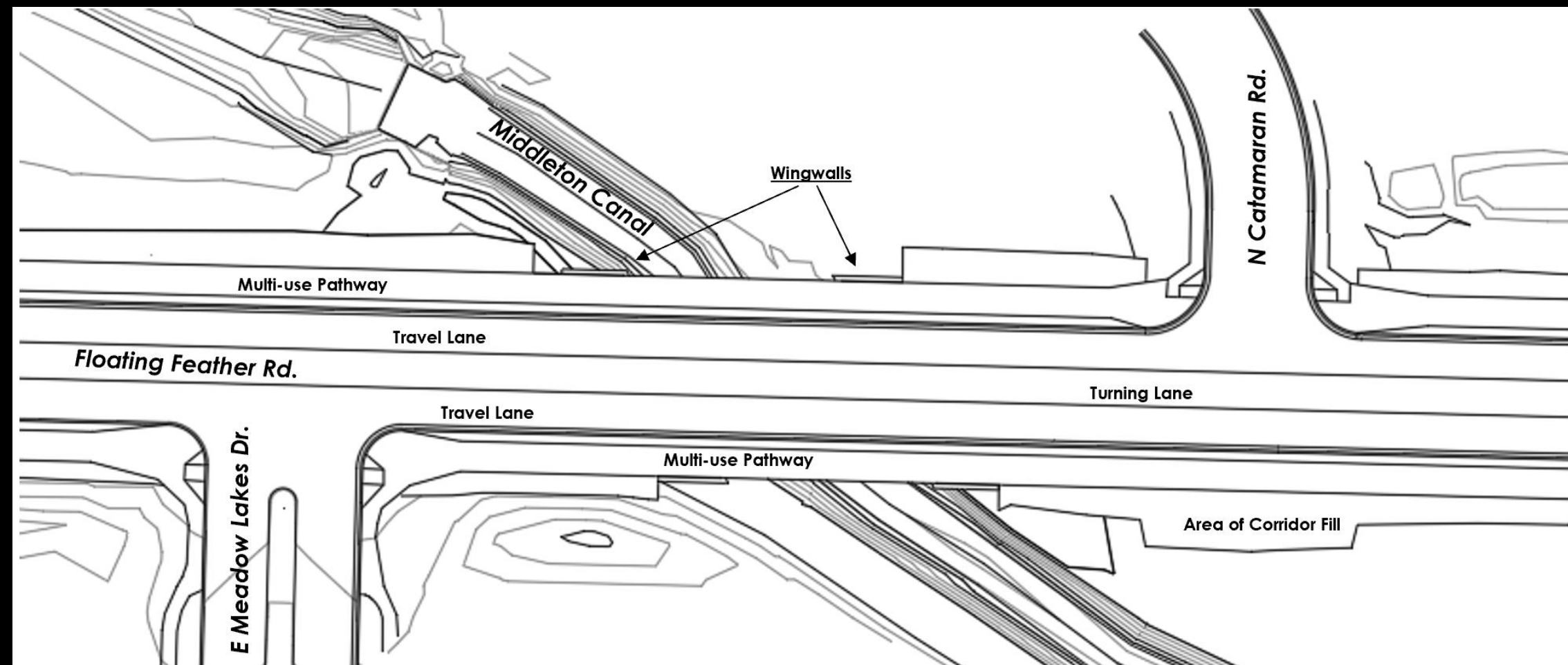
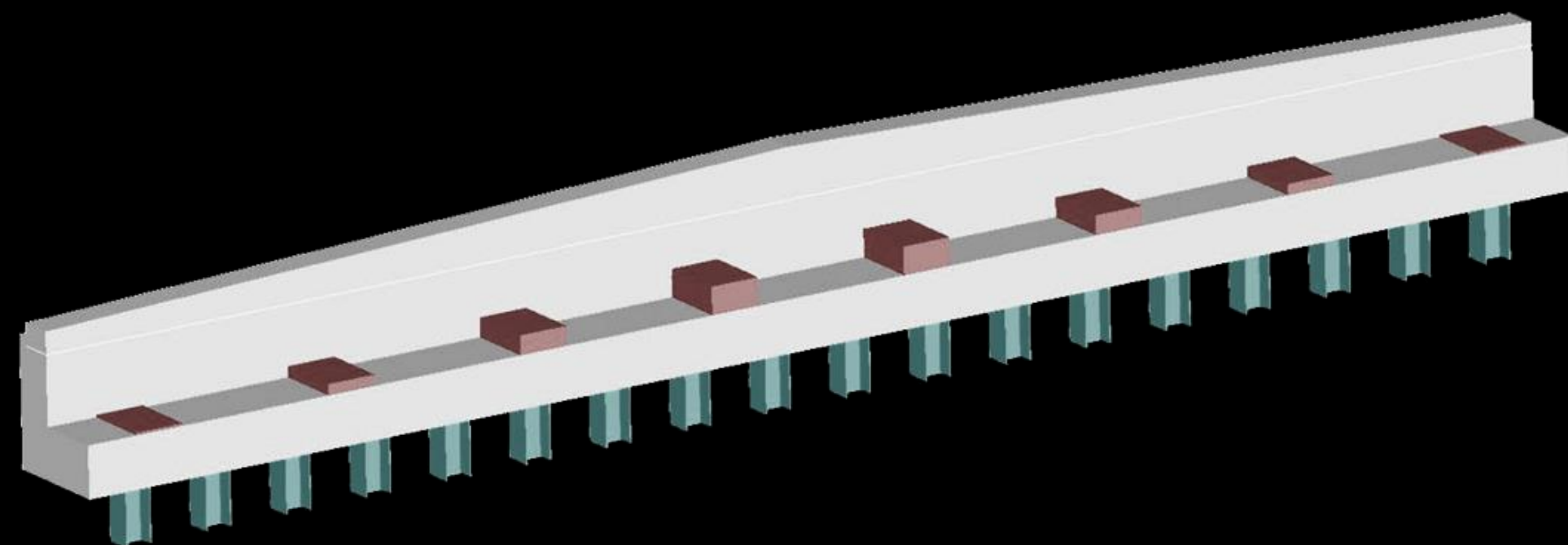


ROADWAY ALIGNMENT



- Vehicular Lane Width: 12'
- Multi-Use Pathway Width: 10'
- Bridge Length: 72'
- Bridge Skew: 30 Degrees
- Roadway Height: 2469 MSE

FOUNDATION DESIGN



- Full Integral Abutment Supported by 18 Driven Steel HP14X117 to a Depth of 50'
- Maximum Forces and Moments Applied from Bridge and Earthen Fill Transferred from Abutment to Piles
- Pile Spacing is 3.75' On Center
- Piles Embedded 2' Into Abutment

OBJECTIVES

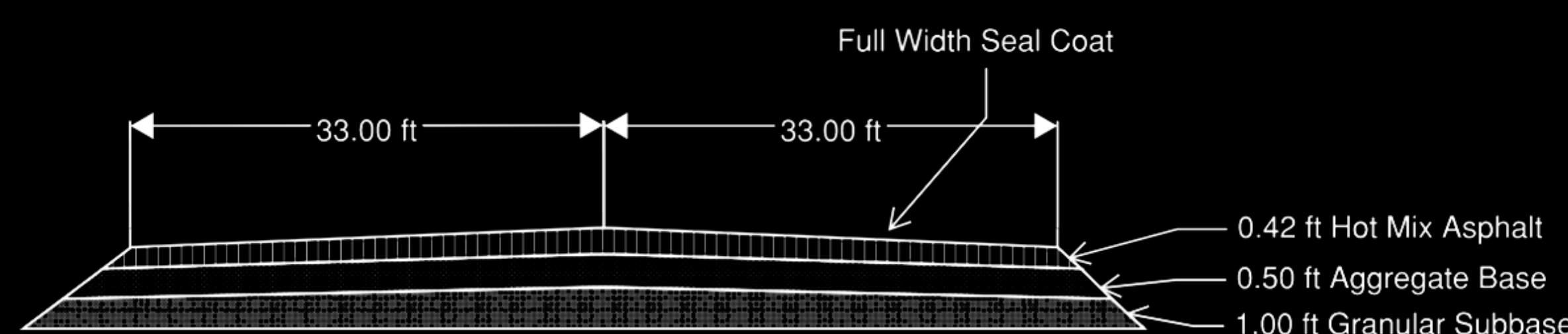
- Improve Safety for Future Usage of Vehicles, Pedestrians, and Cyclists
- Minimize Cost
- Design 75-Year Service-Life Bridge and Approach Replacement

BACKGROUND

- Located in Star, Idaho on Floating Feather Road
- Corridor Length of Approximately 1250'
- Rapid Suburban Development in Surrounding Areas
- Increase in Vehicular and Pedestrian Traffic

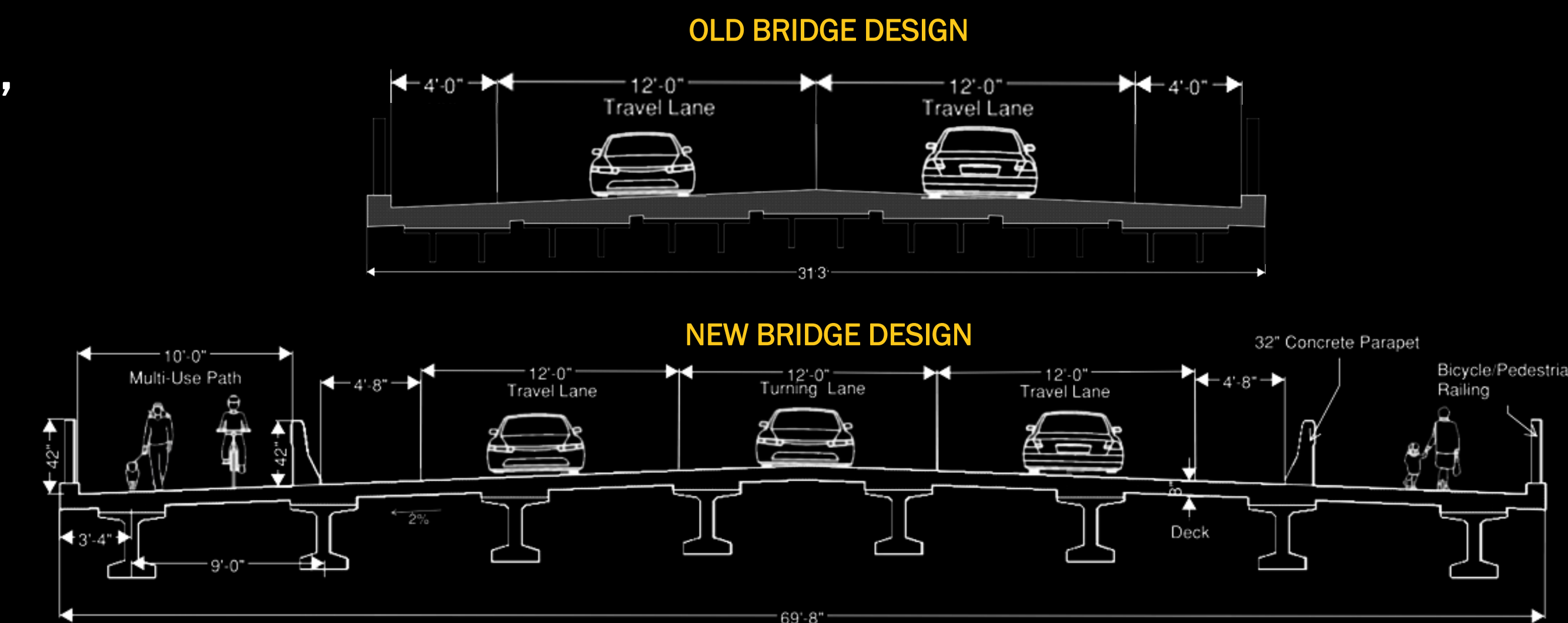


PAVEMENT DESIGN



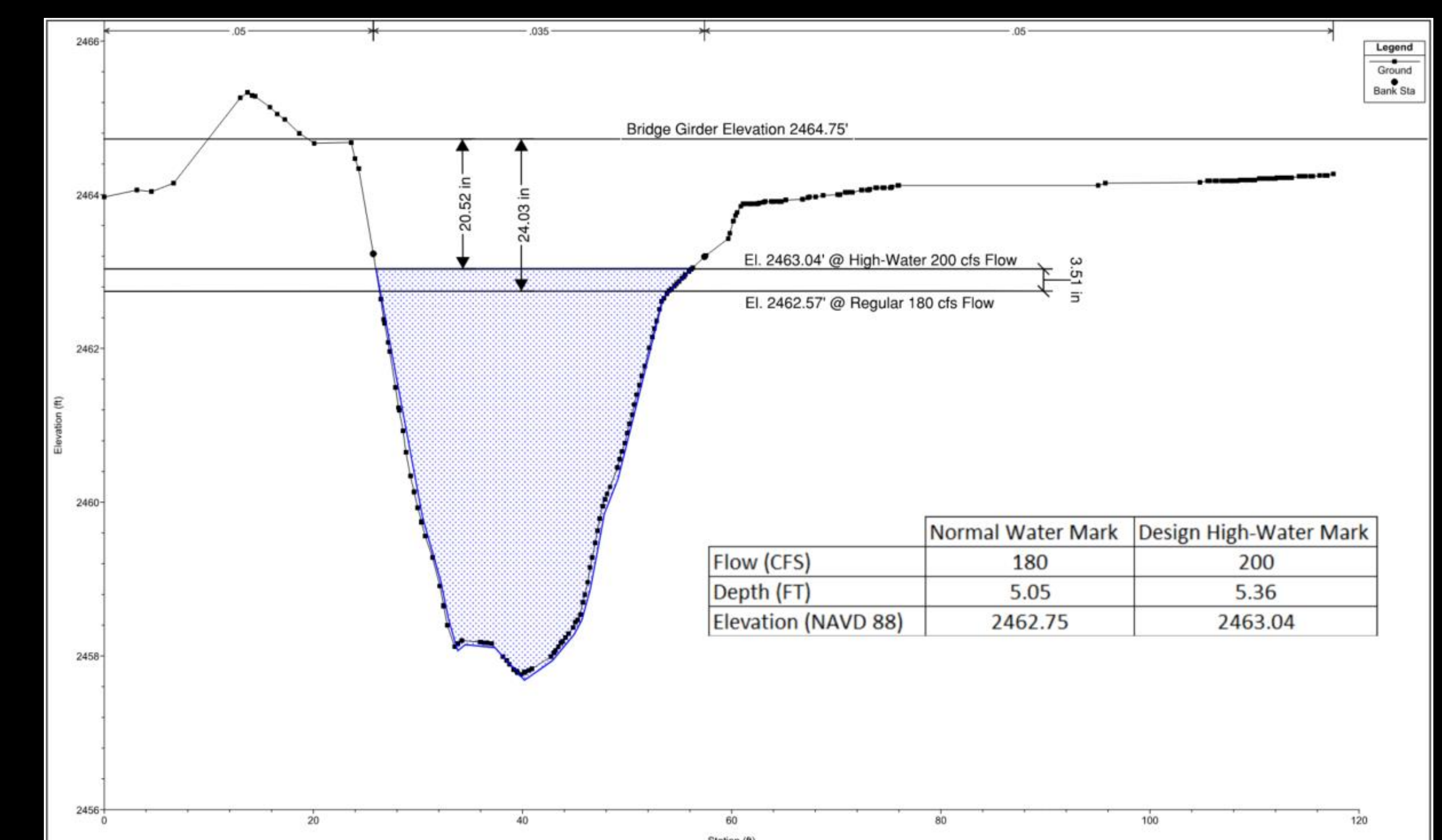
- R-Value Gravel Equivalency Method in Accordance with ITD Materials Manual Section 500

BRIDGE DESIGN



- Bridge Spans 35'-Wide Middleton Canal
- [8] 36" Bulb Tee Girders with 24 Prestressed Strands
- 8" Deck Thickness
- 32" Concrete Parapet with Pedestrian Railing

HYDROLOGIC ANALYSIS



- Middleton Canal is a Man-Controlled Canal with Normal Flow of 180 CFS
- 1' Minimum Design Freeboard Distance Over 200 CFS High-Water Mark Specified by Middleton Mill Ditch Company
- Bridge Low Chord has Freeboard of 1.71'