

Broadway Railroad Culvert Project Update

Dover, NH
City Council Workshop Session

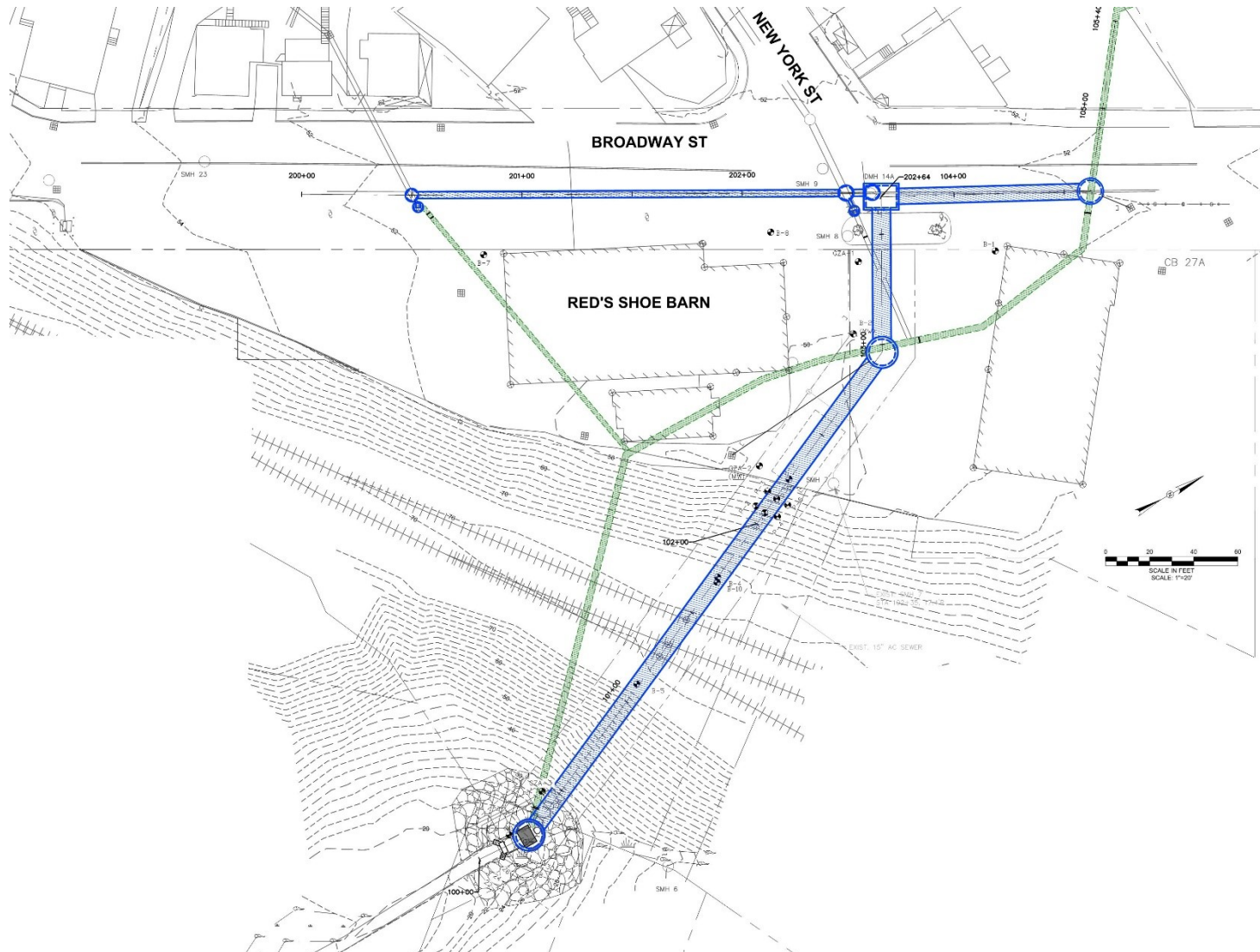
March 11, 2020



Summary of Construction Change Order 4

Description	Amount
Change Order 4 (for known additional work related to pipe jacking/tunneling)	\$2,375,899.30
Construction Contingency (to address any additional unforeseen additional work items)	\$500,000.00
Total Appropriation Requested	\$2,875,899.30

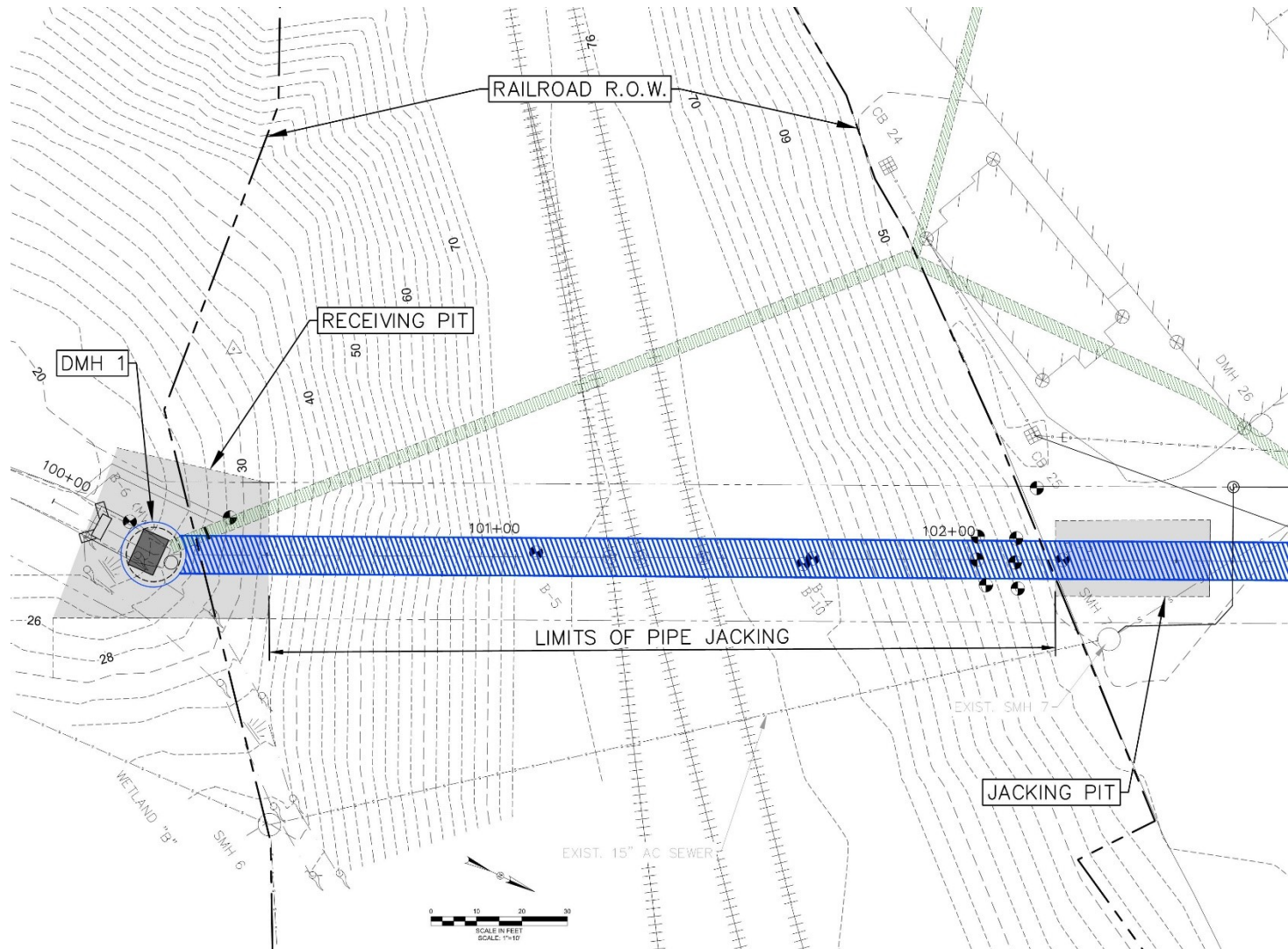
Project Location



Project Purpose

- Replace Existing Stone Box Culvert Underneath the Railroad
 - Existing Culvert Undersized
 - Prior Investigations Revealed Partial Collapse of the Existing Culvert
- Reduce Flooding in Local Area
- Size New Culvert for Future Conditions

Plan – New Culvert Under Railroad



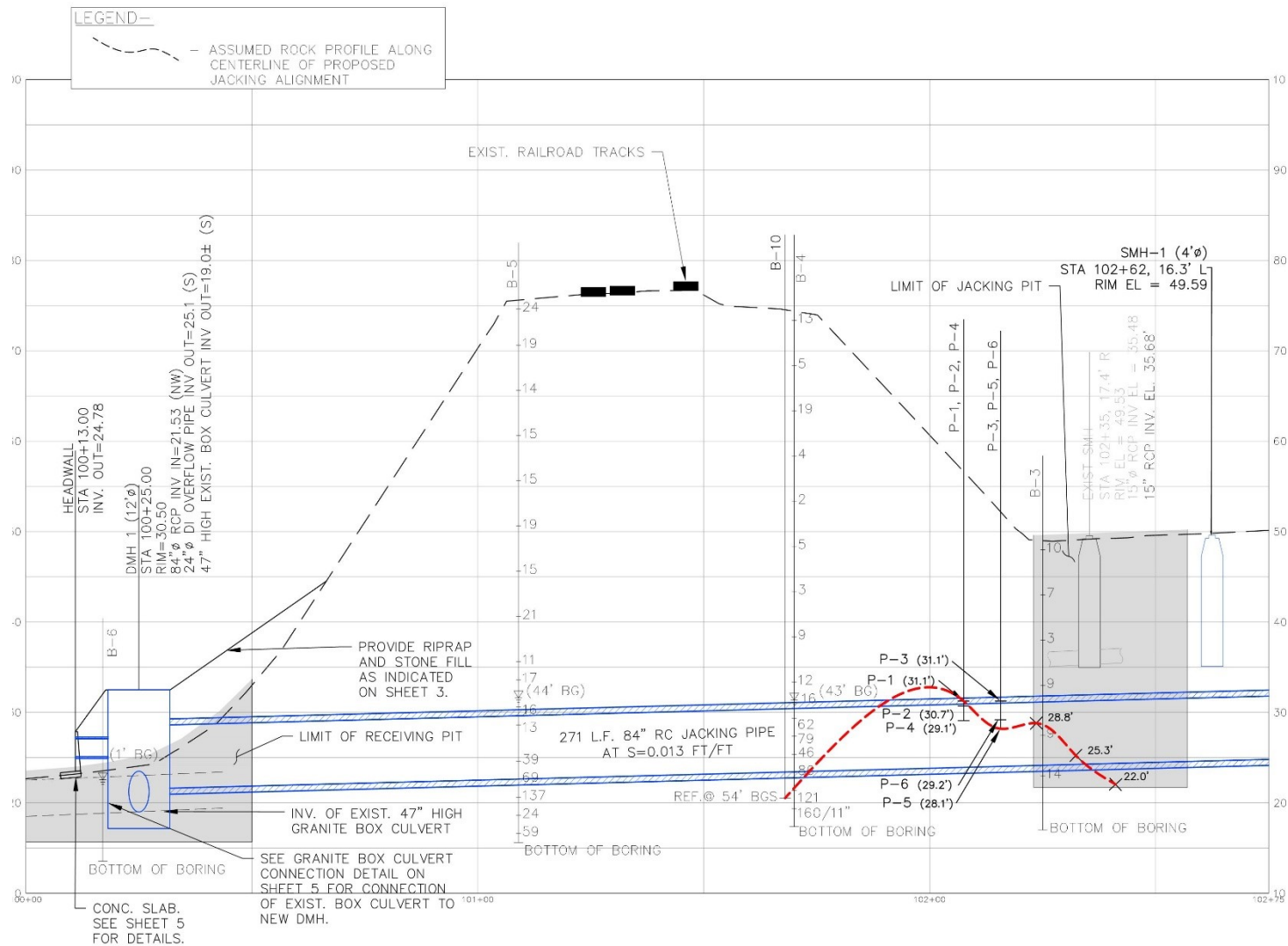
Existing Jacking Pit



Discovery of Underground Ledge 'Ridge'



Profile – New Culvert Under Railroad



Revised Installation Method Through Ledge

- Install Tunnel Liner Plates for Approx. 50 LF
 - Turn-Key Tunneling / General Contractor

- Micro-Fracturing To Remove Ledge
 - Main Drilling and Blasting

- Conventional Jacking (once tunnel liner plates are installed)
 - M&P Pipe Jacking / General Contractor

Proposed Tunneling Method – Liner Plates

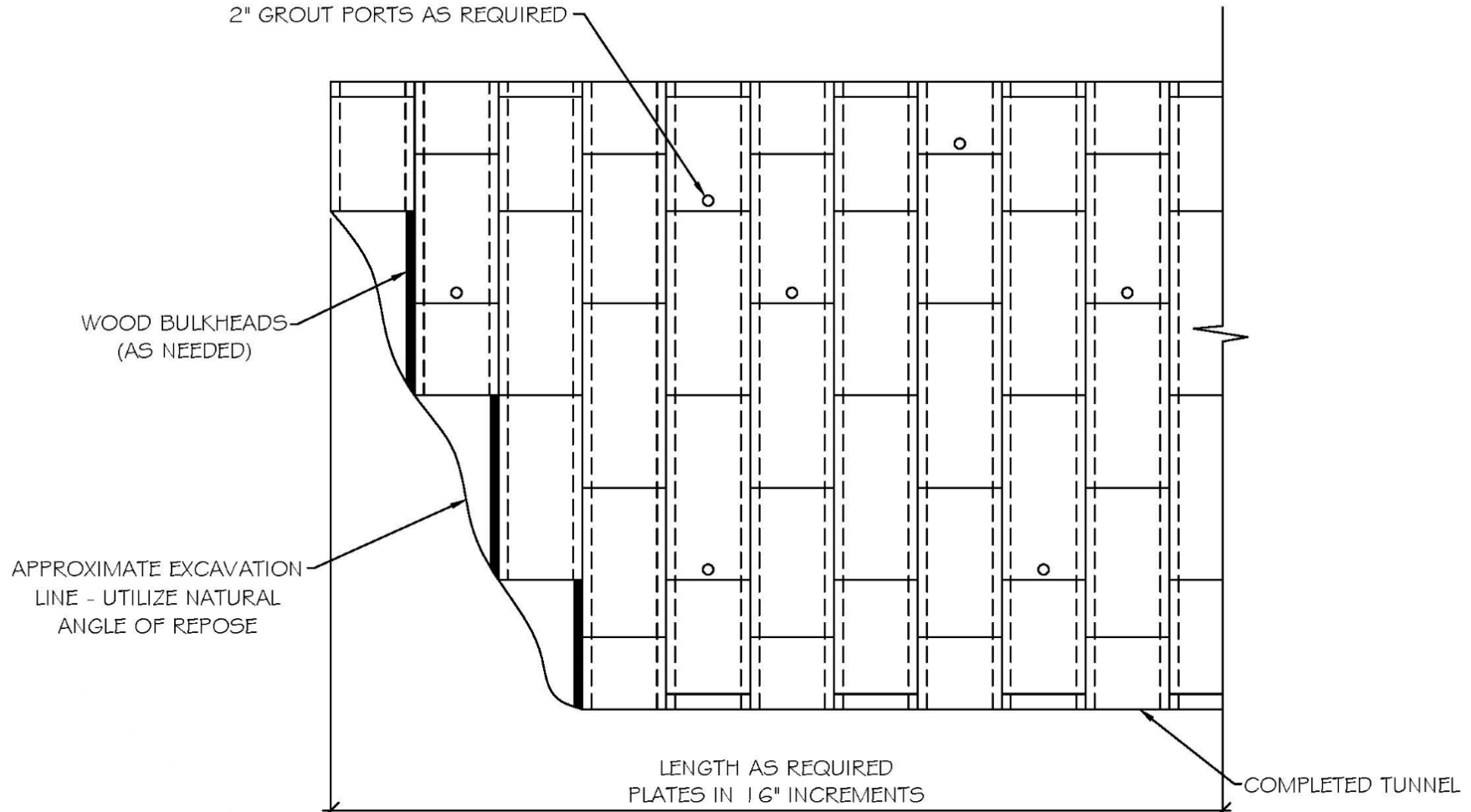


Image Courtesy of Turn-Key Tunneling

Proposed Tunneling Method – Liner Plates



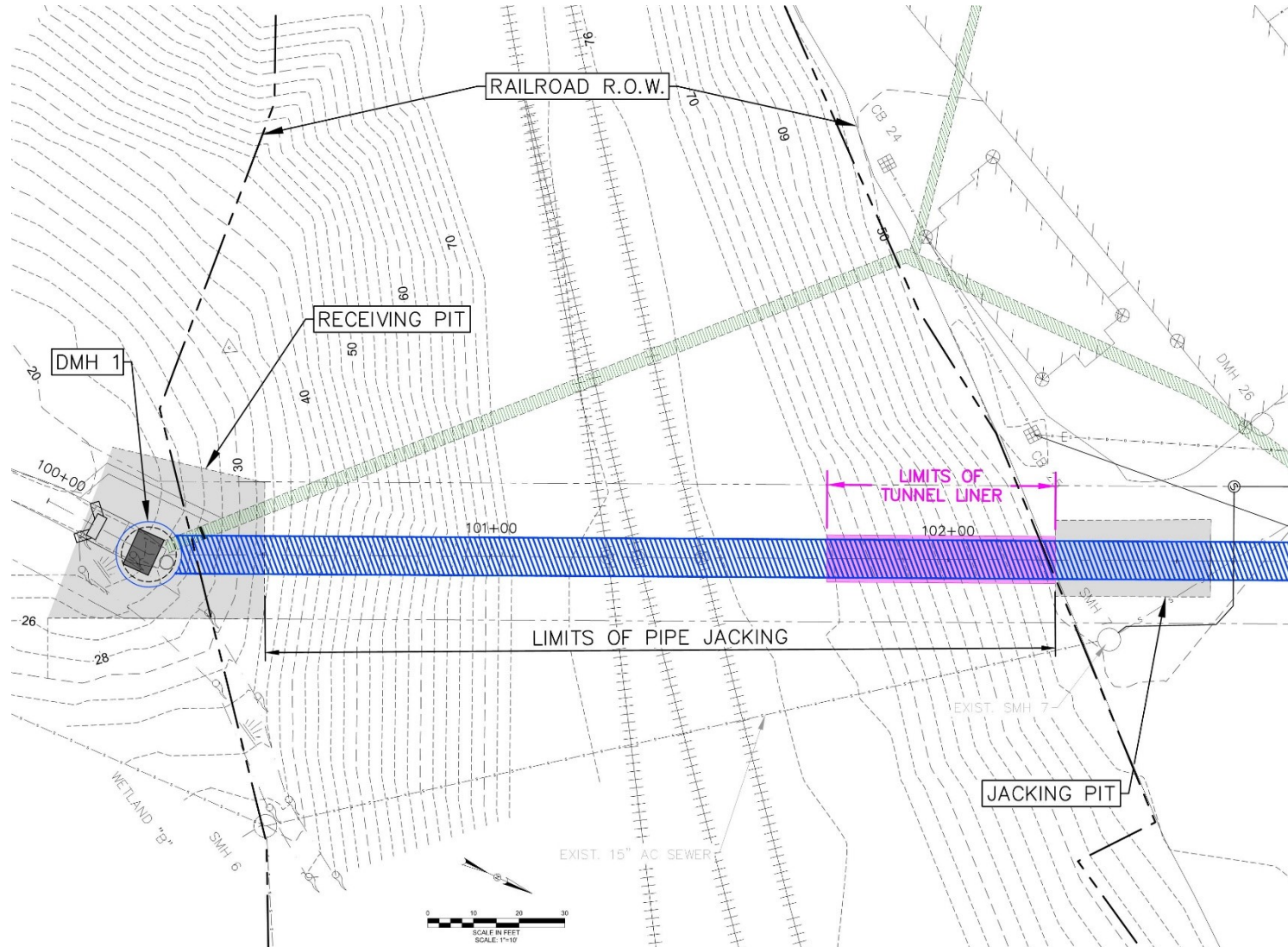
Photo Courtesy of Turn-Key Tunneling

Proposed Tunneling Method – Liner Plates



Photo Courtesy of Turn-Key Tunneling

Plan – New Tunnel Liner Under Railroad



Jacking Shield

