



# RENEWAL WHEAT RIDGE

ITB-RWR-16-2 *CR*  
ADDENDUM #3

## TRAFFIC SIGNAL at 44<sup>th</sup> & Vance PROJECT

**Date:** July 22, 2016  
**Bid Number:** ITB-RWR-16-2  
**Bid Due Date:** TUESDAY, August 2, 2016 BY 1:00 PM OUR CLOCK

The following information is provided to all prospective bidders and is hereby made a part of the above bid documents. Bidders must acknowledge this Addendum 2 with their bid. It is a total of one (1) pages.

### CLARIFICATION, ADDITIONAL INFORMATION, AND CHANGES:

1. **The Bid Due Date for this project is TUESDAY, AUGUST 2, 2016, 1:00 PM our clock.**

2. Question: 100 mph wind speed.

**RESPONSE:** The City's standards for the pole design for the signals has been removed from the revision to Subsection 614.08 (g) on page 143 of the specifications. The traffic signal poles should be designed to the CDOT specifications for loading. The bolt pattern changes remain in the revision to Subsection 614.08 (g).

3. Question: 50 year design life.

**RESPONSE:** Yes, 50 year design life per current AASHTO criteria.

4. Question: Fatigue category 2.

**RESPONSE:** Yes, Galloping loads are excluded from fatigue design and Category II importance factors are to be used per CDOT.

5. Question: No design for galloping, if galloping should occur the owner will install a mitigation device as quickly as possible after the galloping appears.

**RESPONSE:** As mentioned in response for item "c" above, galloping loads were excluded from the fatigue design. If the City prefers to require mitigation of galloping, notes within the plans and revised text within the project specifications recommend conformance with CDOT standards.

6. Question: Design for 45 mph truck gusts.

**RESPONSE:** CDOT standard plans (S-614-40A, sheet 1 of 4) state a design wind velocity of one 12' lane with a 65 mph truck induced gust loading, the City specifications require a 1.3 gust factor in accordance with the latest edition of AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals. General note 27 on Sheet 1 of 5 of the Construction Plans states "...The specified average truck speed to be used for the design of truck induced gust loads

at this intersection location equals the design speed of 40 mph on 44<sup>th</sup> Ave." For this speed, apply the gust factor per City of Wheat Ridge.

7. Question: Mastarm loading information is shown on plan sheet 1 of 5 dated March 15, 2016.

**RESPONSE:** This is correct, the mast arm loading information is provided in sheet 1 of 5 dated March 15, 2016.

8. Question: Signal poles shall be supplied with a 16.5 inch bolt pattern for mast arms 35 feet and less or with a 20 inch bolt pattern for mast arms in excess of 35 feet unless the pole manufacturer recommends/requires a larger bolt circle based on the pole sizing.

**RESPONSE:** Yes, in accordance with City specification 614.08 (g) and General Note 1 on sheet 1 of 5, Signal poles shall be supplied with 16.5 inch bolt pattern for mast arms 35 feet and less or with a 20 inch bolt pattern for mast arms in excess of 35 feet. Any variations from the specified City requirements will require six sets of shop drawings, sealed and signed by a registered Colorado professional engineer to be submitted to the City of Wheat Ridge engineering.

9. Question: All anchor bolts to be 2.00" diameter.

**RESPONSE:** Yes, all anchor bolts shall be 2 inches in diameter.

10. Question: Hand holes are to be supplied at the base and across from the mast arm fitting.

**RESPONSE:** Yes, In accordance with City specification 618.04 (g) and Note 5 on sheet 4 of 5, hand holes shall be supplied at the pole base and across from the mast arm fitting.

11. Question: Pole finish to be black powder coat paint over galvanizing, mastarms and luminaire arms to be black powder coat.

**RESPONSE:** All poles and mast arms shall be galvanized and powder coated black in accordance with General Note 7 on sheet 1 of 5 and CDOT Stand plan S-614-40Z, sheet 1 of 4, and CDOT standard specification section 522. The City will need to provide the final paint color and coating information.

12. Question: Luminaire arms to be 10' long at 35' mounting height.

**RESPONSE:** Yes, in accordance with the signal pole information table on sheet 1 of 5 and detail information on sheet 4 of 5, luminaire arms shall be 10' long with a mounting height of 35'.

13. Question: Poles shall be round and taper at a rate of .14" per foot.

**RESPONSE:** In accordance with current CDOT standard plans (S-614-40A, Sheet 1 of 4), all poles and mast arms shall be round or dodecagonal tubes with a 0.14 in/ft taper.

14. question: Pole manufacturer to supply Colorado PE stamped drawings prior to fabrication for review and approval by The City of Wheat Ridge.

**RESPONSE:** In accordance with current CDOT specification 105.02 and General Note 1 on sheet 1 of 5, prior to fabrication, shop drawings, sealed and signed by a registered Colorado professional engineer shall be submitted to the City of Wheat Ridge engineering. In accordance with current City specification 105.02 (b)4., modify sheet 1 of 5 to read "four sets of shop drawings".

It is recommended that the information currently provided in General Note 3 on sheet 1 of 5 remains. Any variations from the specified CDOT requirements will require submittal of shop drawings, sealed and signed by a registered Colorado professional engineer to the City of Wheat Ridge engineering for review and approval.

Attachments:

**Plans**

Sheet 1 of 5 –

1. Note # 27 of the project was revised to clarify consistent to the response #2 and #6 above.

**Specifications**

Spec Change – Page 143

1. Spec section 614.08(g) have been revised to reflect the changes to the required wind loading. A red-lined version is included.

Visit our City website for prebid sign in sheet, addendum, plan holders list and project updates:  
[www.ci.wheatridge.co.us](http://www.ci.wheatridge.co.us)

**POINT OF CONTACT:** Jennifer Nellis, Purchasing Agent for the City of Wheat Ridge, [jnellis@ci.wheatridge.co.us](mailto:jnellis@ci.wheatridge.co.us), fax 303-234-5924, or phone 303-235-2811. Do not contact the Renewal Wheat Ridge,



9. *Documentation.* Two paper copies of the cabinet prints shall be accurate and complete and shipped with each cabinet. An additional copy shall be supplied in digital format (DXF) on 3.5 inch high density diskette. If additions or deletions are necessary to the cabinet as supplied, a new print will be supplied. Corrections to an existing print will not be accepted. A quality assurance sheet shall be supplied stating the following:
- A. The date of the test.
  - B. The duration of the test.
  - C. The method of testing.
  - D. If the testing involved components, the manufacture and model number of the devices used.
  - E. The technician's signature (not initials).
  - F. Quality control supervisor's signature (not initials).
  - G. The serial number or other unique identifier of the cabinet.

Subsection 614.08 (d) shall include the following:

Detector units shall be card rack mounted plug-in type 3M Canoga 400 4-channel units.

Subsection 614.08 (e) shall include the following:

Micro Detector shall be as supplied by 3M Micro Probes.

Subsection 614.08 (f) shall include the following:

The push-button assembly shall meet the requirements for accessible pedestrian signals as outlined in the latest edition of the "Manual of Uniform Traffic Control Devices" Chapter 4E. Installation shall be done in accordance with the manufacturer's specifications.

Subsection 614.08 (g) shall include the following:

~~Traffic signal poles, pedestals, and mast arms shall be of the general configuration shown on Standard Drawings. All traffic signal poles and mast arms shall be designed to meet the requirements outlined in the latest edition of "Standard Specifications for Structural Supports for Highway Signs, Luminaries, and Traffic Signals", published by AASHTO, for a wind velocity of 90 mph with a 1.3 gust factor. Signal poles shall be supplied with a 16.5 inch bolt pattern for mast arms 35 feet and less or with a 20 inch bolt pattern for mast arms in excess of 35 feet. Hand holes are to be supplied at the base and across from the mast arm fitting.~~

Subsection 614.08 (h) shall include the following:

(h) *Traffic Signal Faces.*

1. *Traffic Signal Units.* All signal units shall be of the individual section, adjustable type, black polycarbonate. Signal units shall be supplied by Eagle, IDC or Econolite.

Programmable heads shall be Cast Aluminum frame units supplied by 3M.

Visors shall be detachable, 12 inch tunnel type, open at the bottom; be black in color on the outside and flat black on the inside.

Reflector shall be silvered glass or Alzak type units.

Lenses shall be in accordance with Institute of Transportation Engineers (ITE) Specifications.

Sockets shall be fixed focus.

Doors on the signal heads for the installation of lamps and lens replacement or other maintenance shall not require use of any tool to be opened. Doors and lenses shall be equipped with neoprene weather proof gaskets to ensure against infiltration of moisture, road film and dust. Each three-color signal unit shall have the socket leads from all signal sections connected to a terminal board stamped identifiable with terminals. There shall be a terminal for color indication plus a common terminal where one lead from each socket shall terminate. The terminal board shall be mounted in the middle section and be properly insulated. All openings, top and bottom, shall be for 1 ½ inch pipe or pipe mounting brackets. Gaskets shall be supplied for top and bottoms openings.