

Lewis County
Highway Department
presents the
Replacement of CR 21
Bridge over Gulf Stream

P.I.N. 7753.95
BIN 1039780

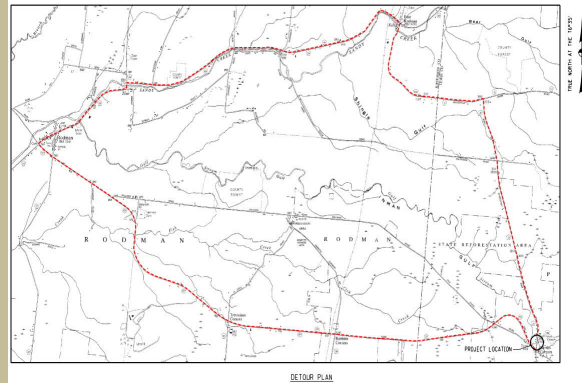


NYS Department of Transportation
Federal Highway Administration



Work Zone Traffic Control:

The CR 21 Bridge will be closed to traffic for the duration of construction. Traffic will be maintained on an off-site detour during this time. The official signed detour uses NYS Route 177, County Route 69, County Route 156, and County Route 21 to detour vehicles around the job site. The official signed detour is approximately 17 miles long and takes 25 minutes to drive. Emergency services, school buses, and local commuter traffic will likely use local roads while the bridge is closed, significantly reducing the detour length and the commuter time during construction.



Contact Information:

Lewis County:
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Lewis County Highway Department
7660 State Street, Lowville, New York 13367
Email: timhunt@lewiscounty.ny.gov
Barton & Loguidice, D.P.C.:
Matthew D. Patterson, P.E., Chief Engineer
Barton & Loguidice, D.P.C.
443 Electronics Parkway, Liverpool, New York 13088
Email: mpatterson@bartonandloguidice.com

Please submit comments to:
mpatterson@bartonandloguidice.com
The project comment period is open through: April 12, 2021

Project Location:

CR 21 Bridge over Gulf Stream (BIN 1039780) in
the Town of Pinckney, Lewis County, New York.



Current Conditions:

BIN 1039780 is a two lane, single span, steel through girder bridge. The clear span is approximately 65' long and supported on concrete abutments and footings. The bridge was originally built in 1933. The structure is structurally deficient and has exceeded its intended service life.

Project Purpose:

The purpose of this project is to maintain the long term crossing and address deficiencies associated with this crossing in a cost effective approach.

Deficiencies to be addressed:

- Left girder has several areas along the upper and lower flanges that exhibit moderate corrosion deformation to built up upper and lower flange plates. Left girder upper flange has 15% section loss.
- Right girder upper flange has a deformed cover plate at $\frac{3}{4}$ span. Rivets were used to attach built up cover plates. This location had rivets replaced with bolts. This condition was also observed in other locations of both left and right girders.
- Several floor beams exhibit section loss to lower flange from free end of floor beam to bearing point on the cantilevered portion of the beam on both girders.
- Both the begin and end concrete abutments exhibit spalling at various locations.
- Non-standard features including: shoulder widths.



Proposed Alternative:

The proposed alternative is to replace the existing bridge with a new single span bridge on a similar horizontal and vertical alignment to the existing. As part of the preferred alternative, the superstructure of the existing bridge will be completely removed. The new abutments will be constructed behind the existing abutments to avoid impacts to the streambed. A portion of the existing footing on the south side will be left in place and used to stabilize the embankment.

The proposed structure is a single-span multiple steel girder superstructure with a cast-in-place concrete deck supported on cast-in-place concrete conventional abutments. New concrete wingwalls will be constructed. New box beam guide rail will be installed over the bridge and along the approaches. Full depth reconstruction of the roadway will occur throughout the project limits.

Structure Information:

	<u>Existing</u>	<u>Proposed</u>
Type	Steel through girder	Multiple steel girder
Year Built	1933	TBD
Travel Lane	11 ft.	11 ft.
Shoulder	Varies 1 ft. to 5 ft.	5 ft.
Sidewalk	4.5 ft. east	None
Width	34 ft. 4 in.	35 ft. 4 in.
Span	65 ft.	108 ft.
Service Life	NA	75 years
Construction	NA	\$1,538,000

Hydraulics:

There are no hydraulic deficiencies along Gulf Stream through the project area. The proposed alternative provides adequate freeboard for both the 50-year and 100-year storms.

Right-Of-Way:

Two easements, one permanent and one temporary, are required on the north side of the bridge for excavation for the end abutment and for the closed drainage system. The proposed PE is located adjacent to the highway boundary on the northwest quadrant and totals 0.0314 acres (1368 square feet). The proposed TE is located adjacent to the highway boundary on the northeast quadrant and totals 0.0510 acres (2222 square feet).

Anticipated Schedule:

Design Approval – April 2021
Design Complete – December 2021
ROW Acquisition – January 2022
Start Construction – TBD
Complete Construction – TBD



END APPROACH (LOOKING NORTH)



DOWNSTREAM FASCIA



UPSTREAM FROM BRIDGE



BEGIN APPROACH (LOOKING SOUTH)



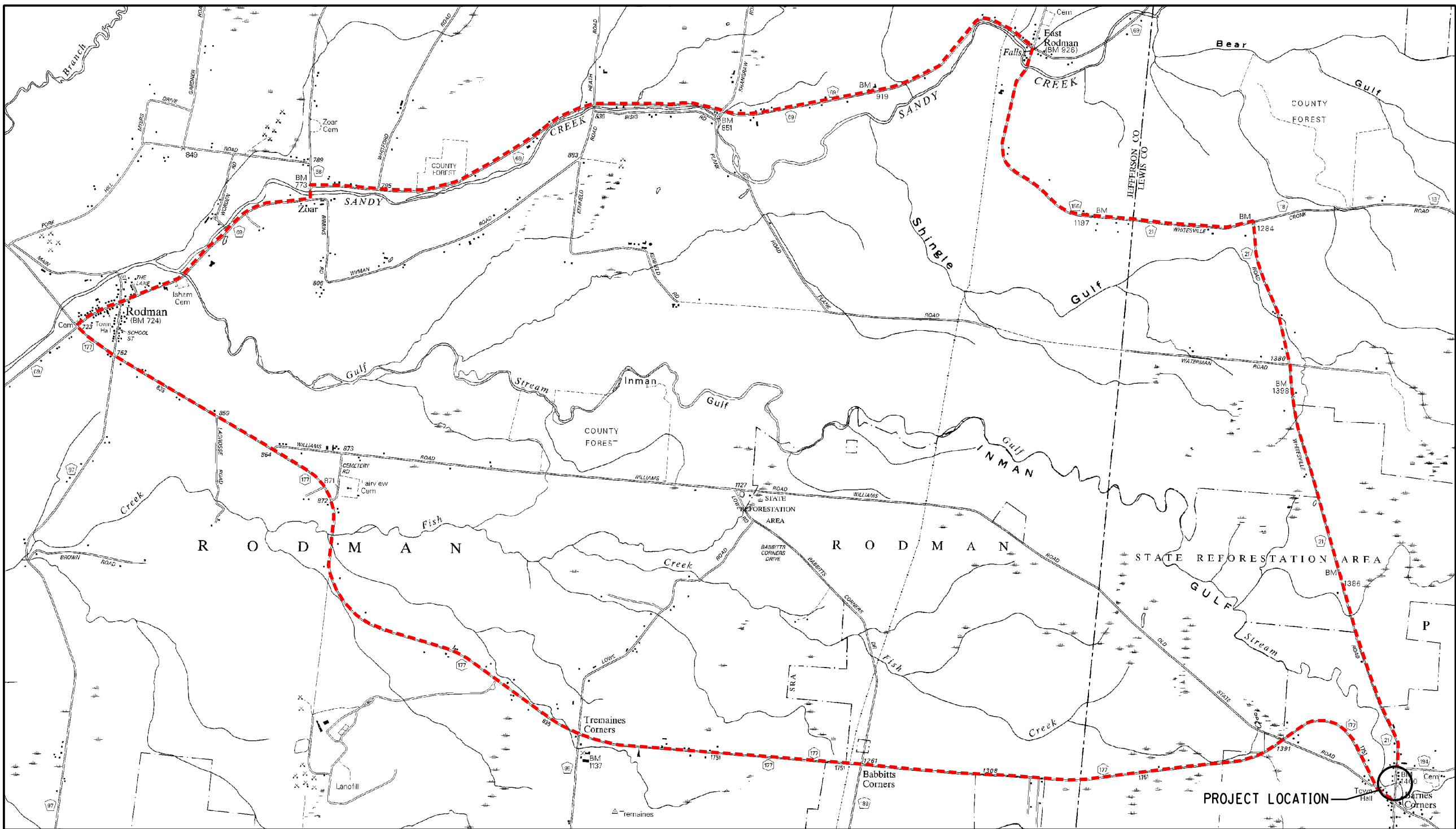
UPSTREAM FASCIA



DOWNSTREAM FROM BRIDGE

REPLACEMENT OF CR 21 BRIDGE
OVER GULF STREAM (PIN 7753.95) (BIN 1039780)
TOWN OF PINCKNEY, LEWIS COUNTY





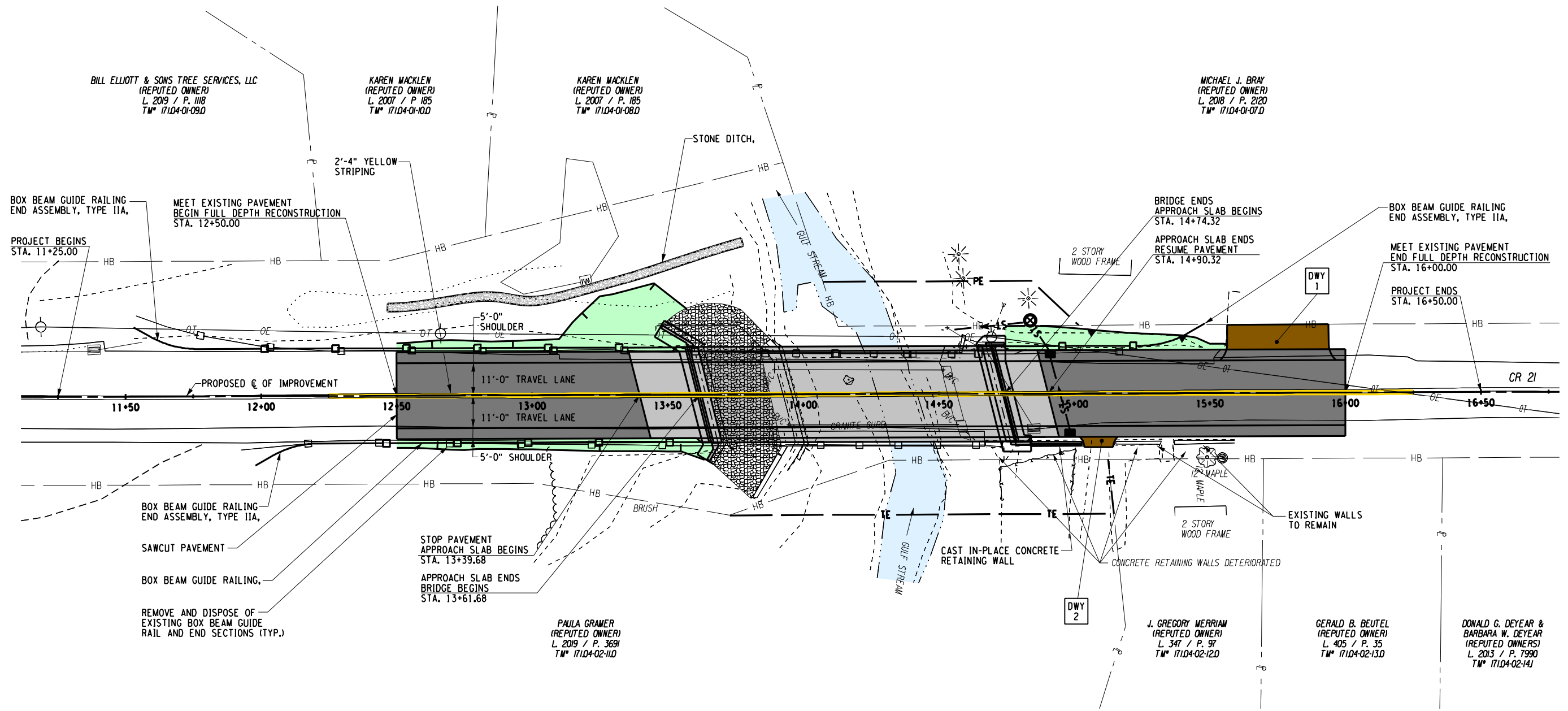
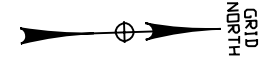
TRUE NORTH AT THE 76°35'
 MERIDIAN OF WEST LONGITUDE

DETOUR PLAN

**REPLACEMENT OF CR 21 BRIDGE
 OVER GULF STREAM (PIN 7753.95) (BIN 1039780)
 TOWN OF PINCKNEY, LEWIS COUNTY**

LEGEND:
 - - - - - DETOUR ROUTE





BILL ELLIOTT & SONS TREE SERVICES, LLC
(REPUTED OWNER)
L. 2019 / P. 1118
TM# 17104-01-09.D

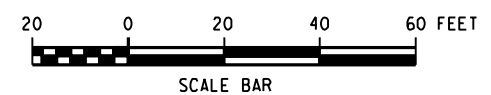
KAREN MACKLEN
(REPUTED OWNER)
L. 2007 / P. 185
TM# 17104-01-10.D

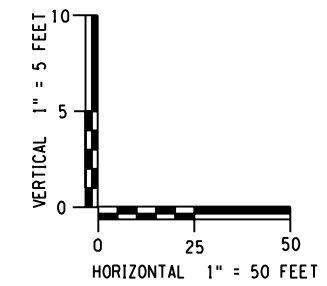
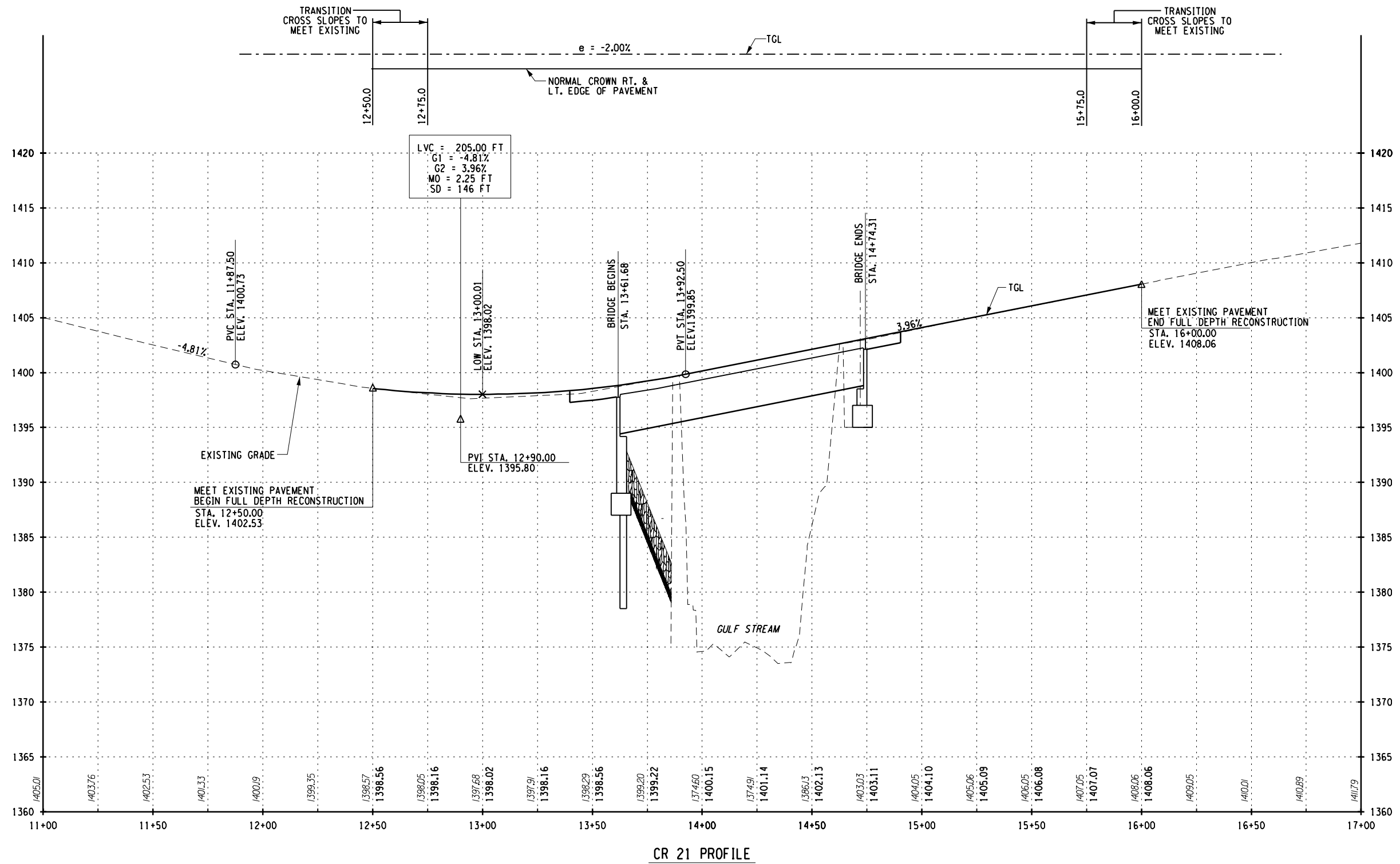
KAREN MACKLEN
(REPUTED OWNER)
L. 2007 / P. 185
TM# 17104-01-08.D

MICHAEL J. BRAY
(REPUTED OWNER)
L. 2018 / P. 2120
TM# 17104-01-07.D

- LEGEND:
- PROPOSED ROADWAY
 - PROPOSED BRIDGE & APPROACH SLAB
 - EARTHWORK LIMIT
 - GULF STREAM
 - DRIVEWAYS

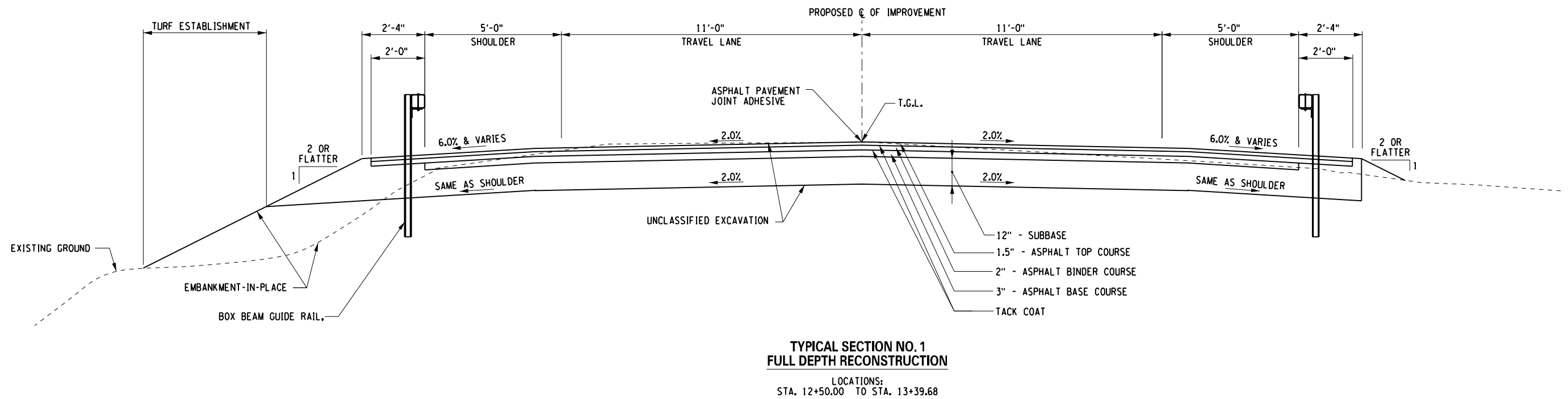
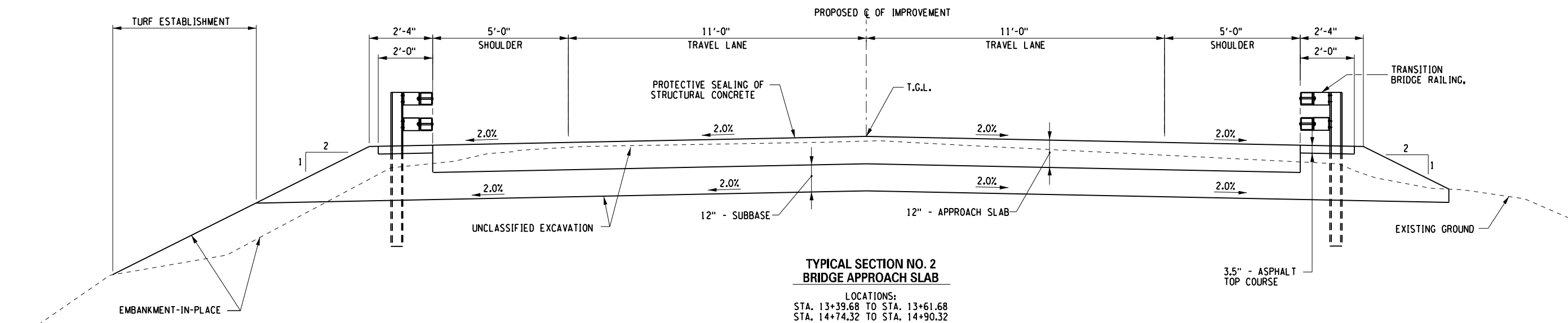
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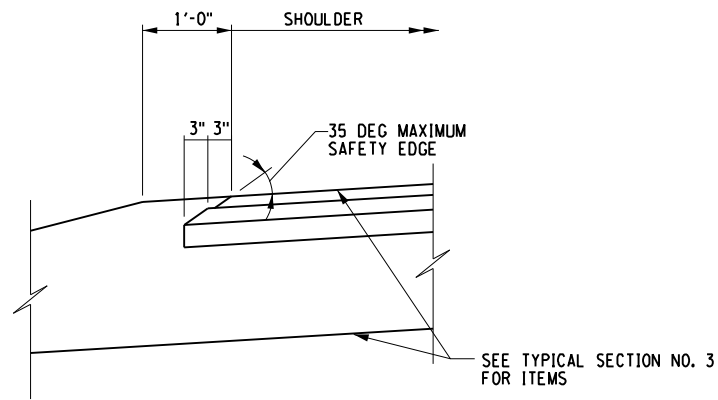
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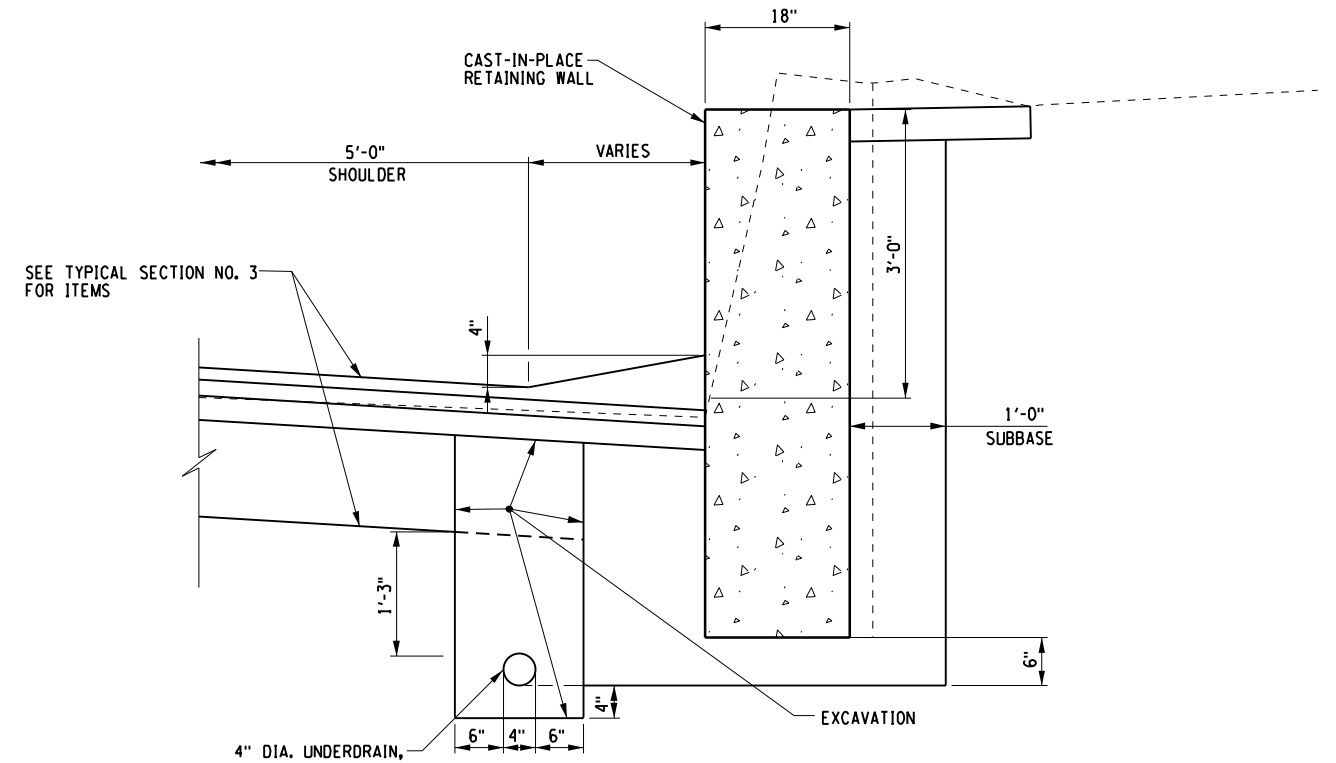


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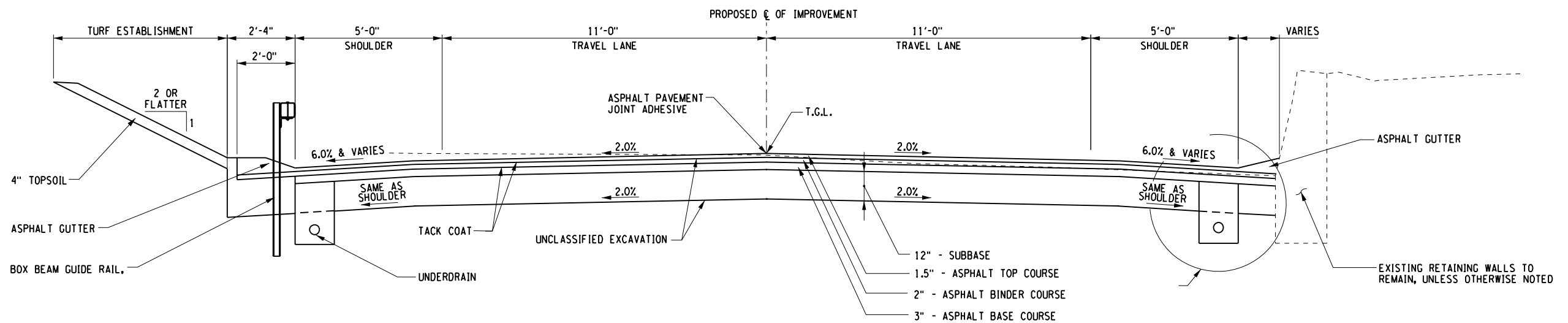




HALF SECTION WITHOUT GUIDE RAIL AND EDGE OF PAVEMENT DETAIL



HALF SECTION WITH RETAINING WALL AND UNDERDRAIN

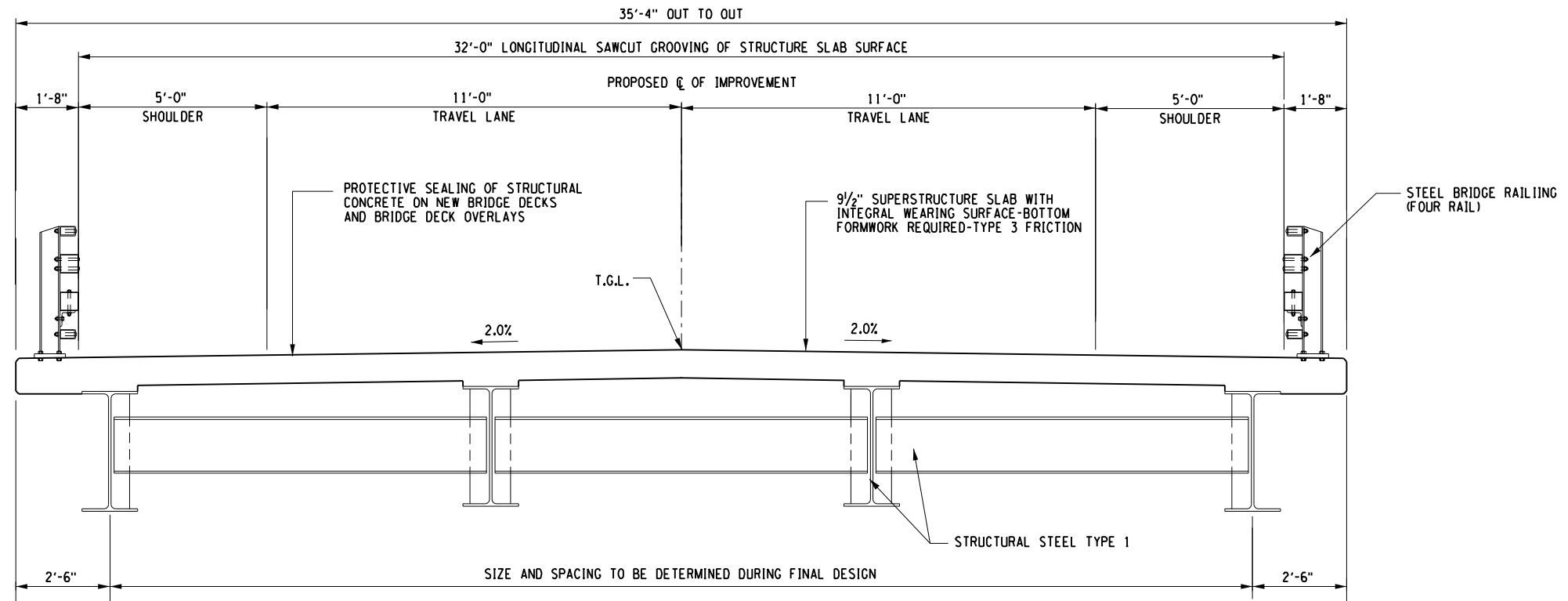


TYPICAL SECTION NO. 3
FULL DEPTH RECONSTRUCTION

LOCATIONS:
STA. 14+85.00 TO STA. 16+00.00

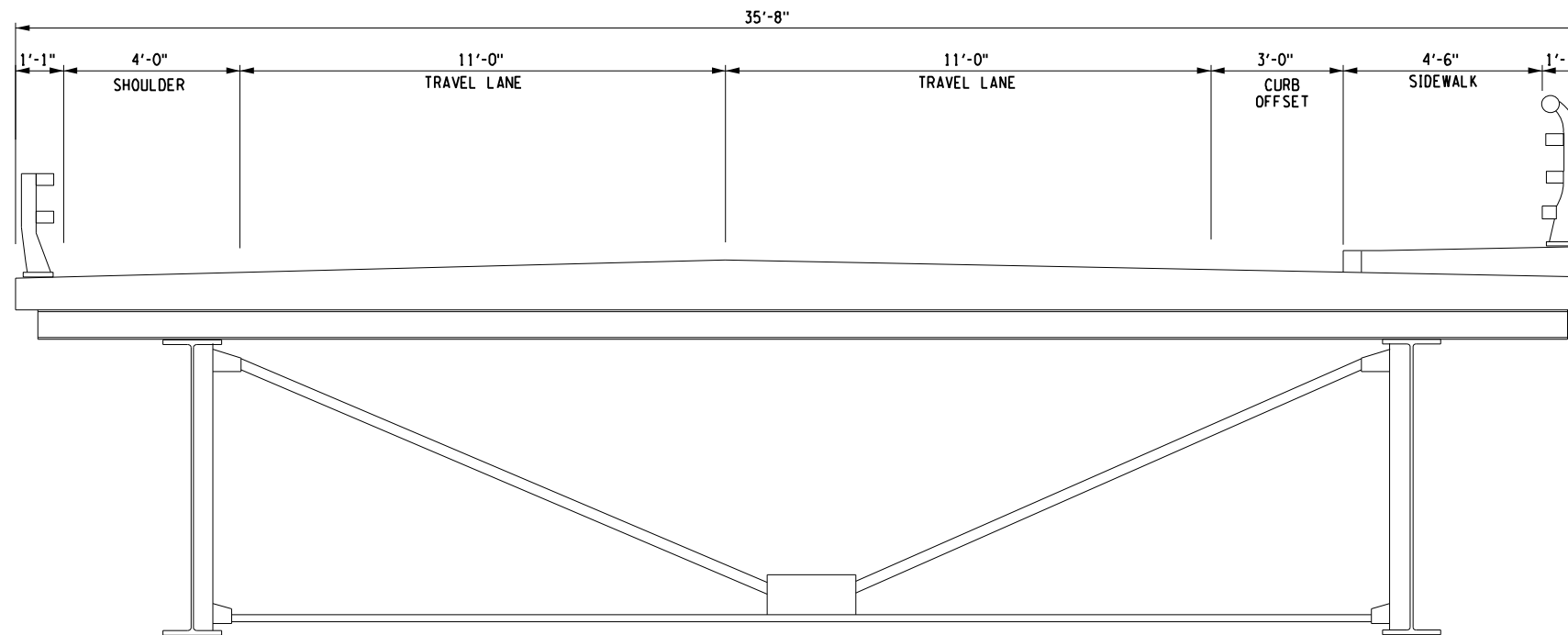
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PROPOSED BRIDGE SECTION

SCALE: 1/4" = 1'-0"



EXISTING BRIDGE SECTION

SCALE: 1/4" = 1'-0"

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