

Pasco County Traffic Operations Division Traffic Signal Controller Specifications and Standard Plan Notes

Rev 3, February 6, 2008

Traffic Signal Controller Specifications

- 1) All NON-ATMS/ITS traffic signal controller cabinets shall be **NEMA TS2 TYPE1**.
- 2) When the controller and cabinet is to be used in a CLOSED LOOP SYSTEM, the controller shall be a **NEMA controller with "ABC" connectors and Buss communications** and be compatible with the existing system software.
- 3) All ATMS/ITS traffic signal controller cabinets shall be CALTRANS type 333JP. The controller shall be **2070** controller compatible with the existing system software.
- 4) If the controller and cabinet shall be used in an existing system, the communications type shall match the existing system.

STANDARD TRAFFIC SIGNAL PLAN NOTES FOR SPAN WIRE SIGNALS

- 1) ALL LOOP WIRE SHALL BE XHHW WIRE I.M.S.A. SPEC. #51-3.
- 2) LOOP LEAD-IN FEEDER CABLE SHALL BE I.M.S.A. SPEC. #50-2.
- 3) ALL SIGNAL POLES FOUNDATIONS SHALL HAVE A MINIMUM OF TWO 2" AND ONE 1" PVC CONDUITS. UNUSED CONDUITS SHALL BE STUBBED OUT A MINIMUM OF 12" FROM THE FOUNDATION.
- 4) ALL TRAFFIC SIGNAL FIXTURES SHALL BE WIRED PER THE INTERSECTIONS WIRING DIAGRAM. CABLE SIZE SHALL BE AS CALLED FOR IN THE WIRING DIAGRAM.
- 5) ALL SIGNAL CABLES ON SPAN WIRES SHALL BE ATTACHED TO THE MESSENGER BY USE OF LASHING ROD IN PLACE OF TIE WRAPS.
- 6) ALL SPARE CONDUCTORS IN TRAFFIC SIGNAL FIXTURES SHALL BE CONNECTED TO **AC-** IN THE CABINET AND FIXTURE.
- 7) TUNNEL HOODS SHALL BE USED WHEN PED SIGNALS ARE PRESENT.
- 8) ALL FIELD WIRES IN CABINET SHALL BE IDENTIFIED WITH PANDUIT #PLF1M-C MARKER TIES OR EQUIVALENT.
- 9) IN REFERENCE TO F.D.O.T. SPEC. #B660-5.2 THE FOLLOWING CHANGE IS MADE. ALL LOOP INSULATION RESISTANCE SHALL BE 50 MEGOHMS OR GREATER.
- 10) PRIOR TO ORDERING THE CONTROLLER AND CABINET ASSEMBLIES, VERIFY THE TYPE SYSTEM THAT IT WILL BE USED IN. ALL CONTROLLER AND CABINET ASSEMBLIES SHALL FULLY COMPATIBLE WITH THE APPROPRIATE CLOSED LOOP OR SCATS SYSTEM. VERIFY THE TYPE OF COMMUNICATIONS TO BE USED, RADIO, FIBER OR TWISTED PAIR.
- 11) ALL CONTROLLER AND CABINET ASSEMBLIES SHALL BE IN ACCORDANCE WITH PASCO COUNTY SPECIFICATION 04-001 AND 04-002

1. ADAPTIVE SYSTEM REQUIRES 2070 OR 2070N CONTROLLERS WITH PROPER SOFTWARE. VERIFY COMMUNICATIONS REQUIREMENT WITH PASCO COUNTY.
 2. CLOSED LOOP SYSTEM, VERIFY CONTROLLER AND COMMUNICATIONS TYPE WITH PASCO COUNTY. IF SPREAD SPECTRUM RADIO IS REQUIRED, IT SHALL BE SUPPLIED WITH RADIO, ANTENNA, COAX CABLE, CONNECTORS AND POLYPHASER.
 3. ALL CABINET ASSEMBLIES SHALL BE NEMA TS2 TYPE 1 UNLESS OTHERWISE SPECIFIED.
- 12) ALL SPLICES BETWEEN THE LOOP AND LOOP LEAD-IN SHALL BE MADE USING **3M 3570G** CONNECTOR SEALING PACKS OR EQUAL.
 - 13) THE ONLY SPLICE THAT SHALL BE ALLOWED IN LOOP LEADING SHALL BE BETWEEN THE TWISTED PAIR OF THE LOOP AND ITS BELDEN LEAD-IN CABLE. ALL BELDEN LEAD-IN CABLES SHALL BE CONTINUOUS WITH NO SPLICES.
 - 14) NO INDUCTIVE LOOP LEAD-IN SHALL BE RUN ACROSS ANY SPAN WIRE ASSEMBLY. ALL INDUCTIVE LOOP LEAD-INS SHALL BE PLACED IN CONDUITS OR SAW CUTS TO THE CABINET ASSEMBLY.
 - 15) IF THE TOTAL LENGTH OF THE TWISTED PAIR FROM A LOOP TO THE POINT OF ATTACHMENT IN THE CABINET IS 75 FEET OR LESS, NO BELDEN LEAD-IN CABLE IS REQUIRED.
 - 16) ALL GROUND ROD CONNECTIONS SHALL BE MADE USING EXOTHERMIC WELD GROUND CONNECTORS.
 - 17) ALL UNUSED REDS SHALL BE HARD WIRED TO 120V AC, NO PLUG IN JUMPERS SHALL BE USED.
 - 18) THE TOP ELEVATION OF THE CONTROLLER BASE SHALL BE EQUAL TO OR GREATER THAN THE CROWN OF THE ROAD.
 - 19) CABLE CONDUIT BETWEEN THE CONTROLLER BASE AND THE ALL POLES SHALL BE MINIMUM 2" PVC.
 - 20) ALL SPLICES IN THE POLE BASE SHALL BE MADE USING **3M 3570G** CONNECTOR SEALING PACKS OR EQUAL. ALL SPLICES SHALL BE MADE AT THE HAND HOLE.
 - 21) ALL TRAFFIC SIGNALS SHALL BE EQUIPPED WITH 3M OPTICOM REPORTER SERIES EMERGENCY VEHICLE PRE-EMPTION. THIS SHALL INCLUDE ALL COMPONENTS AND WIRING TO PROVIDE A FULLY FUNCTIONAL SYSTEM. THE DETECTORS SHALL BE PAID UNDER ITEM 663-70 VEHICLE DETECTOR OPTICAL. ALL OTHER EQUIPMENT, HARDWARE, INTERFACE PANELS AND WIRING SHALL BE PAID UNDER ITEM 678-1-100. DETECTOR TYPE AND PLACEMENT SHALL BE SHOWN ON THE PLANS.
 1. 711 DETECTORS SHALL BE USED ON ALL APPROACHES OF AN UNDIVIDED ROADWAY AND FOR ADVANCE DETECTORS.
 2. 721 DETECTORS SHALL BE USED ON ALL APPROACHES OF A MULTILANE DIVED ROADWAY TO WIDEN THE DETECTION ZONE.
 3. 722 DETECTORS MAY BE USED FOR TWO APPROACHES OF AN UNDIVIDED ROADWAY WHEN THE PLACEMENT WILL ALLOW.
 - 22) ALL RED, YELLOW, GREEN, SIGNALS SHALL BE EQUIPPED WITH LED "LIGHT EMITTING DIODE" DISPLAYS. ALL LEDS SHALL BE OF A TYPE CURRENTLY CERTIFIED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION FOR USE IN THE STATE OF FLORIDA.
 - 23) ALL WALK AND DON'T WALK PEDESTRIAN SIGNALS SHALL BE LED COUNT-DOWN PER FDOT SPECIFICATIONS WITH A SOLID SYMBOL DISPLAY. ALL SIGNS FOR THE PEDESTRIAN SIGNALS SHALL BE FTP-68B-06.

- 24) ALL REMOVAL ITEMS EXCEPT 690-90 AND 690-100 SHALL BE RETURNED TO PASCO COUNTY AND PROTECTED FROM DAMAGE FOR REUSE.
- 25) ALL OVERHEAD STREET NAME SIGNS SHALL BE "LED EDGE LIT".