

626 PROTECTION SHIELD

626.01 DESCRIPTION

Work shall consist of designing, furnishing, installing, relocating, maintaining, removing and disposing of a temporary protection shield along the length of the bridge. The shield shall be sized and designed to provide a floor sufficiently sturdy and tight to prevent equipment and materials of demolition and construction from falling through the shield and upon any portion of the area under the structure and the immediate vicinity. Care must be taken to ensure the safety of motorists, pedestrians, bicyclists and others who may be in the area under or adjacent to a structure. Required minimum horizontal and vertical clearances, as indicated in the contract documents, must be maintained.

The design, construction and maintenance of protection shields shall meet the requirements of [703.16](#), Falsework and Centering.

626.02 SHOP DRAWINGS

The shield shall be designed by a registered Professional Engineer and drawings shall bear his/her registration seal. Approval of said drawings shall be obtained from the District prior to commencing construction of the shield. Plans (including shop drawings and calculations) for the protection shield shall be submitted to the Chief Engineer for approval prior to start of demolition. This approval does not relieve the Contractor from the responsibility for the structural adequacy of the installation. Demolition shall not begin until the protection shield is completely erected and approved by the Chief Engineer.

Care shall be taken to ensure the safety of the traveling public using any roadways, railroads, pedestrian/bicyclist/horse trails that may pass beneath the structure.

626.03 CONSTRUCTION REQUIREMENTS

The protection shield shall be installed prior to start of any demolition and/or construction operations. The limits of the protection shield shall be equal to the full length of the superstructure, that is from back wall to back wall of abutments and shall cover all spans simultaneously, unless specifically exempted by the contract documents. The shield shall extend transversely at least 5 feet beyond the limits of construction for each particular phase, shall have barricades extending from the underside of the shield to an elevation of 6 feet above the floor of the shield and shall provide a minimum vertical clearance of 12'-6", or as indicated in the contract documents.

The floor of the protection shield shall be constructed to support a uniform live load of 85 pounds per square foot, or equivalent to the weight of the existing deck slab if that is larger. The side barriers shall be designed to resist a wind force of 50 pounds per square foot.

The protection shield may be installed and used in stages, if approved by the Chief Engineer. However, any portion of the structure where demolition and/or construction operations are taking place shall have a protection shield installed prior to the start of any work.

626.02 MAINTENANCE

The protection shield shall be inspected daily and shall be cleaned at the end of each working day. Regular maintenance shall be performed to ensure the structural adequacy of the installation and the ability of the flooring to retain construction debris.

626.03 MEASURE AND PAYMENT

The unit of measure for Protection Shield will be the job. No direct measure will be made.

Payment will be made at the contract lump sum price which payment will include the cost of design, shop drawings, fabrication, erection, staging, maintenance, dismantling, disposal and all labor tools, materials, equipment and incidentals needed to complete the work as specified