

12. NCHRP REPORT 350 CRASHWORTHY REQUIREMENTS:

TRAFFIC CONTROL DEVICES SHALL MEET THE EVALUATION CRITERIA IN NCHRP REPORT 350 AS SUPPLEMENTED BY FHWA MEMORANDUM "IDENTIFYING ACCEPTABLE HIGHWAY SAFETY FEATURES," DATED JULY 25, 1997. AVAILABLE ON THE INTERNET AT http://safety.fhwa.dot.gov/roadway_dept/road_hardware/nchrp_350/nchrp350.htm

THE CONTRACTOR SHALL:

1) PROVIDE TO THE ENGINEER A COPY OF THE MANUFACTURER'S SELF-CERTIFICATION THAT ANY CATEGORY 1 (i.e. - PLASTIC TRIMLINE CONES, TUBULAR MARKERS, DRUMS WITHOUT ATTACHMENTS) AND CATEGORY 2 (i.e. - PORTABLE SIGN STANDS (WITH SIGNS), TYPE II AND III BARRICADES, AND VERTICAL PANELS) DEVICES USED ON THE PROJECT ARE NCHRP REPORT 350 COMPLIANT.

2) PROVIDE TO THE ENGINEER, UPON REQUEST, A COPY OF THE ENTIRE FHWA NCHRP REPORT 350 ACCEPTANCE LETTER (WZ-xxx) FOR ANY CATEGORY 2 DEVICE (i.e., -PORTABLE SIGN STANDS (WITH SIGNS), TYPE II AND III BARRICADES, AND VERTICAL PANELS) USED ON THE PROJECT. WORK ZONE FHWA NCHRP REPORT 350 ACCEPTANCE LETTERS (WZ-xxx) ARE AVAILABLE ON THE INTERNET AT http://safety.fhwa.dot.gov/roadway_dept/road_hardware/listing.cfm?code=workzone

3) CERTIFY THAT THE TRUCK MOUNTED ATTENUATORS (TMA'S) (WHICH ARE DEFINED AS CATEGORY 3 DEVICES BY THE FHWA MEMORANDUM) WERE PURCHASED PRIOR TO OCTOBER 1, 1998, AND INCLUDE A COPY OF THE ENTIRE FHWA ACCEPTANCE LETTER STATING THAT THE TMA'S ARE NCHRP REPORT 230 COMPLIANT; OR IF THE DEVICES WERE PURCHASED AFTER OCTOBER 1, 1998, INCLUDE A COPY OF THE ENTIRE FHWA'S ACCEPTANCE LETTER STATING THAT THE TMA'S ARE NCHRP REPORT 350 COMPLIANT.

ALL CATEGORY 1 & 2 DEVICES USED ON PROJECTS LET AFTER JANUARY 1, 2002 SHALL BE NCHRP REPORT 350 COMPLIANT. TMS PURCHASED PRIOR TO OCTOBER 1, 1998, MAY BE USED UNTIL THE END OF THEIR SERVICEABLE LIVES.

A MINIMUM OF ONE FLAGGER SHALL BE STATIONED WITHIN EACH MULTI-LANE ROADWAY WORK AREA WHERE WORK IS IN A CLOSED LANE ADJACENT TO TRAFFIC AND NOT SEPERATED BY CONCRETE SAFETY BARRIER.

WHEN THE WORK WILL OCCUPY A LOCATION MORE THAN THREE DAYS, ALL
CONFLICTING PAVEMENT MARKINGS SHALL BE REMOVED OR MASKED AND ALL TRANSITION
TAPERS, CROSSOVERS, AND EDGE LINES ALONG CHANNELIZING DEVICES SHALL BE
MARKED WITH SOLID 100 mm WIDE PAVEMENT MARKING.

THE FIRST MODULE OF EACH INERTIAL BARRIER SYSTEM (IBS) SHALL HAVE A MINIMUM OF 0.175 SQ M OF FLOURESCENT ORANGE PRISMATIC GRADE RETROREFLECTIVE SHEETING FACING TRAFFIC. EITHER A VERTICAL RECTANGLE OR DIAMOND SHAPE MAY BE USED.

WORK ZONE SIGNS SHALL NOT INHIBIT PEDESTRIAN AND BICYCLE TRAFFIC ON
SIDEWALKS OR OTHER AREAS DESIGNATED FOR PEDESTRIAN OR BICYCLE USE.

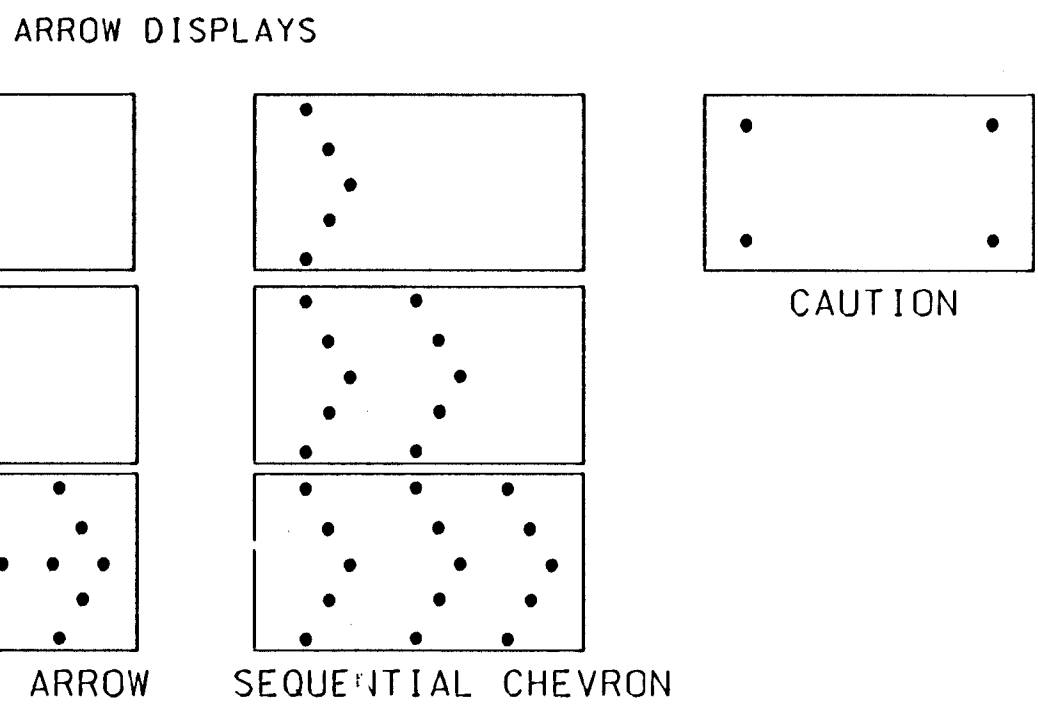
CONSIDERATION SHOULD BE MADE TO SEPERATE PEDESTRIAN AND BICYCLE MOVEMENTS FROM BOTH WORK SITE ACTIVITY AND VEHICULAR TRAFFIC. UNLESS A REASONABLE SAFE ROUTE THAT DOES NOT INVOLVE CROSSING THE ROADWAY CAN BE PROVIDED, PEDESTRIANS AND BICYCLISTS SHOULD BE APPROPRIATELY DIRECTED WITH ADVANCE SIGNING THAT ENCOURAGES THEM TO CROSS TO THE OPPOSITE SIDE OF THE ROADWAY. IN URBAN AND SUBURBAN AREAS WITH HIGH VEHICULAR TRAFFIC VOLUMES, THESE SIGNS SHOULD BE PLACED AT INTERSECTIONS (RAIHER THAN MID BLOCK LOCATIONS) SO THAT PEDESTRIANS AND BICYCLISTS ARE NOT CONFRONTED WITH MID-BLOCK WORK SITES THAT WILL INDUCE THEM TO ATTEMPT SKIRTING THE WORK SITE OR MAKING A MID-BLOCK CROSSING.

ATTACH TWO FLAGS AND A RED TYPE B HIGH INTENSITY WARNING LIGHT TO ANY STOP SIGN THAT CREATES A NEW STOP CONDITION OR MOVES THE STOP CONDITION TO A NEW LOCATION. LEAVE FLAGS AND LIGHTS IN PLACE FOR AT LEAST THE FIRST 30 DAYS. INSTALL W3-1 (SYMBOLIC STOP AHEAD) SIGN IN ADVANCE OF STOP SIGN IF STOP SIGN IS NOT VISIBLE FOR A MINIMUM OF DISTANCE 'A' (SEE CHART ON TETIOSI) OR IF STOP CONDITION IS MOVED TO LESS THAN DISTANCE 'A' FROM AN EXISTING STOP AHEAD SIGN.

WHEN TRAFFIC CONTROL IS BID LUMP SUM, ADDITIONAL DEVICES WILL BE PAID FOR AS EXTRA WORK.

WHEN NIGHTTIME WORK IS REQUIRED, FLOODLIGHTS SHOULD BE USED TO ILLUMINATE FLAGGER STATIONS, EQUIPMENT CROSSINGS, AND OTHER AREAS WHERE EXISTING LIGHT IS NOT ADEQUATE FOR THE WORK TO BE PERFORMED SAFELY.

IN NO CASE SHALL FLOODLIGHTS BE PERMITTED TO CREATE A DISABLING GLARE FOR THE DRIVER. THE ADEQUACY OF THE FLOODLIGHT PLACEMENT AND ELIMINATION OF POTENTIAL GLARE SHOULD BE CHECKED BY DRIVING THROUGH THE PROJECT.



ARROW DISPLAY ELEMENTS SHALL BE CAPABLE OF A MINIMUM 50 PERCENT DIMMING FROM THEIR FULL-RATED LAMP VOLTAGE. FULL LAMP VOLTAGE SHOULD BE USED FOR DAY AND DIMMED MODE SHALL BE USED FOR NIGHT. AN ARROW DISPLAY IN THE CAUTION MODE SHALL BE USED ONLY FOR SHOULDER WORK OR ROADSIDE WORK NEAR THE SHOULDER.

KANSAS DEPARTMENT OF TRANSPORTATION

GENERAL TRAFFIC CONTROL