



U.S. Department
of Transportation
**Federal Transit
Administration**

Chief Counsel

1200 New Jersey Avenue S.E.
Washington DC 20590

JUN 8 2011

Mark E. Huffer
General Manager
Kansas City Area Transportation Authority
1200 East 18th Street
Kansas City, MO 64108

Subject: Applicability of FTA's Buy America Rules to a Traffic Signal System

Dear Mr. Huffer:

I write in response to your March 12, 2011 letter to Federal Transit Administration (FTA) Regional Administrator Mokhtee Ahmad requesting guidance on how to apply FTA's Buy America rules to traffic signal improvements within the City's Green Impact Zone. FTA's response follows.

Background

In your letter, you identify the various parts that comprise a traffic signal system—mast arm, base, cabinet, controller, conflict monitor, loop amplifiers, load switches, signals (head, housings, lamps, wire harnesses, back plates, and visors), pedestrian crossing signals, pedestrian crossing buttons, street lights (lamp, housing, lens, and electronics), and signs with street names. You propose to categorize as components the mast arm, base, and the traffic signal cabinet. All other parts you propose to categorize as subcomponents.

According to your letter, street signals are assembled on the project site as follows:

1. A base is constructed to support the mast arm.
2. The mast arm is assembled on site.
3. The mast arm is lifted and placed on the base.
4. The housings for the signal are mounted to the mast arm.
5. Visors are placed around the lamps on the housings.
6. The back plate is attached to the signal housing.
7. Pedestrian crossing signals are mounted on the mast arm.
8. All signal heads are adjusted to be visible.
9. Cameras are added to the mast arm and adjusted.
10. Signs with street names are added to the mast arm.
11. The cabinet and its contents are delivered to the shop.
12. Contents of cabinet (controller, conflict monitor, loop amplifiers, and load switches) are placed in slots or wired directly to the cabinet.

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13. The cabinet is tested.
14. The cabinet is placed on a concrete pad near the street.
15. The cabinet is wired to the mast arms.

Buy America

Before discussing the Buy America rules that apply to FTA-funded projects, it is important to note that FTA and FHWA have separate and distinct Buy America rules. FTA's rules originated with a provision in the Surface Transportation Assistance Act of 1978 and are currently codified at 49 U.S.C. § 5323(j) and implemented by regulation at 49 C.F.R. Part 661. FHWA's Buy America rules are codified at 23 U.S.C. § 313 and implemented by regulation at 23 C.F.R. § 635.410.

FTA may not fund a project unless the steel, iron, and manufactured goods used in the project are produced in the United States.¹

For steel and iron, all manufacturing processes must take place in the United States.² This requirement applies to all construction materials made primarily of steel or iron, including structural steel or iron, and steel or iron beams, columns, running rail, and contact rail.³ The steel and iron requirements do not apply to steel or iron used as components or subcomponents of other manufactured products.⁴

For manufactured products, the requirement is two-fold: (1) all manufacturing processes for the product must take place in the United States, and (2) all of the components of the product must be of U.S. origin. A component is considered of U.S. origin if it is manufactured in the United States, regardless of the origin of its subcomponents.⁵

To satisfy the manufactured product standard summarized above, a component must be produced as a result of a manufacturing process that occurs in the United States. Manufacturing process means the application of processes to alter the form or function of materials or of elements of the product in a manner adding value and transforming those materials or elements so that they represent a new end product functionally different from that which would result from mere assembly of the elements or materials.⁶ FTA has stated that alteration activities sufficient to be considered a manufacturing process include "forming, extruding, material removal, welding, soldering, etching, plating, material deposition, pressing, permanent adhesive joining, shot blasting, brushing, grinding, lapping, finishing, vacuum impregnating and, in electrical and electronic pneumatic, or mechanical products, the collection, interconnection, and testing of various elements."⁷ "Mere assembly is insufficient to satisfy the manufactured product

¹ 49 U.S.C. § 5323(j).

² 49 C.F.R. 661.5(b).

³ 49 C.F.R. 661.5(c).

⁴ 49 C.F.R. 661.5(c).

⁵ 49 C.F.R. 661.5(d).

⁶ 49 C.F.R. 661.3.

⁷ FTA offered this explanation of a "manufacturing process" in 56 Fed. Reg. 926 (January 9, 1991) with reference to rolling stock; it applies to manufactured products as well.

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requirements of 49 C.F.R. 661.5.”⁸

Other key definitions include the following:

End product means any vehicle, structure, product, article, material, supply, or system, which directly incorporates constituent components at the final assembly location, that is acquired for public use under a federally funded third-party contract, and which is ready to provide its intended end function or use without any further manufacturing or assembly change(s).⁹

Component means any article, material, or supply, whether manufactured or unmanufactured, that is directly incorporated into the end product at the final assembly location.¹⁰

System means a machine, product, or device, or a combination of such equipment, consisting of individual components, whether separate or interconnected by piping, transmission devices, electrical cables or circuitry, or contribute together to a clearly defined function. Factors to consider in determining whether a system constitutes an end product include: Whether performance warranties apply to an integrated system (regardless of whether components are separately warranted); whether products perform on an integrated basis with other products in a system, or are operated independently of associated products in the system; or whether transit agencies routinely procure a product separately (other than as replacement or spare parts).¹¹

The following is a list of representative manufactured end products that are subject to the requirements of Buy America. Note that this list is representative, not exhaustive.

Manufactured end products: Infrastructure projects not made primarily of steel or iron, including structures (terminals, depots, garages, and bus shelters), ties and ballast; contact rail not made primarily of steel or iron; fare collection systems; computers; information systems; security systems; data processing systems; and mobile lifts, hoists, and elevators.¹²

Discussion

For purposes of applying Buy America, you asked FTA to classify the items described in your letter as end products, components, or subcomponents.

The items described in your letter are interconnected and contribute to a clearly defined function—to control vehicle and pedestrian traffic at street intersections. See, Appendix A to 49

⁸ Letter from Dorval R. Carter, Jr., Chief Counsel, Federal Transit Administration, to Anita Gulotta-Connelly, Managing Director, Milwaukee County Transit System (Mar. 1, 2010).

⁹ 49 C.F.R. 661.3.

¹⁰ 49 C.F.R. 661.3.3

¹¹ 49 C.F.R. 661.3.3

¹² Appendix A to 49 C.F.R. § 661.3.

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C.F.R. 661.3. For these reasons, the end product is a traffic signal system.

The components are the articles, materials, and supplies that are directly incorporated into the end product—mast arm, base, control system, traffic signals, pedestrian crossing signals, pedestrian crossing buttons, street lights, and signs with street names.

Several components listed above, including the control system, traffic and pedestrian crossing signals, and street lights can be separated into subcomponents. The subcomponents of the control system include the cabinet, controller, conflict monitor, loop amplifier, and load switches. The subcomponents of the traffic and pedestrian crossing signal include the head, housings, lamps, wire harnesses, back plates, and visors. Street light subcomponents are the lamp, housing, lens, and electronics.

The following chart identifies the end product, components, and subcomponents of a traffic signal system like the one described in your letter:

Traffic Signal System		
Component	Mast Arm	
Component	Mast Base	
Component	Control System	
	Subcomponent	Cabinet
	Subcomponent	Controller
	Subcomponent	Conflict Monitor
	Subcomponent	Loop Amplifier
	Subcomponent	Load Switch
Component	Traffic Signals	
	Subcomponent	Signal Head
	Subcomponent	Housings
	Subcomponent	Lamps
	Subcomponent	Wire Harness
	Subcomponent	Back Plate
	Subcomponent	Visors
Component	Pedestrian Crossing Signals	
	Subcomponent	Signal Head
	Subcomponent	Housings
	Subcomponent	Lamps
	Subcomponent	Wire Harness
	Subcomponent	Back Plate
	Subcomponent	Visors
Component	Pedestrian Crossing Buttons	
Component	Street Light	
	Subcomponent	Lamp
	Subcomponent	Housing
	Subcomponent	Lens
	Subcomponent	Electronics
Component	Street Name Signs	

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Conclusion

Applying the rules and definitions summarized above to the products you describe in your letter, I find that the end product is a traffic signal system; the components are the mast arm, mast base, control system, traffic signals, pedestrian crossing signals, pedestrian crossing buttons, street lights, and signs with street names.

Feel free to contact Jayme Blakesley at jayme.blakesley@dot.gov with questions about this decision.

Sincerely,

A handwritten signature in black ink, appearing to read "Dorval R. Carter, Jr.", with a stylized flourish at the end.

Dorval R. Carter, Jr.
Chief Counsel