

SR 4016, SECTION D10 (PLEASANT VIEW SMOCK ROAD)

**BRIDGE REPLACEMENT OVER REDSTONE CREEK
FRANKLIN AND MENALLEN TOWNSHIPS, FAYETTE COUNTY
MPMS NO. 76017**



APRIL, 2025

PROJECT TEAM

- PennDOT Engineering District 12-0
 - Brian Svesnik – Project Manager
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- SAI Consulting Engineers, Inc.
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PROJECT SUMMARY

- Project Description:

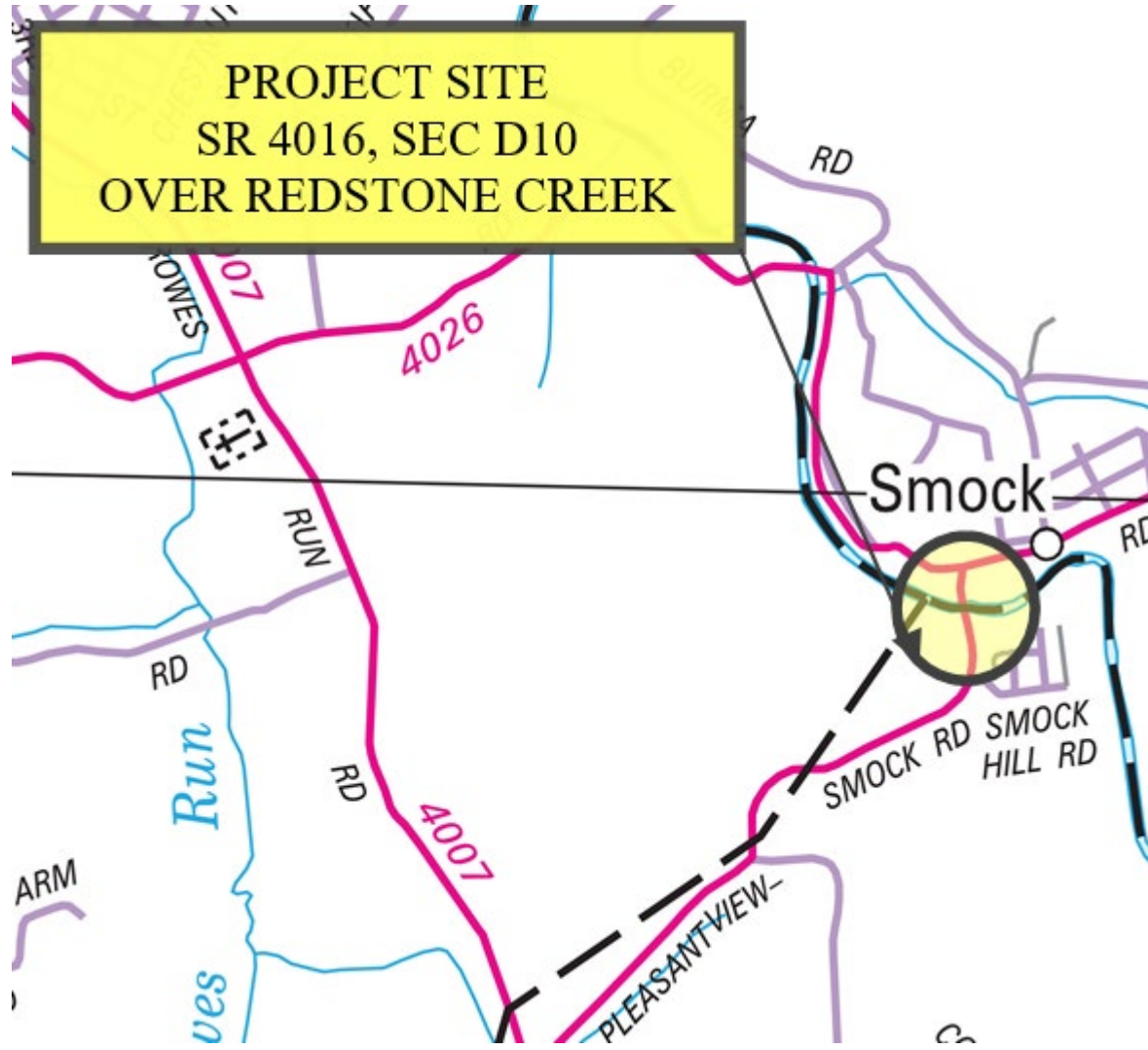
- SR 4016 (Pleasant View Smock Road) Bridge over Redstone Creek is located on the border of Franklin and Menallen Townships, Fayette County. The project consists of the complete replacement of the existing two span concrete encased steel I-beam bridge and pier with a two span prestressed concrete PA Bulb-Tee beam bridge and pier. Approach roadway work will consist of approximately 250' of roadway reconstruction to the south and approximately 50' of full depth reconstruction with an additional 150' of overlay to the north. The project also includes the realignment of an unnamed tributary to Redstone Creek that parallels SR 4016. The proposed roadway alignment and profile will be slightly altered to accommodate the proposed typical section of 10' lanes and 4' shoulders. Traffic will be maintained via detour. The project is currently entering Final Design. Construction of the project is anticipated in 2028, but is subject to change.

- Project Purpose and Need:

- The purpose of this project is to provide a reliable crossing of SR 4016 over Redstone Creek which meets current design criteria and structural capacity needs while maintaining community and regional connectivity. The existing structure was built in 1927. The structure is in poor condition due to the concrete on all beams having map, longitudinal, and vertical cracks with moderate efflorescence, and areas of scaling and spalling exposing the bottom and top flanges with moderate rust on the exposed steel. The wing walls have severe scaling and spalling with diagonal, vertical, and map cracking. The pier has heavy to severe delamination, scaling, spalling, vertical and diagonal map cracks.



PROJECT LOCATION



PROJECT PHOTOS

Existing Structure



PROJECT PHOTOS

Existing Roadway



PROJECT PHOTOS

Existing Roadway



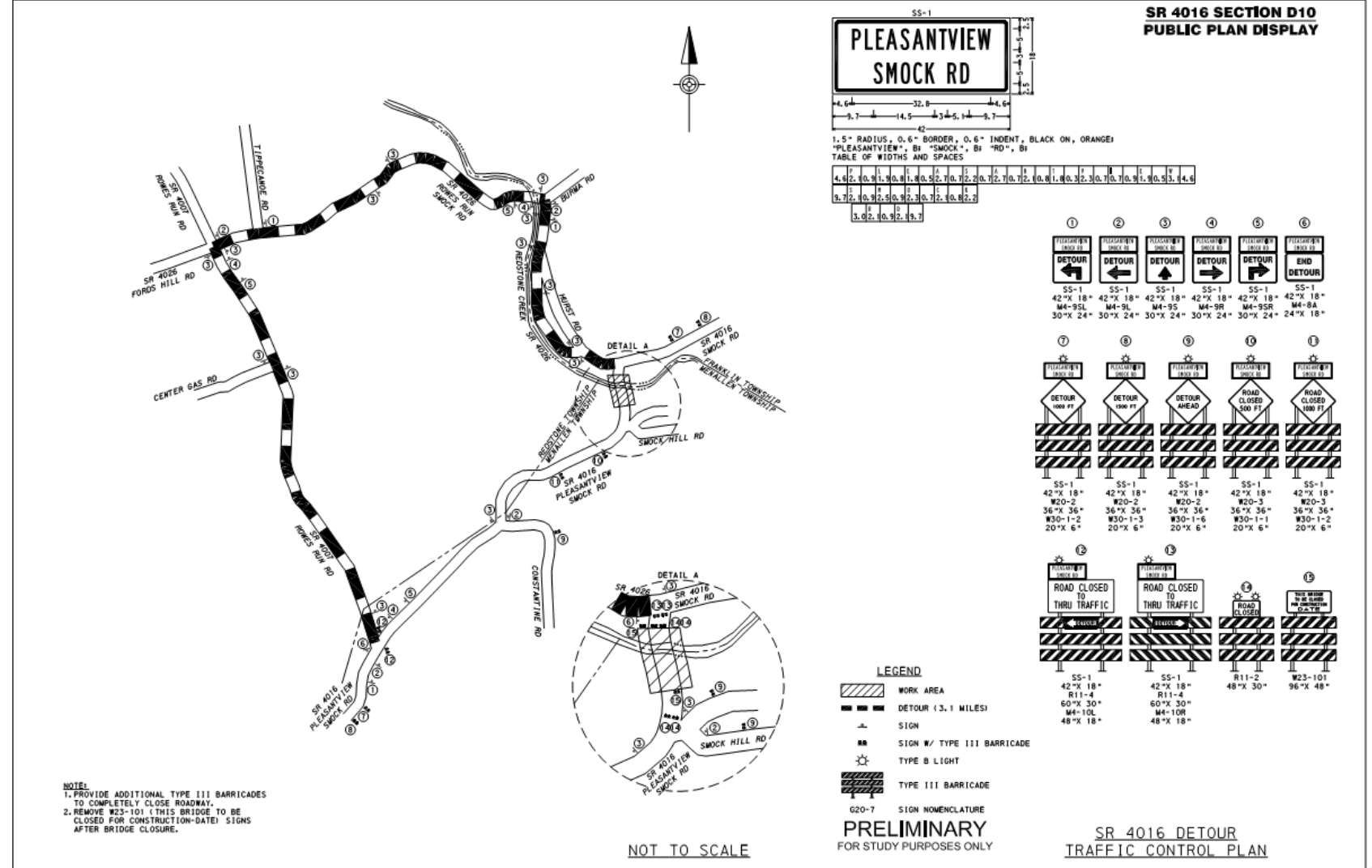
PROJECT IMPROVEMENTS

Bridge Replacement Project

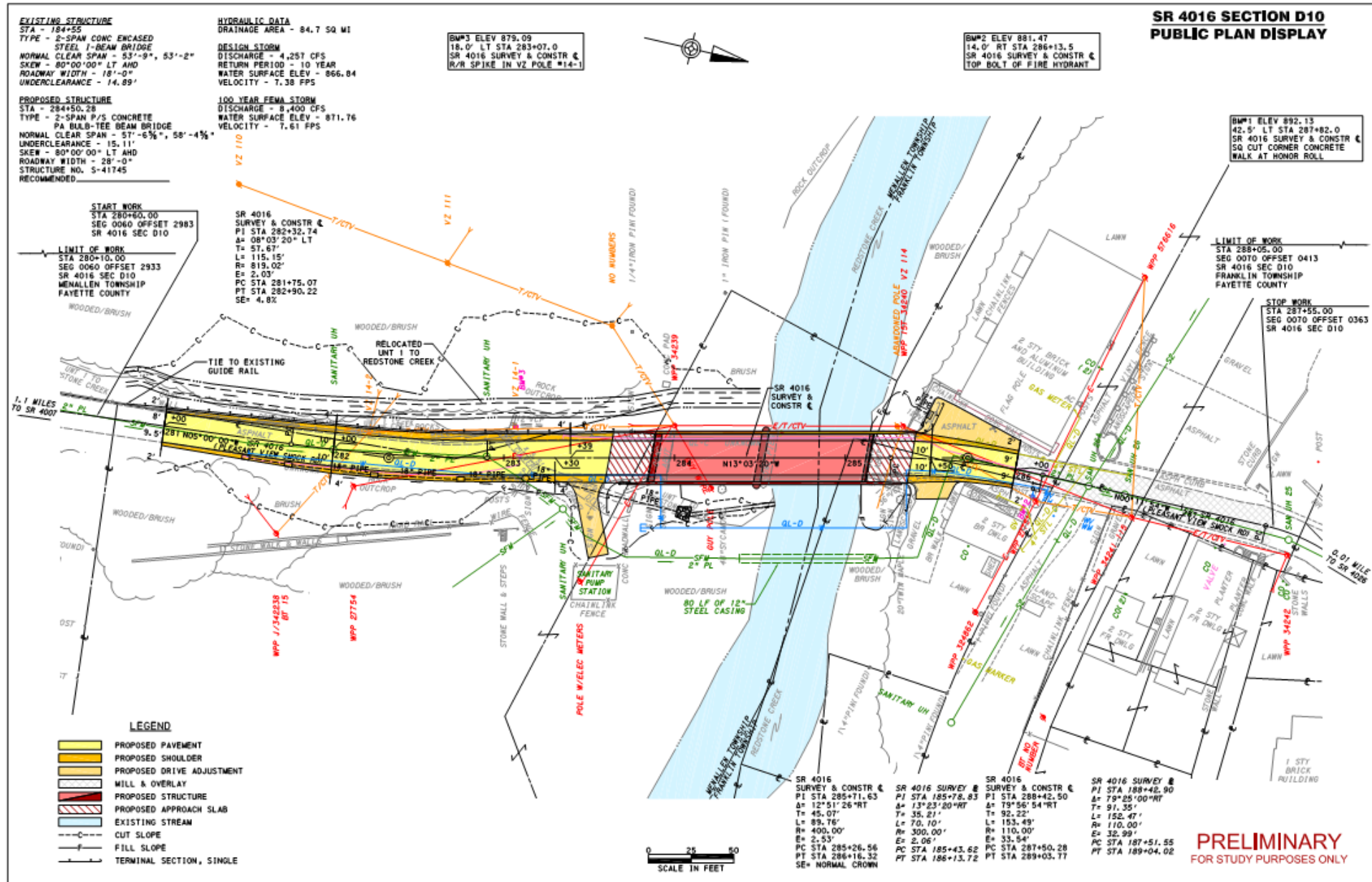
- Scope of Work includes:
 - Reconstruct Roadway approaches including a wider lanes and shoulders
 - Replace inlets and drainage pipes
 - Relocate Unnamed Tributary to Redstone Creek
 - Remove existing deck, beams, abutments, and pier
- Construct proposed abutments
- Construct proposed pier
- Construct proposed concrete beams and deck.
- Construct proposed barriers
- Perform overlay within paving limits



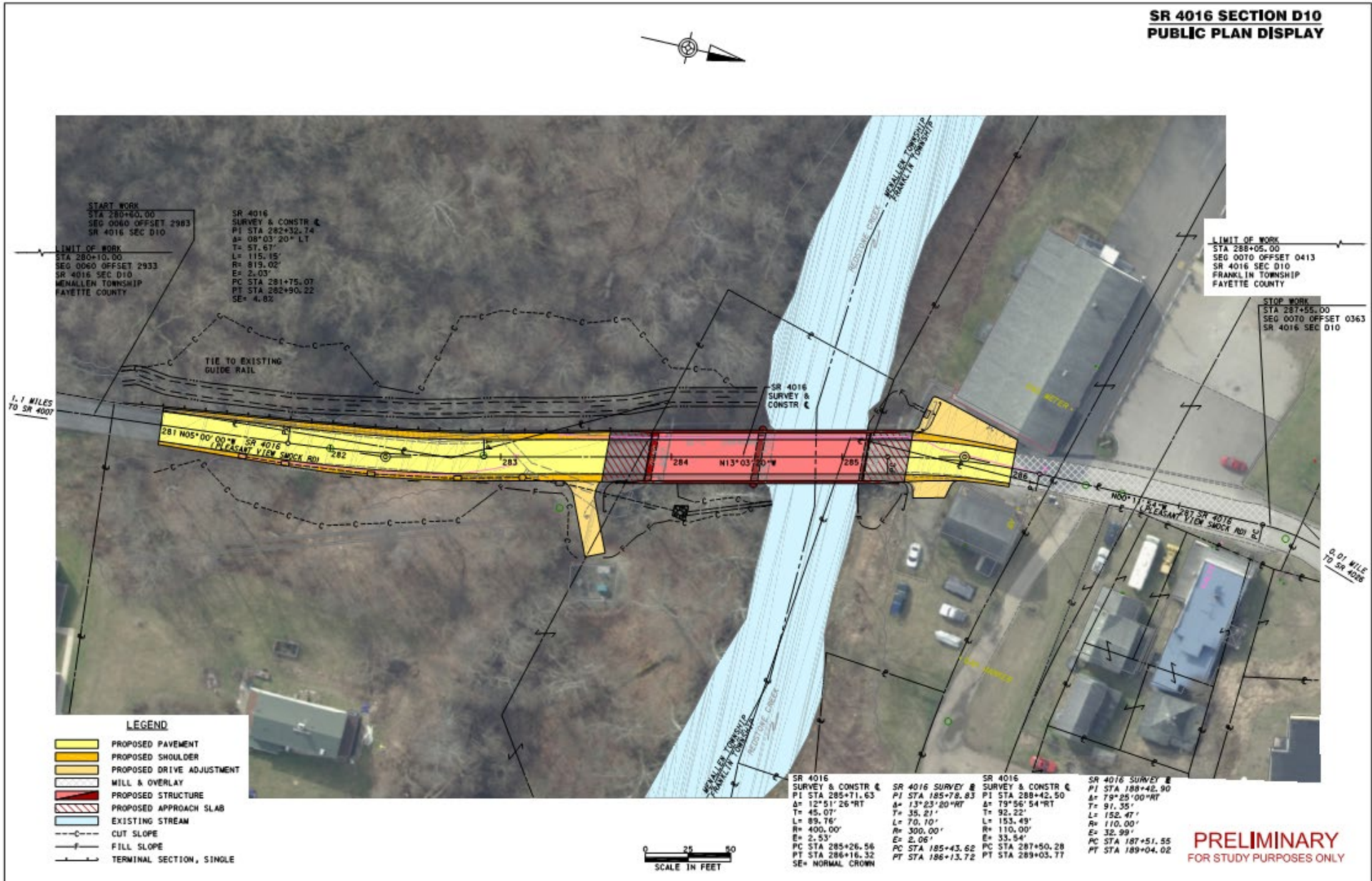
- SR 4026 (Hurst Rd) to SR 4026 (Rowes Run Smock Rd) to SR 4007 Rowes Run Rd)
- Length = 3.1 Miles



PROJECT ROADWAY PLAN

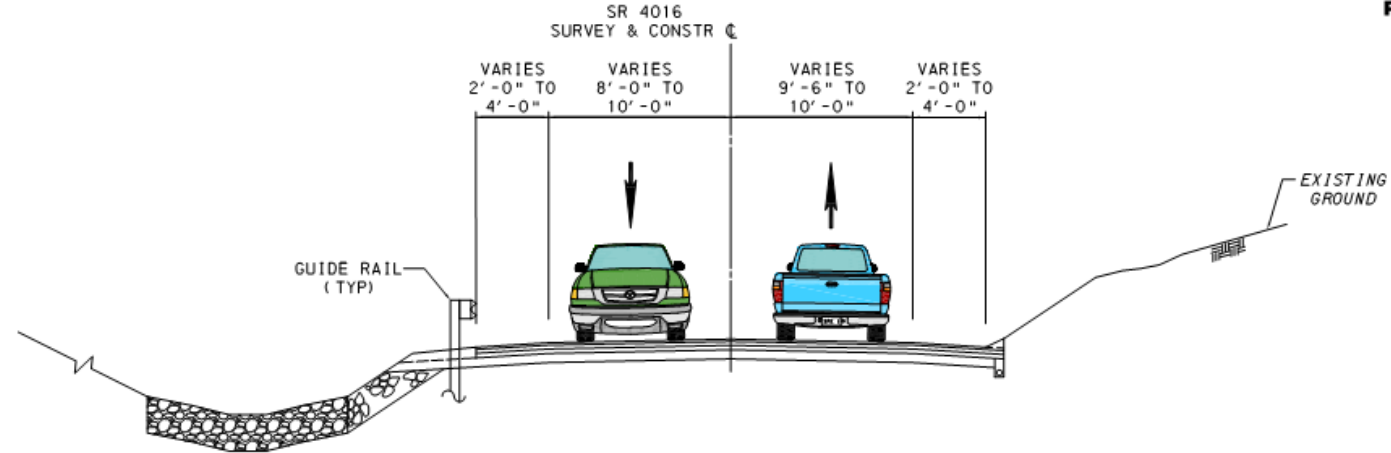


PROJECT ROADWAY PLAN (AERIAL)



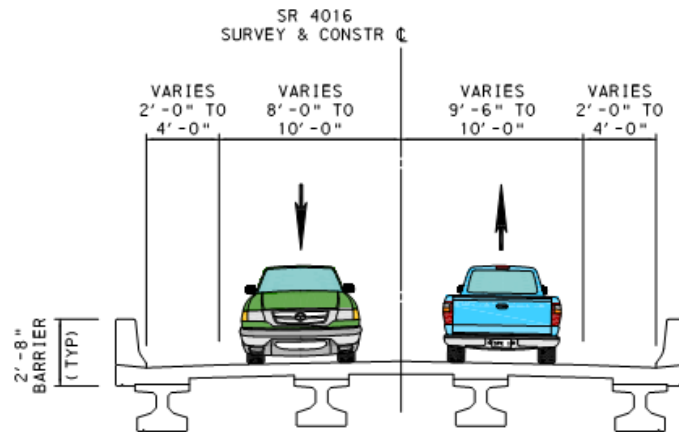
PROJECT ROADWAY TYPICAL

SR 4016 SECTION D10
PUBLIC PLAN DISPLAY



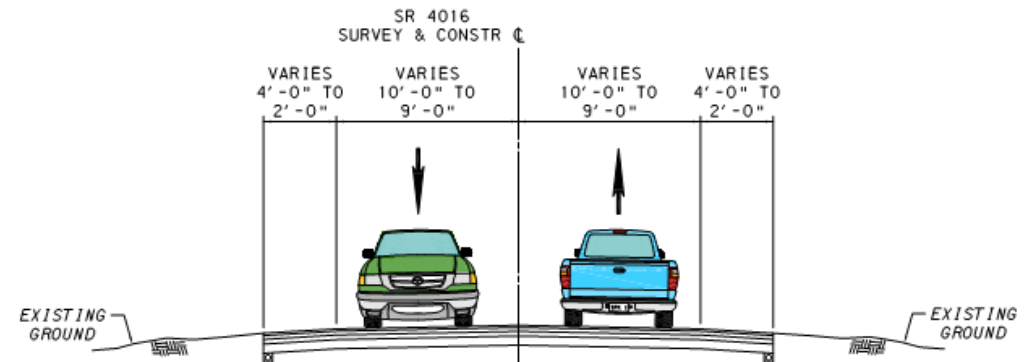
TYPICAL SECTION SOUTH OF BRIDGE

SR 4016
STA 281+00.00 TO STA 283+61.70
NOT TO SCALE



TYPICAL BRIDGE SECTION

SR 4016
STA 283+61.70 TO STA 285+38.80
NOT TO SCALE



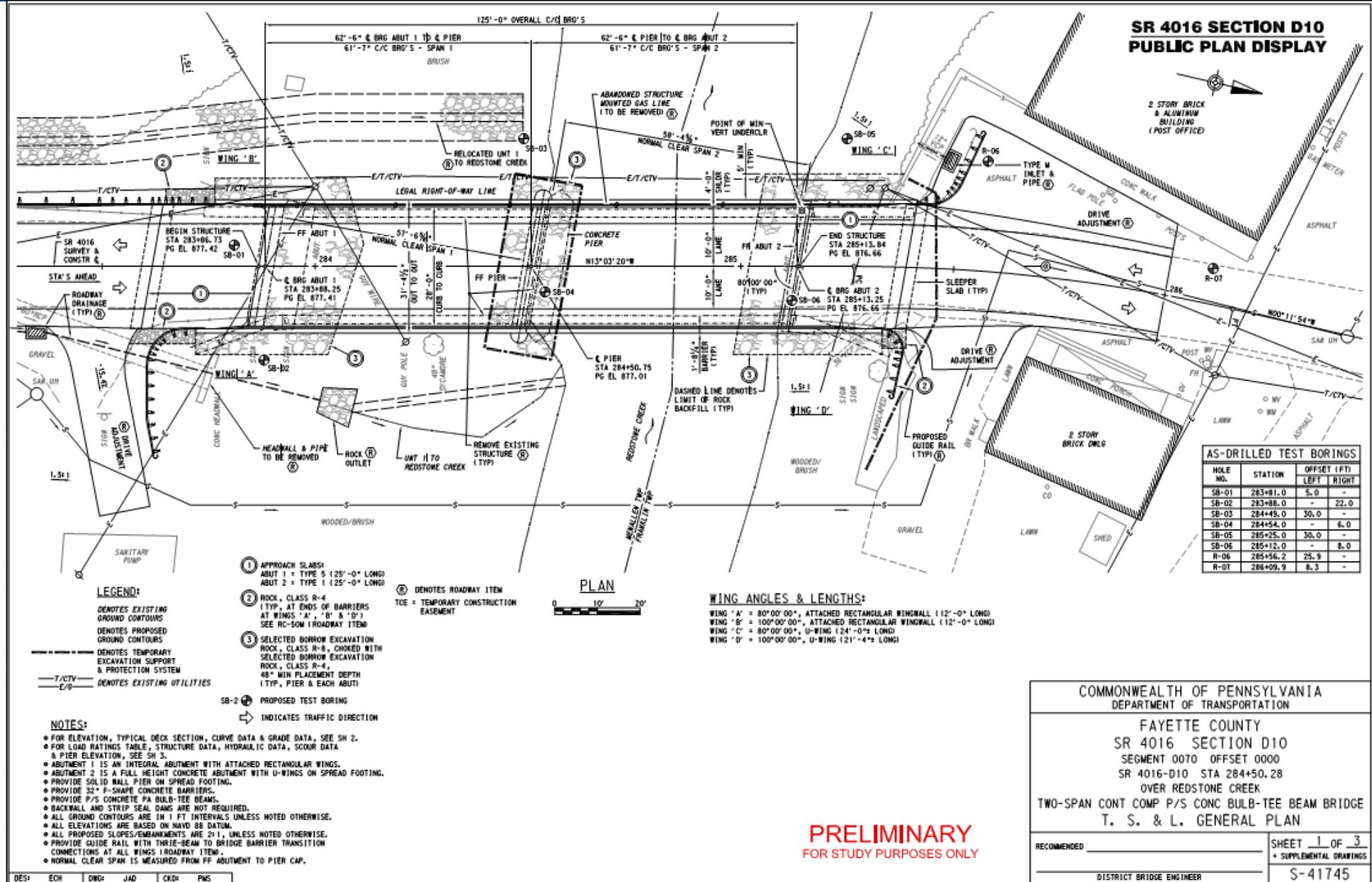
TYPICAL SECTION NORTH OF BRIDGE

SR 4016
STA 285+38.80 TO STA 286+00.00
NOT TO SCALE

PRELIMINARY
FOR STUDY PURPOSES ONLY



PROJECT STRUCTURE

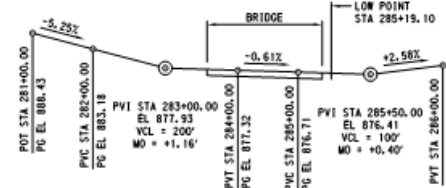
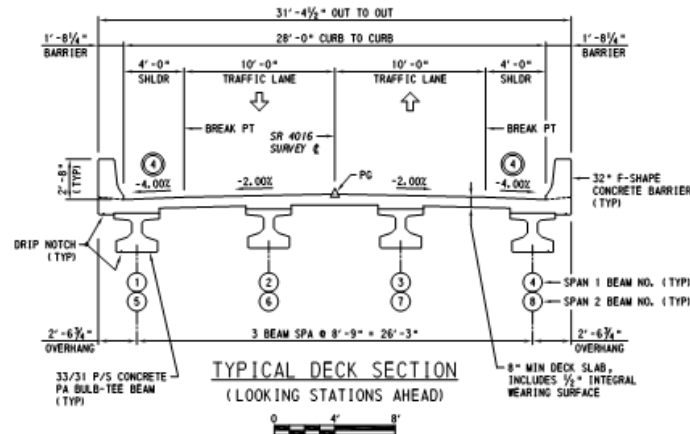
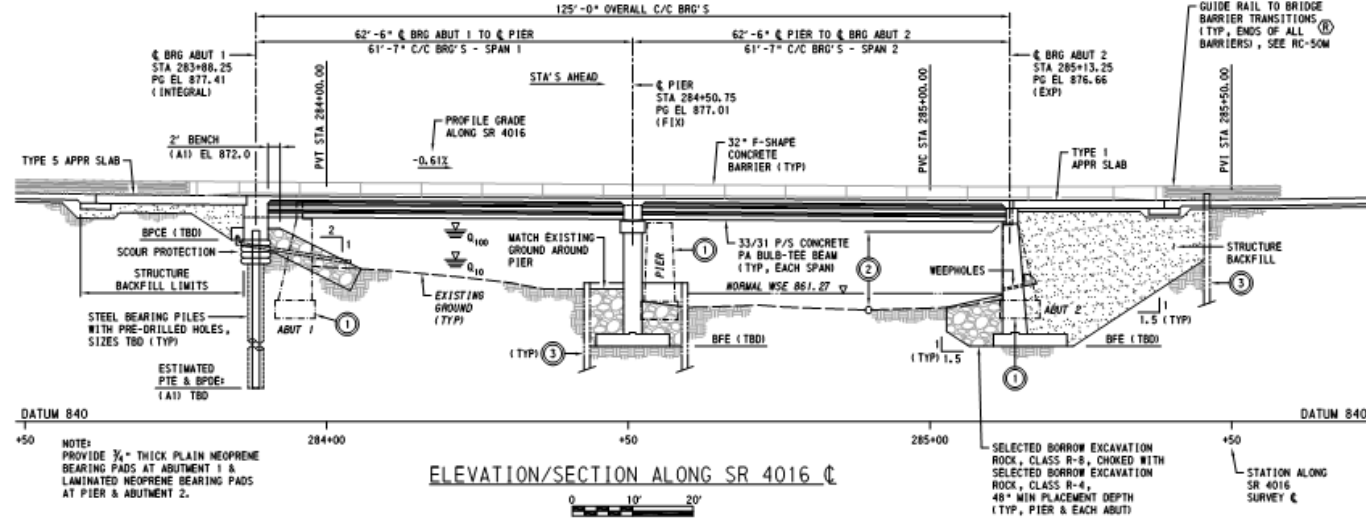


PROJECT STRUCTURE

SR 4016 SECTION D10 PUBLIC PLAN DISPLAY

LEGEND:

- ① REMOVE ENTIRE EXISTING PIER AND REMOVE EXISTING ABUTMENTS AND WINGWALLS TO 2' MIN BELOW PROPOSED CONSTRUCTION OR TO WHERE THERE IS NO CONFLICT WITH PROPOSED CONSTRUCTION, WHICHEVER GOVERNS (ROADWAY ITEM).
 - ② MIN EXISTING UNDERCL = 14.89' (EXISTING LOW CHORD OF BEAM 13 AT FF ABUT 2 = EL 872.58 & STREAMBED EL = 857.69)
MIN PROVIDED UNDERCL = 15.11' (BOTTOM OF BEAM 1 AT FF ABUT 2 = EL 872.80 & STREAMBED EL = 857.69)
 - ③ TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM
 - ④ AT APPROACH SLAB 2 ONLY:
SHOULDER SLOPE TRANSITIONS FROM -4.00% AT END OF STRUCTURE TO -6.00% AT END OF APPROACH SLAB.
- A1 = ABUTMENT 1
BFE = BOTTOM OF FOOTING ELEVATION
BPCE = BOTTOM OF PILE CAP ELEVATION
BPDE = BOTTOM OF PRE-DRILLED HOLE ELEVATION
PTE = PILE TIP ELEVATION
TBD = TO BE DETERMINED
- Ⓜ DENOTES ROADWAY ITEM
➔ INDICATES TRAFFIC DIRECTION



GRADE DATA SR 4016

HORIZ CURVE DATA SR 4016

PI STA 285+71.63
Δ = 12°51'26" RT
T = 45.07'
L = 89.76'
R = 400.00'
E = 2.53'
PC STA 285+26.56
PT STA 286+16.32

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

FAYETTE COUNTY
SR 4016 SECTION D10
SEGMENT 0070 OFFSET 0000
SR 4016-D10 STA 284+50.28
OVER REDSTONE CREEK

TWO-SPAN CONT COMP P/S CONC BULB-TEE BEAM BRIDGE
T. S. & L. ELEVATION & SECTION

RECOMMENDED SHEET 2 OF 3

S-41745

PRELIMINARY
FOR STUDY PURPOSES ONLY



PROPOSED PROJECT SCHEDULE

- Complete Preliminary Engineering: **Spring 2025**
- Begin Final Design: **Spring 2025**
- Begin Right-of-Way Acquisition: **Spring 2026**
- Open Bids: **Summer 2027**
- Road Closure and Construction: **June/August 2028**

(Dates Subject to Change)



PROJECT CONSULTATION

- Interested in becoming a Consulting Party for this Project?
 - A consulting party is a group or individual who has a demonstrated interest in the project, due to their legal or economic relationship to the undertaking or affected property. For example, consulting parties can be:
 - The local government
 - Property owners in the project area
 - Historical societies or preservation groups
- Please utilize the QR Code to fill out an application.



Questions?



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