

ITEM 630 TRAFFIC SIGNS AND SIGN SUPPORTS

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630.01 Description. This work consists of furnishing and installing traffic signs, sign supports, and foundations complete and ready for service. This work also includes necessary excavation and backfill, disposal of discarded materials, and restoration of disturbed facilities and surfaces to a condition equal to that existing before this work started.

630.02 Materials. The acceptance of materials and products is based on Certified Test Data, furnished in triplicate, or on test results of samples according to 106.02, as required by the Engineer.

Transfer manufacturers' guarantees or warranties on all traffic sign material to the City or other maintaining agency upon completion and acceptance of the project.

Furnish materials conforming to:

Concrete, Class C	499, 511
Steel:	
Structural steel	711.01
Reinforcing steel	509.02
U-channel posts	730.015
Square posts	730.016
Wooden Box Beam	730.017
Tube and pipe	730.01
Anchor bolts and nuts	730.02
Poles and arms	730.03
Base and arm plates	730.04
Handhole covers	730.05
Pole caps	730.06
Arm caps	730.07
Hardware	730.08
Stainless steel	730.09
Stainless steel hardware	730.10
Messenger wire	732.18
Aluminum:	
Sheet and plate	730.11

Extrusions.....	730.12
Tube and pipe.....	730.13
Castings.....	730.14
Forgings.....	730.15
Welding rods.....	730.16
Hardware.....	730.17
Other materials:	
Decals.....	725.21
Reflective sheeting, Type F.....	730.18
Reflective sheeting, Type G.....	730.19
Reflective sheeting, Type H.....	730.192
Reflective sheeting, Type J.....	730.193
Nonreflective sheeting.....	730.20
Silk screen inks.....	730.22
Transparent electronic cuttable films.....	730.23

630.03 Certified Drawings. Furnish certified drawings according to 625.06. Submit sign support certified drawings that cover all design types such as ground mounted, rigid overhead, span wire mounted, and overpass structure mounted supports. On the drawings, show overall height, sign clearance above foundation, span length, sign locations, sign overall heights and widths, and glare shield height and location, if applicable.

Submit two sets of sign design certified drawings. The drawings shall show the overall extrusheet size dimensions including glare shield, panel type and length, temporary overlay sign dimensions and location on the covered sign, the type and quantity of assembly and mounting hardware, and guide sign legend details. Furnish guide sign legend details that include sheeting type, copy type, character size and spacing, and reference or code numbers. Indicate the guide sign background and legend colors. For the sign layout, conform to standards maintained by the City. It is not necessary to submit drawings of standard warning, regulatory, or route marker signs.

630.04 Sign Fabrication. Sign types include flat sheet, double faced, extrusheet, and temporary overlay. Flat sheet signs consist of one-piece units made of aluminum. Double faced signs consist of flat sheet aluminum or extruded aluminum blanks with legend on both sides. Extrusheet signs consist of a number of horizontal panels assembled to form a complete sign. Temporary overlay signs consist of an aluminum sheet covering portions or entire surfaces of extrusheet signs.

Prior to reflective sheeting application, clean aluminum sign surfaces either by total immersion in a tank containing an alkaline solution of the manufacturer's specification or by steam cleaning with an alkaline solution of the manufacturer's specification, followed by a thorough rinsing with running water. After cleaning, etch the surface with an acid solution, and dry. Do not allow cleaned and etched surfaces to become contaminated by contact with oil or grease. Drill or punch bolt holes to finish size.

Use sign legends according to the (a) City Sign Design Manual, (b) OMUTCD and (c) the ODOT Sign Design Manual. In case of a conflicting specification statement, the specification document hierarchy shall be in the order listed from (a), highest, to (c) lowest. Use Clearview font for positive contrast legends on freeway and expressway guide signs and on all other guide signs when permitted in the ODOT Sign Design Manual and City Sign Design Manual, respectively. Use capital legends and

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upper/lower case legends in accordance with the City Sign Design Manual. When either is permitted in the City Sign Design Manual, use upper/lower case legends.

For flat sheet, double faced mile marker, double faced street name and ground mounted extrusheet signs, use Type G, H or J reflective sheeting for background and reflective legends. For overhead extrusheet signs, use Type H reflective sheeting for the background, and use Type H reflective sheeting for reflective legends, shields and symbols (including hazardous cargo plate, airport symbol, arrows and borders). Apply reflective sheeting to the surface according to the manufacturer's recommendations, with no blisters, wrinkles, tears, or blemishes. Do not use reboundable or damage control sheeting for permanent signs.

For reflective legends on flat sheet and double faced mile marker signs, use reverse silk screen transparent ink or electronic cuttable film. For nonreflective legends, use direct silk screen black ink or direct applied nonreflective black sheeting copy. For double faced mile marker signs, use flat sheet aluminum and apply reflective sheeting and legend to both sides

Extrusheet panels consist of flat sheet aluminum reinforced with aluminum extrusions attached by spot welding. The Contractor may use panels extruded in a single operation in lieu of extrusheet panels. Do not use extruded panels and extrusheet panels in the same sign. Bolt together the minimum number of full length, sheeted panels to achieve the sign height, using aluminum bolts, washers, lock washers and nuts. For reflective legends, shields and symbols (including hazardous cargo plate, airport symbol, arrows and borders) use direct applied reflective sheeting. Apply all reflective legend on a sign with the same rotation angle orientation. For nonreflective legends, use direct applied nonreflective black sheeting copy.

For temporary overlay signs, use 0.063-inch thick flat sheet aluminum, with a maximum panel size of 8 × 4 feet. Apply sheeting and legend as described above for extrusheet signs. Attach temporary overlays to extrusheet signs in the shop or field using aluminum blind rivets at a maximum spacing of 18 inches on the peripheries of the temporary overlays and 24 inches within the interior. Position rivots so as not to disturb the legend on the underlying sign.

Use fluorescent yellow green reflective sheeting for the following signs: SCHOOL (S4-3), School Crossing (S1-1), yellow portions of school speed limit (S5-H3, S5-H4, S5-H5), SCHOOL ENTRANCE (S3-H3), SCHOOL BUS STOP AHEAD (S3-1), SCHOOL BUS TURN AHEAD (S3-H2), Bicycle Crossing (W11-1), Pedestrian Crossing (W11-2), Handicap Crossing (W11-9), SAFETY ZONE (W11-H15), and Playground (W15-1). Fabricate supplemental signs [such as SHARE THE ROAD (W16-1), Advisory Speed Plate (W13-1), Distance Plates (W16-2, W16-2a, W16-3, W16-3a), Supplemental Arrows (W16-5p, W16-6p, W16-7p and AHEAD Plate (W16-9p)] from fluorescent yellow green sheeting when used with a sign above.

Use fluorescent yellow reflective sheeting for all yellow signs, yellow portions of multi-colored signs, and yellow sign post reflectors, except for signs and portions of signs required to be fabricated with fluorescent yellow green reflective sheeting.

For lighted signs, cover glare shield and rectangular luminaire support tube with nonreflective sheeting matching the predominant sign color.

Place identification decals of Type G silver white reflective sheeting with silk screened black numerals on signs in accordance with Figure 1. These sign identification decals shall be 6 inches by 3 inches in size and positioned so they can be read horizontally and are clearly visible, not near bolt holes or rivets. Place the decals on the back side of the sign in the lower right-hand corner of rectangular signs, or in an equivalent location of other sign shapes, approximately 3 inches from side and bottom sign edges (for smaller signs, these dimensions may be less).

The Engineer will reject signs delivered at the site without a properly applied decal. At the time of sign installation, indicate the installation data by scratching out the appropriate month and year. Do not allow the sign installation contractor to erect any such signs, or overlays, that do not have a properly completed and affixed sign decal.

FIGURE 1 - STICKER DESIGN

PROPERTY OF THE CITY OF COLUMBUS												
UP TO \$2500 FINE AND 5 YEARS IMPRISONMENT FOR DAMAGING OR REMOVING THIS SIGN OHIO REV. CODE SEC. 4511.17 TO REPORT DAMAGE CALL 645-3111												
INSTALLATION	1	2	3	4	5	6	7	8	9	10	11	12
11	12	13	14	15	16	17	18	19				

630.05 Foundations. Locate sign support foundations so the plane of the sign surface is at a right angle to the roadway lanes served (except for signs not intended for this orientation). Install foundations according to 632.14. Furnish and install a ground rod at each rigid overhead and span wire sign support foundation according to 625.16.

Before placing foundation concrete for embedded supports, brace the supports in a vertical position. Seven days after concrete placement, remove bracing for embedded supports and erect signs.

630.06 Sign Supports. Sign supports consist of ground mounted, rigid overhead, span wire, and overpass structure mounted types. Fabricate sign supports according to the applicable requirements of Item 513, and weld according to 513.21. The approval of fabricators according to 501.03 will not apply. Hot-dip galvanize steel structural members according to 711.02. Galvanize steel hardware according to 730.08.

Tighten threaded fasteners, except anchor bolt nuts, by the “turn of the nut” method according to 513.20.

Furnish anchor bolts with a leveling nut, plain washers, lock washer, and anchor nut conforming to 730.02. Use anchor nuts with a plain washer against the base plate upper surface and a lock washer between the plain washer and anchor nut.

Tighten anchor bolt nuts according to 513.20, except that under Table 513.20-3, use the “nut rotation from snug tight condition” from 1/12 to 1/6 turn instead of 1/3 turn.

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Apply anaerobic adhesive complying with Federal Standard MIL S 46163, Type II, Grade N to anchor bolts and other threaded connections 1/2-inch (13 mm) diameter or larger, according to the manufacturer's recommendations. Do not use anaerobic adhesive with torque-limiting nuts.

Submit alternate designs or materials for sign supports for acceptance at least 21 days in advance of a bid opening date. The Director will give notification of the acceptance or rejection of the alternate design to the bidder at least 7 days in advance of a bid opening date.

A. Ground Mounted Supports. Ground mounted supports consist of structural sections of the material and weights required. Drive the ground mounted supports into the earth or embed them in concrete, as specified. Install supports in exposed locations in accordance with the performance requirements of NCHRP 350. The support lengths shown on the plans are approximate. Determine the exact length of supports before fabrication.

1. Post Supports. Mark each driven post with a line of paint 6 inches above the specified driving depth. Drive posts to the specified depth without bending, distortion, or end mutilation. Do not splice posts. Do not place posts in drainage ditches. If unable to install the post at the specified location, relocate the post with the Engineer's approval at no cost to the City.

Install posts located in paved areas through a hole provided by sleeving or core drilling. After the post is in position, patch the hole with a non-shrink grout; except when the hole is in asphalt, patch with bituminous material.

For groupings of flat sheet signs in multiple arrangements mounted on posts, provide sign backing assemblies.

For temporary sign supports and their placement, conform to the OMUTCD.

2. Structural Beam Supports. Furnish ground mounted structural beam supports from rolled steel sections. The alternate design shown on ODOT Standard Drawing TC-41.10 is not acceptable in the City of Columbus. Furnish slip base connections when specified. Bolt the pieces of each beam together, and preload the assembly bolts before delivery to the project. Carefully handle assembled breakaway beams during transportation and erection. Upon erection, perform the final specified torquing on all threaded fasteners.

At least 4 weeks after erecting signs on breakaway beams, inspect the breakaway feature for evidence of shifting or loose fasteners. Re-torque all loose fasteners to specified values. Loosen and re-torque slip base plate fasteners even if no shifting or looseness is detected. However, if the base plate connection was made with torque limiting nuts, re-torque only if looseness is detected. Apply anaerobic adhesive to the re-torqued conventional nuts, or, as an alternate, use new torque limiting nuts with the proper range.

3. Pipe Supports. Furnish ground mounted pipe supports from structural steel pipe and tubing. Furnish bolt down anchor installations in existing concrete. Furnish triangular slip base connection when specified.

4. Wooden Box Beam Supports. Furnish wooden box beam supports from laminated veneers pressure treated with wood preservative. Install breakaway feature after installation when specified.

B. Rigid Overhead Supports. Rigid overhead supports consist of single poles with cantilevered arms, or span types supported between end frames. Furnish supports that include brackets for attaching disconnect switch, and pipe couplings for sign wiring. Furnish anchor bolts and conduit ells [at least two 2-inch minimum diameter] for installation in the foundation. Upon erection, set support poles and end frames on their foundations, and plumb using the leveling nuts followed by secure tightening of the nuts on the anchor bolts. Plumb poles supporting cantilevered signs following erection of signs as required. Ensure that a minimum of one full thread remains on each anchor bolt above the top of the anchor nut after final tightening. Do not use concrete grouting in the space between the foundation surface and support base.

Provide cover bases or individual anchor bolt covers on support anchor bases regardless of support location.

Furnish overhead sign supports with sign attachment assemblies for attaching extrusheet signs and/or sign hanger assemblies for mounting flat sheet signs to the support chords. Furnish luminaire support assemblies for lighted signs.

When specified, furnish sign support identification stickers of Type F reflective sheeting listing the support type, design number, span/arm length, county, route, and section number (example: TC-7.65, design 6, 80 ft span, CUY-90-17.58). Apply stickers only when the ambient temperature is above 40 °F. Locate the sticker approximately 8 feet above groundline on the quadrant of the sign support facing approaching traffic. Identify sign supports spanning opposing directions of traffic with two stickers, each on a support member facing traffic.

Rigid span supports consist of a box truss supported by single plane truss end frames. Fabricate box trusses from aluminum or steel tubular members with built-in camber, and mark each section "TOP". Do not erect box trusses unless at least one sign or damping device approved by the Engineer is installed within 8 hours. Provide for the attachment of a luminaire bracket arm on combination overhead sign supports.

C. Span Wire Supports. Furnish span wire sign supports with sign hanger and messenger wire assemblies. Furnish anchor bolts and conduit ells [at least two 2-inch minimum diameter] for installation in the foundation.

Achieve a span wire sag under load of 4 to 5 percent of the span. Adjust poles to be essentially vertical after span wire tensioning. Ensure that a minimum of one full thread remains on each anchor bolt above the top of the anchor nut after final tightening.

Provide cover bases or individual anchor base covers on support anchor bases regardless of support location.

When specified, furnish sign support identification stickers as described in 630.06.B.

D. Overpass Structure Mounted Supports. Mount the supports on the overpass structure so the bottom of the signs are in a level position, regardless of bridge slope.

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E. Sign Attachments. Use sign attachment assemblies to attach extrusheet signs to rigid overhead supports. Use sign hanger assemblies to attach flat sheet signs to span wire or rigid overhead supports. Use sign support assemblies to attach flat sheet or extrusheet signs to poles or bridge parapets. Use sign backing assemblies for groups of signs attached to a sign post, and to attach exit number or supplemental panels to an extrusheet sign.

630.07 Sign Erection. Erect signs on ground mounted or overhead supports according to the schematic signing layout. Do not remove an existing sign until the replacement sign is either erected or available for immediate erection. Do not erect a replacement sign on a new support more than 24 hours before the removal of the existing sign.

A. Flat Sheet Sign Erection.

Use steel bolts, wide washers, plastic washers, lock washers, and nuts. Use bearing plates between the sign and U-channel post at each bolt. Field drill signs mounted on messenger wire or mast arms to match holes in brackets.

B. Extrusheet Sign Erection.

Use self-aligning aluminum mounting clips, aluminum or stainless steel rectangular head bolts, aluminum or stainless steel washers, and stainless steel elastic stop nuts, to attach extrusheet signs to beam or U-channel post supports, and for U-channel post sections used to attach exit number and supplemental panels to extrusheet signs. Use aluminum bolts, washers, lock washers, and nuts to assemble extrusheet signs shipped in two pieces.

630.08 Sign Shipment and Storage. Package and ship finished flat sheet signs to assure adequate protection of the sign face, using methods and materials as recommended by the reflective sheeting manufacturer.

Ship extrusheet signs up to 8 feet high completely assembled. Extrusheet signs over 8 feet high may be shipped in two pieces for field assembly. Keep extrusheet signs rigid by back bracing or crating.

Store signs, whether provided by the Contractor or furnished by the City, off the ground in a vertical position with adequate covering or shelter to prevent packing material from getting wet. Immediately remove packing material that does become wet from contact with sign faces to prevent damage to the reflective sheeting.

Identify extrusheet signs on a detachable form on the sign back giving the project number and year, sign reference number, sign legend sketch, and station location. Identify the underlying sign for signs shipped with an attached temporary overlay sign.

630.09 Specific Service and Tourist-Oriented Directional Signs. Specific Service (logo) signs and Tourist-Oriented Directional Signs (TODS) and the supports for these signs, are installed and maintained by a private company operating under a contractual arrangement with ODOT. These signs and supports are not to be removed or relocated unless so indicated in the plans, or if their removal or relocation becomes necessary during the course of construction.

For TODS and/or logo signs and associated supports needing to be removed or relocated, provide written notification to the private company operating under

contractual arrangement with ODOT at least 60 days prior to the date the signs and/or supports need to be removed or relocated. The private company is responsible for removing the signs and supports within 60 days of notification.

The Engineer will coordinate the removal and/or relocation of the TODS and logo signs and supports.

630.10 Covering of Signs. Install temporary covers, and subsequently remove and dispose of them as shown on the plans or as directed by the Engineer. For the covering material, use a sturdy opaque material and obtain the Engineer's approval of the proposed method of covering and attachment. No tape or adhesive shall be used on the face of any sign.

630.12 Removal and Storage, Reerection, or Disposal of Signs and Supports. Carefully dismantle signs and sign supports indicated for removal. Either store on the project, re-erect, or dispose of removed signs and sign supports. To ensure maintenance of adequate traffic control at all times, remove signs only with the Engineer's approval.

Remove sign supports in a manner to avoid damage. Remove sign service to the support by disconnecting and removing cables at the service pull-box. Ensure that connection of remaining cables conforms to 625.18. Remove support foundations to at least 1 foot (0.3 m) below subgrade or finished groundline. Backfill and restore surfaces to a condition equal to that existing before the work started and dispose of surplus material according to 603.12 at no cost to the City.

Furnish mounting hardware for signs to be re-erected. Field drill as necessary. Furnish anchor bolts and conduit ells for installation in the foundation for overhead sign supports to be re-erected.

Remove temporary overlay signs so as not to damage the underlying sign.

630.13 Inspection. After erection, the Engineer will inspect signs under both day and night conditions. Correct deficiencies in lateral position or visibility to the Engineer's satisfaction.

630.14 Method of Measurement. The City will measure Ground Mounted Post Support by the number of feet, and will include driving, hardware for anchor base installation, and furnishing and placing of patching materials for excavations in paved areas.

The City will measure Foundations for ground mounted pipe supports, ground mounted structural beam supports, rigid overhead sign supports and span wire sign supports by the number of each for one pipe, structural beam, pole, end frame or strain pole, and will include excavation, reinforcing steel, concrete, backfilling, and when required the 10 foot foundation section of concrete barrier, and the disposal of surplus excavation.

The City will measure Ground Mounted Structural Beam Support by the number of feet measured from the bottom of the foundation to the top of the sign, and will include furnishing and placing of patching materials for excavations in paved areas.

The City will measure Ground Mounted Pipe Support by the number of feet measured from the bottom of the foundation to the top of the sign and will include u-bracket,

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tubing, posts and hardware for sign attachment, bolt-down anchor and furnishing and placing of patching materials for excavations in paved areas.

The City will measure Ground Mounted Wooden Box Beam Support by the number of feet, and will include excavation, backfilling, disposal of surplus material, and installation of breakaway feature.

The City will measure One Way Support and Street Name Sign Support by the number of feet, and will include driving and furnishing and placing of patching materials for excavations in paved areas.

The City will measure Temporary Sign Support by the number of feet or the number of each furnished, erected, maintained, and removed.

The City will measure Breakaway Structural Beam Connection by the number of each set of connection parts with necessary welding and drilling of holes as required for the breakaway function in one beam, and will include base plates, fuse plate, hinge plate, bolt retainer plate, and bolts assembled to specified torques.

The City will measure Triangular Slip Base Connection by the number of each set of connection parts with the necessary welding and drilling of holes as required for the breakaway function in one pipe and will include slip plate, slip base casting, locking collar, bolt retainer plate, coiled pin and bolts assembled to specified torques.

The City will measure Overhead Sign Support by the number of each, and will include anchor bolts and conduit ells furnished for the foundation, sign attachment assemblies, sign hanger assemblies, luminaire support assemblies when required, and identification stickers when specified.

The City will measure Combination Overhead Sign Support with light pole extension by the number of each, and will include anchor bolts and conduit ells furnished for the foundation, sign attachment assemblies, sign hanger assemblies, luminaire support assemblies when required, and identification stickers when specified. Bracket arms and roadway lighting luminaires are not included.

The City will measure Sign Attachment Assembly by the number of separately itemized assemblies, and will include one overhead sign bracket, U-bolts, clamps, and miscellaneous hardware.

The City will measure Luminaire Support Assembly by the number of separately itemized assemblies, and will include one support arm, other necessary structural members, and miscellaneous hardware.

The City will measure Span Wire Sign Support by the number of each support, and will include two strain poles with span wire clamps and anchor shackles, anchor bolts and conduit ells furnished for foundations, messenger wire, clamps, thimbles, and sign hanger assemblies with hangers, braces, lengths of post, and miscellaneous hardware.

The City will measure Overpass Structure Mounted Sign Support by the number of each support, and will include attachment work and hardware, to attach one individual sign.

The City will measure Sign Hanger Assembly by the number of each, and will include all parts necessary to attach one individual sign.

For pole mounted sign supports, the City will measure Sign Support Assembly by the number of each, and will include brackets, hardware, and posts sufficient to attach each sign or set of signs to an individual pole.

For bridge mounted sign supports, the City will measure Sign Support Assembly by the number of each, and will include post, hardware, and attachment work.

The City will measure Sign by the number of square feet of signs, and will include the furnishing of identification stickers, sign backing assemblies, mounting bolts, washers, nuts, bearing plates, clips, and rivets. For square, rectangular, circular, or irregular shaped signs, the City will determine measurement by multiplying the largest dimensions of width and height. For triangular shaped signs, the City will determine measurement by multiplying the largest dimension of width and one-half the largest dimension of height. The City will include the area of the glare shields for lighted signs as an integral part of the sign.

The City will measure Sign Post Reflector by the number of each, and will include the furnishing of mounting bolts, washers and nuts.

The City will measure Sign, Double-Faced by the number of each, and will include mounting fittings and hardware.

The City will measure Sign Erected by the number of square feet of signs erected, and will include mounting hardware, the assembly of signs that are in more than one piece and the installation of required sign backing assemblies. The City will exclude the furnishing of signs. For square, rectangular, circular, or irregular shaped signs, the City will determine measurement by multiplying the largest dimensions of width and height. For triangular shaped signs, the City will determine measurement by multiplying the largest dimension of width and one-half the largest dimension of height. The City will include the area of the glare shields for lighted signs as an integral part of the sign.

The City will measure Sign Backing Assembly by the number of separately itemized assemblies, and will include back bracing for each group of flat sheet signs attached to a post or posts, or a single assembly for backing posts used to attach an exit or supplemental panel to a guide sign.

The City will measure Covering of Sign by the number of square feet of sign face covered, and will include the subsequent removal and disposal of the covering.

The City will measure Removal and Storage, Reerection, or Disposal of Sign by the number of each sign removed and stored, re-erected or disposed of. Major signs are defined for measurement as being 40 square feet or larger.

The City will measure Removal and Storage, Reerection, or Disposal of Support by the number of each support removed and stored, re-erected or disposed of, and will include removal of foundations and restoration of surfaces. With reerection, the City will include furnishing of anchor bolts, conduit ells, necessary field drilling, and hardware.

630.15 Basis of Payment. The City will not pay for relocating posts from their planned location without prior approval by the Engineer.

The City will pay for accepted quantities at the contract prices as follows:

630.15

Item	Unit	Description
630	Each	Ground Mounted Structural Beam Support Foundation
630	Each	Ground Mounted Pipe Support Foundation
630	Each	Rigid Overhead Sign Support Foundation
630	Each	Span Wire Sign Support Foundation
630	Foot	Ground Mounted Support, ___ Post
630	Foot	Ground Mounted Structural Beam Support, ___ Beam
630	Foot	Ground Mounted Support, Pipe
630	Foot	Ground Mounted Wooden Box Beam Support, ___ Beam
630	Foot	One-Way Support, ___ Post
630	Foot	Street Name Sign Support, ___ Post
630	Foot or Each	Temporary Sign Support, ___ Post
630	Each	Breakaway Structural Beam Connection
630	Each	Triangular Slip Base Connection
630	Each	Overhead Sign Support, Type TC-___, Design___
630	Each	Combination Overhead Sign Support, Type TC-___, Design___
630	Each	Sign Attachment Assembly
630	Each	Luminaire Support Assembly
630	Each	Span Wire Sign Support, Type TC-17.10, Design___
630	Each	Overpass Structure Mounted Sign Support, Type TC-___, Design___
630	Each	Sign Hanger Assembly, (Span Wire, Mast Arm)
630	Each	Sign Support Assembly, (Pole or Bridge Mounted)
630	Square Foot	Sign, (Flat Sheet, Ground Mounted Extrusheet, Overhead Extrusheet, Temporary Overlay)
630	Each	Sign, Double-Faced, (Mile Marker)
630	Square Foot	Sign Erected, (Flat Sheet, Extrusheet, Temporary Overlay)
630	Each	Sign Backing Assembly
630	Each	Sign Post Reflector
630	Square Foot	Covering of Sign
630	Each	Removal of Ground Mounted(Major) Sign and (Storage, Reerection, or Disposal)
630	Each	Removal of Ground Mounted(Structural Beam, Post, Pipe, Wooden Box Beam) Support and (Storage or Disposal)
630	Each	Removal of Overhead Mounted Sign and (Storage, Reerection, or Disposal)

630	Each	Removal of Overhead Sign Support and (Storage, Reerection, or Disposal), Type TC-____
630	Each	Removal of Overlay Sign