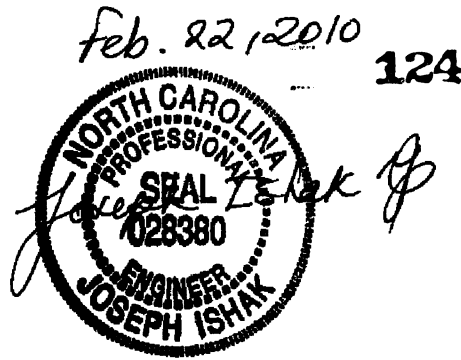


TIP #: U-2826B
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WATER FILLED BARRIER:
3-20-07

SPI

Description

Furnish, install, secure, maintain, remove, and reset Water Filled Barrier in accordance with the contract.

Materials

(A) **General**

Provide Water Filled Barrier that meets the requirements of NCHRP 350 Test Level II for work zones that have a posted speed limit of 45 mph or less. Provide Water Filled Barrier that acts as its own free standing, non-redirective end treatment. Use environmentally safe anti-freezing agent in the water per manufacturer specifications and recover agent when the barrier is drained. Do not drain Water Filled Barrier into or across an existing travel lane. Provide barrier units that are capable of being lifted and moved when filled if draining is not possible. Dispose of water and agent properly.

(B) **Material Qualifications**

Use Water Filled Barrier that is on the Approved Products List or is Traffic-qualified by the NCDOT Work Zone Traffic Control Section. For more information on the Traffic-qualification process, contact the NCDOT Work Zone Traffic Control Section at 750 N. Greenfield Pkwy., Garner, NC 27529, (919) 773-2800, or see the approved product list on NCDOT web site at: <http://www.ncdot.org/doh/preconstruct/wztc/>

(C) **Historical Performance**

Historical performance of the Water Filled Barrier will be used in determining future use of the material by the Department, regardless if the Water Filled Barrier has been traffic-qualified. Poor past or poor current performance of Water Filled Barrier at any site, whether or not related to a specific contract may be grounds for non-acceptance of a product on any project under contract.

Construction Methods

Place and install Water Filled Barrier units as shown in the plans and per manufacturer specifications on roadways with posted speed limits of 45 mph or less.

Furnish delineators for Water Filled Barrier that meet the requirements of Section 1088-2 and Section 1170-3 (E) of the *Standard Specifications*.

Measurement and Payment

Water Filled Barrier will be measured in accordance with Section 1170-4 of the *Standard Specifications* and paid for in linear feet.

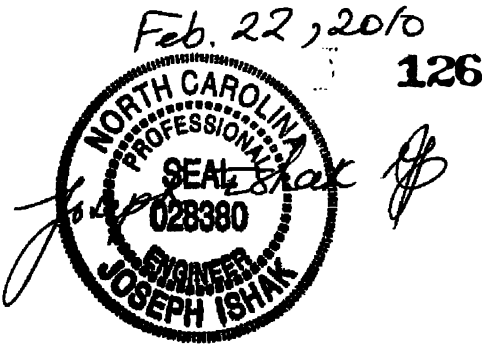
Resetting Water Filled Barrier will be measured in accordance with Section 1170-4 of the *Standard Specifications* and paid for in linear feet.

There will be no direct payment for barrier delineators as they are considered incidental to these pay items.

Payment will be made under:

Pay Item	Pay Unit
Water Filled Barrier	Linear Foot
Reset Water Filled Barrier	Linear Foot

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Law Enforcement:
2-19-09

SPI

Description

Furnish Law Enforcement Officers and marked Law Enforcement vehicles to direct traffic in accordance with the contract.

Construction Methods

Use uniformed Law Enforcement Officers and marked Law Enforcement vehicles equipped with blue lights mounted on top of the vehicle, and Law Enforcement vehicle emblems to direct or control traffic as required by the plans or by the Engineer.

Measurement and Payment

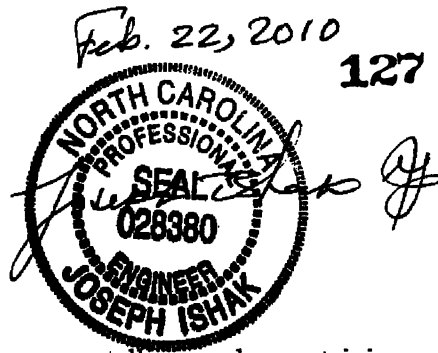
Law Enforcement will be measured and paid for in the actual number of hours that each Law Enforcement Officer is provided during the life of the project as approved by the Engineer. There will be no direct payment for marked Law Enforcement vehicles as they are considered incidental to the pay item.

Payment will be made under:

Pay Item
Law Enforcement

Pay Unit
Hour

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SAFETY FENCE:

Description

Safety Fence shall consist of furnishing, installing and maintaining polyethylene or polypropylene fence along the outside riparian buffer, wetland, or water boundary located within the construction corridor to mark the areas that have been approved to infringe within the buffer, wetland or water. The fence shall be installed prior to any land disturbing activities. *Safety Fence* shall also be installed to separate pedestrian traffic from construction in accordance with the Traffic Control Plans.

Materials

Polyethylene or polypropylene fence shall be a highly visible preconstructed safety fence approved by the Engineer. The fence material shall have an ultraviolet coating.

Either wood posts or steel posts may be used. Wood posts shall be hardwood with a wedge or pencil tip at one end, and shall be at least 5 ft. in length with a minimum nominal 2" x 2" cross section. Steel posts shall be at least 5 ft. in length, and have a minimum weight of 0.85 lb./ft. of length.

Construction Methods

No additional clearing and grubbing is anticipated for the installation of this fence; however, if any clearing and grubbing is required, it will be the minimum required for the installation of the safety fence. Such clearing shall include satisfactory removal and disposal of all trees, brush, stumps and other objectionable material.

The fence shall be erected to conform to the general contour of the ground. When determined necessary, minor grading along the fence line shall be performed to meet this requirement provided no obstructions to proper drainage are created.

Posts shall be set and maintained in a vertical position and may be hand set or set with a post driver. If hand set, all backfill material shall be thoroughly tamped. Wood posts may be sharpened to a dull point if power driven. Posts damaged by power driving shall be removed and replaced prior to final acceptance. The tops of all wood posts shall be cut at a 30-degree angle. The wood posts may, at the option of the Contractor, be cut at this angle either before or after the posts are erected.

The fence fabric shall be attached to the wood posts with one 2" galvanized wire staple across each cable or to the steel posts with wire or other acceptable means.

The Contractor shall be required to maintain the safety fence in a satisfactory condition for the duration of the project as determined by the Engineer.

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Measurement and Payment

Safety Fence will be measured and paid for as the actual number of linear feet installed in place and accepted. Such payment will be full compensation including but not limited to clearing and grading, furnishing and installing fence fabric with necessary posts and post bracing, staples, tie wires, tools, equipment and incidentals necessary to complete this work.

Payment will be made under:

Pay Item	Pay Unit
Safety Fence	Linear Foot