I-83 EAST SHORE SECTION

HARRISBURG I-83 CAPITAL BELTWAY SR 0083, SECTION 079 DAUPHIN COUNTY, PA

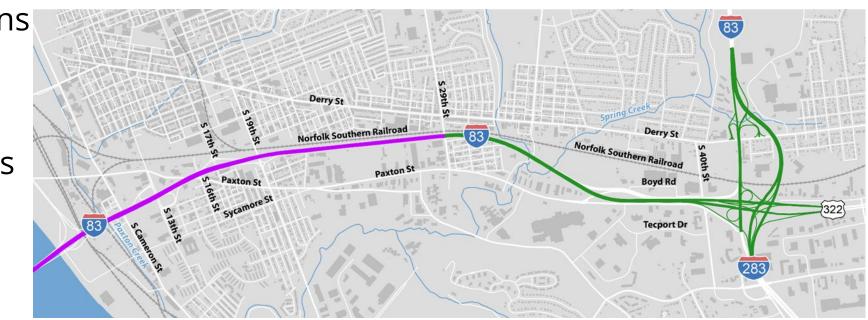
HNTB

Chris Deats, PE and Justin McCarthy, PE, SE ASHE / PennDOT D8 / PTC Conference April 26th, 2022

HARRISBURG I-83 CAPITAL BELTWAY SR 0083, SECTION 079 DAUPHIN COUNTY, PA

SR 0083 Section 079 Project

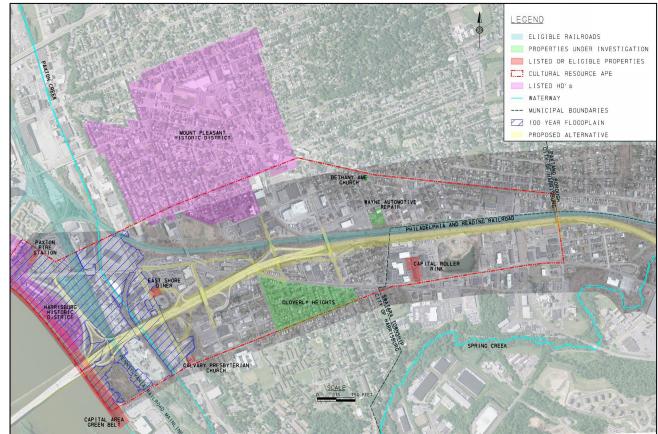
- Design Considerations
- Alternatives
- Traffic Model
- Construction Projects
- Contract #1
- Traffic Control
- Structures
- Timeline



HARRISBURG I-83 CAPITAL BELTWAY SR 0083, SECTION 079 DAUPHIN COUNTY, PA

Project Considerations

- NS Railroad
- Historic Properties
- River Floodplain
- EJ Communities
- North-South Ped/Bike Connections
- Tie-in to Viaduct

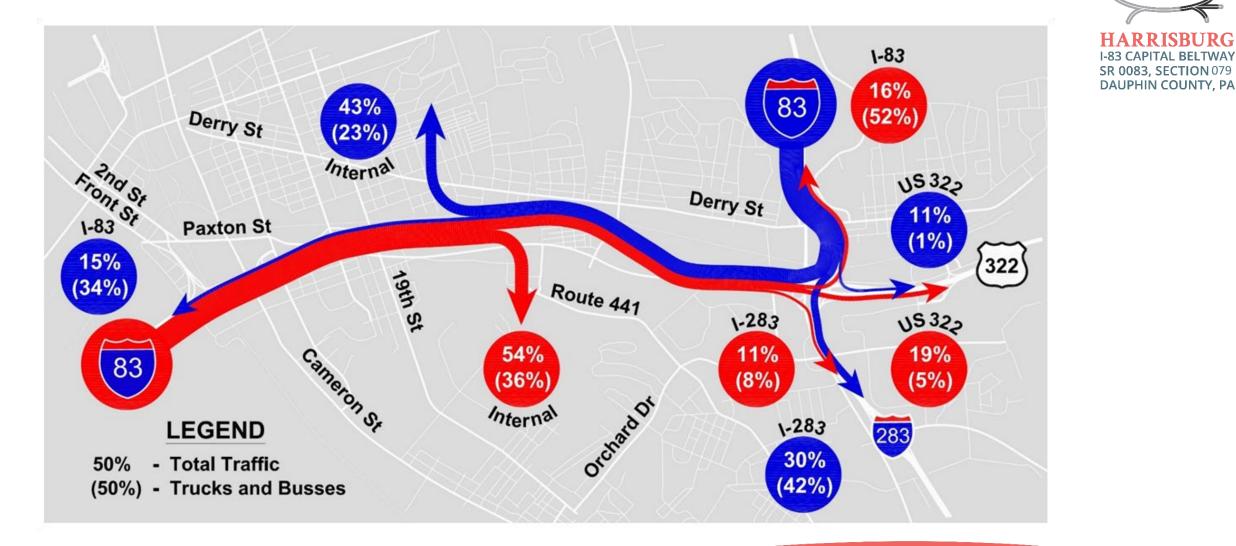


Alternatives

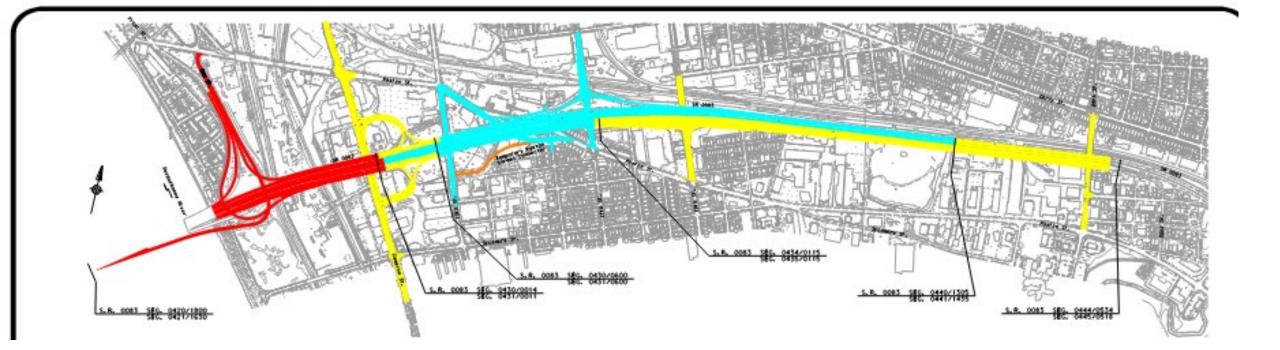
Paxton St



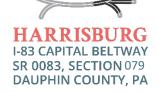




Construction Projects

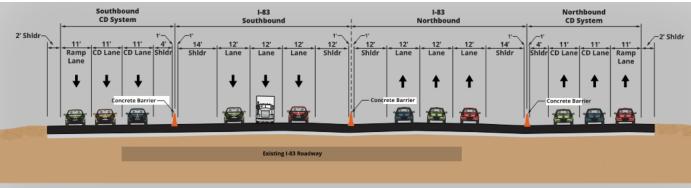


HARRISBURG I-83 CAPITAL BELTWAY SR 0083, SECTION 079 DAUPHIN COUNTY, PA

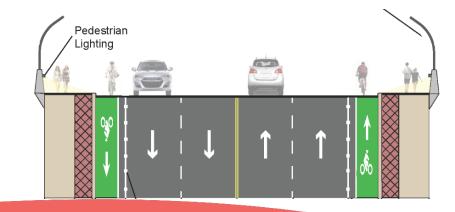


Contract #1 Section 079

- Cameron Street Interchange including stormwater basins
- 19th Street Interchange
- NB widening from 19th Street overpass to 29th Street overpass
- Cameron Street Reconstruction
- 19th Street Reconstruction
- 29th Street Reconstruction

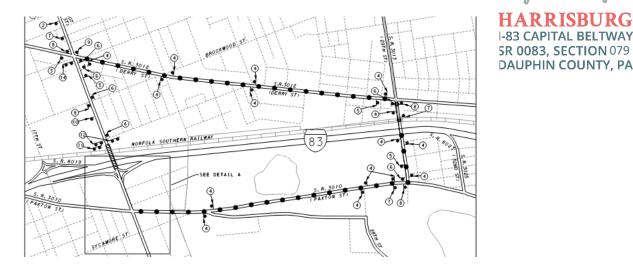


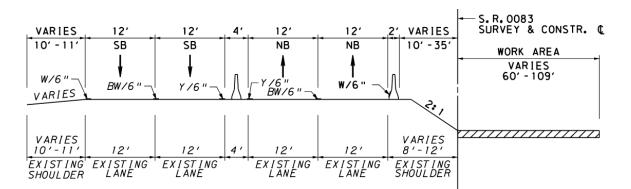
I-83 MAINLINE WITH COLLECTOR DISTRIBUTOR (CD) SYSTEM



Traffic Control

- Maintain 2 lanes of traffic in each direction for I-83
- Off-alignment widening
- Detours for bridges over I-83
- Maintain current interchange at 13th Street until Cameron Street Interchange is constructed





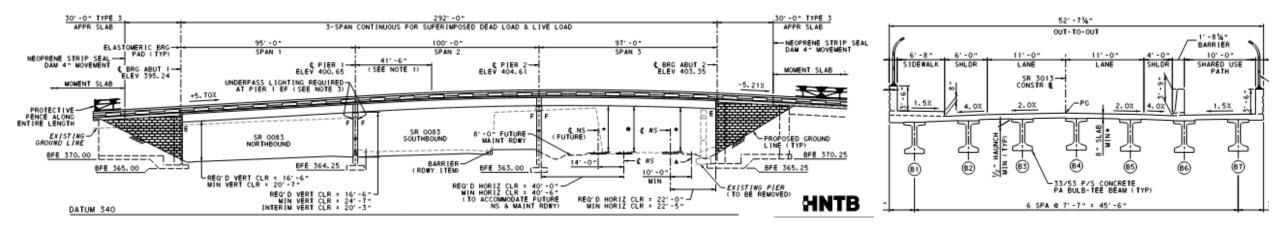
Summary of Bridges

- 29th St over SR 0083 & Norfolk Southern
- 19th St over Norfolk Southern
- 19th St over SR 0083
- SR 0083 over Abandoned Railroad Spur (Bridge Removal)



29th St over SR 0083 & NS

- Coordination with Norfolk Southern
- Existing abutment removal concept details
- Beam placement concept details

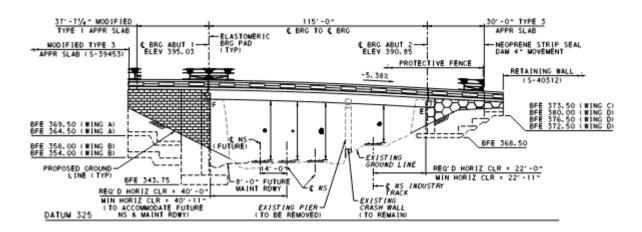


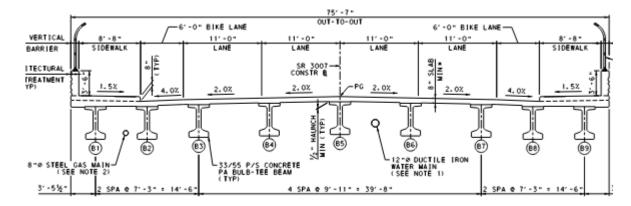
I-83 CAPITAL BELTWAY SR 0083, SECTION 079

DAUPHIN COUNTY, PA

19th St over NS

- Coordination with Norfolk Southern
- Existing pier removal concept details
- Beam placement concept details



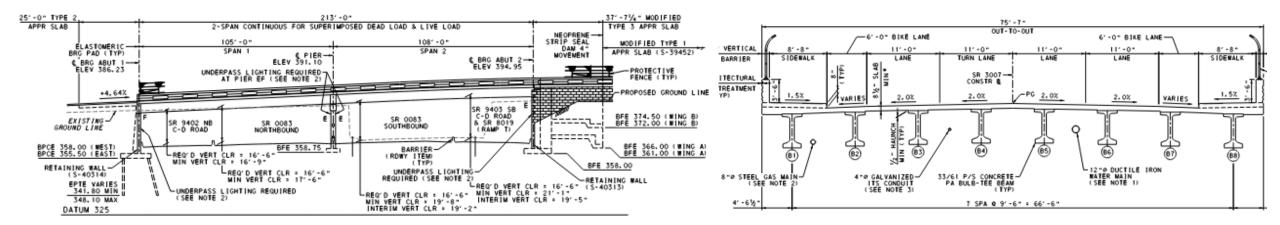


HARRISBURG I-83 CAPITAL BELTWAY SR 0083, SECTION 079

DAUPHIN COUNTY, PA

19th St over SR 0083

- Beam placement concept details
- Substructure founded on rock outcropping
- Complex geometry Abutment 1 at 19th St interchange



HARRISBURG I-83 CAPITAL BELTWAY SR 0083, SECTION 079

DAUPHIN COUNTY, PA

Summary of Retaining Walls, Sound Barriers & Moment Slabs

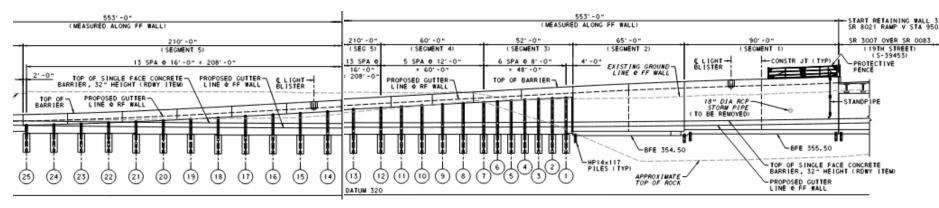
- RW1 19th St Northeast
- RW2 19th St over SB C-D Road
- RW3 Ramp V over NB C-D Road
- RW4 Yates Alley over Ramp V
- RW5 Ramp U over NB C-D Road
- RW6 Ramp U over 18th St

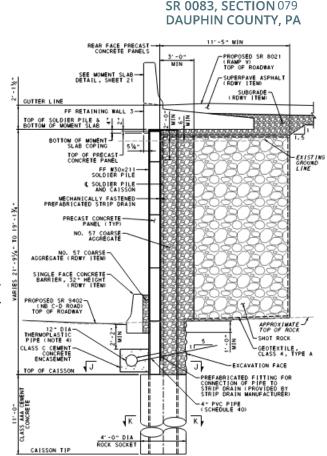
- SB1 East of RW4 along Ramp V & NB C-D Road
- SB2 West of RW4 along Ramp V
- MS1 & MS2 Along SR 0083 SB (to maintain grading outside of NS ROW)

SR 0083, SECTION 079 DAUPHIN COUNTY, PA

RW3

- Wall types tailored to rock profile
- Group effects conservatively considered for caissons in rock
- Potential need for blasting of rock for NB C-D Road

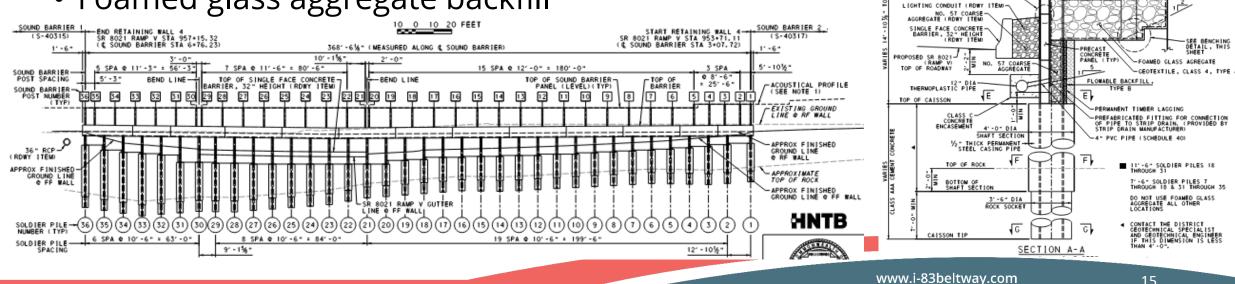




HARRISBURG

RW4 / SB1 / SB2

- Constraints in front (Ramp V) & behind (Yates Alley)
- Poor soil conditions rock sockets at every caisson
- Group effects considered for caissons in soil
- Foamed glass aggregate backfill



HARRISBURG **I-83 CAPITAL BELTWA** SR 0083, SECTION 079 DAUPHIN COUNTY, PA

> YATES ALLEY TOP OF ROADWAY SUPERPAVE ASPHAL

C SOLDIER PILE

SUBGRADE

PERMANENT SHORING (IN LOCATIONS WITH FOAMED GLASS AGGREGATE)

SOUND BARRIER

SEE MOMENT SLAB

FF RETAINING WALL

BOTTOM OF NOMENT TOP OF PRECAST

MECHANICALLY FASTENED PREFABRICATED STRIP DRAIN

FF W24x192 SOLDIER PILE SEE SHEAR KEY DETAIL. THIS SHEET

EXISTING GROUND LINE

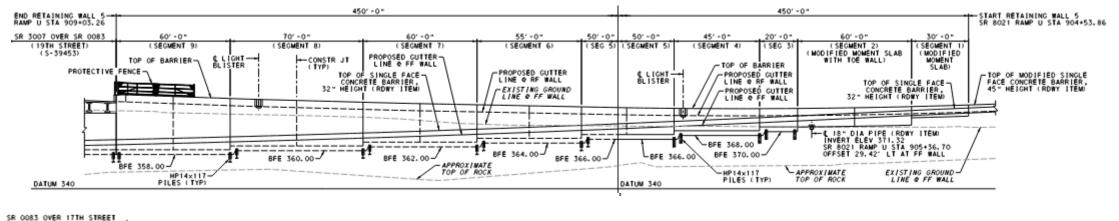
GUTTER LINE

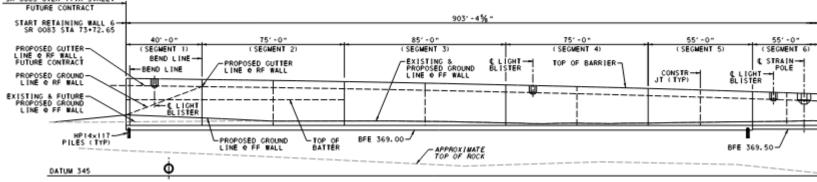
TOP OF SOLDIER PILE BOTTOM OF MOMENT SL

14. N.

HARRISBURG I-83 CAPITAL BELTWAY SR 0083, SECTION 079 DAUPHIN COUNTY, PA

RW5 & RW6





Summary of Structures

- 17th St over Norfolk Southern
- SR 0083 over 17th St
- SR 0083 over Paxton St
- 13th St over SR 0083
- RW7 SB C-D Road between 17th St & Paxton St
- RW8 NB C-D Road between 17th St & Paxton St
- MS3 Continuation of MS2 from Sec 079
- MS4 Along NB C-D Road between 13th St & Paxton St

SR 0083. SECTION 079

DAUPHIN COUNTY. PA

SR 0083 Sec 079 Project Timeline 2022



SR 0083 Sections 078 & 079



