



**SPECIAL PROVISIONS
FOR
DIRECT BURIED FIBER OPTIC CABLE**

Iowa County
ITS-080-6(552)219--25-48

Effective Date
July 21, 2026

THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS AND DEVELOPMENTAL SPECIFICATIONS.

230420.01 DESCRIPTION.

Make the following modifications and additions to the Developmental Specifications for Intelligent Transportation Systems.

230420.02 MATERIALS.

I. Wire and Cable.

6. Warning Tape

- a. Use non-detectable warning tape.
- b. Warning tape shall be 3 inch width.
- c. Use orange warning tape with black lettering reading "CAUTION FIBER OPTIC CABLE BURIED BELOW".

230420.03 CONSTRUCTION.

I. Conduit.

1. High Density Polyethylene Conduit.

a. General.

- ~~9) No direct buried cable is allowed.~~

K. Wire and Cable.

4. Fiber Optic Cable.

i. Direct Buried Fiber Optic Cable.

1) Direct Buried Fiber Optic Cable Equipment.

- a) Use equipment and construction methods subject to the approval of the Engineer that cause minimal displacement of the soil.

- b) The equipment shall be capable of extending the plow in order to maintain the required minimum depths under all terrain conditions.
- c) The equipment shall use a prime mover with hydrostatic type steering and a static plow. The design of the plowshare shall be such that the buried fiber cable passing through the plow shall not bind and shall not be bent in a radius less than 20 times the outside diameter of the cable and maintains the structural integrity of the cable.
- d) The feed chute shall have a removable gate for the purpose of inspection and to allow the fiber cable to be removed from or inserted into the feed chute at any intermediate point between splice locations. The fiber cable path inside the feed chute shall have low friction surfaces and be free of burrs and sharp edges to prevent damage to the conduit as it passes through. Smooth any welds before use. Internal guide rollers shall not be used.
- e) The reel carrier shall be of adequate size and be configured so that the reel sizes being used can be safely handled.

2) Direct Buried Fiber Optic Cable Installation.

- a) Perform plowing in accordance with standard industry practices and exercise care during the plowing operation to avoid cable damage. Feed the cable into the ground through the plow loose and at no tension. Equipment and construction methods shall be such as to assure compliance with this requirement. The Contractor shall furnish competent supervision at all times at the site of plowing operations to assure compliance with this requirement.
- b) No fiber splices shall be allowed unless indicated by the plans or approved by the Engineer.
- c) Install warning tape 18 inches above direct buried fiber optic cable.
- d) Install fiber optic cable at a depth of 60 inches depth unless otherwise noted in the plans or approved by the Engineer.
- e) Perform operations in a manner that minimizes soil erosion and employs appropriate storm water pollution prevention measures during all construction operations.
- f) Excavate as needed start and finish pits and pits at points of intersection in advance of plowing. Expose ends of casings and crossings of foreign utilities before the start of plowing operations for a conduit segment. Exercise care in the use of trenching and excavating tools and equipment to avoid damaging installed and intersecting conduits or other facilities.
- g) Avoid damaging any paved surfaces, ditches, or other similar surface features. Immediately repair any damage to such features to the satisfaction of the Engineer.
- h) The slot made in the soil by the cable plows shall be closed immediately by driving a vehicle track of sufficient weight over the plow slot, to thoroughly compact the plow slot or by other suitable means approved by the Contractor.
- i) To avoid possible damage to buried cable from exposure to traffic and other hazards, trenching of laterals, trenching around culverts, construction of aerial inserts and similar operations shall be completed as soon as practicable behind the plowing operation, but never more than 48 hours behind the plowing operation unless additional protective measures, as approved by the Engineer, are employed. Notwithstanding this provision, the Contractor remains responsible for the cable throughout the placing and acceptance intervals.
- j) Upon completion of fiber cable placing operations and any other work in an area, remove all debris, materials, tools, and equipment from the area and restore the disturbed area(s) to original or better condition within 24 hours or as soon as practicable as determined by the Engineer. Backfill all excavations and grade all disturbed areas during the restoration process.

230420.04 METHOD OF MEASUREMENT.

LL. Fiber Optic Cable, Direct Buried.

Linear feet shown in the contract documents. Direct bury fiber optic cable length is calculated from plan dimensions as the linear length of new fiber. No allowance has been added to this quantity.

230420.05 BASIS OF PAYMENT.

LL. Fiber Optic Cable, Direct Buried.

1. Per linear foot.
2. Payment is full compensation for:
 - a. The installation of all fiber optic cable by direct bury method. The fiber optic cable material is paid under a separate bid item.
 - b. The furnishing and installation of all warning tape to be installed above all direct buried fiber optic cable.
 - c. Furnishing all materials, labor, equipment, and other incidental items necessary to meet the requirements of the contract documents.
 - d. Including all surface excavations or surface preparation work, repair or restoration of any disturbed areas to pre-construction conditions.