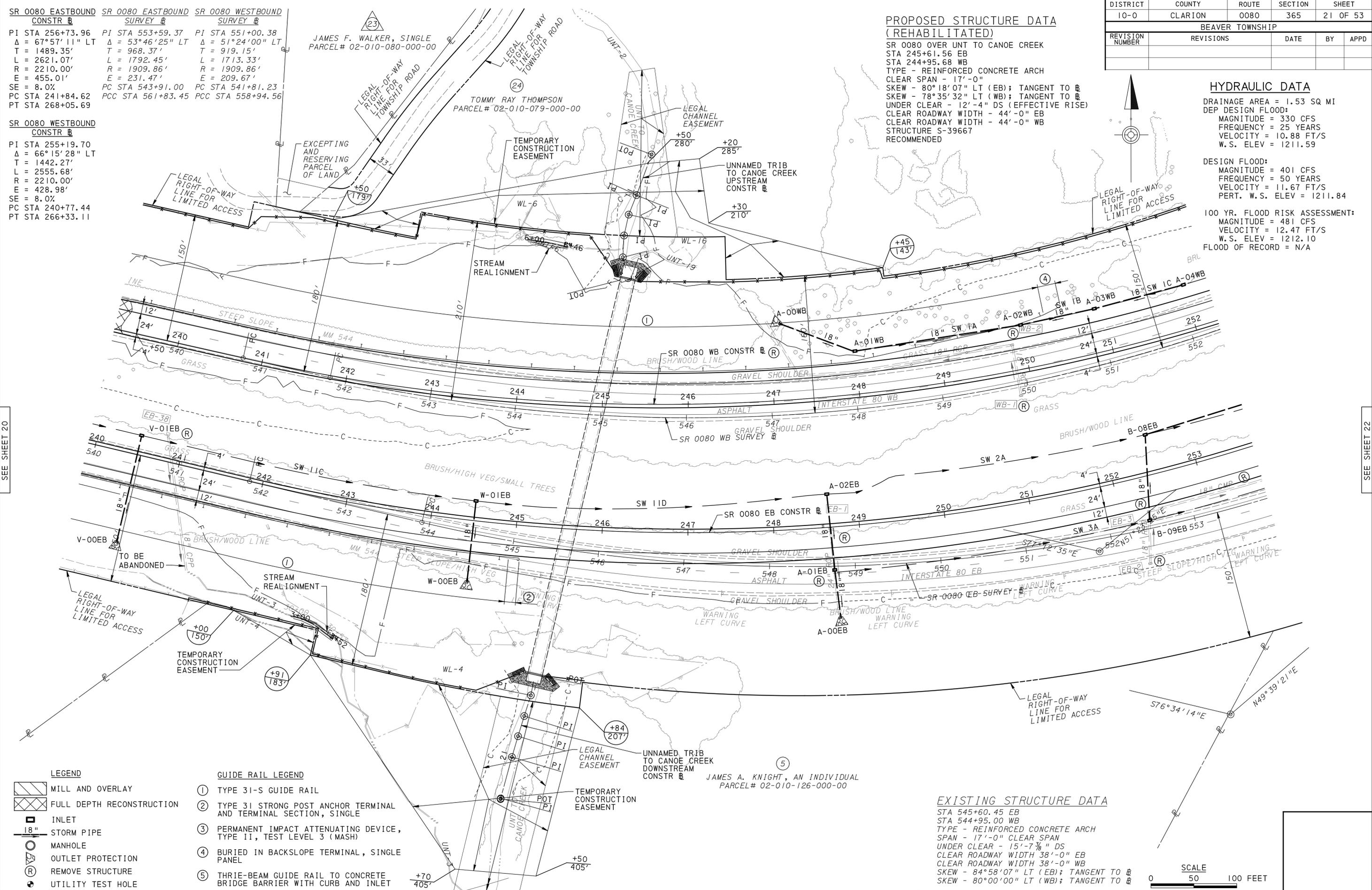
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	21 OF 53

BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

HYDRAULIC DATA
 DRAINAGE AREA = 1.53 SQ MI
 DEP DESIGN FLOOD:
 MAGNITUDE = 330 CFS
 FREQUENCY = 25 YEARS
 VELOCITY = 10.88 FT/S
 W. S. ELEV = 1211.59

DESIGN FLOOD:
 MAGNITUDE = 401 CFS
 FREQUENCY = 50 YEARS
 VELOCITY = 11.67 FT/S
 PERT. W. S. ELEV = 1211.84

100 YR. FLOOD RISK ASSESSMENT:
 MAGNITUDE = 481 CFS
 VELOCITY = 12.47 FT/S
 W. S. ELEV = 1212.10
 FLOOD OF RECORD = N/A



- LEGEND**
- MILL AND OVERLAY
 - FULL DEPTH RECONSTRUCTION
 - INLET
 - 18" STORM PIPE
 - MANHOLE
 - OUTLET PROTECTION
 - REMOVE STRUCTURE
 - UTILITY TEST HOLE

- GUIDE RAIL LEGEND**
- ① TYPE 31-S GUIDE RAIL
 - ② TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
 - ③ PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
 - ④ BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
 - ⑤ THRIE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET

EXISTING STRUCTURE DATA
 STA 545+60.45 EB
 STA 544+95.00 WB
 TYPE - REINFORCED CONCRETE ARCH
 SPAN - 17'-0" CLEAR SPAN
 UNDER CLEAR - 15'-7 3/8" DS
 CLEAR ROADWAY WIDTH 38'-0" EB
 CLEAR ROADWAY WIDTH 38'-0" WB
 SKEW - 84°58'07" LT (EB); TANGENT TO #
 SKEW - 80°00'00" LT (WB); TANGENT TO #



SR 0080 EASTBOUND
CONSTR B

PI STA 256+73.96
Δ = 67°57'11" LT
T = 1489.35'
L = 2621.07'
R = 2210.00'
E = 455.01'
SE = 8.0%
PC STA 241+84.62
PT STA 268+05.69

SR 0080 WESTBOUND
CONSTR B

PI STA 255+19.70
Δ = 66°15'28" LT
T = 1442.27'
L = 2555.68'
R = 2210.00'
E = 428.98'
SE = 8.0%
PC STA 240+77.44
PT STA 266+33.11

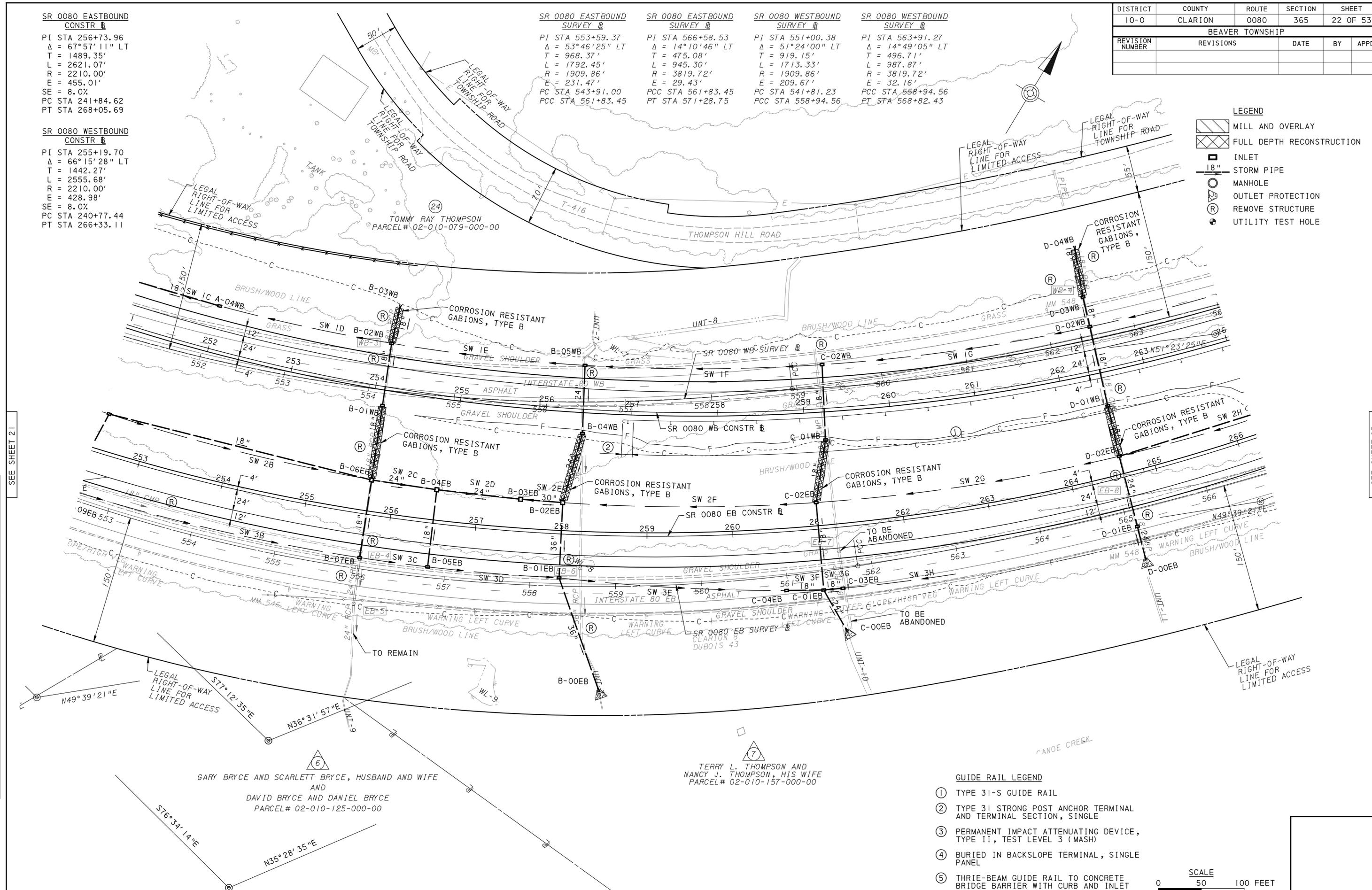
SR 0080 EASTBOUND SURVEY B	SR 0080 EASTBOUND SURVEY B	SR 0080 WESTBOUND SURVEY B	SR 0080 WESTBOUND SURVEY B
PI STA 553+59.37	PI STA 566+58.53	PI STA 551+00.38	PI STA 563+91.27
Δ = 53°46'25" LT	Δ = 14°10'46" LT	Δ = 51°24'00" LT	Δ = 14°49'05" LT
T = 968.37'	T = 475.08'	T = 919.15'	T = 496.71'
L = 1792.45'	L = 945.30'	L = 1713.33'	L = 987.87'
R = 1909.86'	R = 3819.72'	R = 1909.86'	R = 3819.72'
E = 231.47'	E = 29.43'	E = 209.67'	E = 32.16'
PC STA 543+91.00	PCC STA 561+83.45	PC STA 541+81.23	PCC STA 558+94.56
PCC STA 561+83.45	PT STA 571+28.75	PCC STA 558+94.56	PT STA 568+82.43

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	22 OF 53

BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

LEGEND

	MILL AND OVERLAY
	FULL DEPTH RECONSTRUCTION
	INLET
	18" STORM PIPE
	MANHOLE
	OUTLET PROTECTION
	REMOVE STRUCTURE
	UTILITY TEST HOLE



USER: JBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:23:56 PM
 PATH: G:\pwork\K\img\veg\01\0381977\ FILE: 0080-CANOE-RD-PL-NO4.dgn
 MODEL: DeFault

SEE SHEET 21

SEE SHEET 23

6
 GARY BRYCE AND SCARLETT BRYCE, HUSBAND AND WIFE
 AND
 DAVID BRYCE AND DANIEL BRYCE
 PARCEL# 02-010-125-000-00

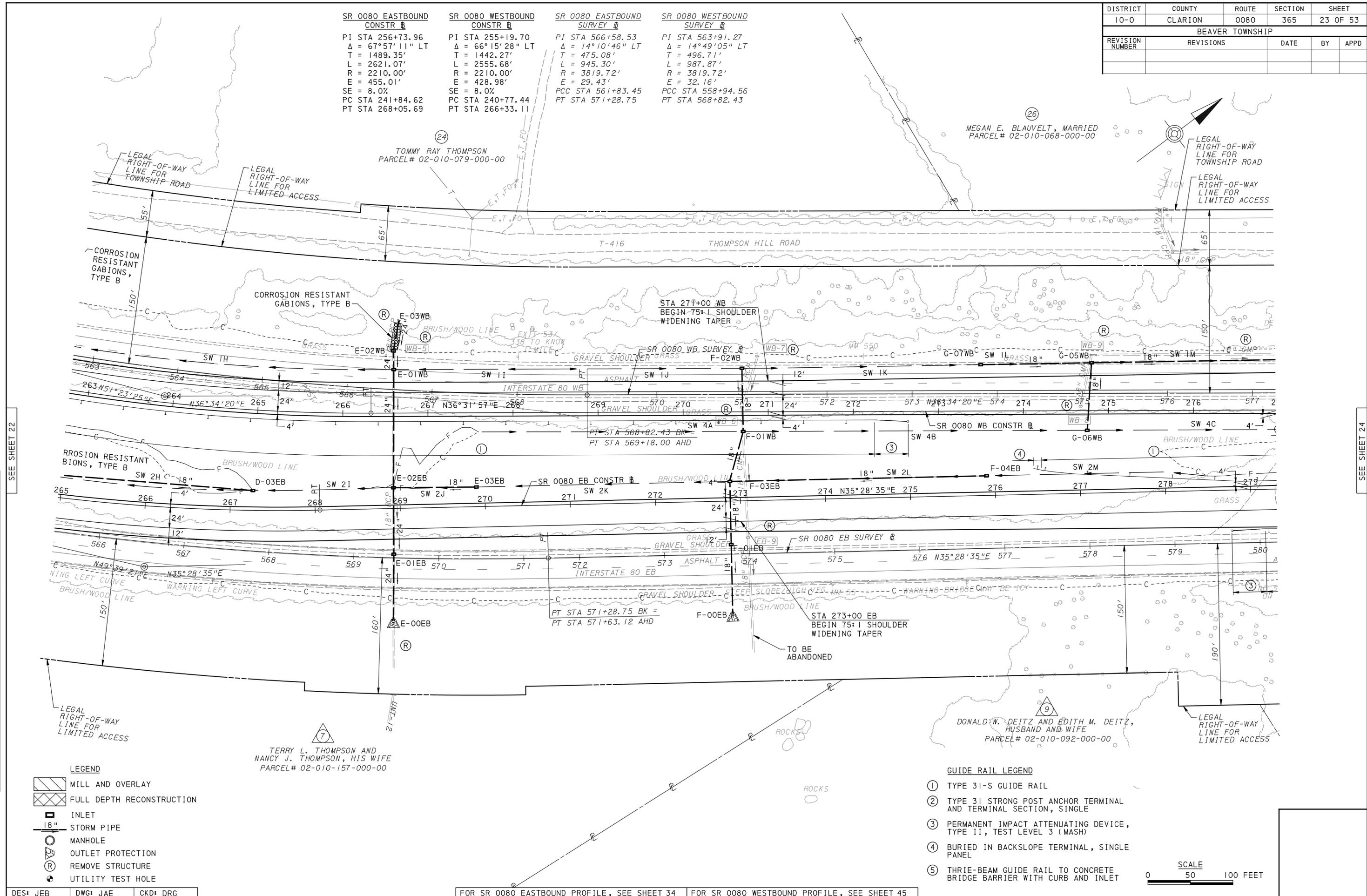
7
 TERRY L. THOMPSON AND
 NANCY J. THOMPSON, HIS WIFE
 PARCEL# 02-010-157-000-00

- GUIDE RAIL LEGEND
- TYPE 31-S GUIDE RAIL
 - TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
 - PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
 - BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
 - THREE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	23 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

SR 0080 EASTBOUND CONSTR	SR 0080 WESTBOUND CONSTR	SR 0080 EASTBOUND SURVEY	SR 0080 WESTBOUND SURVEY
PI STA 256+73.96 Δ = 67°57'11" LT T = 1489.35' L = 2621.07' R = 2210.00' E = 455.01' SE = 8.0% PC STA 241+84.62 PT STA 268+05.69	PI STA 255+19.70 Δ = 66°15'28" LT T = 1442.27' L = 2555.68' R = 2210.00' E = 428.98' SE = 8.0% PC STA 240+77.44 PT STA 266+33.11	PI STA 566+58.53 Δ = 14°10'46" LT T = 475.08' L = 945.30' R = 3819.72' E = 29.43' PCC STA 561+83.45 PT STA 571+28.75	PI STA 563+91.27 Δ = 14°49'05" LT T = 496.71' L = 987.87' R = 3819.72' E = 32.16' PCC STA 558+94.56 PT STA 568+82.43



USER: JBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt fsg PLOT DATE: 12-06-2021 2:24:02 PM
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SEE SHEET 22

SEE SHEET 24

LEGEND

	MILL AND OVERLAY
	FULL DEPTH RECONSTRUCTION
	INLET
	18" STORM PIPE
	MANHOLE
	OUTLET PROTECTION
	REMOVE STRUCTURE
	UTILITY TEST HOLE

GUIDE RAIL LEGEND

①	TYPE 31-S GUIDE RAIL
②	TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
③	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
④	BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
⑤	THREE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET



DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 EASTBOUND PROFILE, SEE SHEET 34 FOR SR 0080 WESTBOUND PROFILE, SEE SHEET 45

PROPOSED STRUCTURE DATA EASTBOUND

SR 0080 OVER CANOE CREEK & SR 4005
 STA 288+96.55
 TYPE - FIVE SPAN CONTINUOUS STEEL GIRDER
 SPAN - 190'-0", 260'-0", 260'-0", 260'-0", 190'-0"
 SKEW - 90°00'00"
 UNDER CLEAR - 114'-2" TO STREAMBED; 99'-6" TO SR 4005
 CLEAR ROADWAY WIDTH - 56'-0"
 STRUCTURE S-39578
 RECOMMENDED

PROPOSED STRUCTURE DATA WESTBOUND

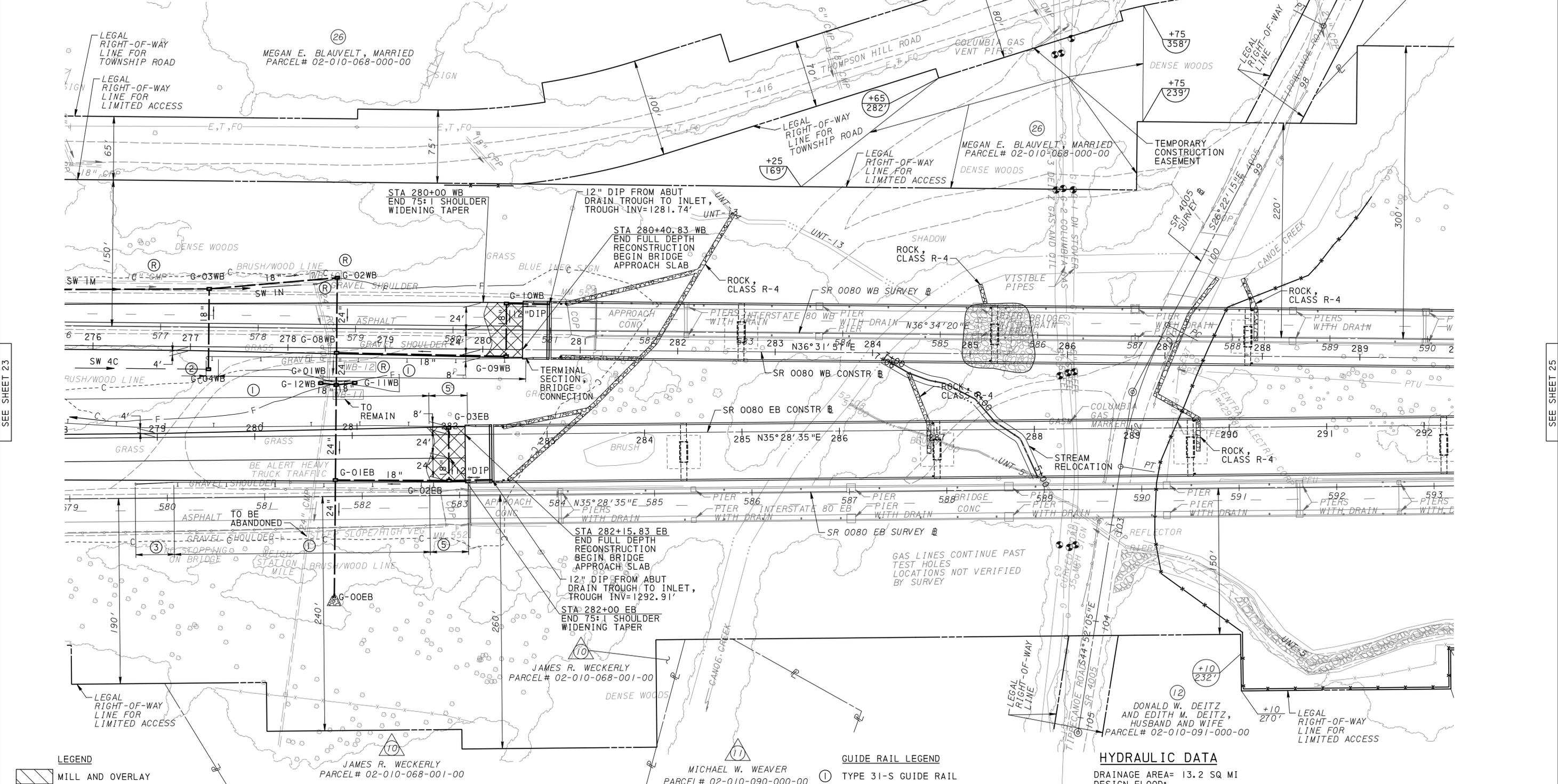
SR 0080 OVER CANOE CREEK & SR 4005
 STA 286+87.81
 TYPE - FIVE SPAN CONTINUOUS STEEL GIRDER
 SPAN - 190'-0", 260'-0", 260'-0", 260'-0", 190'-0"
 SKEW - 90°00'00"
 UNDER CLEAR - 102'-7" TO STREAMBED; 98'-5" TO SR 4005
 CLEAR ROADWAY WIDTH - 56'-0"
 STRUCTURE S-39577
 RECOMMENDED

SR 4005 SURVEY #
 PI STA 96+50.26
 Δ = 15°39'48" RT
 T = 91.20'
 L = 181.27'
 R = 663.08'
 E = 6.24'
 PC STA 95+59.06
 PT STA 97+40.33

SR 4005 SURVEY #
 PI STA 101+63.53
 Δ = 18°29'50" LT
 T = 77.35'
 L = 153.35'
 R = 475.00'
 E = 6.26'
 PC STA 100+86.18
 PT STA 102+39.53

GAS LINES CONTINUE PAST
 TEST HOLES
 LOCATIONS NOT VERIFIED
 BY SURVEY

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	24 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



LEGEND

	MILL AND OVERLAY
	FULL DEPTH RECONSTRUCTION
	INLET
	18" STORM PIPE
	MANHOLE
	OUTLET PROTECTION
	REMOVE STRUCTURE
	UTILITY TEST HOLE

EXISTING STRUCTURE DATA EASTBOUND
 STA 586+35.00
 TYPE - STEEL CONTINUOUS GIRDER FLOORBEAM SYSTEM
 W/ ADJACENT BOX BEAM APPROACHES
 SPAN - 90'-0", 135'-0", 162'-0", 162'-0", 162'-0",
 135'-0", 101'-0", 102'-0", 101'-0"
 UNDER CLEAR - 119'-8 3/4"
 CLEAR ROADWAY WIDTH 33'-0"
 SKEW - 90°00'00"

EXISTING STRUCTURE DATA WESTBOUND
 STA 584+65.00
 TYPE - STEEL CONTINUOUS GIRDER FLOORBEAM SYSTEM
 W/ ADJACENT BOX BEAM APPROACHES
 SPAN - 90'-0", 135'-0", 162'-0", 162'-0", 162'-0",
 135'-0", 119'-0", 119'-0"
 UNDER CLEAR - 99'-10 1/2"
 CLEAR ROADWAY WIDTH 33'-0"
 SKEW - 90°00'00"

GUIDE RAIL LEGEND

①	TYPE 31-S GUIDE RAIL
②	TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
③	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
④	BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
⑤	THREE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET

HYDRAULIC DATA
 DRAINAGE AREA= 13.2 SQ MI
 DESIGN FLOOD:
 MAGNITUDE= 2070 CFS
 FREQUENCY= 50 YEARS
 VELOCITY= 11.02 FT/S
 W. S. ELEV= 1181.23

100 YR. FLOOD RISK ASSESSMENT:
 MAGNITUDE= 2430 CFS
 VELOCITY= 11.95 FT/S
 W. S. ELEV= 1181.72
 FLOOD OF RECORD = N/A



USER: JBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:24:13 PM
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 MODEL: D:\e\fault

SEE SHEET 23

SEE SHEET 25

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	25 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

PROPOSED STRUCTURE DATA EASTBOUND

SR 0080 OVER CANOE CREEK & SR 4005
 STA 288+96.55
 TYPE - FIVE SPAN CONTINUOUS STEEL GIRDER
 SPAN - 190'-0", 260'-0", 260'-0", 260'-0", 190'-0"
 SKEW - 90°00'00"
 UNDER CLEAR - 114'-2" TO STREAMBED; 99'-6" TO SR 4005
 CLEAR ROADWAY WIDTH - 56'-0"
 STRUCTURE S-39578
 RECOMMENDED

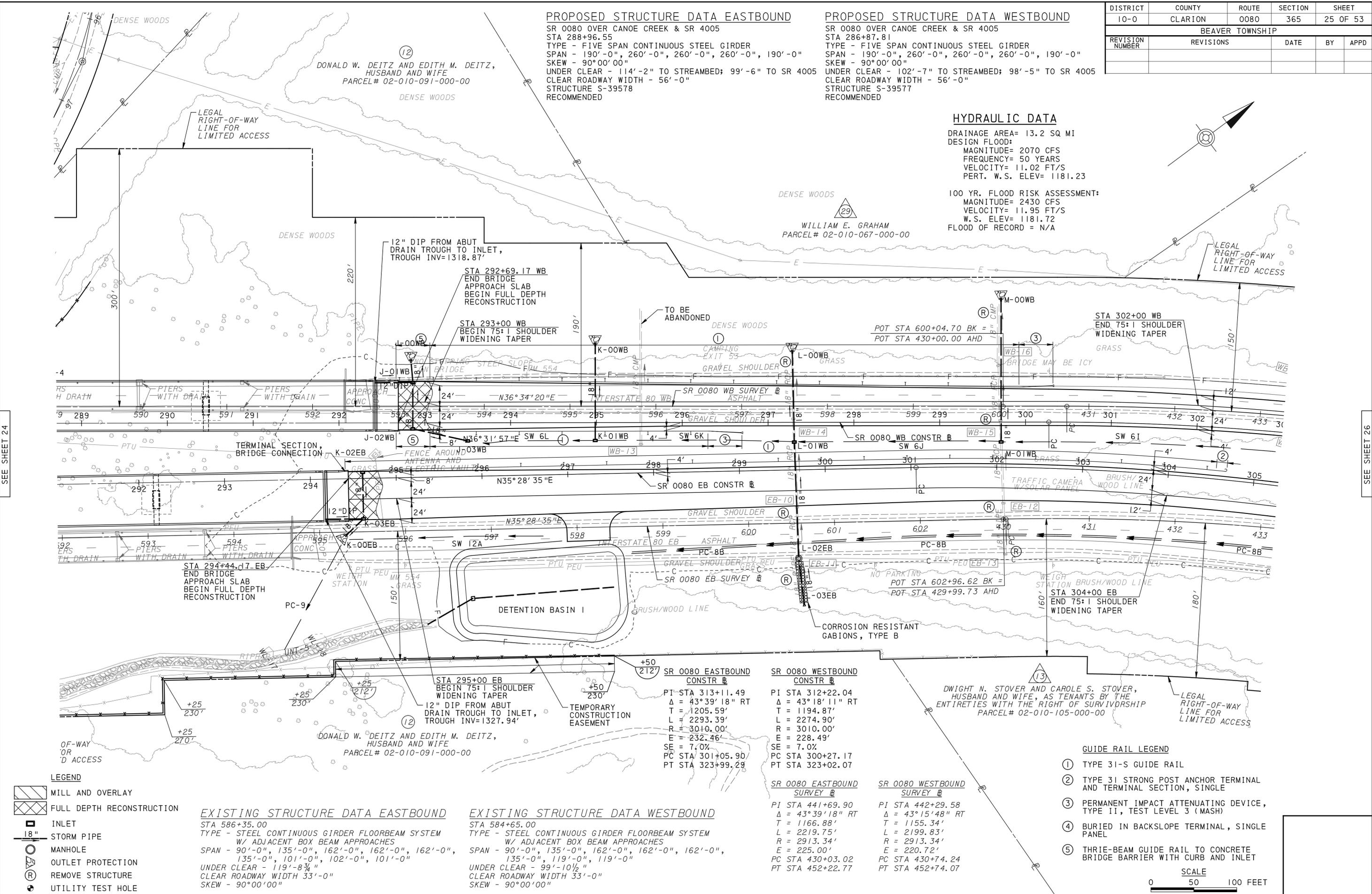
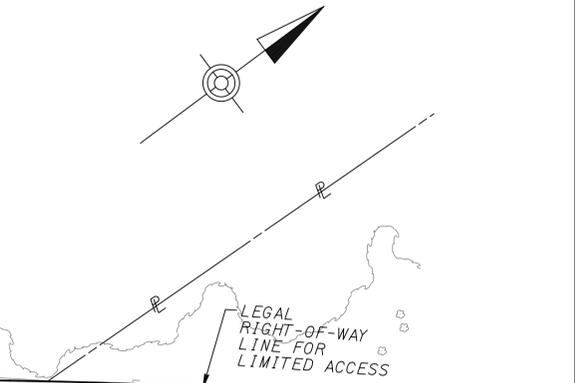
PROPOSED STRUCTURE DATA WESTBOUND

SR 0080 OVER CANOE CREEK & SR 4005
 STA 286+87.81
 TYPE - FIVE SPAN CONTINUOUS STEEL GIRDER
 SPAN - 190'-0", 260'-0", 260'-0", 260'-0", 190'-0"
 SKEW - 90°00'00"
 UNDER CLEAR - 102'-7" TO STREAMBED; 98'-5" TO SR 4005
 CLEAR ROADWAY WIDTH - 56'-0"
 STRUCTURE S-39577
 RECOMMENDED

HYDRAULIC DATA

DRAINAGE AREA= 13.2 SQ MI
 DESIGN FLOOD:
 MAGNITUDE= 2070 CFS
 FREQUENCY= 50 YEARS
 VELOCITY= 11.02 FT/S
 PERT. W.S. ELEV= 1181.23

100 YR. FLOOD RISK ASSESSMENT:
 MAGNITUDE= 2430 CFS
 VELOCITY= 11.95 FT/S
 W.S. ELEV= 1181.72
 FLOOD OF RECORD = N/A



SEE SHEET 24

SEE SHEET 26

USER: JBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:24:21 PM
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 MODEL: DeFault

LEGEND

	MILL AND OVERLAY
	FULL DEPTH RECONSTRUCTION
	INLET
	18" STORM PIPE
	MANHOLE
	OUTLET PROTECTION
	REMOVE STRUCTURE
	UTILITY TEST HOLE

EXISTING STRUCTURE DATA EASTBOUND
 STA 586+35.00
 TYPE - STEEL CONTINUOUS GIRDER FLOORBEAM SYSTEM
 W/ ADJACENT BOX BEAM APPROACHES
 SPAN - 90'-0", 135'-0", 162'-0", 162'-0", 162'-0", 162'-0",
 135'-0", 101'-0", 102'-0", 101'-0"
 UNDER CLEAR - 119'-8 3/4"
 CLEAR ROADWAY WIDTH 33'-0"
 SKEW - 90°00'00"

EXISTING STRUCTURE DATA WESTBOUND
 STA 584+65.00
 TYPE - STEEL CONTINUOUS GIRDER FLOORBEAM SYSTEM
 W/ ADJACENT BOX BEAM APPROACHES
 SPAN - 90'-0", 135'-0", 162'-0", 162'-0", 162'-0", 162'-0",
 135'-0", 119'-0", 119'-0"
 UNDER CLEAR - 99'-10 1/2"
 CLEAR ROADWAY WIDTH 33'-0"
 SKEW - 90°00'00"

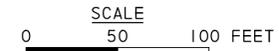
SR 0080 EASTBOUND CONSTR
 PI STA 313+11.49
 Δ = 43°39'18" RT
 T = 1205.59'
 L = 2293.39'
 R = 3010.00'
 E = 232.46'
 SE = 7.0%
 PC STA 301+05.90
 PT STA 323+99.29

SR 0080 EASTBOUND SURVEY
 PI STA 441+69.90
 Δ = 43°39'18" RT
 T = 1166.88'
 L = 2219.75'
 R = 2913.34'
 E = 225.00'
 PC STA 430+03.02
 PT STA 452+22.77

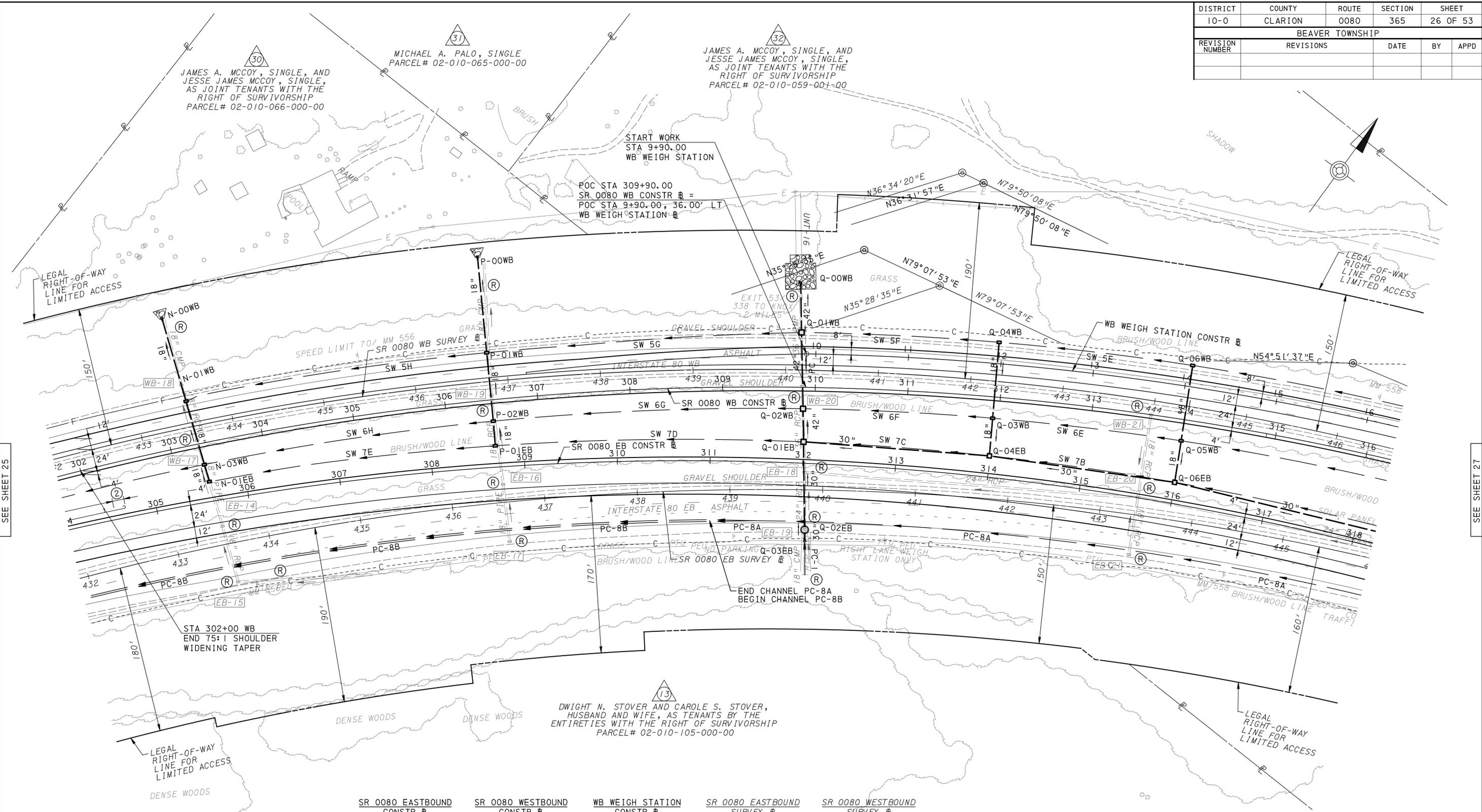
SR 0080 WESTBOUND CONSTR
 PI STA 312+22.04
 Δ = 43°18'11" RT
 T = 1194.87'
 L = 2274.90'
 R = 3010.00'
 E = 228.49'
 SE = 7.0%
 PC STA 300+27.17
 PT STA 323+02.07

SR 0080 WESTBOUND SURVEY
 PI STA 442+29.58
 Δ = 43°15'48" RT
 T = 1155.34'
 L = 2199.83'
 R = 2913.34'
 E = 220.72'
 PC STA 430+74.24
 PT STA 452+74.07

- GUIDE RAIL LEGEND**
- ① TYPE 31-S GUIDE RAIL
 - ② TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
 - ③ PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
 - ④ BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
 - ⑤ THREE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	26 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



USER: JBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt.ctb PLOT DATE: 12-06-2021 2:24:28 PM
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SEE SHEET 25

SEE SHEET 27

LEGEND

	MILL AND OVERLAY
	FULL DEPTH RECONSTRUCTION
	INLET
	18" STORM PIPE
	MANHOLE
	OUTLET PROTECTION
	REMOVE STRUCTURE
	UTILITY TEST HOLE

SR 0080 EASTBOUND CONSTR	SR 0080 WESTBOUND CONSTR	WB WEIGH STATION CONSTR	SR 0080 EASTBOUND SURVEY	SR 0080 WESTBOUND SURVEY
PI STA 313+11.49	PI STA 312+22.04	PI STA 15+79.56	PI STA 441+69.90	PI STA 442+29.58
Δ = 43°39'18" RT	Δ = 43°18'11" RT	Δ = 21°54'31" RT	Δ = 43°39'18" RT	Δ = 43°15'48" RT
T = 1205.59'	T = 1194.87'	T = 589.56'	T = 1166.88'	T = 1155.34'
L = 2293.39'	L = 2274.90'	L = 1164.72'	L = 2219.75'	L = 2199.83'
R = 3010.00'	R = 3010.00'	R = 3046.00'	R = 2913.34'	R = 2913.34'
E = 232.46'	E = 228.49'	E = 56.53'	E = 225.00'	E = 220.72'
SE = 7.0%	SE = 7.0%	SE = 7.0%	PC STA 430+03.02	PC STA 430+74.24
PC STA 301+05.90	PC STA 300+27.17	PC STA 9+90.00	PT STA 452+22.77	PT STA 452+74.07
PT STA 323+99.29	PT STA 323+02.07	PT STA 21+54.72		

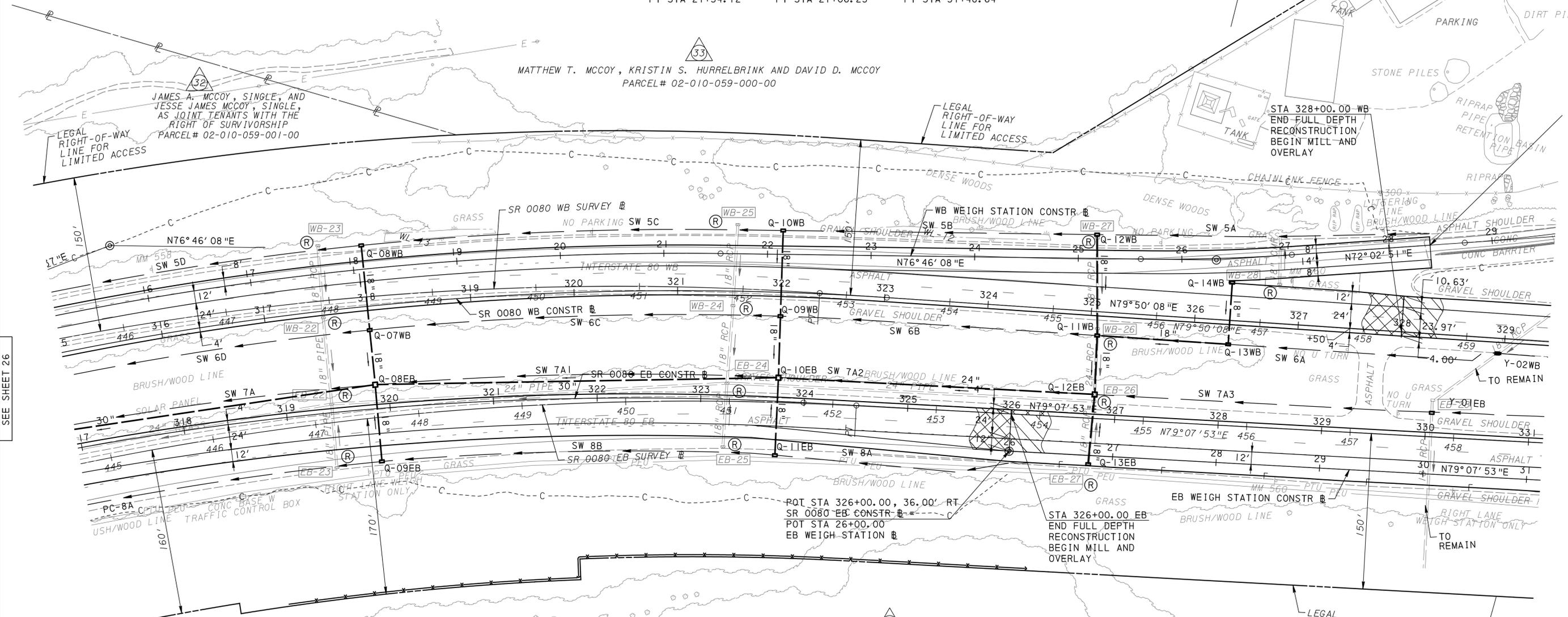
GUIDE RAIL LEGEND

①	TYPE 31-S GUIDE RAIL
②	TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
③	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
④	BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
⑤	THREE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	27 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

WB WEIGH STATION CONSTR #	WB WEIGH STATION CONSTR #	WB WEIGH STATION CONSTR #
PI STA 15+79.56	PI STA 26+33.35	PI STA 30+11.51
$\Delta = 21^\circ 54' 31''$ RT	$\Delta = 4^\circ 43' 17''$ LT	$\Delta = 10^\circ 47' 42''$ LT
T = 589.56'	T = 72.97'	T = 137.95'
L = 1164.72'	L = 145.85'	L = 275.08'
R = 3046.00'	R = 1770.00'	R = 1460.00'
E = 56.53'	E = 1.50'	E = 6.50'
SE = 7.0%	SE = 4.0%	SE = N/A
PC STA 9+90.00	PC STA 25+60.38	PC STA 28+73.56
PT STA 21+54.72	PT STA 27+06.23	PT STA 31+48.64



33
MATTHEW T. MCCOY, KRISTIN S. HURRELBRINK AND DAVID D. MCCOY
PARCEL# 02-010-059-000-00

SR 0080 EASTBOUND CONSTR #	SR 0080 WESTBOUND CONSTR #	SR 0080 EASTBOUND SURVEY #	SR 0080 WESTBOUND SURVEY #
PI STA 313+11.49	PI STA 312+22.04	PI STA 441+69.90	PI STA 442+29.58
$\Delta = 43^\circ 39' 18''$ RT	$\Delta = 43^\circ 18' 11''$ RT	$\Delta = 43^\circ 39' 18''$ RT	$\Delta = 43^\circ 15' 48''$ RT
T = 1205.59'	T = 1194.87'	T = 1166.88'	T = 1155.34'
L = 2293.39'	L = 2274.90'	L = 2219.75'	L = 2199.83'
R = 3010.00'	R = 3010.00'	R = 2913.34'	R = 2913.34'
E = 232.46'	E = 228.49'	E = 225.00'	E = 220.72'
SE = 7.0%	SE = 7.0%	PC STA 430+03.02	PC STA 430+74.24
PC STA 301+05.90	PC STA 300+27.17	PT STA 452+22.77	PT STA 452+74.07
PT STA 323+99.29	PT STA 323+02.07		

LEGEND

	MILL AND OVERLAY
	FULL DEPTH RECONSTRUCTION
	INLET
	18" STORM PIPE
	MANHOLE
	OUTLET PROTECTION
	REMOVE STRUCTURE
	UTILITY TEST HOLE

GUIDE RAIL LEGEND

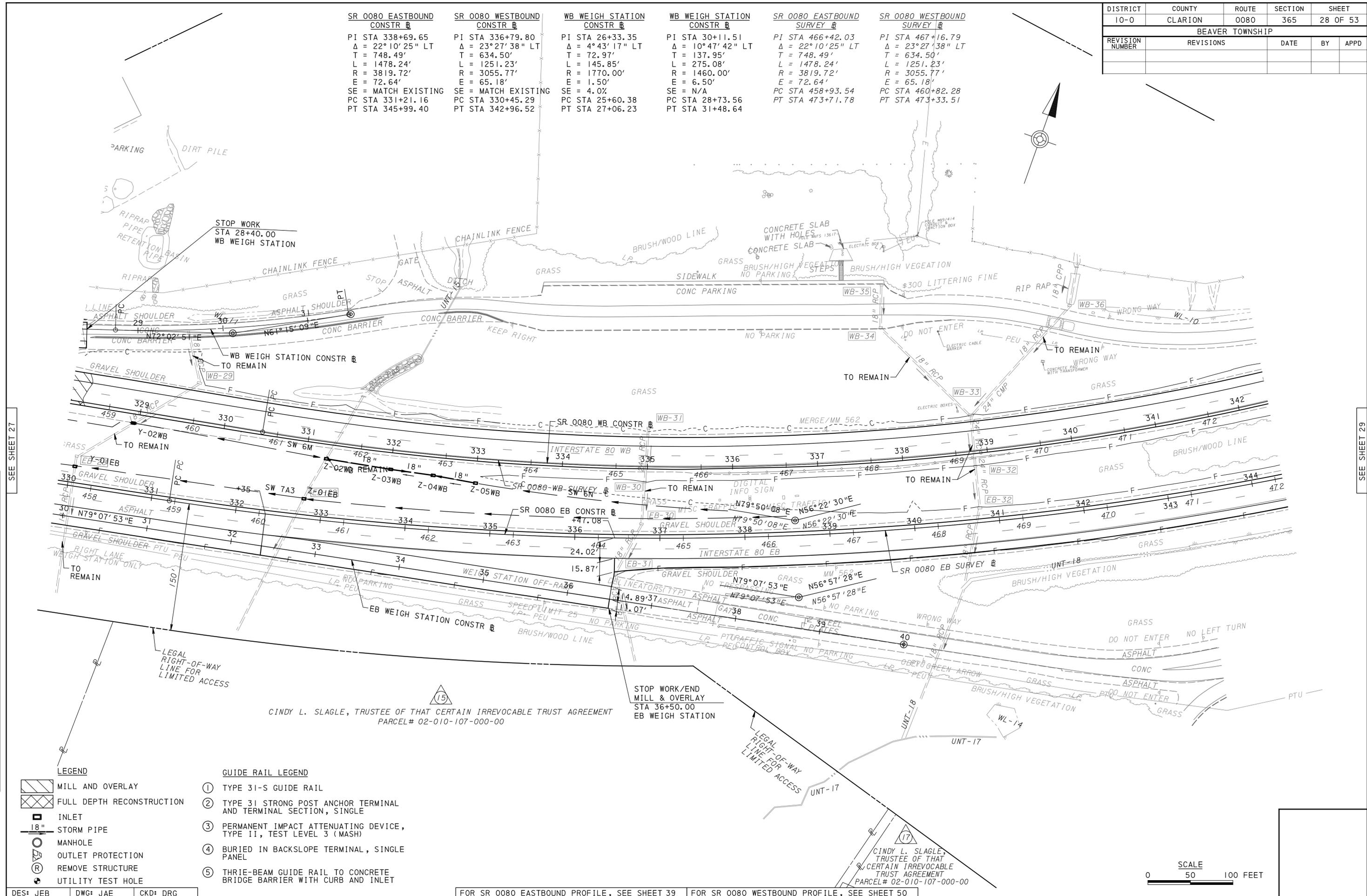
①	TYPE 31-S GUIDE RAIL
②	TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
③	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
④	BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
⑤	THREE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET



USER: JBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:24:34 PM
 PATH: G:\pwork\K\img\veg\01\038\1977\ FILE: 0080-CANOE-RD-PLN09.dgn
 MODEL: Dwg.fault

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	28 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

SR 0080 EASTBOUND CONSTR #	SR 0080 WESTBOUND CONSTR #	WB WEIGH STATION CONSTR #	WB WEIGH STATION CONSTR #	SR 0080 EASTBOUND SURVEY #	SR 0080 WESTBOUND SURVEY #
PI STA 338+69.65 Δ = 22°10'25" LT T = 748.49' L = 1478.24' R = 3819.72' E = 72.64' SE = MATCH EXISTING PC STA 331+21.16 PT STA 345+99.40	PI STA 336+79.80 Δ = 23°27'38" LT T = 634.50' L = 1251.23' R = 3055.77' E = 65.18' SE = MATCH EXISTING PC STA 330+45.29 PT STA 342+96.52	PI STA 26+33.35 Δ = 4°43'17" LT T = 72.97' L = 145.85' R = 1770.00' E = 1.50' SE = 4.0% PC STA 25+60.38 PT STA 27+06.23	PI STA 30+11.51 Δ = 10°47'42" LT T = 137.95' L = 275.08' R = 1460.00' E = 6.50' SE = N/A PC STA 28+73.56 PT STA 31+48.64	PI STA 466+42.03 Δ = 22°10'25" LT T = 748.49' L = 1478.24' R = 3819.72' E = 72.64' PC STA 458+93.54 PT STA 473+71.78	PI STA 467+16.79 Δ = 23°27'38" LT T = 634.50' L = 1251.23' R = 3055.77' E = 65.18' PC STA 460+82.28 PT STA 473+33.51



15
CINDY L. SLAGLE, TRUSTEE OF THAT CERTAIN IRREVOCABLE TRUST AGREEMENT
PARCEL# 02-010-107-000-00

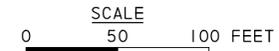
17
CINDY L. SLAGLE,
TRUSTEE OF THAT
CERTAIN IRREVOCABLE
TRUST AGREEMENT
PARCEL# 02-010-107-000-00

LEGEND

	MILL AND OVERLAY
	FULL DEPTH RECONSTRUCTION
	INLET
	18" STORM PIPE
	MANHOLE
	OUTLET PROTECTION
	REMOVE STRUCTURE
	UTILITY TEST HOLE

GUIDE RAIL LEGEND

①	TYPE 31-S GUIDE RAIL
②	TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
③	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
④	BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
⑤	THREE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET



DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 EASTBOUND PROFILE, SEE SHEET 39 FOR SR 0080 WESTBOUND PROFILE, SEE SHEET 50

USER: JIBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:24:40 PM
 PATH: G:\pwork\k\mg\veg\01\0381977\ MODEL: Dwg.fault
 FILE: 0080-CANOE-RD-PLN 10.dgn

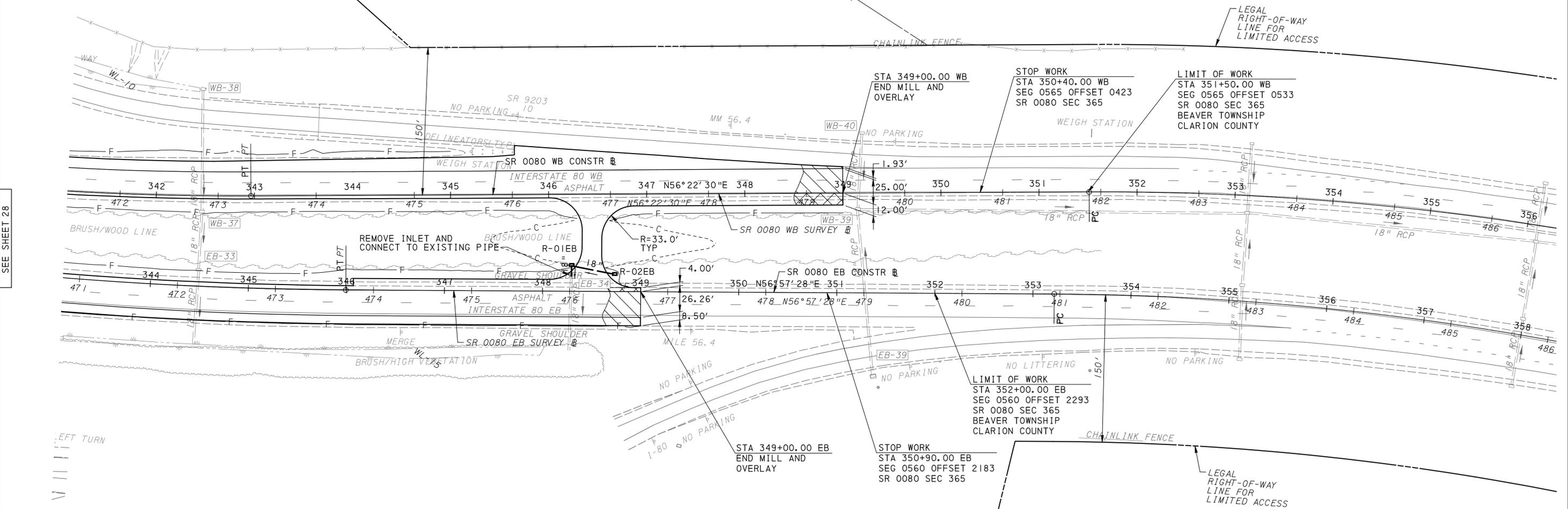
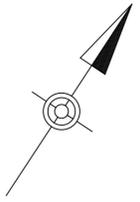
SEE SHEET 27

SEE SHEET 29

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	29 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

SR 0080 EASTBOUND CONSTR PI STA 338+69.65 $\Delta = 22^\circ 10' 25''$ LT T = 748.49' L = 1478.24' R = 3819.72' E = 72.64' SE = MATCH EXISTING PC STA 331+21.16 PT STA 345+99.40	SR 0080 WESTBOUND CONSTR PI STA 336+79.80 $\Delta = 23^\circ 27' 38''$ LT T = 634.50' L = 1251.23' R = 3055.77' E = 65.18' SE = MATCH EXISTING PC STA 330+45.29 PT STA 342+96.52	SR 0080 EASTBOUND SURVEY PI STA 466+42.03 $\Delta = 22^\circ 10' 25''$ LT T = 748.49' L = 1478.24' R = 3819.72' E = 72.64' PC STA 458+93.54 PT STA 473+71.78	SR 0080 WESTBOUND SURVEY PI STA 467+16.79 $\Delta = 23^\circ 27' 38''$ LT T = 634.50' L = 1251.23' R = 3055.77' E = 65.18' PC STA 460+82.28 PT STA 473+33.51
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 MATTHEW T. MCCOY, KRISTIN S. HURRELBRINK AND DAVID D. MCCOY
 PARCEL# 02-010-059-000-00



SEE SHEET 28

USER: JBONO PLOT DRIVER: PcmDOT_PDF_Memo.plt PLOT DATE: 12-06-2021 2:24:47 PM
 PATH: G:\pwork\K\img\veg\10\10038\1977\ FILE: 0080-CANOE-RD-PLN1.T.5gn MODEL: Dwg.fault

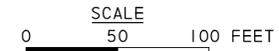
LEGEND

	MILL AND OVERLAY
	FULL DEPTH RECONSTRUCTION
	INLET
	18" STORM PIPE
	MANHOLE
	OUTLET PROTECTION
	REMOVE STRUCTURE
	UTILITY TEST HOLE

GUIDE RAIL LEGEND

	TYPE 31-S GUIDE RAIL
	TYPE 31 STRONG POST ANCHOR TERMINAL AND TERMINAL SECTION, SINGLE
	PERMANENT IMPACT ATTENUATING DEVICE, TYPE II, TEST LEVEL 3 (MASH)
	BURIED IN BACKSLOPE TERMINAL, SINGLE PANEL
	THREE-BEAM GUIDE RAIL TO CONCRETE BRIDGE BARRIER WITH CURB AND INLET

SR 0080 EASTBOUND CONSTR PI STA 74+31.13 $\Delta = 71^\circ 48' 45''$ RT T = 2109.39' L = 3651.48' R = 2913.34' E = 683.48' SE = N/A PC STA 353+21.73 PT STA 389+73.22	SR 0080 WESTBOUND CONSTR PI STA 372+83.19 $\Delta = 72^\circ 23' 43''$ RT T = 2109.39' L = 3681.12' R = 2913.34' E = 696.82' SE = N/A PC STA 351+51.13 PT STA 388+32.24	SR 0080 EASTBOUND SURVEY PI STA 502+03.51 $\Delta = 71^\circ 48' 45''$ RT T = 2109.39' L = 3651.48' R = 2913.34' E = 683.48' PC STA 480+94.11 PT STA 517+45.59	SR 0080 WESTBOUND SURVEY PI STA 503+20.18 $\Delta = 72^\circ 23' 43''$ RT T = 2132.06' L = 3681.12' R = 2913.34' E = 696.82' PC STA 481+88.12 PT STA 518+69.23
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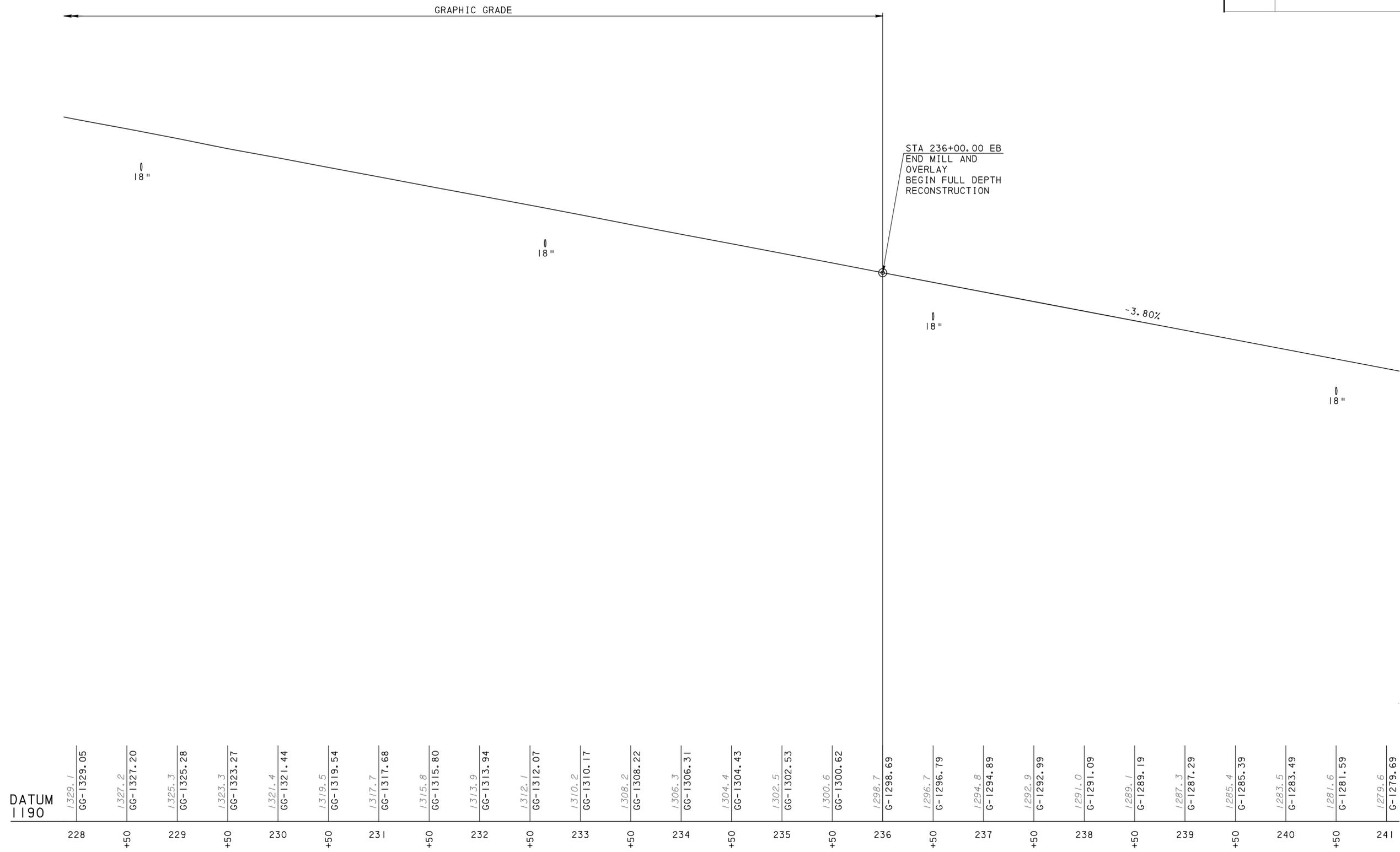
DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 EASTBOUND PROFILE, SEE SHEET 40 FOR SR 0080 WESTBOUND PROFILE, SEE SHEET 51

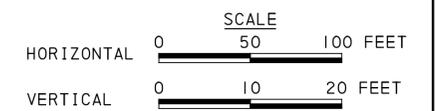
USER: JBONO PLOT DRIVER: PcmdOT_PDF_Memo.pltcfgr PLOT DATE: 12-06-2021 2:24:53 PM
 PATH: c:\pwork\img\ves\01\1\038\1977\ FILE: 0080-CANOE-RD-PRF-EB02.dgn MODEL: Default

SEE SHEET 30

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	31 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



SR 0080 EASTBOUND



DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 EASTBOUND PLAN, SEE SHEET 20

SEE SHEET 32

USER: JBONO PLOT DRIVER: Pcmdot_PDF_Memo.pltcfgr PLOT DATE: 12-06-2021 2:24:57 PM
 PATH: c:\pwworking\jbono\1\10381977\ FILE: 0080-CANOE-RD-PRF-EB03.dgn MODEL: DwgPlot1

SEE SHEET 31

240	1283.5	G-1283.49
+50	1281.6	G-1281.59
241	1279.6	G-1279.69
+50	1277.8	G-1277.79
242	1275.9	G-1275.89
+50	1274.0	G-1273.99
243	1272.0	G-1272.09
+50	1270.0	G-1270.19
244	1267.7	G-1268.32
+50	1265.4	G-1266.52
245	1262.9	G-1264.79
+50	1260.1	G-1263.11
246	1257.7	G-1261.51
+50	1255.1	G-1259.97
247	1252.3	G-1258.49
+50	1250.7	G-1257.08
248	1249.2	G-1255.74
+50	1248.2	G-1254.46
249	1254.3	G-1253.25
+50	1265.3	G-1252.10
250	1266.5	G-1251.02
+50	1266.6	G-1250.00
251	1266.4	G-1249.05
+50	1267.3	G-1248.16
252	1267.9	G-1247.34
+50	1267.5	G-1246.58
253	1267.3	G-1245.89
+50	1267.9	G-1245.27

SR 0080 EASTBOUND

FOR SR 0080 EASTBOUND PLAN, SEE SHEET 21

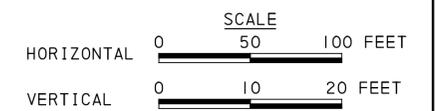
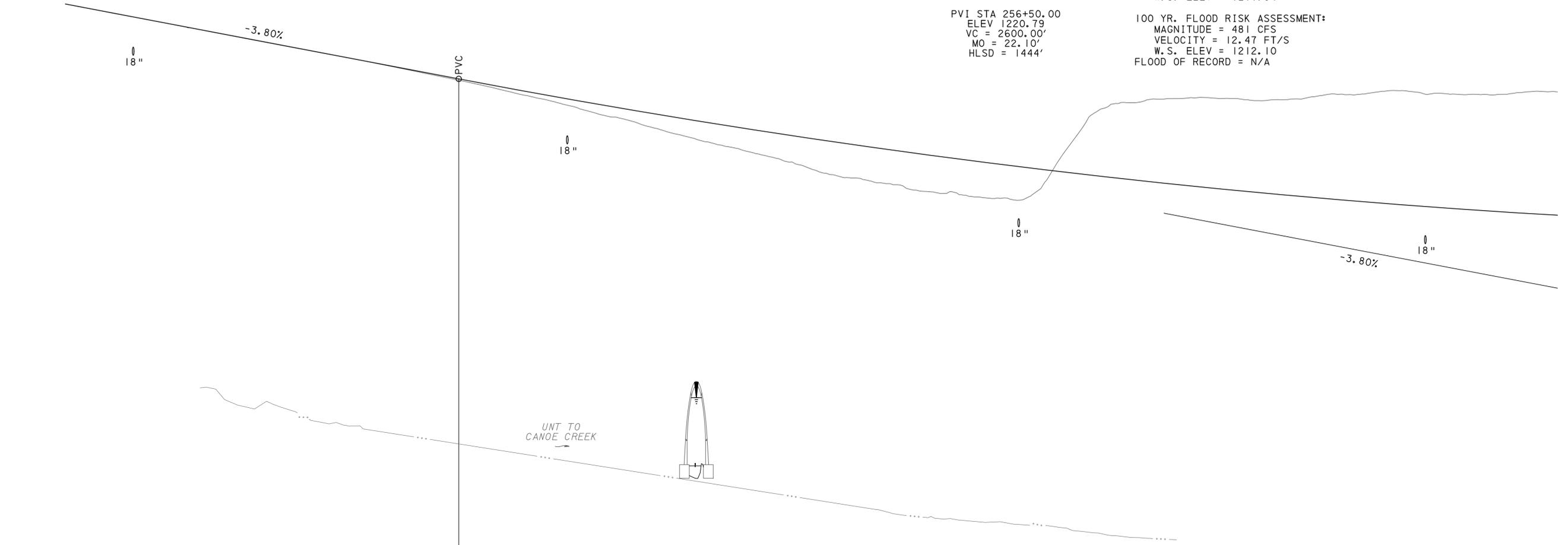
HYDRAULIC DATA
 DRAINAGE AREA = 1.53 SQ MI
 DEP DESIGN FLOOD:
 MAGNITUDE = 330 CFS
 FREQUENCY = 25 YEARS
 VELOCITY = 10.88 FT/S
 W.S. ELEV = 1211.59

DESIGN FLOOD:
 MAGNITUDE = 401 CFS
 FREQUENCY = 50 YEARS
 VELOCITY = 11.67 FT/S
 W.S. ELEV = 1211.84

100 YR. FLOOD RISK ASSESSMENT:
 MAGNITUDE = 481 CFS
 VELOCITY = 12.47 FT/S
 W.S. ELEV = 1212.10
 FLOOD OF RECORD = N/A

PVI STA 256+50.00
 ELEV 1220.79
 VC = 2600.00'
 MO = 22.10'
 HLSD = 1444'

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	32 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

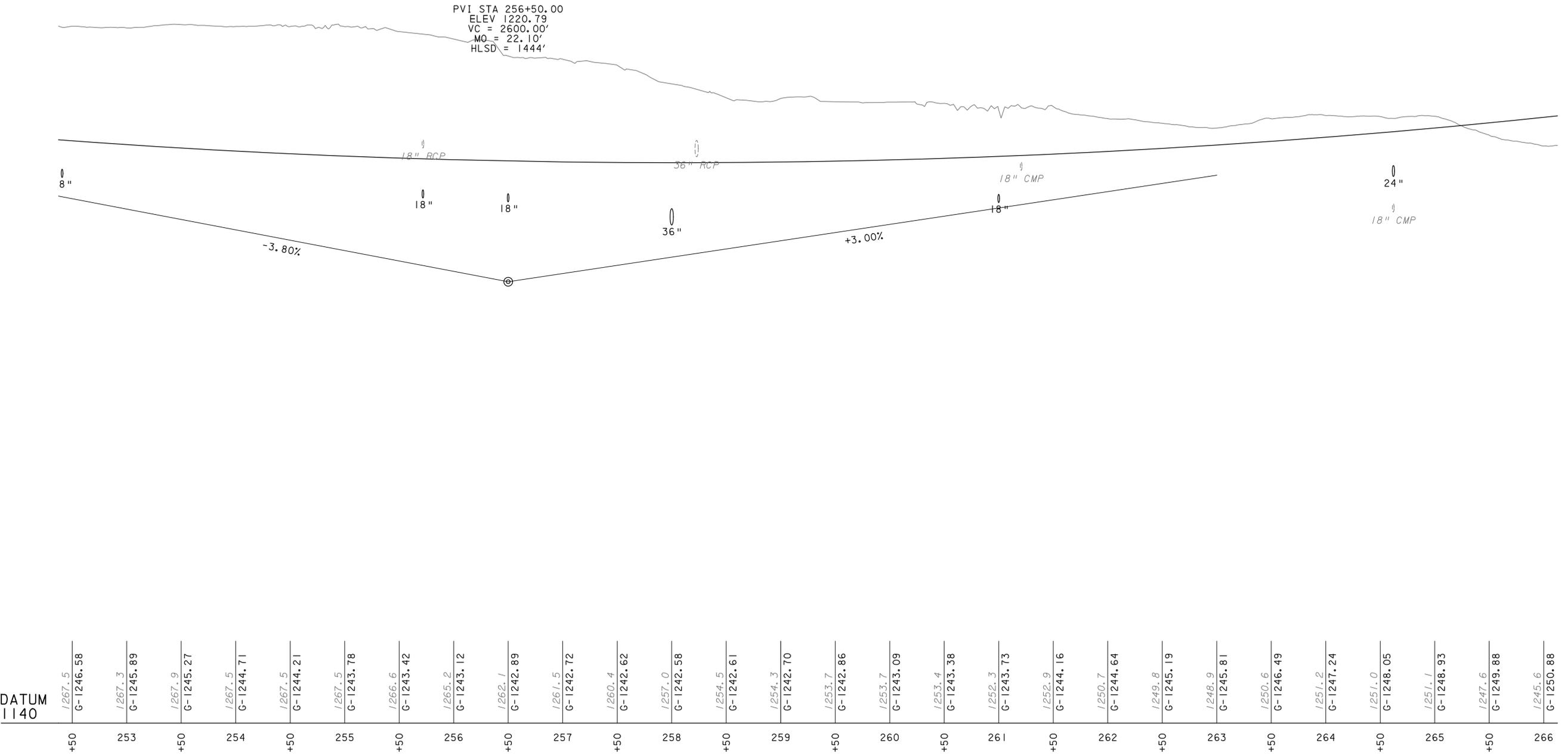


DES: JEB DWG: JAE CKD: DRG

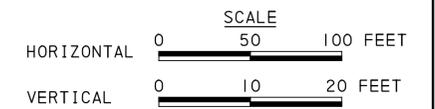
SEE SHEET 33

USER: JIBONO PLOT DRIVER: Pcmdot_PDF_Memo.pltcfgr PLOT DATE: 12-06-2021 2:25:00 PM
 PATH: c:\pwworking\esri\info381977\FILE0080-CANOE-RD-PRF-EB04.dgn MODEL: Dxfplot

SEE SHEET 32



SR 0080 EASTBOUND



DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 EASTBOUND PLAN, SEE SHEET 22

SEE SHEET 34

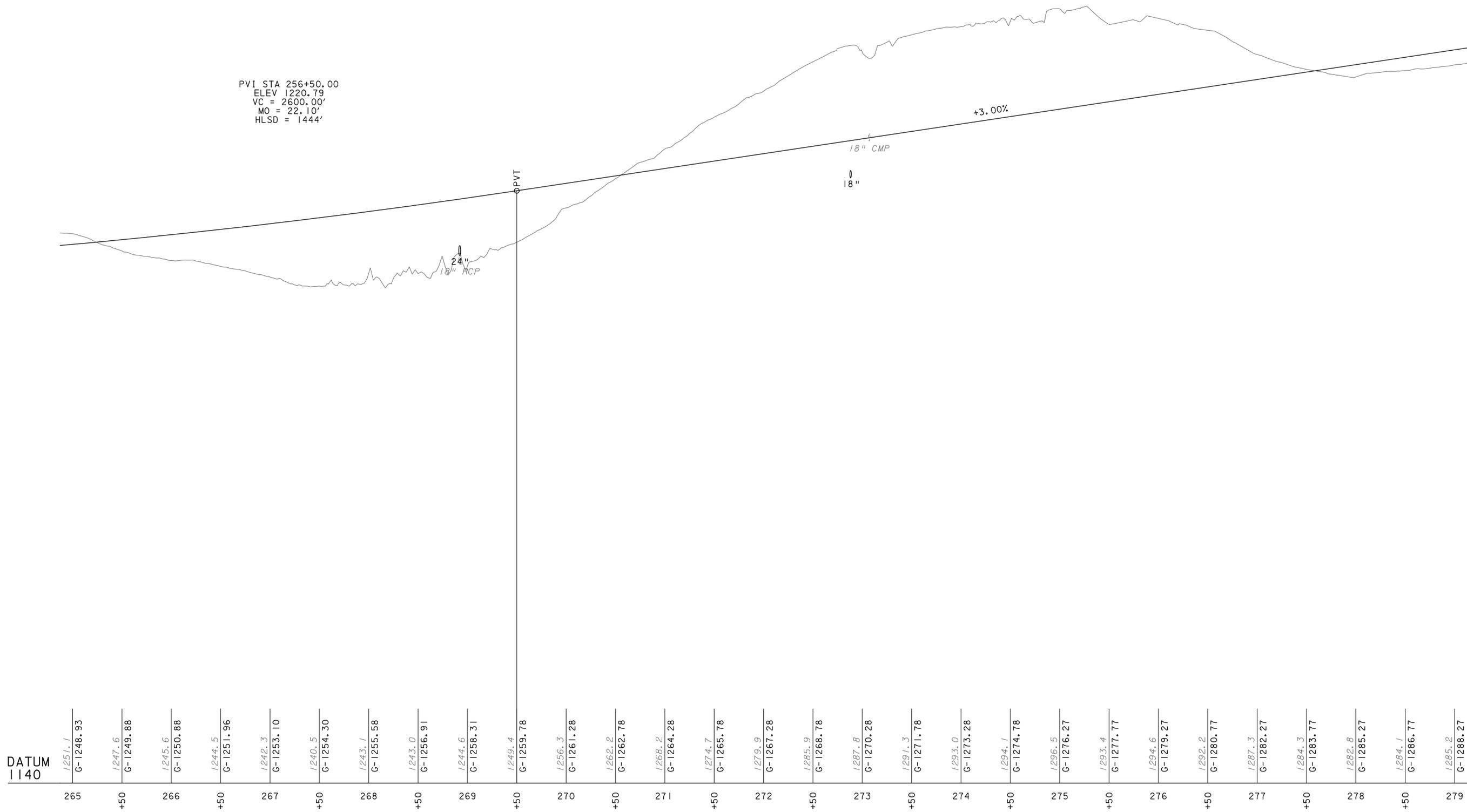
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	33 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

USER: JBDNO PLOT DRIVER: Pcmdot.PDF_Memo.pltcfgr PLOT DATE: 12-06-2021 2:25:03 PM
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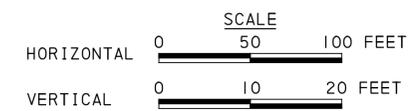
SEE SHEET 33

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	34 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

PVI STA 256+50.00
 ELEV 1220.79
 VC = 2600.00'
 MO = 22.10'
 HLSD = 1444'



SR 0080 EASTBOUND



DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 EASTBOUND PLAN, SEE SHEET 23

SEE SHEET 35

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	35 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

HYDRAULIC DATA

DRAINAGE AREA= 13.2 SQ MI
 DESIGN FLOOD:
 MAGNITUDE= 2070 CFS
 FREQUENCY= 50 YEARS
 VELOCITY= 11.02 FT/S
 PERT. W.S. ELEV= 1181.23

100 YR. FLOOD RISK ASSESSMENT:
 MAGNITUDE= 2430 CFS
 VELOCITY= 11.95 FT/S
 W.S. ELEV= 1181.72
 FLOOD OF RECORD = N/A

STA 282+15.83 EB
 END FULL DEPTH
 RECONSTRUCTION
 BEGIN BRIDGE
 APPROACH SLAB

+3.00%

18"

24"

24" CMP

CANOE CREEK

CANOE CREEK

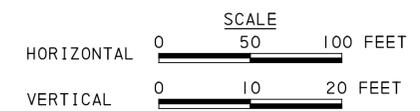
SR 4005

G3 G2 G1

DATUM
1160

+50	1284.1	G-1286.77	279	+50	1286.8	G-1289.77	280	+50	1284.0	G-1292.77	281	+50	1282.8	G-1294.27	282	+50	1291.7	G-1298.77	283	+50	1277.4	G-1300.27	284	+50	1258.7	G-1301.77	285	+50	1239.7	G-1303.27	286	+50	1226.2	G-1304.77	287	+50	1205.9	G-1306.27	288	+50	1174.7	G-1307.76	289	+50	1176.1	G-1309.26	290	+50	1181.2	G-1310.76	291	+50	1182.9	G-1312.26	292	+50	1185.4	G-1313.76	293	+50	1189.8	G-1315.26	294	+50	1197.0	G-1316.76	295	+50	1202.6	G-1318.26	296	+50	1212.3	G-1319.76	297	+50	1226.0	G-1321.26	298	+50	1239.9	G-1322.76	299	+50	1246.6	G-1324.26	300	+50	1256.0	G-1325.76	301	+50	1265.3	G-1327.26
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SR 0080 EASTBOUND



FOR SR 0080 EASTBOUND PLAN, SEE SHEET 24

USER: JBONO PLOT DRIVER: Pcmdot_PDF_Memo.plt PLOT DATE: 12-06-2021 2:25:07 PM
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SEE SHEET 34

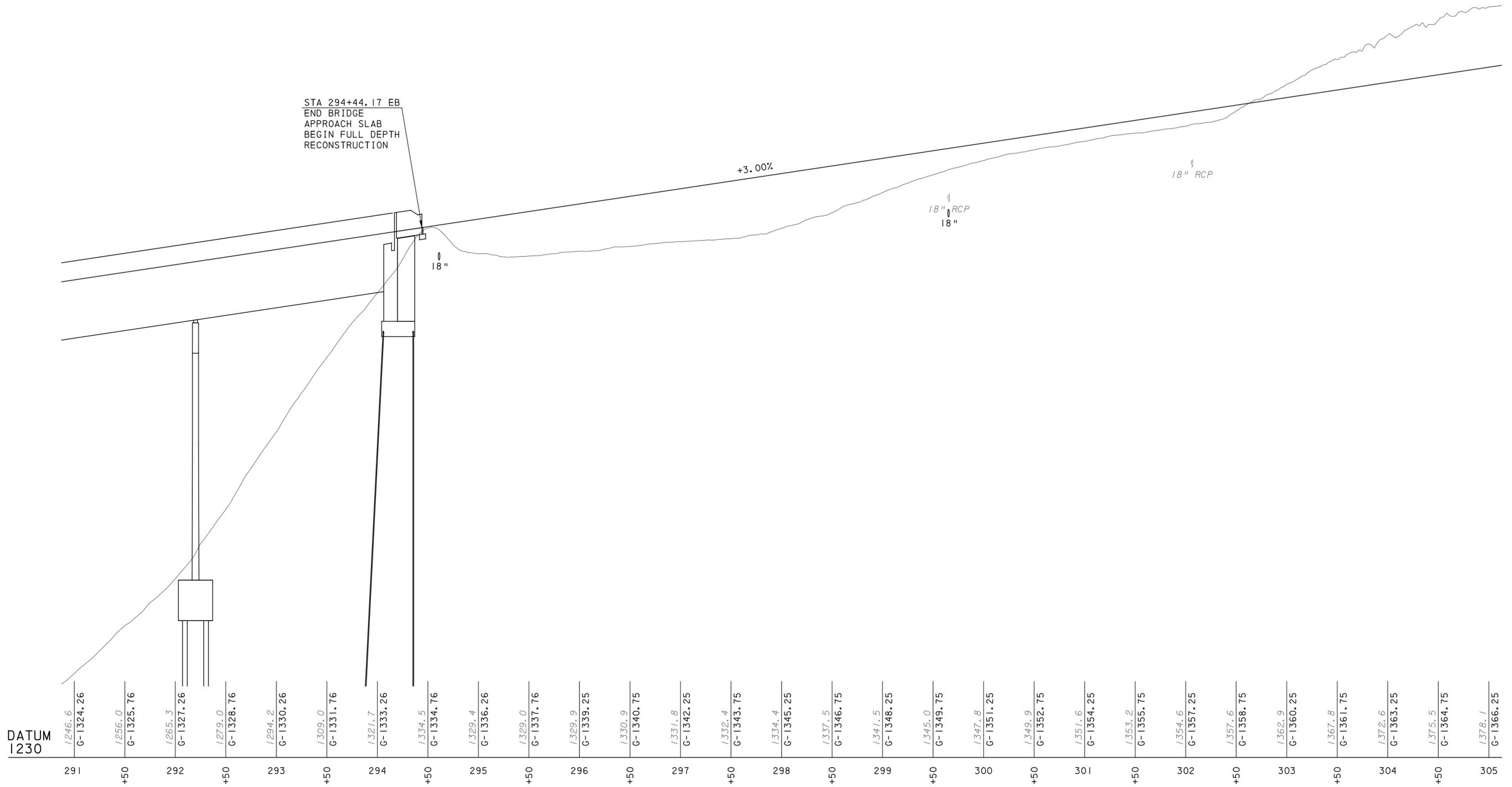
SEE SHEET 36

DES: JEB DWG: JAE CKD: DRG

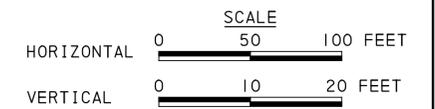
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	36 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

USER: JBONO PLOT DRIVER: Pcmdot_PDF_Memo.pltcfgr PLOT DATE: 12-06-2021 2:25:10 PM
 PATH: c:\pwork\proj\11\0381977\ FILE: 0080-CANOE-RD-PRF-EB07.dgn MODEL: d07a.dwg

SEE SHEET 35



SR 0080 EASTBOUND



DES: JEB DWG: JAE CKD: DRG

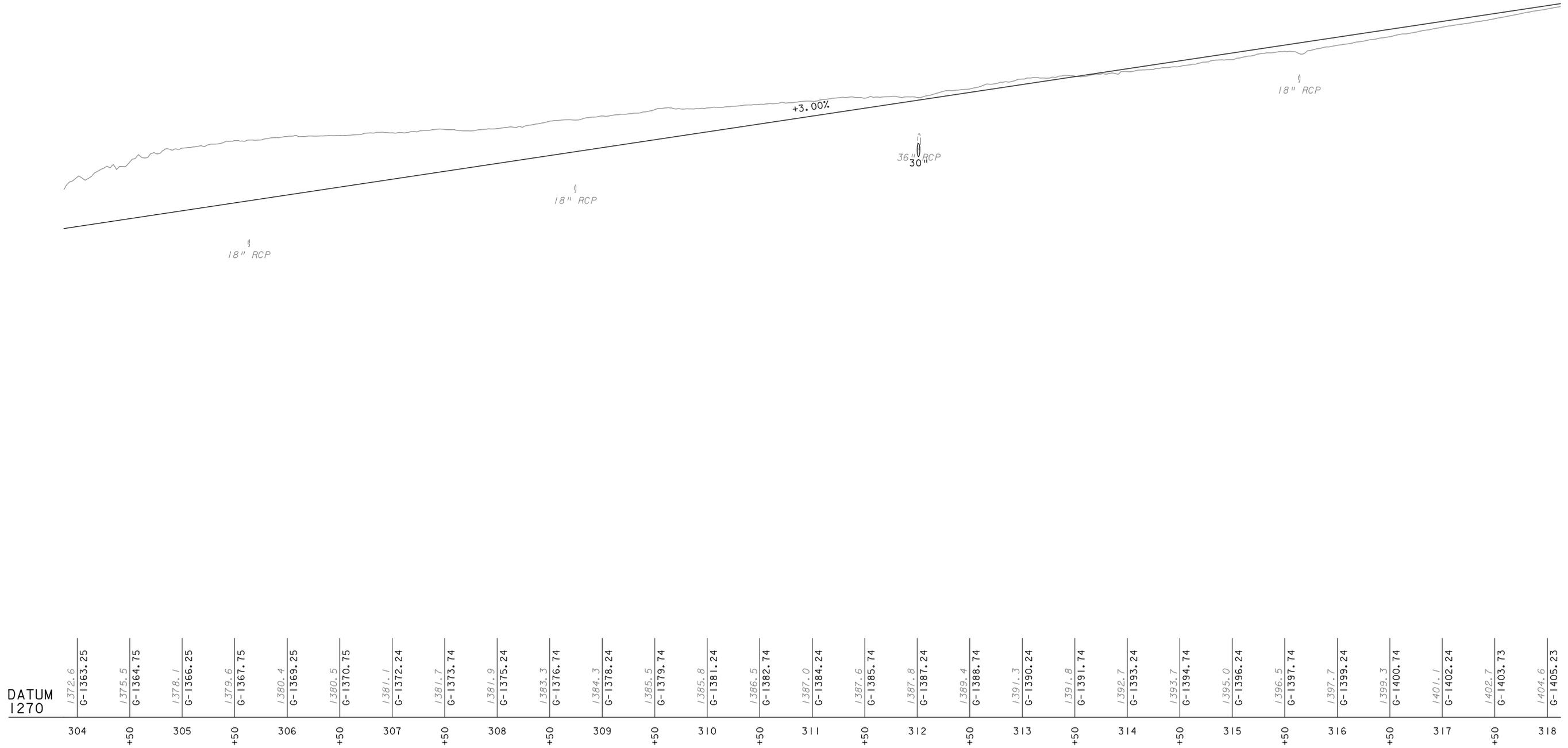
FOR SR 0080 EASTBOUND PLAN, SEE SHEET 25

SEE SHEET 37

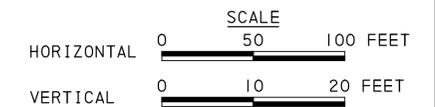
USER: JBONO PLOT DRIVER: Pcmdot_PDF_Memo.pltcfgr PLOT DATE: 12-06-2021 2:25:14 PM
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 MODEL: Default

SEE SHEET 36

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	37 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



SR 0080 EASTBOUND



DES: JEB DWG: JAE CKD: DRG

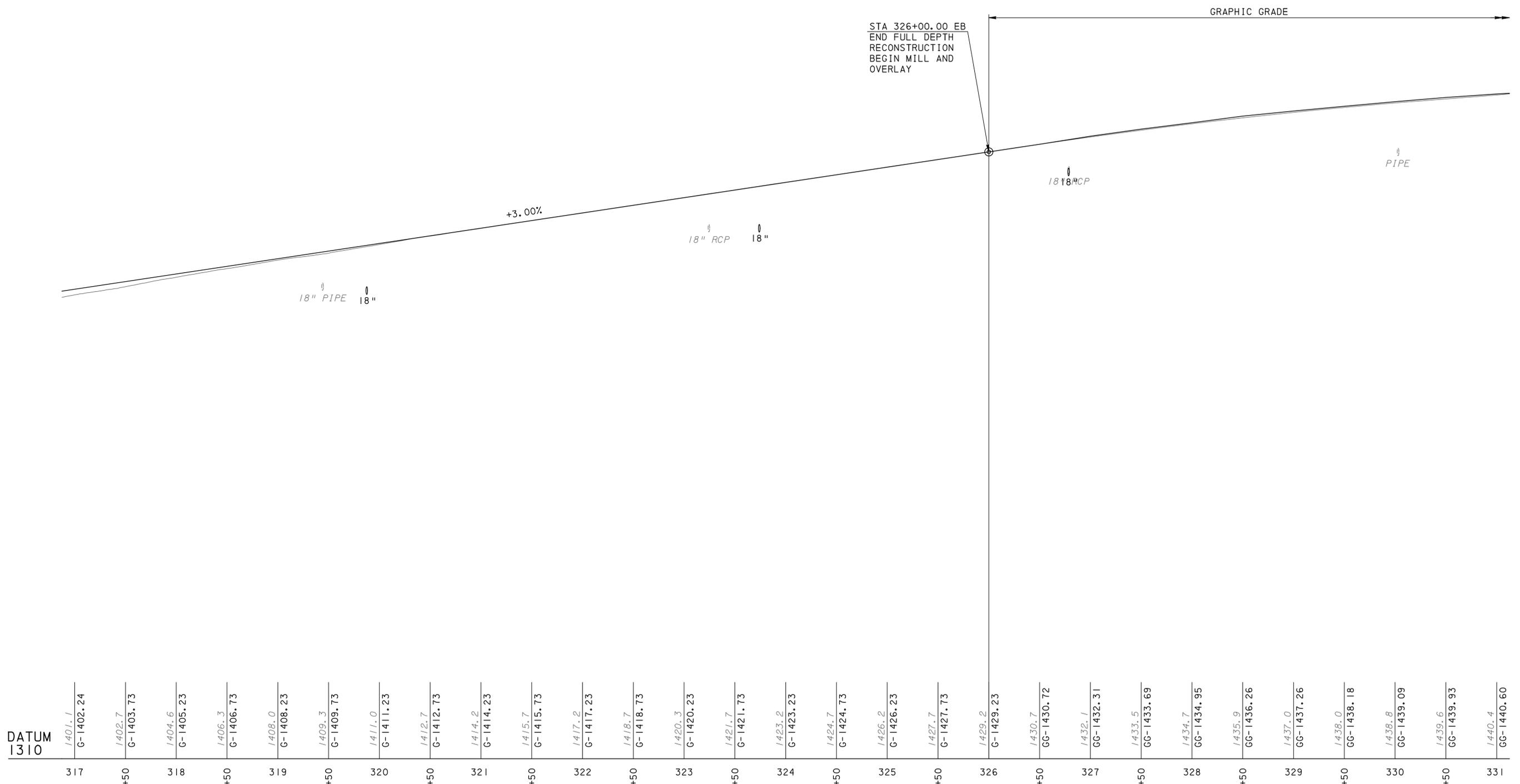
FOR SR 0080 EASTBOUND PLAN, SEE SHEET 26

SEE SHEET 38

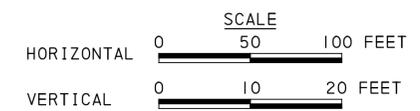
USER: JBONO PLOT DRIVER: Pcmdot_PDF_Memo.pltcfgr PLOT DATE: 12-06-2021 2:25:19 PM
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SEE SHEET 37

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	38 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



SR 0080 EASTBOUND



DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 EASTBOUND PLAN, SEE SHEET 27

SEE SHEET 39

USER: JBONO PLOT DRIVER: Pcmdot_PDF_Mono.pltcfgr PLOT DATE: 12-06-2021 2:25:23 PM
 PATH: c:\pwworking\esri\info381977\FILE0080-CANOE-RD-PRF-EB10.dgn MODEL: Default

SEE SHEET 38

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	39 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

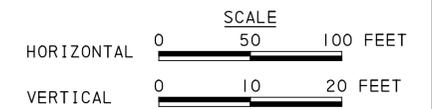
GRAPHIC GRADE

PIPE

PIPE

DATUM 1330	1438.8 GG-1439.09	1439.6 GG-1439.93	1440.4 GG-1440.60	1441.1 GG-1441.14	1441.7 GG-1441.70	1442.2 GG-1442.19	1442.6 GG-1442.62	1443.2 GG-1443.15	1443.7 GG-1443.69	1444.2 GG-1444.19	1444.6 GG-1444.64	1445.1 GG-1445.11	1445.7 GG-1445.69	1446.2 GG-1446.21	1446.7 GG-1446.70	1447.3 GG-1447.27	1447.8 GG-1447.77	1448.3 GG-1448.27	1448.8 GG-1448.79	1449.3 GG-1449.27	1449.7 GG-1449.74	1450.2 GG-1450.24	1450.8 GG-1450.78	1451.3 GG-1451.27	1451.7 GG-1451.72	1452.2 GG-1452.25	1452.8 GG-1452.76	1453.3 GG-1453.28	1453.8 GG-1453.76
330	+50	331	+50	332	+50	333	+50	334	+50	335	+50	336	+50	337	+50	338	+50	339	+50	340	+50	341	+50	342	+50	343	+50	344	

SR 0080 EASTBOUND



DES: JEB DWG: JAE CKD: DRG

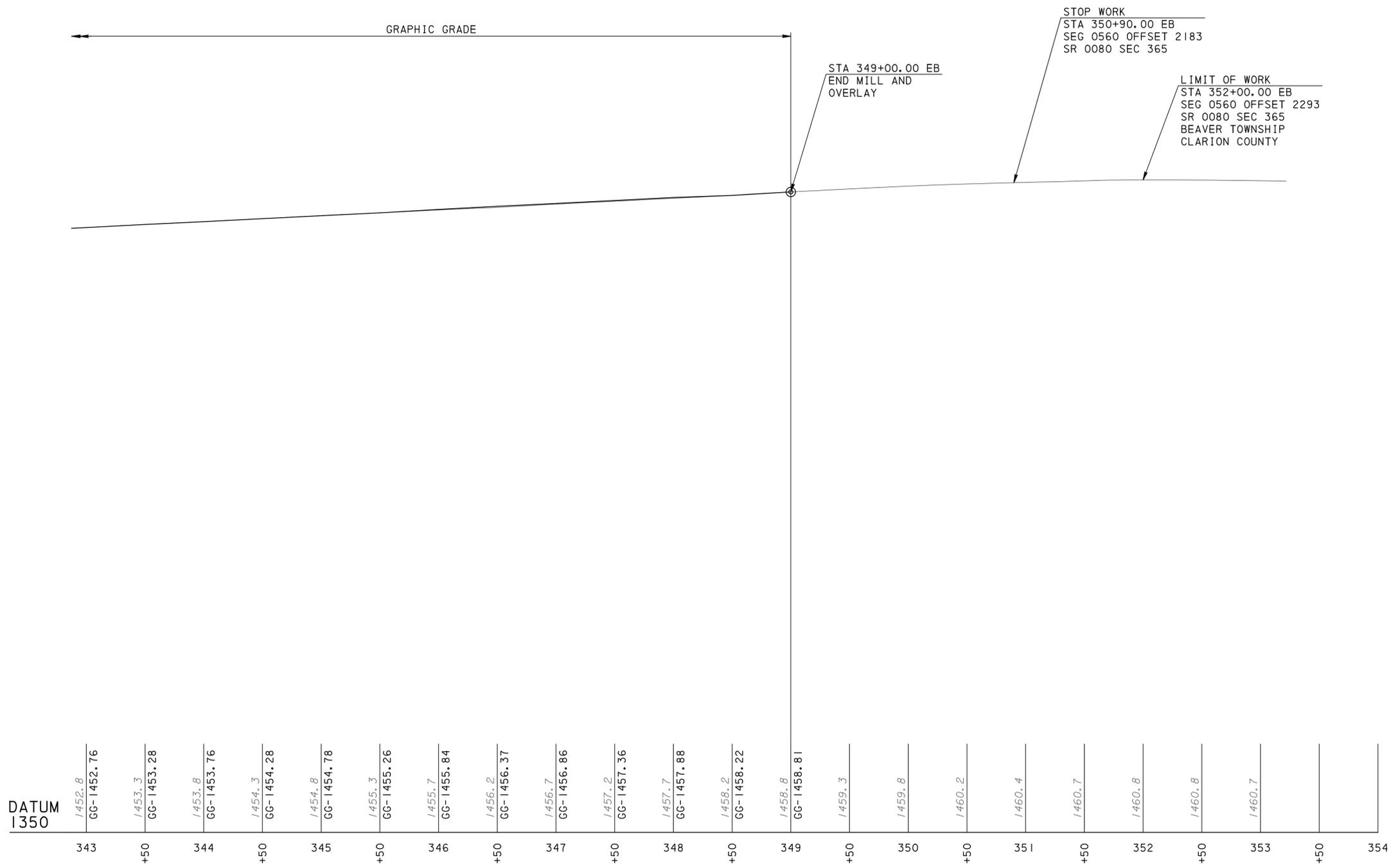
FOR SR 0080 EASTBOUND PLAN, SEE SHEET 28

SEE SHEET 40

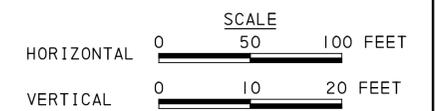
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	40 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

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SEE SHEET 39



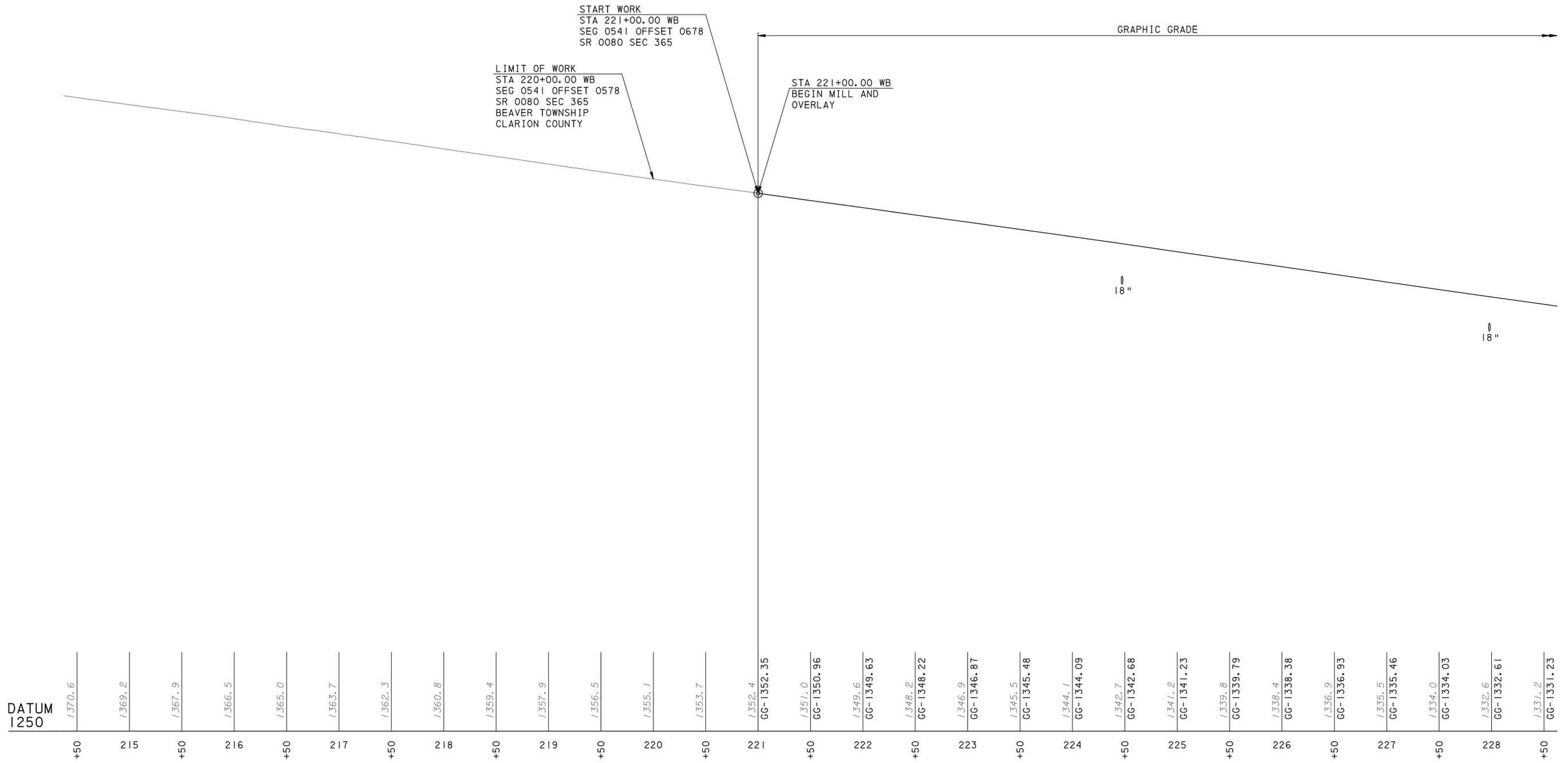
SR 0080 EASTBOUND



DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 EASTBOUND PLAN, SEE SHEET 29

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	41 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



SR 0080 WESTBOUND

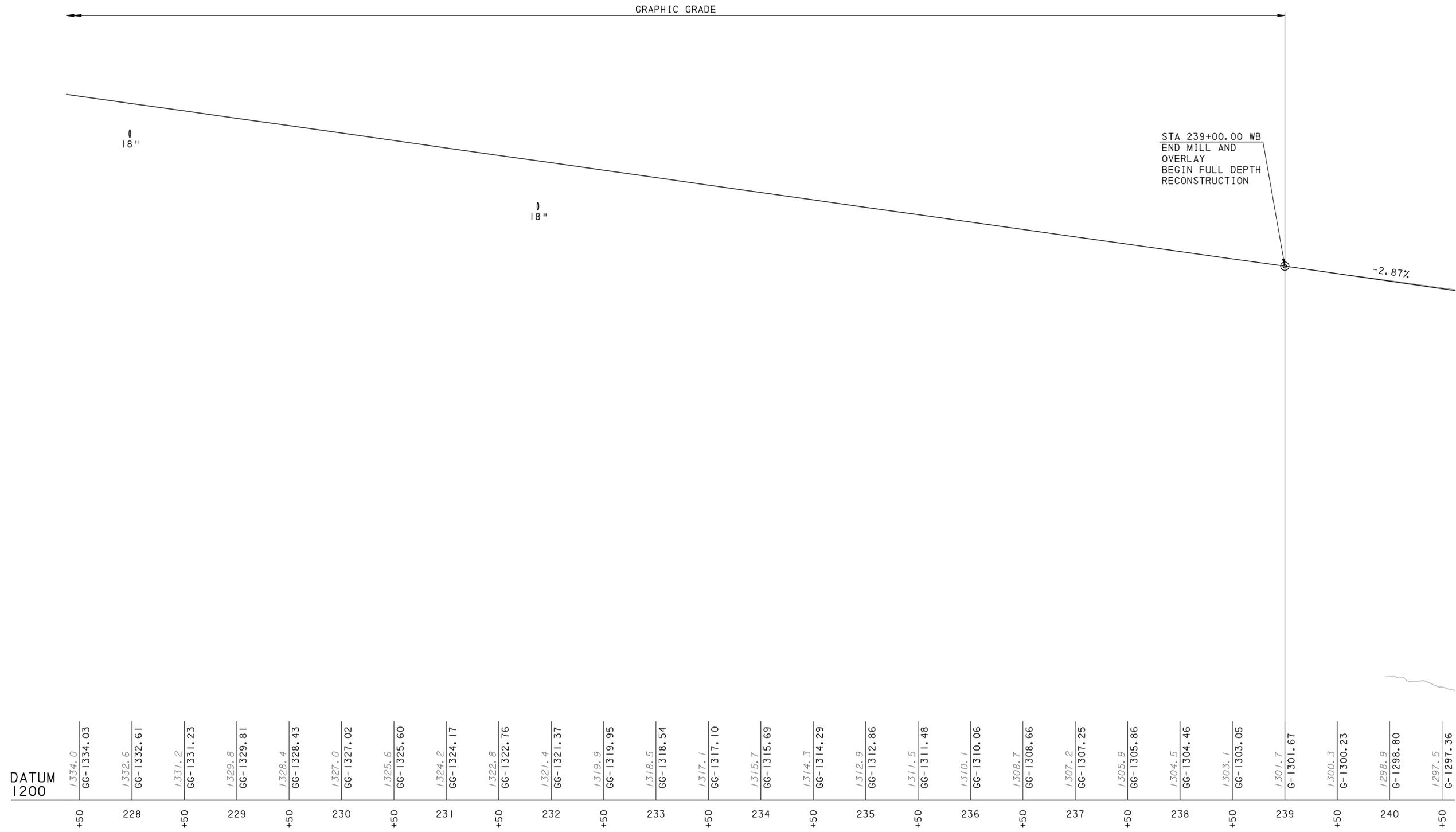


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 MODEL: Default

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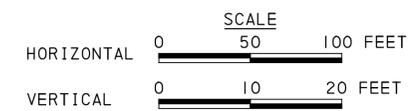
SEE SHEET 41

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	42 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



DATUM 1200	1/334.0 GG-1334.03	1/332.6 GG-1332.61	1/331.2 GG-1331.23	1/329.8 GG-1329.81	1/328.4 GG-1328.43	1/327.0 GG-1327.02	1/325.6 GG-1325.60	1/324.2 GG-1324.17	1/322.8 GG-1322.76	1/321.4 GG-1321.37	1/319.9 GG-1319.95	1/318.5 GG-1318.54	1/317.1 GG-1317.10	1/315.7 GG-1315.69	1/314.3 GG-1314.29	1/312.9 GG-1312.86	1/311.5 GG-1311.48	1/310.1 GG-1310.06	1/308.7 GG-1308.66	1/307.2 GG-1307.25	1/305.9 GG-1305.86	1/304.5 GG-1304.46	1/303.1 GG-1303.05	1/301.7 G-1301.67	1/300.3 G-1300.23	1/298.9 G-1298.80	1/297.5 G-1297.36
+50	228	+50	229	+50	230	+50	231	+50	232	+50	233	+50	234	+50	235	+50	236	+50	237	+50	238	+50	239	+50	240	+50	

SR 0080 WESTBOUND



DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 WESTBOUND PLAN, SEE SHEET 20

SEE SHEET 43

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SEE SHEET 42

DES: JEB DWG: JAE CKD: DRG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
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BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

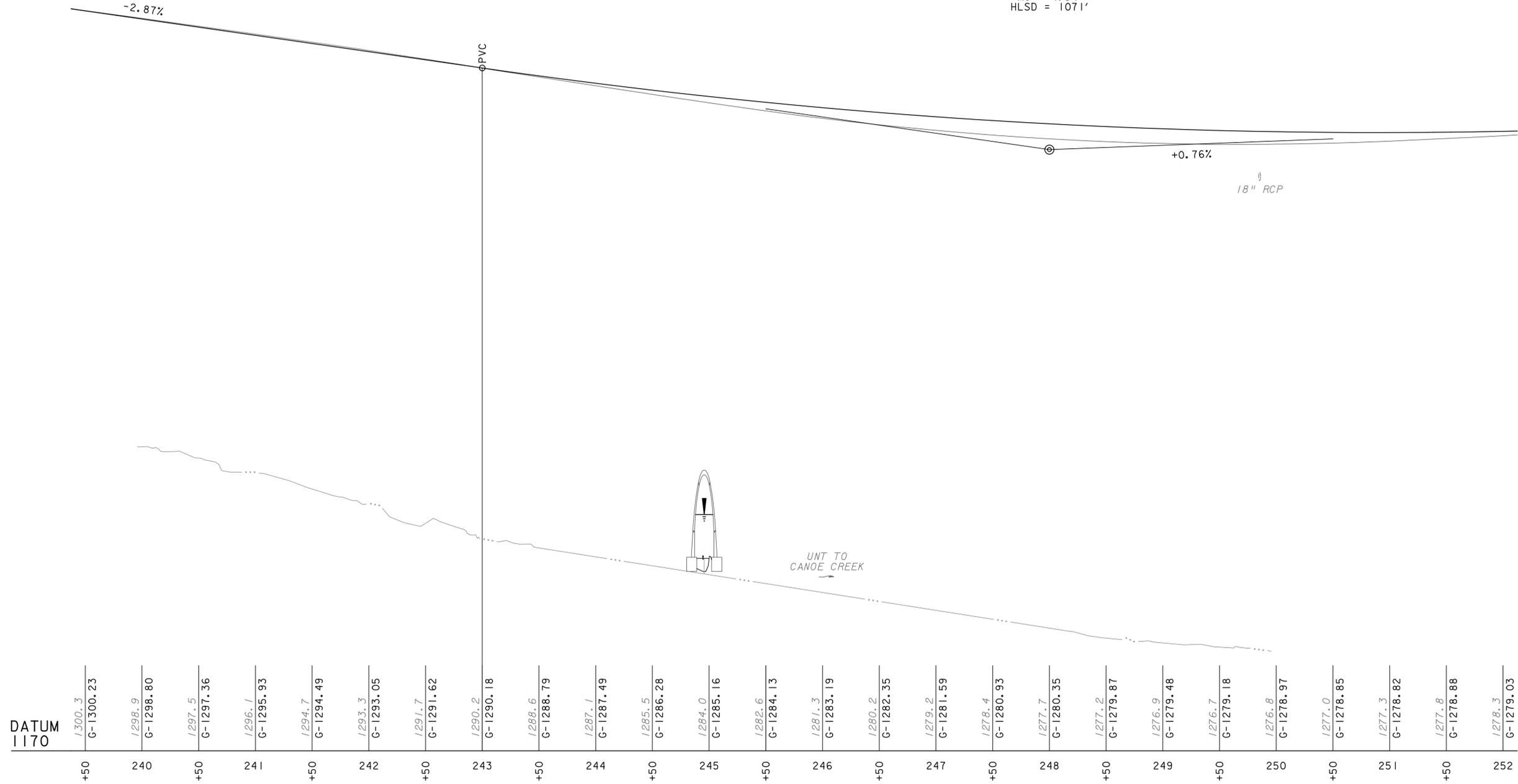
HYDRAULIC DATA

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 DEP DESIGN FLOOD:
 MAGNITUDE = 330 CFS
 FREQUENCY = 25 YEARS
 VELOCITY = 10.88 FT/S
 W. S. ELEV = 1211.59

DESIGN FLOOD:
 MAGNITUDE = 401 CFS
 FREQUENCY = 50 YEARS
 VELOCITY = 11.67 FT/S
 PERT. W.S. ELEV = 1211.84

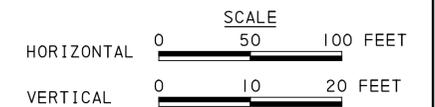
100 YR. FLOOD RISK ASSESSMENT:
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 VELOCITY = 12.47 FT/S
 W.S. ELEV = 1212.10
 FLOOD OF RECORD = N/A

PVI STA 248+00.00
 ELEV 1275.81
 VC = 1000.00'
 MO = 4.54'
 HLSD = 1071'



SR 0080 WESTBOUND

FOR SR 0080 WESTBOUND PLAN, SEE SHEET 21

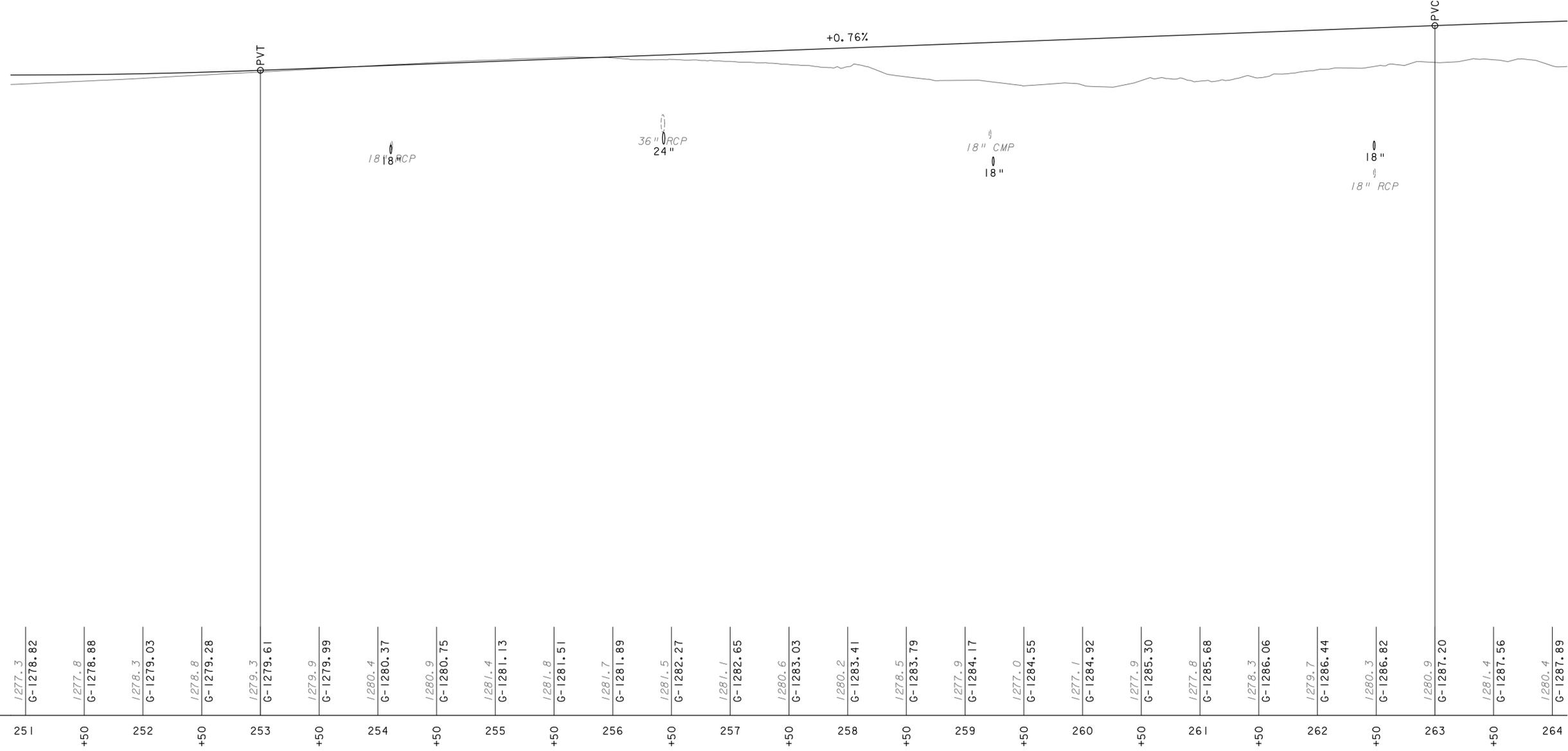


SEE SHEET 44

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	44 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

PVI STA 248+00.00
 ELEV 1275.81
 VC = 1000.00'
 MO = 4.54'
 HLSD = 1071'

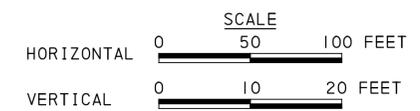
PVI STA 268+00.00
 ELEV 1291.00
 VC = 1000.00'
 MO = -1.77'
 SSD = 1261'



DATUM
1170

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SR 0080 WESTBOUND



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SEE SHEET 43

SEE SHEET 45

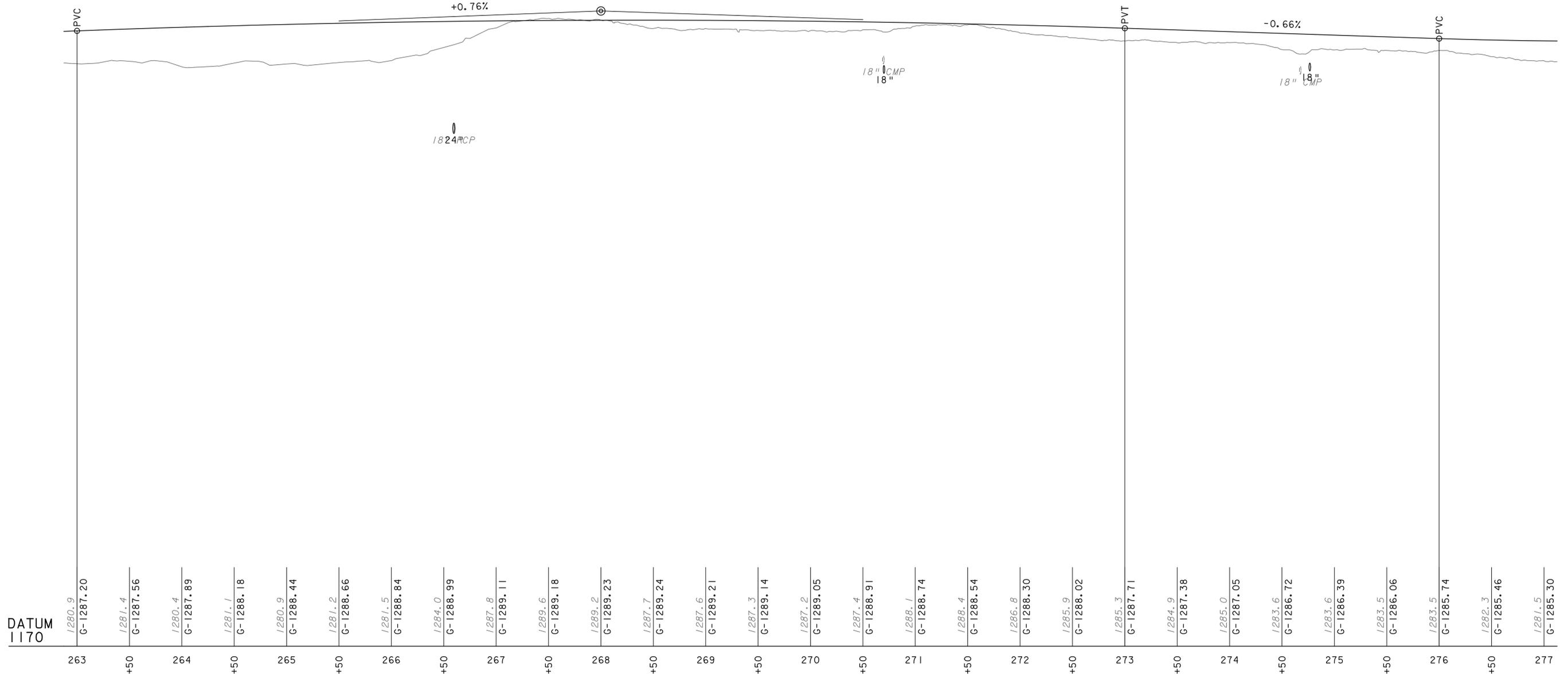
DES: JEB DWG: JAE CKD: DRG

FOR SR 0080 WESTBOUND PLAN, SEE SHEET 22

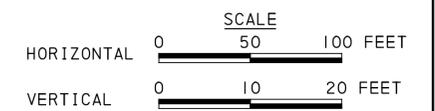
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	45 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

PVI STA 268+00.00
 ELEV 1291.00
 VC = 1000.00'
 MO = -1.77'
 SSD = 1261'

PVI STA 281+00.00
 ELEV 1282.45
 VC = 1000.00'
 MO = 5.45'
 HLSD = 904'



SR 0080 WESTBOUND



USER: JIBONO PLOT DRIVER: Pcmdot.pdf Mono.plt fctg PLOT DATE: 12-06-2021 2:25:52 PM
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SEE SHEET 44

SEE SHEET 46

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	46 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

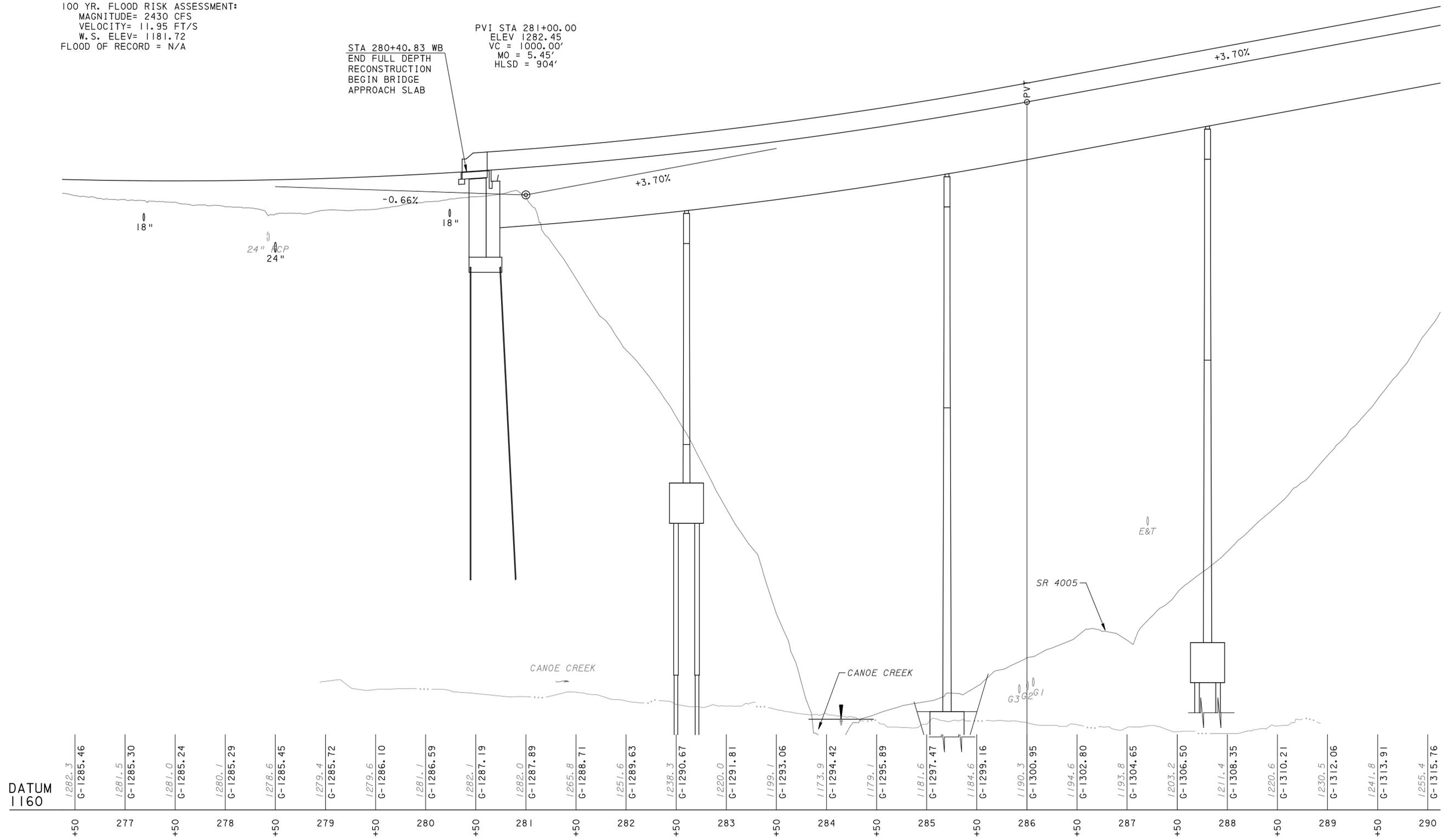
HYDRAULIC DATA

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 MAGNITUDE= 2070 CFS
 FREQUENCY= 50 YEARS
 VELOCITY= 11.02 FT/S
 PERT. W.S. ELEV= 1181.23

100 YR. FLOOD RISK ASSESSMENT:
 MAGNITUDE= 2430 CFS
 VELOCITY= 11.95 FT/S
 W.S. ELEV= 1181.72
 FLOOD OF RECORD = N/A

STA 280+40.83 WB
 END FULL DEPTH
 RECONSTRUCTION
 BEGIN BRIDGE
 APPROACH SLAB

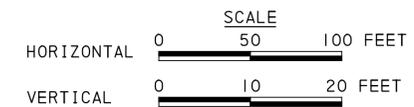
PVI STA 281+00.00
 ELEV 1282.45
 VC = 1000.00'
 MO = 5.45'
 HLSD = 904'



DATUM
1160

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SR 0080 WESTBOUND



FOR SR 0080 WESTBOUND PLAN, SEE SHEET 24

SEE SHEET 45

SEE SHEET 47

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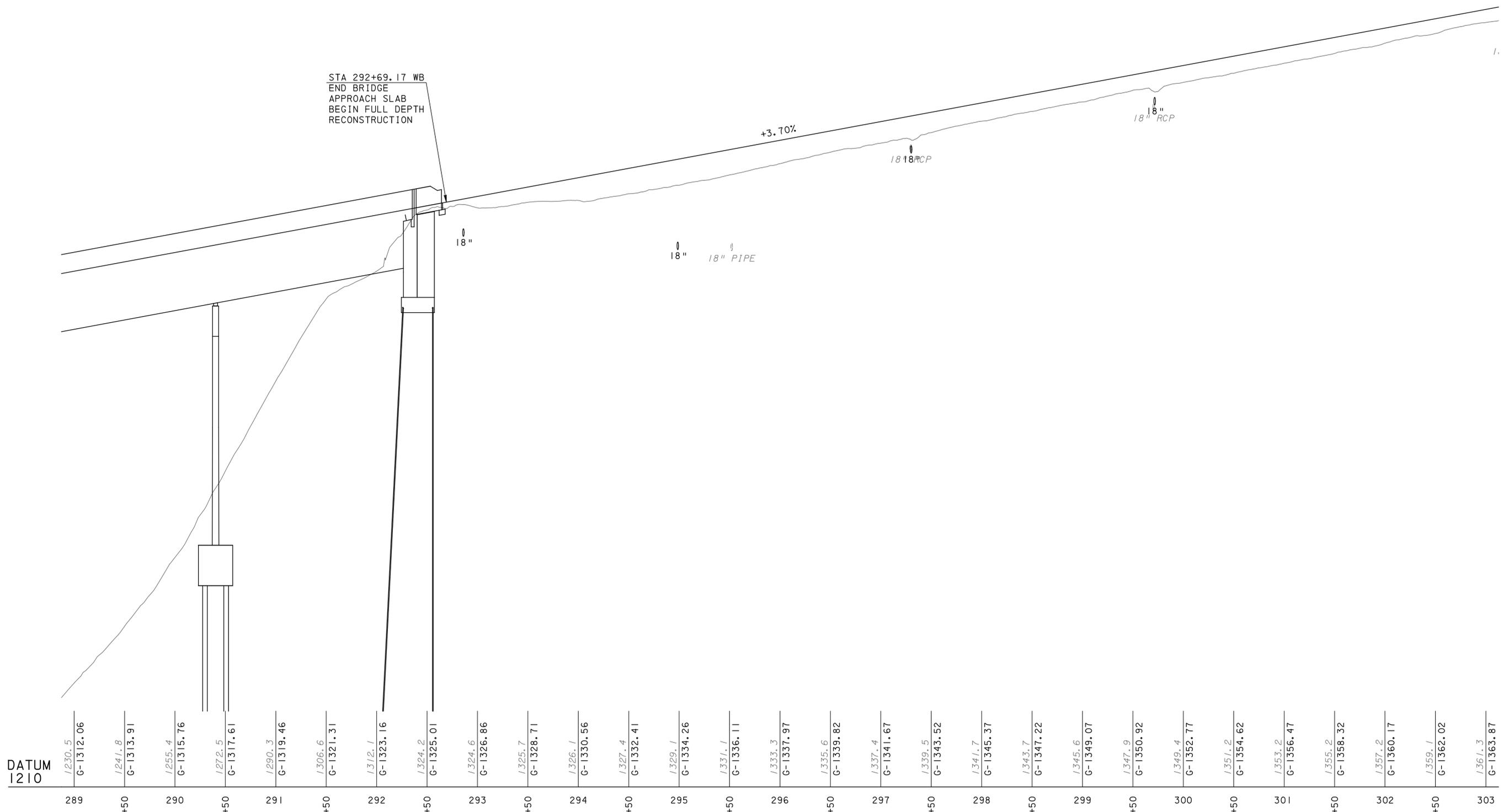
DES: JEB DWG: JAE CKD: DRG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	47 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

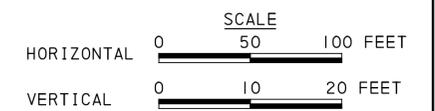
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 MODEL: de fault

SEE SHEET 46

SEE SHEET 48



SR 0080 WESTBOUND



DES: JEB DWG: JAE CKD: DRG

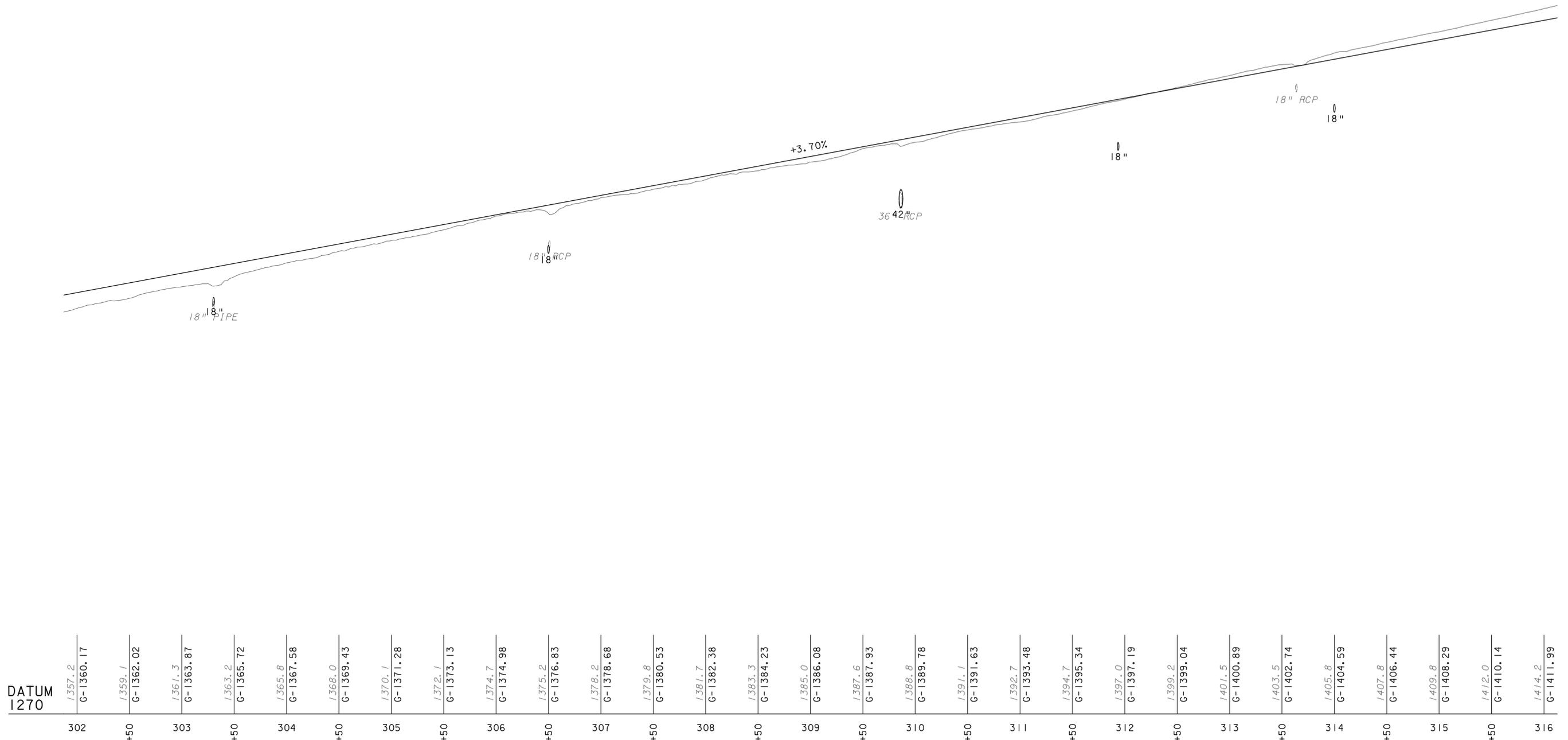
FOR SR 0080 WESTBOUND PLAN, SEE SHEET 25

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	48 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

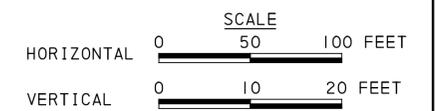
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SEE SHEET 47

SEE SHEET 49



SR 0080 WESTBOUND



DES: JEB DWG: JAE CKD: DRG

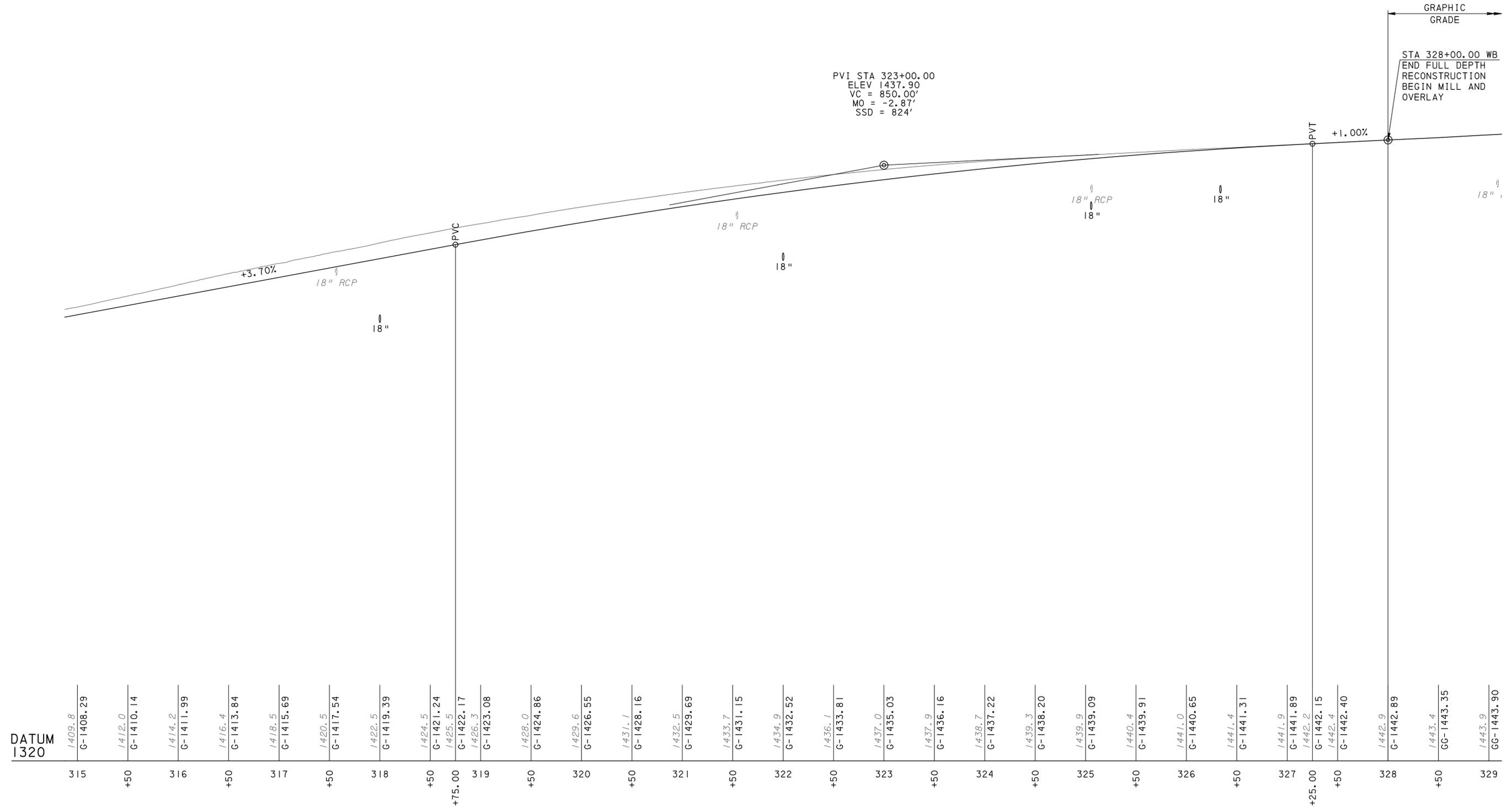
FOR SR 0080 WESTBOUND PLAN, SEE SHEET 26

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	49 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

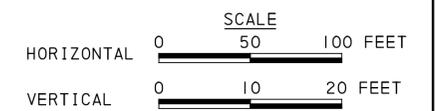
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SEE SHEET 48

SEE SHEET 50



SR 0080 WESTBOUND



DES: JEB DWG: JAE CKD: DRG

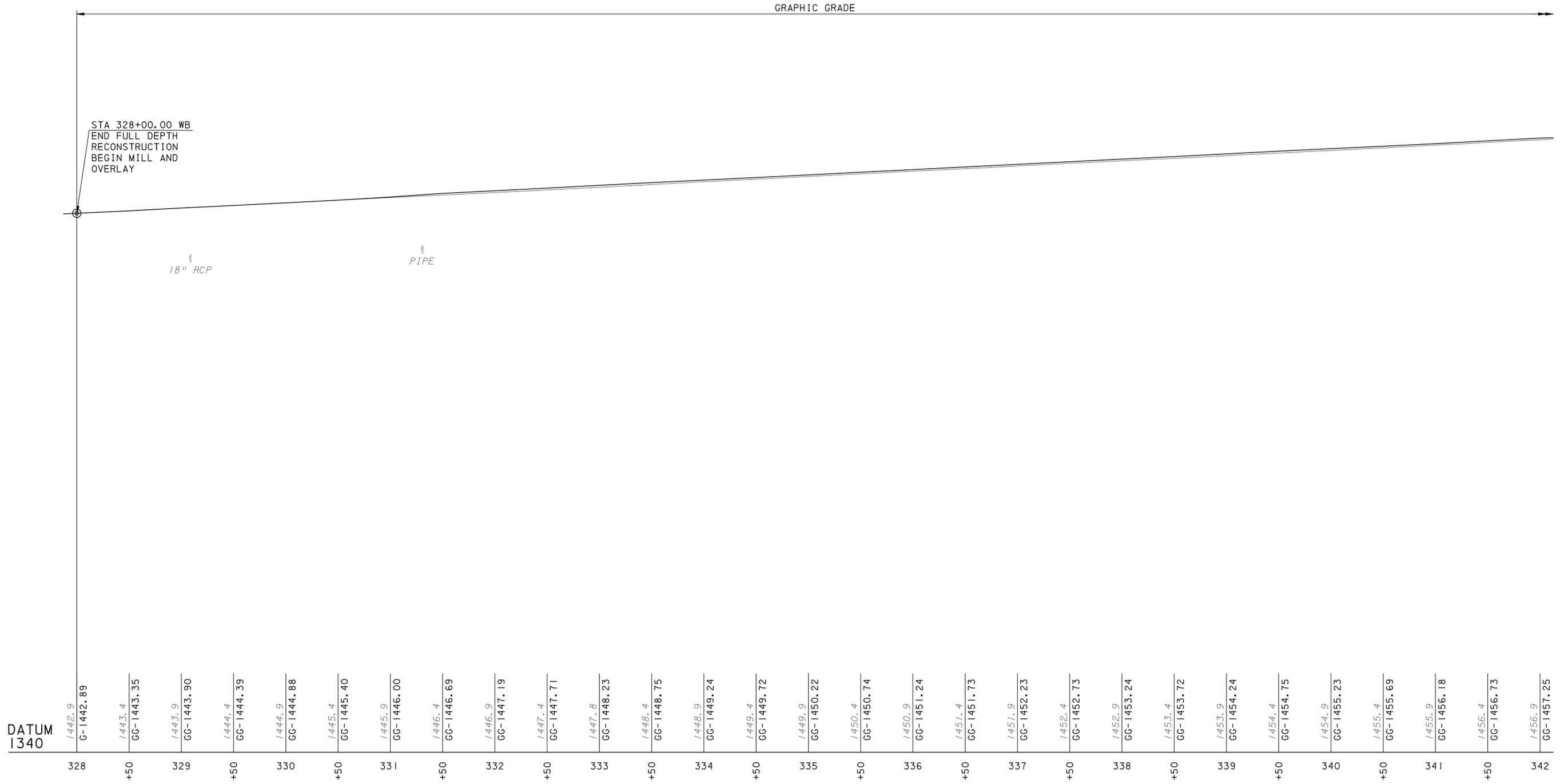
FOR SR 0080 WESTBOUND PLAN, SEE SHEET 27

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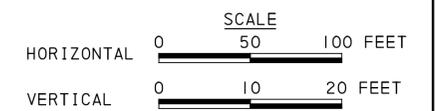
SEE SHEET 49

DES: JEB DWG: JAE CKD: DRG

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	50 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



SR 0080 WESTBOUND



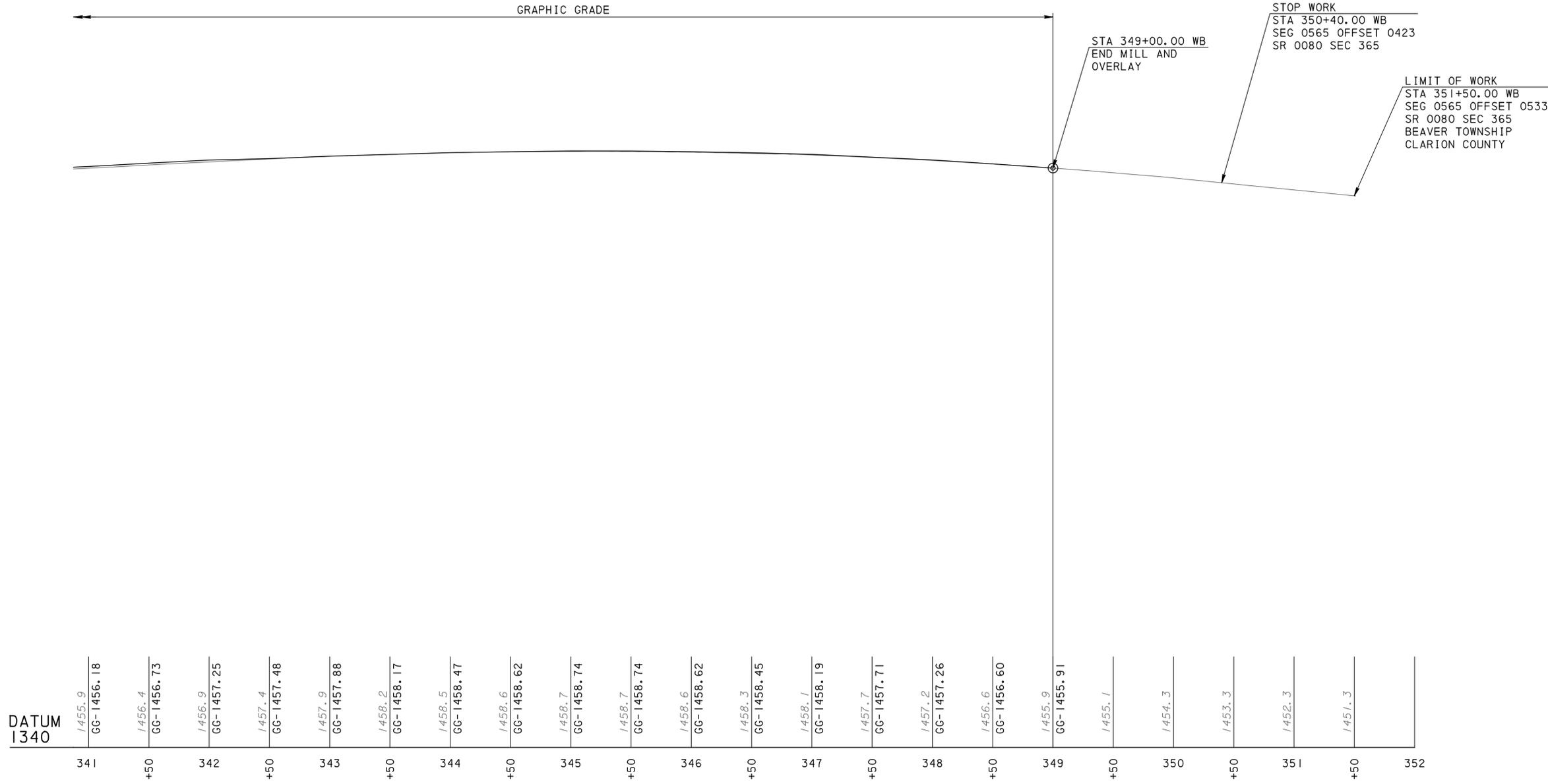
FOR SR 0080 WESTBOUND PLAN, SEE SHEET 28

SEE SHEET 51

USER: JBONO PLOT DRIVER: PennDOT_PDF_Memo.pltcfgr PLOT DATE: 12-06-2021 2:26:13 PM
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SEE SHEET 50

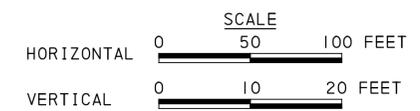
DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	51 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



DATUM
1340

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+50	1457.4	GG-1457.48
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+50	1458.2	GG-1458.17
344	1458.5	GG-1458.47
+50	1458.6	GG-1458.62
345	1458.7	GG-1458.74
+50	1458.7	GG-1458.74
346	1458.6	GG-1458.62
+50	1458.3	GG-1458.45
347	1458.1	GG-1458.19
+50	1457.7	GG-1457.71
348	1457.2	GG-1457.26
+50	1456.6	GG-1456.60
349	1455.9	GG-1455.91
+50	1455.1	
350	1454.3	
+50	1453.3	
351	1452.3	
+50	1451.3	
352		

SR 0080 WESTBOUND

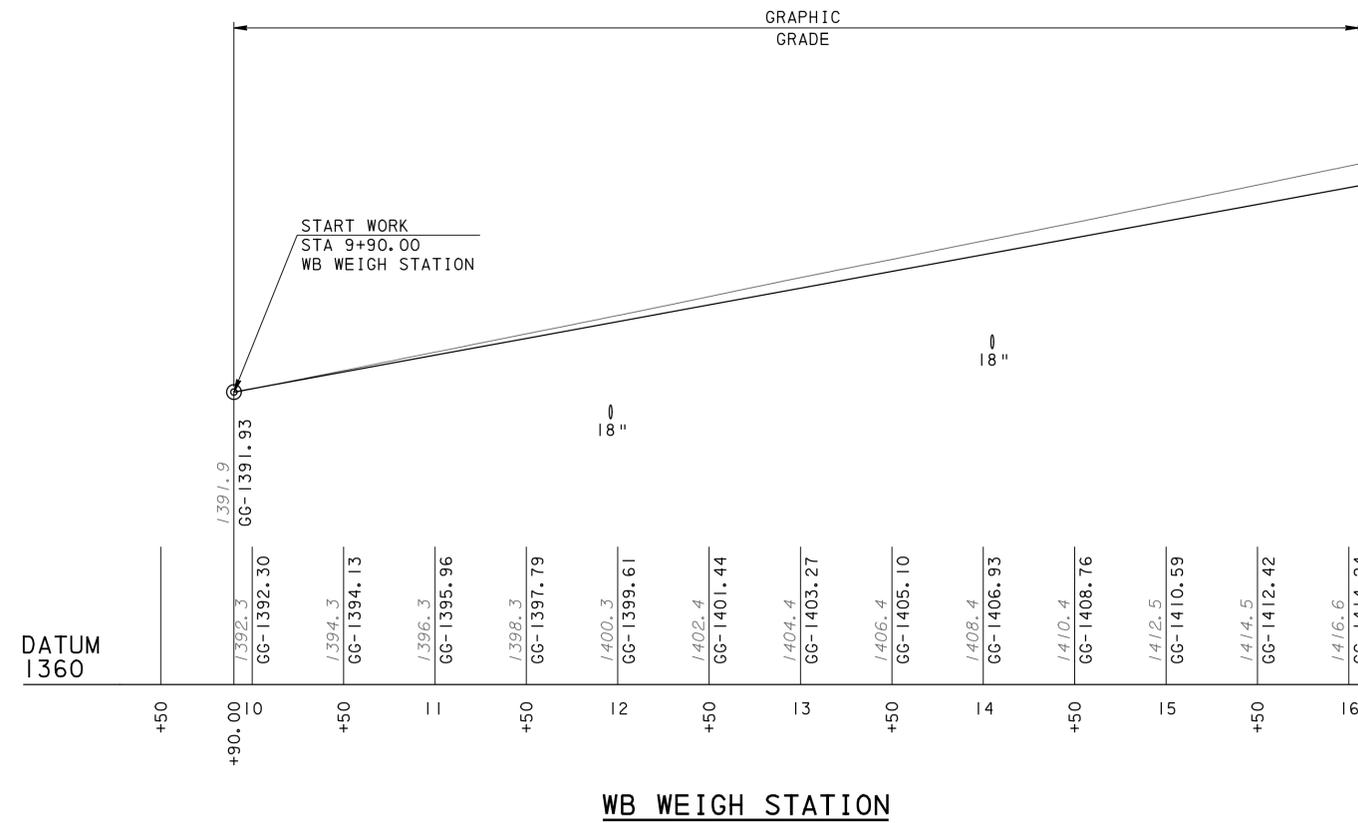


DES: JEB DWG: JAE CKD: DRG

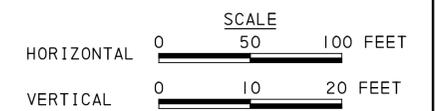
FOR SR 0080 WESTBOUND PLAN, SEE SHEET 29

USER: JBONO PLOT DRIVER: Pcmdot.PDF_Mono.plt PLOT DATE: 12-06-2021 2:26:17 PM
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DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	52 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD



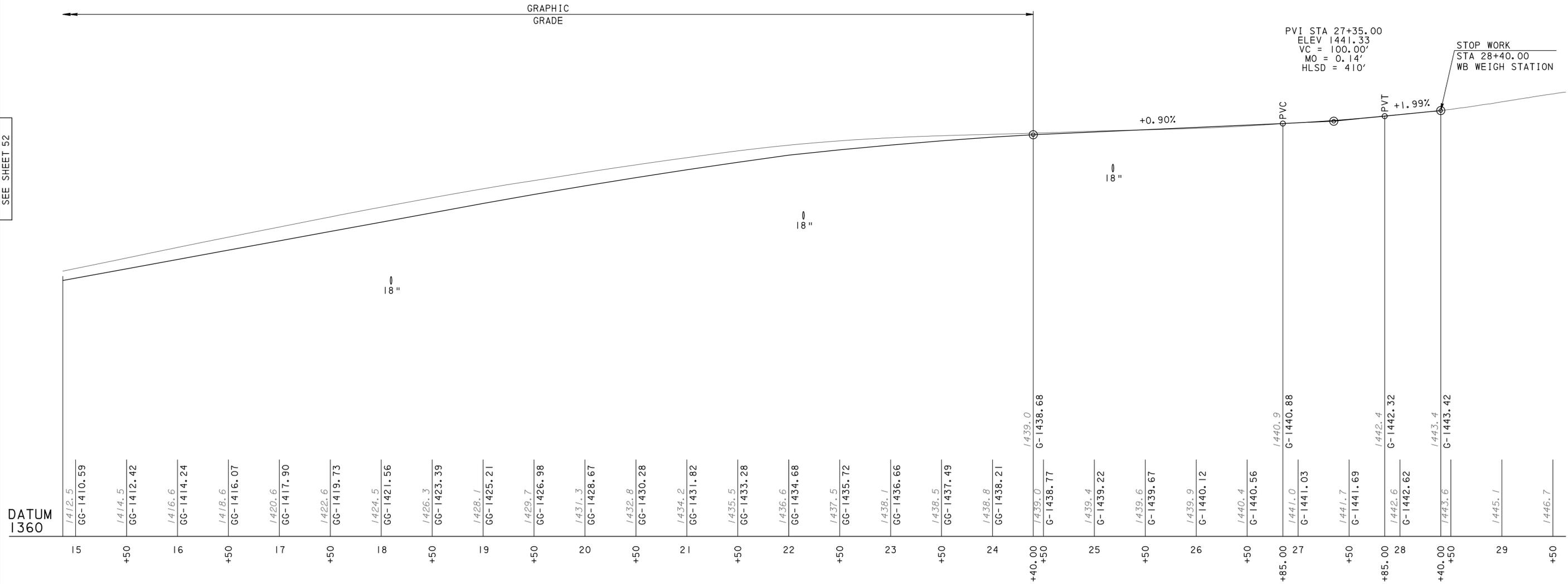
GRAPHIC GRADE ELEVATIONS DEVELOPED
 BASED ON SR 0080 WB PROFILE (PARALLEL)



DISTRICT	COUNTY	ROUTE	SECTION	SHEET
10-0	CLARION	0080	365	53 OF 53
BEAVER TOWNSHIP				
REVISION NUMBER	REVISIONS	DATE	BY	APPD

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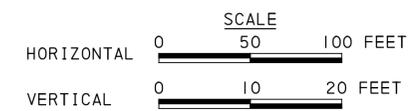
SEE SHEET 52



DATUM
1360

WB WEIGH STATION

GRAPHIC GRADE ELEVATIONS DEVELOPED
 BASED ON SR 0080 WB PROFILE (PARALLEL)



DES: JEB DWG: JAE CKD: DRG

FOR WB WEIGH STATION PLAN, SEE SHEET 27

Appendix D
Stream and Wetland Mitigation



Compensatory Mitigation Approach

Compensatory wetland mitigation is required as a result of unavoidable permanent impacts to jurisdictional streams associated with the I-80 Canoe Creek Bridge Replacement Project (Project) proposed by PennDOT District 10-0 (Applicant). The proposed Project and anticipated stream impacts are located in Clarion County, Pennsylvania, within the the Central Allegheny River Subbasin (Pennsylvania State Water Plan Watershed Subbasin 17). A summary of the anticipated impact types and amounts is provided below in Table 1.

Table 1: Estimated Mitigation Required for Permanent Stream Impacts					
Resource Type	Impact Type	Impact Square Foot (or Linear Foot)	Impact Acres	Mitigation Ratio Applied ^{1,2}	Bank Credits Needed
Stream	Permanent/Fill	95.0	N/A	1:1	95.0
Totals		95.0	N/A	-	95.0

First Pennsylvania Resource, L.L.C. (FPR), a wholly owned subsidiary of Resource Environmental Solutions, L.L.C. (RES), will facilitate compensatory stream mitigation for the Project. FPR understands that based on the permanent stream impacts anticipated as a result of the Project, 95.0 wetland credits may be required to fulfill compensatory mitigation requirements related to stream loss.

Consistent with the *Compensatory Mitigation Final Rule* (33 CFR § 332.3(b)(2) 2008), which establishes mitigation credits as the preferred method of compensatory mitigation for impacts to waters of the United States, the Applicant first sought to purchase approved stream mitigation credits from a mitigation bank within the Central Allegheny River Subbasin. There are no stream mitigation banks or credits in the Central Allegheny River Subbasin, however the Project is located within the Secondary Service Area (SSA) of FPR's Robinson Fork Mitigation Bank Phase 1 (RFMB1 or Bank) (USACE Permit No.: LRP 2016-969, PA DEP File No. MB990563-003). As such, the Applicant is proposing the use of mitigation credits from the RFMB1 to meet the anticipated mitigation requirements as shown in Table 1 above. A figure of these subbasins and the Project is attached as Figure 1.

The 95.0 stream credits that are needed to meet offset requirements are available from the Bank, which was constructed in 2016 and 2017, and is currently in the latter stages of monitoring, and meeting all success criteria. As a component of the Joint Permit Application review, a request will be submitted to the USACE and PADEP permit reviewers to confirm the number of stream bank credits necessary for the Project, along with the use of credits within the Secondary Service Area of the Bank. After these two items are confirmed, RES will memorialize the use of stream credits in a Credit Commitment Letter, which will be necessary for compensatory mitigation component of the Chapter 105 and Section 404 authorizations for the Project.

Appendix E
Threatened and Endangered Species

1. PROJECT INFORMATION

Project Name: **PennDOT - I-80 Canoe Creek; Pathways Program**

Date of Review: **8/4/2021 05:59:32 PM**

Project Category: **Transportation, Structures and Bridges, Bridge Replacement adjacent to existing alignment (within 100 feet up/down stream)**

Project Area: **186.57 acres**

County(s): **Clarion**

Township/Municipality(s): **BEAVER TOWNSHIP; MONROE TOWNSHIP; PAINT TOWNSHIP**

ZIP Code:

Quadrangle Name(s): **CLARION; KNOX**

Watersheds HUC 8: **Clarion**

Watersheds HUC 12: **Beaver Creek; Blyson Run-Clarion River; Canoe Creek; Deer Creek-Clarion River; Piney Creek-Clarion River; Turkey Run-Clarion River**

Decimal Degrees: **41.183273, -79.533421**

Degrees Minutes Seconds: **41° 10' 59.7835" N, 79° 32' 0.3161" W**

2. SEARCH RESULTS

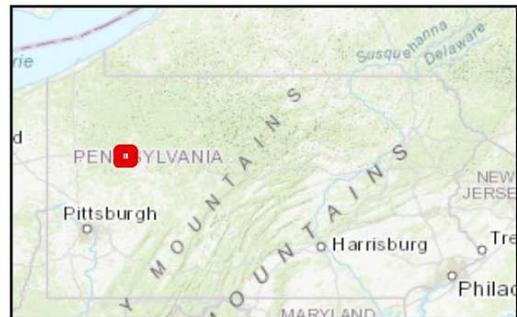
Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

PennDOT - I-80 Canoe Creek; PATHways Program

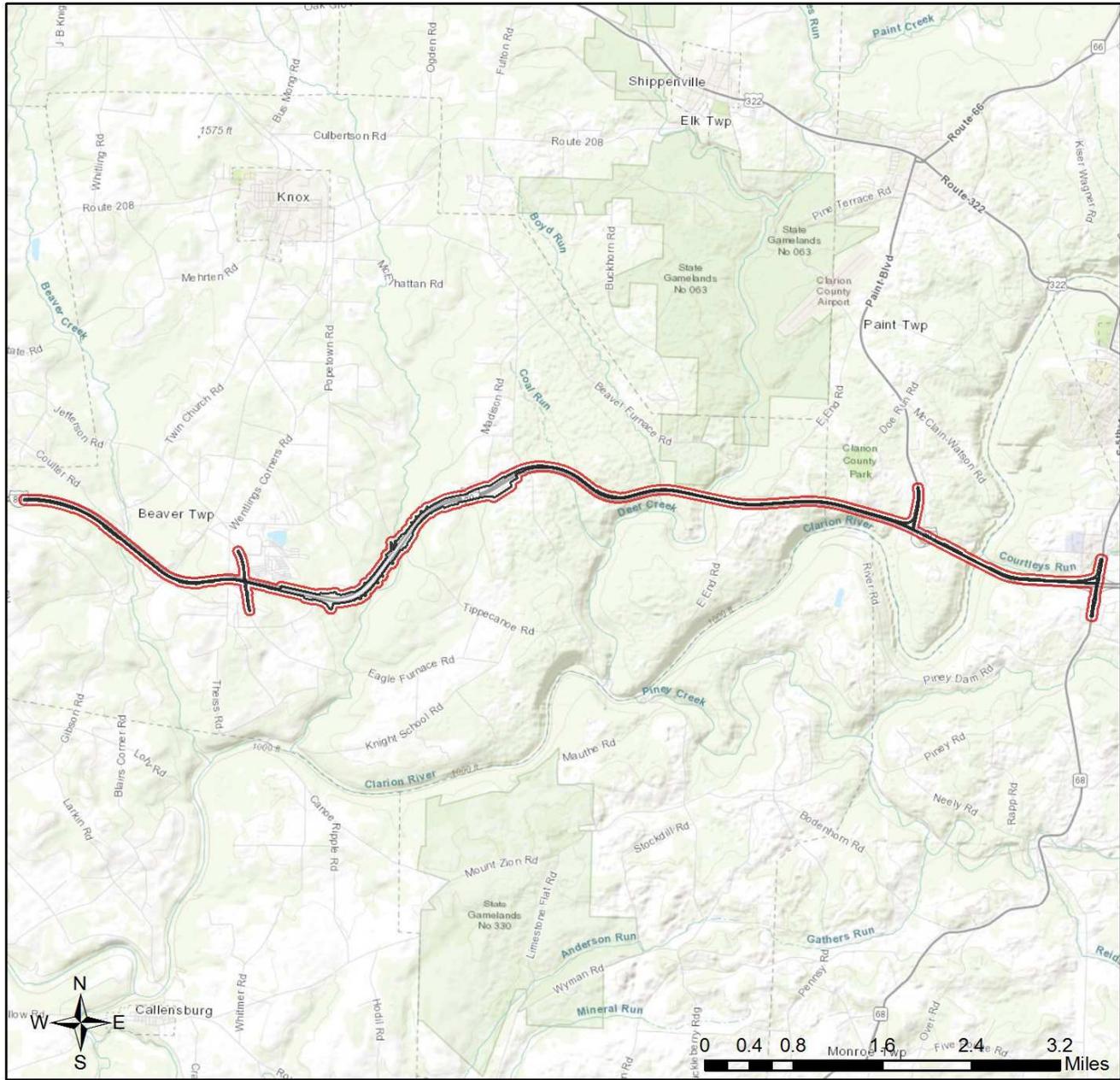


- Project Boundary
- Buffered Project Boundary



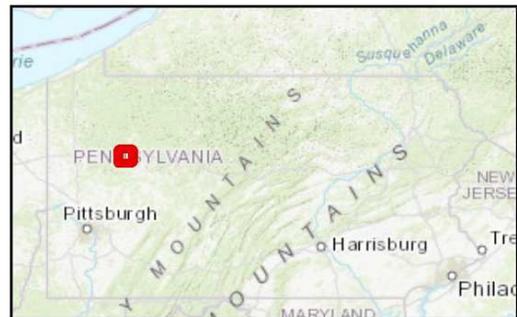
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China

PennDOT - I-80 Canoe Creek; Pathways Program



- Project Boundary
- Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, Garmin, Intemap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community



3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

PA Fish and Boat Commission

Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

U.S. Fish and Wildlife Service

Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
Email: IR1_ESPenn@fws.gov
NO Faxes Please

PA Game Commission

Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Kathy Krommes
Company/Business Name: HDR Inc.
Address: 4900 Ritter Road, Suite 101
City, State, Zip: Mechanicsburg, PA 17055
Phone: (717) 516-3158 Fax: (717) 516-3145
Email: kathy.krommes@hdrinc.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.


applicant/project proponent signature

12/23/2021
date

Appendix F
List of Preparers

Name	Organization	EA Role	Education	Years
Camille Otto Director of Planning, Environment, and Finance	FHWA PA Division	FHWA Approver	B.S. Biology	25
Jon Crum Senior Environmental Specialist	FHWA PA Division	FHWA Environmental Reviewer	B.S. Biology M.S. Environmental Science and Management	17
James Peratino, PE Transportation Engineer	FHWA PA Division	FHWA Approver	AAS Engineering	17
Jason E. Layman, P.E. Consultant Design Project Manager	PennDOT District 10-0	Engineering Reviewer	B.S. Civil Engineering Technology	14
Jessica Schrecengost Senior Civil Engineer Supervisor	PennDOT District 10-0	Environmental Reviewer	B.S. Civil Engineering/Minor Environmental Engineering	10
Drew Ames Environmental Planning Manager	PennDOT Central Office	Environmental Reviewer	B.H Communications M.S. Community and Regional Planning	26
Kenda Gardner Deputy Chief Counsel	PennDOT Office of Chief Counsel	Legal Review	B.S. Chemistry J.D.	28
Neal Brofee Environmental Counsel	PennDOT Office of Chief Counsel	Legal Review	B.A. Mathematics J.D.	24
David Anthony Historic Preservation Specialist	PennDOT Central Office	Above Ground Cultural Resources	M.S. Historic Preservation	24
Susanne Haney Archaeologist District 10-0 and PennDOT Highway Archaeological Survey Team	PennDOT Central Office	Archaeology	B.A Social Science archaeology emphasis/M.A. Professional Growth (Applied Archaeology)	28
Jeff Bucher, PE Chief, Highway Design & Technology Division	PennDOT Central Office	Engineering Reviewer	B.S. Civil Engineer	33
Diane Nulton Environmental Project Manager	HDR	EA Project Manager	B.S. Biology/Ecology	35
Robert Schmidt, PE Project Manager	HDR	Bridge Replacement Project Manager	B.S Structural Engineering; Associates of Science, Architectural Design	28
Kathleen Krommes, ENV SP Environmental Project Manager	HDR	Environmental Lead, EA Technical Writer/Editor	B.S. Chemical Engineering	35
Katherine Markowitz Environmental Scientist	HDR	EA Technical Writer/Editor	B.S. Marine and Environmental Biology and Policy	8
Jennifer Nolan-Kremm Transportation Hydraulics Lead	HDR	H&H and Permitting Lead	BS Physics & MS Civil Engineering	16
John McPherson, AICP Environmental Services Director	HDR	EA, Cumulative Impacts	B.A. Math/Economics; M.U.P.	30

Name	Organization	EA Role	Education	Years
Lori Smith-Hall Geologist	HDR	Hazardous Materials, GIS Mapping	B.S. Geological & Related Sciences; Geographic Information Systems & Environmental Geography	18
Jenn Walsh, PE Traffic & Planning Section Manager	HDR	Traffic Diversion Analysis	B.S. Civil Engineering; M.S. Civil Engineering	28
Darryl Phillips, P.E, PTOE Senior Project Manager	HDR	Traffic Diversion Analysis	B.S. Civil Engineering; M.S. Engineering	34
Audrey Heffernan Senior Environmental Planner	HDR	Environmental Justice	B.A. Math; M.A. Math; M.S. City & Regional Planning	28
Connie Eskin Administrative Coordinator	HDR	Technical Editor	Pennsylvania State University	25
Tina Adair Technical Editor	HDR	Technical Editor	B.S. Communications	35
Frank Brillhante GIS Manager	HDR	GIS Analysis	B.S. Engineering; M.S Environmental Engineering	28
Andrea Cline, PWS, CPESC Senior Environmental Scientist	HDR	Cumulative	B.S. Biology; M.S. Conservation Biology and Sustainable Development	22
Terri Slack National Discipline Lead,Trans. Revenue Systems & Operations	CDM Smith	Traffic Forecasting	BA Economics; BA Political Science M.B.A Management	33
Tarannum Rima Travel Demand Modeler	CDM Smith	Traffic Forecasting	B.S. Civil Engineering M.S Transportation Engineering M.S. Computer Systems Engineering	16
Nathaniel Weinstock Air Quality and Acoustical Group Leader, Sr. Air Quality and Acoustical Scientist	Navarro & Wright	Diversion Route Noise Analysis	B.S. Public Service	22
Kyle Brubaker Sr. Environmental Specialist, TD Environmental Task Leader	Navarro & Wright	Hazardous Materials	B.S. Environmental Science	13
Robert C. Kolmansberger Director of Environmental Services, Sr. Air Quality & Acoustical Scientist	Navarro & Wright	Diversion Route Noise Analysis, QA/QC	B.A. Geography & Environmental Planning	30

Appendix G

References

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