

GENERAL NOTES

FED. RD. DIV.	STATE	PROJECT	
5	OHIO	7-4030-(13)	7 38

LAKE COUNTY
LAK - 20-14-30
LAK - 86-0-25
AND WASHINGTON STREET
AND ST. CLAIR STREET

- b. Sign backing material designs showing overall dimensions, extrusheet panel width, overlay panel widths, notches in glare shields and number of mounting clips.
- c. Proposed sign face colors including legend, border, and background of sign.

PACKAGING, SHIPMENT AND STORAGE OF SIGNS

In addition to the requirements of Supplemental Specification 815, the following requirements shall be adhered to:

FLAT SHEET SIGNS

- Flat sheet signs of like size may be packaged together.
- Sign faces shall be protected by slip sheets which have plastic coated finish on the side adjacent to each sign face. Oily or waxy paper slip sheets are not acceptable.

STORAGE OF SIGNS

Sign faces shall not become wet during shipment or storage. If it is necessary to store signs on or near the project site prior to erection adequate protection by approved shelter or protective covering is required at all times to assure that signs are not exposed to weather elements.

Extrusheet signs shall be stored in a vertical position in crates or supported by temporary bracing above natural ground, with the top edge of sign up. Under no circumstances shall extrusheet signs be stored in a horizontal position.

PAYMENT FOR THIS ITEM SHALL BE MADE AT CONTRACT UNIT PRICE BID FOR ITEM 815, SIGNS FLAT SHEET TYPE.

816 OVERHEAD SIGN SUPPORT BY TYPE

All component parts of the overhead sign supports shall be steel, except for the truss and components for the Number 7 series which shall be aluminum. For specific details and materials, see Sheet Numbers 32 through 34.

Cost of furnishing and installing the sign brackets and the fixture support arm, length "G", with mounting holes and hardware shall be included in the contract unit price bid for overhead sign supports.

Modifying supplemental specification 816 switch enclosure mounting brackets including mounting bolts and drilled holes shall be furnished and installed under payment for 816 Overhead Sign Support Structures at the contract price per overhead sign support, by type.

Payment for this item shall be made at the contract unit price bid for each overhead sign support, by type, installed in place and accepted, which price shall be full compensation for furnishing all anchor bolts, 2" and 3/4" EMT conduit ellis (for installation under 816 Concrete Foundations, for sign supports,) and for furnishing and installing each overhead sign support structure shown on Sheets 12 thru 25 including fixture support arms, switch enclosure mounting bracket, Sign brackets and all component parts necessary to make a complete workable installation ready for sign erection, installation of disconnect switch and enclosure, ground rod and wire connections and sign wiring.

Erection of these supports shall be accomplished in a manner meeting the requirements of supplemental specification 816.

816 STRUCTURAL SUPPORTS DRIVEN TYPE

Driven type structural supports will be driven to a depth of five feet (5'-0") minimum below ground line in such a manner that no deformation within the length of the support, or damage to the support, will occur.

Prior to installation each support shall be significantly marked with paint at a location on the support 5'-6" from the embedded end, and approved by the Engineer.

"Structural Supports No. 4 Post, Driven and No. 4 Post, as per plan driven" will include the 10"x12"x1/4" soil plate detailed in the plans.

Payment for installation of sign supports by the above method shall be included in the cost of the various support types specified including all labor, equipment and materials required.

816 STRUCTURAL SUPPORTS STEEL BEAM TYPE

The Structural steel beam supports including No. 6 Post, No. 4 Post and hardware shall be in accordance with 712.20.

Quantities for Item 816 "Structural Supports, Steel Beam, Type," appearing in the quantity tables are approximate. The contractor shall be responsible for determining exact support lengths prior to fabrication and galvanizing of supports. Payment shall be at the contract unit price bid per lin. ft. which price and payment shall include all costs in connection with the embedment of the supports.

The cost of the concrete used for embedment if required will be a separate pay item.

816 POLE MOUNTED SIGN ATTACHMENT

This item of work shall consist of the furnishing and installation of stainless steel straps, mounting brackets, and hardware as detailed on Sheet 30.

Basis of payment shall be at the contract bid price per each Pole Mounted Sign Attachment which price shall include all labor, material, equipment and incidentals necessary to perform the required item of work.

816 SPAN WIRE MOUNTED SIGN ATTACHMENT, 816 MAST ARM MOUNTED SIGN ATTACHMENT

This item of work shall consist of the furnishing and installation of a steel angle, span wire mounting bracket, or mast arm mounting bracket, and hardware as detailed on Sheet 30.

Basis of payment shall be at the contract bid price per each Span Wire Mounted Sign Attachment which price shall include all labor, material, equipment and incidentals necessary to perform the required item of work.

816 SPAN WIRE OVERHEAD SIGN SUPPORTS

This item shall include the furnishing and installing of strain poles, messenger wire, heavy duty steel clamps, guy grips, bull rings, thimbles, sign hangers, sign braces and the furnishing of anchor bolts and conduit ellis for the sign support foundations as detailed in the plans.

Material Specifications

- Tapered tubes (steel processed to minimum yield stress of 52,000 P.S.I.)
- Cast anchor base and handhole frame (min. yield stress of 35,000 P.S.I.)
- Handhole cover plate - 11 Ga. steel (min. yield stress of 20,000 P.S.I.)
- Cast aluminum pole top - aluminum alloy (min. yield stress of 9,000 P.S.I.)
- Span wire clamp - low alloy. High strength steel - load producing distortion 12,500 lbs. direct tension
- All bolts and nuts less than 5/8" passivated stainless steel AISI-300 series - commercial grade
- All other nuts and bolts 5/8" dia. and over galvanized in accordance with ASTM-A153
- U-bolts high strength steel minimum yield stress 52,000 lbs. sq. in. min. ultimate 90,000 P.S.I.
- Anchor base - for poles with base diameter in excess of 15" only (min. yield stress 36,000 P.S.I.)
- Welding rod-ASTM-A233 class E60XX or 70XX
- Galvanizing ASTM-A123
- Messenger wire shall be galvanized, utility grade as per ASTM A-122 and 218 Class B

Poles shall be raked sufficiently during erection to assure that they will be essentially vertical under full static load conditions.

Dimension X (the vertical distance between span wires at all points of attachment to poles or sign braces) shall be within one (1) inch of nominal values given in the table at all locations.

Payment shall be at the contract unit price bid for each span wire overhead sign support, by type and the span length, which shall include all labor, material and equipment required for the complete item of work.

816 SIGNAL SUPPORT PEDESTAL MOUNTED

This item shall consist of furnishing and installing pedestal mounted signal supports in accordance with the following specifications and details on Sheet 27.

The pedestal shaft shall be circular seamless steel or aluminum tube having a minimum outside diameter of four and one-half (4-1/2) inches and minimum wall thickness of one-eighth (1/8) inch.

The pedestal shaft for vehicular signals shall be of such length that the center of the bottom signal lens when installed shall be approximately eleven feet - six inches (11'-6") above the concrete foundation.

A square transformer type pedestal base of the dimensions shown shall be provided of steel, aluminum, or cast iron construction.

When pedestrian signals are specified to be mounted on independent pedestals the pedestal shall be of a length such that the bottom of the "walk" indication shall be approximately 8 feet above the concrete foundation.

The base shall be provided with a door held firmly in place with brass or stainless steel screws. The door shall provide an opening of not less than 50 square inches. Internal flanges for the anchor bolts shall be constructed integral with the base and shall accommodate foundation bolts spaced 90 degrees apart in a circle, 12-3/4 inch diameter. Anchor bolts shall be furnished with each pedestal and shall not be less than 5/8 inch in diameter and not less than 20 inches long.

If steel or cast iron components are furnished as specified above, they shall be galvanized in accordance with supplemental specification 816. One quarter inch (1/4") preformed expansion material shall be placed between the bottom of the pedestal base and foundation.

Basis of payment for this item of work shall be at the contract price per each signal support, pedestal mounted which price shall include furnishing and installing the shaft, base, and expansion material, furnishing anchor bolts, (installed as part of the concrete foundation), including all materials, equipment, and labor required to perform this item of work.

619 FIELD OFFICE

The Contractor shall provide a suitable field office having a minimum of 300 square feet of floor space and, in addition to the requirements of Item 619, he shall provide and maintain sanitary provisions as per 107.06. All the above is included in the lump sum price bid for Item 619, Field Office.

621 PAVEMENT MARKING

The pavement marking shall be done in accordance with the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways.

625 PULL BOX CIRCULAR 713.09 AS PER PLAN

Pull boxes shall be circular with a 12" gravel drain below the bottom of pull box using gravel.

Pull boxes shall be furnished without airbells.

Maximum spacing between pull boxes not stationed on the plans shall be 200 feet.

The pull box cover shall have the words "Traffic Control" in the surface in accordance with Specification 713.08.

Payment for Item 625 "Pull Box Circular 713.09 as per plan" shall be made for each pull box installed and shall include the circular pull box, pull box lid, 12 inch gravel drain and all excavation and backfill.

GUARANTEES AND WARRANTIES

The contractor shall warrant or guarantee satisfactory operation of electrical traffic control equipment for a period of (90) DAYS following acceptance of the equipment by the State. The contractor's responsibility shall be limited to necessary repairs, replacement of defective parts with parts equal to or better than those originally specified and remedying faulty installation in an approved manner; including all labor, material and equipment costs related thereto. The following items shall be provided with the specified (90) DAY guarantee:

- Traffic signal controllers and associated control equipment
- Loop Detector Amplifiers
- Interconnection and master control devices

In addition, the manufacturer's normal warranties for the above equipment and other manufacturer's equipment for which guarantees are normally provided shall be assigned and delivered to the State.

The contractor shall install and handle items in accordance with the manufacturer's recommended procedures, provided such procedures are not in conflict with the plans and specifications.

Costs for provision and performance of guarantees and warranties herein described shall be incidental to and included in the unit price(s) bid for the various traffic control items.

816 STRUCTURAL SUPPORTS, NO. 6 POST DRIVEN, AS PER PLAN

This work shall consist of the furnishing, assembly and installation of two (2) No. 3 Drive Posts (No. 6 Post) in combination with a square welded or seamless galvanized tubular post extension spliced to the top of the No. 6 Post. Details are shown on Sheet 38.

Square Tubular Post material shall conform to ASTM A 570 Grade B.

Work shall include all labor, materials, equipment, tools, and hardware necessary to perform the required work.

Basis of Payment will be for 816 Structural Supports, No. 6 Post Driven, as per plan, per lineal foot measured by the total overall length of combination post.