

Traffic Signal Notes

1. Traffic signal materials and installation shall comply with "State of Colorado -- 2011 Standard Specifications for Road and Bridge Construction", "State of Colorado -- M&S Standard Plans", the "Manual on Uniform Traffic Control Devices -- 2009 Edition", the "National Electric Code", and all local ordinances and regulations that apply, except as noted on these plans or special provisions.
2. Traffic signal pole locations shall be staked and potholed in the field by the contractor before drilling.
3. The top of the pole foundation shall be level with the finished grade. If the slope or shoulder drops off from finished grade, the contractor shall grade around pole foundation. The top of the foundation shall extend no more than 4 inches above surrounding grade.
4. Traffic signal pullboxes shall not be located in handicap ramps or asphalt pavement areas, or in locations where these features could possibly be constructed in the future.
5. All vehicle and pedestrian indications shall be approved solid state led countdown type. All vehicle indication shall be 12 inches. All pedestrian indications shall be 16 inches, clamshell mount type.
6. No excavation shall be permitted until underground utilities have been located to the satisfaction of all parties. The contractor shall be responsible for protecting all aerial and underground utilities. Contact the Utility Notification Center of Colorado (UNCC) to have locations of UNCC registered lines marked by member companies. Calls originating outside the Denver area use 1-800-922-1987. All other utilities shall be located by contacting the respective company. For locating CDOT utilities contact Tony Kerr (719) 251-4201.
7. All items not shown in the summary of quantities shall be considered incidental to the installation of traffic signals and will not be paid for separately. Payment will be made only for items on the pay item list upon completion of the work shown on these plans, the contractor shall supply as-built drawings, corrected plans, and other data required by the engineer. The production of these documents will not be paid for separately, but shall be included in the cost of the work.
8. All signal head housing shall be black in color.
9. All signal lenses shall be LED type.
10. All mast-arm mounted heads will have black louvered aluminum back plates with 1" yellow retroreflective borders and astro type mounting brackets.
11. A pre-construction meeting shall be held prior to any work. All submittals shall be due prior to the pre-construction meeting to allow time for review and revisions. CDOT personnel shall be included in the preconstruction meeting, and shall be notified 5 working days in advance of the meeting.
12. Caissons shall be built so that the bolt pattern shall be in the correct position for mounting the poles.
13. A licensed journeyman electrician shall be present at each construction site for all electrical work including the installation of all conduit.
14. All electrical conduit shall be buried a minimum of 30 inches deep. All fiber conduit shall be buried a minimum of 36 inch deep.
15. Utility lines as shown on the plans sheets are approximate only. The contractor shall field verify the exact location of all existing utilities prior to commencing work and agrees to be responsible for any and all damages which occur by the contractor's failure to exactly locate and preserve any underground utilities.
16. Prior to ordering the signal poles and mast arms the contractor shall pothole the existing utilities by the use of non-invasive vacuum extraction methods to verify the exact location and depth of these facilities and that the signal pole foundations can be installed without damage to the existing utilities or relocation of these facilities. It is estimated that 20 hours of potholing will be required.
17. Any facilities damaged during the course of signal conduit construction shall be restored to original or better condition at the contractor's expense. All costs incidental to the foregoing requirements will not be paid separately, but shall be incidental to the work.
18. Excavated materials, including boulders, shall be removed off site from the work site and disposed of at no cost to the project. Any hazardous material shall follow Section 250 of CDOT Standard Specifications for Road and Bridge Construction.

19. Contractor shall complete all work necessary for operation of the system and shall contact CDOT Region 2 Traffic Operations to schedule a compliance inspection. Upon completion of the inspection, field operational testing shall begin. The complete traffic system shall be fully operational, and fully tested, and appropriate markings shall be in place, prior to the signal being turned on. This time shall typically be Tuesday, Wednesday or Thursday during an off-peak traffic period.
20. Contractor shall notify CDOT at least two weeks prior to signal being placed in flash mode to coordinate signal activation.
21. CDOT must be notified 48 hours prior to signal being turned on for full operation.
22. Traffic sign panels on the signal mast arms shall be installed with astro type mounting brackets.
23. All splicing of conductors shall be done in the hand holes of signal poles. No electrical splices will be allowed under ground or in pull boxes.
24. Traffic signal heads mounted on the side of poles shall be drilled and taped.
25. Signal heads not in operation shall be bagged until operation. Bagging shall cover any backplate border and shall not be black, red, or green. Bagging will not be measured and paid for separately but shall be included in the work.
26. Upon completion of the work, the Contractor shall supply CDOT with 2 sets of record drawings, corrected plans, and any other additional data required by the Engineer.
27. Prior to flash operations, the Contractor will be required to have final stop bars installed.
28. Underground Feeder, UF, cable will not be allowed for luminaire installation. Only THHN will be acceptable for underground luminaire wiring. The Contractor shall follow M-613-1 standard, Typical Concrete Light Standard Foundation for luminaire wiring up the pole.
29. Traffic signal poles, pedestal poles, and luminaire arms shall be color powder coated and incidental to the work.



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