

### BILL OF MATERIAL

Item	Unit	Quantity
Temporary Sheet Piling	Sq. Ft.	520
Temporary Soil Retention System	Sq. Ft.	259

**Notes:**

The reinforced concrete box culverts and pipes must be installed and backfilled before driving the adjacent piles.

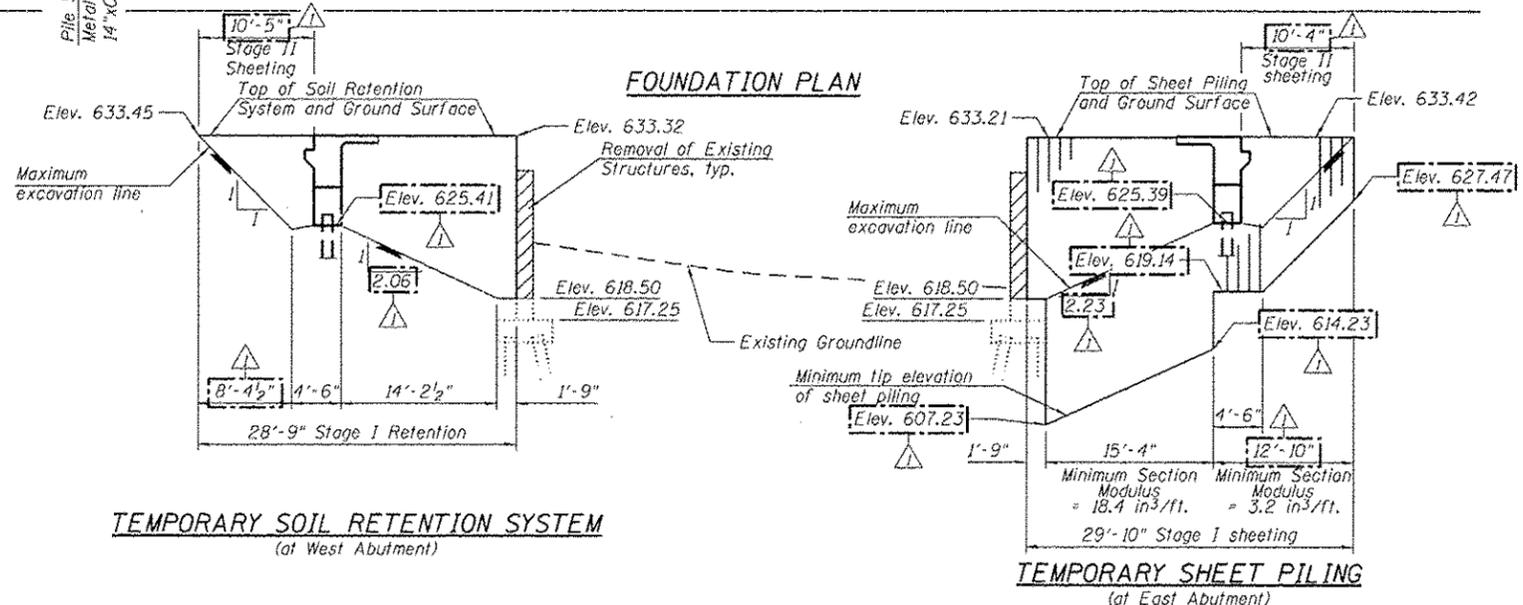
Removal of existing structures shall be in accordance with Section 501 of the Standard Specifications. This item shall include complete removal of the concrete bridge rails, concrete deck and superstructure. This item also includes partial removal of the abutment wall and wingwall down to a minimum of 1'-0" below proposed finished grade and partial removal of the wingwall footing below the proposed abutments. Do not disturb or remove existing timber piles.

The proposed abutment metal shell piles are to be driven within the limits of the existing wingwall footing and timber piles. The wingwall footing adjacent to the proposed piles must be removed prior to driving piles. The metal shell piles shall be offset ±6" along the length of the abutment to miss the existing timber piles. All piles must meet the driving tolerances of Section 512.12 except for the allowed offset.

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

At the West Abutment, a cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.



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