

WORK ZONE PAVEMENT MARKINGS AND SIGNS

614 WORK ZONE PAVEMENT MARKINGS

GENERAL
THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND WHEN NECESSARY, REMOVE WORK ZONE RETROREFLECTIVE PAVEMENT MARKINGS ON EXISTING, RECONSTRUCTED, RESURFACED OR TEMPORARY ROADS WITHIN THE WORK LIMITS, IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE MARKINGS SHALL BE EVALUATED BY THE ENGINEER IN ACCORDANCE WITH THE THREE PERFORMANCE PARAMETERS CONTAINED IN SUPPLEMENT 1047. THE MARKINGS SHALL BE REPAIRED OR REPLACED WHEN THE NUMERICAL RATING OF A PARAMETER IS (a) SIX OR LOWER FOR DURABILITY, (b) FOUR OR LOWER FOR VISUAL EFFECTIVENESS AND (c) FOUR OR LOWER FOR NIGHT VISIBILITY. THE CONTRACTOR SHALL REPAIR OR REPLACE UNSATISFACTORY MARKINGS IMMEDIATELY AND AT NO ADDITIONAL COST TO THE STATE.

TEMPORARY PAVEMENT MARKING MATERIALS
UNLESS OTHERWISE INDICATED ON THE PLANS, TEMPORARY PAVEMENT MARKINGS MAY BE EITHER 621.02 PAINT OR 947.03 TYPE B OR TYPE C PREFORMED MATERIAL.

PAINT
PAINTED MARKINGS SHALL BE IN ACCORDANCE WITH 621 EXCEPT THAT (a) PARAGRAPH 621.14 SHALL NOT APPLY, (b) WHERE THE MARKINGS ARE NOT LIABLE TO BE TRACKED, EITHER CONVENTIONAL OR FAST DRY PAINT MAY BE USED FOR 621.02, AND (c) WHEN APPLIED TO NEW ASPHALT PAVEMENT SURFACES OR PLANED ASPHALT PAVEMENT SURFACES, THE SPECIFIED APPLICATION RATE SHALL BE AS FOLLOWS:

| GALLONS PER MILE OF LINE | | | | | |
|--------------------------|----|----|----|----|-----|
| WIDTH OF LINE, IN. | 4 | 6 | 8 | 12 | 24 |
| SOLID LINE | 24 | 36 | 48 | 72 | 144 |
| DASHED LINE | 6 | 9 | - | - | - |
| DOTTED LINE | 8 | 12 | - | - | - |

TYPE B AND TYPE C PREFORMED MATERIAL
PREFORMED MATERIAL SHALL COMPLY WITH 947.03 EXCEPT THAT NO PREFORMED MATERIAL CONTAINING METAL SHALL BE PLACED ON ANY SURFACE UNLESS IT WILL BE REMOVED LATER BY THE CONTRACTOR. TEMPORARY PAVEMENT MARKINGS OF 947.03 PREFORMED MATERIAL SHALL BE REMOVED PRIOR TO PLACEMENT OF 621 OR 847 SURFACE COURSE MARKINGS AT THAT LOCATION. PREFORMED MATERIAL SHALL BE APPLIED IN ACCORDANCE WITH 847 EXCEPT AS MODIFIED HEREIN.

PLACEMENT
TEMPORARY MARKINGS SHALL BE COMPLETE AND IN PLACE ON ALL PAVEMENT, INCLUDING RAMPS, PRIOR TO EXPOSING IT TO TRAFFIC. WHEN TEMPORARY MARKINGS CONFLICT WITH THE TRAFFIC PATTERN, THEY SHALL BE REMOVED BY THE CONTRACTOR IN ACCORDANCE WITH 621.134.

LINE PLACEMENT TOLERANCE FOR FINAL SURFACES SHALL BE IN ACCORDANCE WITH 621.052. ON SURFACES OTHER THAN THE FINAL, THE TOLERANCE PERMITTED SHALL BE TWICE THAT IN 621.052. LAYOUT AND PREMARKING SHALL BE IN ACCORDANCE WITH 621.051.

TEMPORARY MARKING CLASSES

CLASS I MARKINGS
CLASS I MARKINGS SHALL BE APPLIED TO THE FULL DIMENSIONS AS DEFINED IN 621 WITH THE FOLLOWING ADDITIONS OR EXCEPTIONS:

1. TRANSVERSE LINES SHALL BE 8-INCHES IN WIDTH.
2. STOP LINES SHALL BE 12-INCHES IN WIDTH.
3. CROSS WALK LINES SHALL BE 8-INCHES IN WIDTH.

TEMPORARY MARKING CLASSES (CONTINUED)

CLASS II MARKINGS
CLASS II MARKINGS (ABBREVIATED) SHALL BE DEFINED AS FOLLOWS:

CENTER LINES SHALL CONSIST OF SINGLE, YELLOW 4-INCH WIDE BY A MINIMUM OF 48-INCH LONG DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

LANE LINES SHALL CONSIST OF WHITE 4-INCH WIDE BY A MINIMUM OF 48-INCH LONG DASHES SPACED AT A MAXIMUM OF 40-FOOT INTERVALS.

GORE MARKINGS SHALL BE CONTINUOUS, WHITE 4-INCH LINES PLACED AT THE THEORETICAL GORE OF AN EXIT RAMP OR DIVERGING ROADWAYS.

THE PAINT APPLICATION RATE SHALL BE NOT LESS THAN 2.4 GALLONS PER MILE FOR LANE LINE AND CENTER LINE AND 24 GALLONS PER MILE FOR GORE MARKINGS.

CONFLICTING EXISTING MARKINGS
THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL CONFLICTING EXISTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 621.134. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCLUDED IN 614 MAINTAINING TRAFFIC UNLESS SPECIFICALLY ITEMIZED.

THE CONTRACTOR SHALL ALSO REMOVE THE PRISMATIC RETRO-REFLECTOR WITHIN ANY RAISED PAVEMENT MARKER (RPM) WHICH IS IN CONFLICT WITH THE TEMPORARY PAVEMENT MARKINGS. WHEN THE TEMPORARY PAVEMENT MARKINGS ARE REMOVED AND THE RPM IS NO LONGER IN CONFLICT, THE CONTRACTOR SHALL THOROUGHLY CLEAN THE RECESSED REFLECTOR ATTACHMENT AREA OF THE CASTING AND INSTALL A NEW PRISMATIC RETRO-REFLECTOR OF THE SAME KIND AND COLOR. THE COST FOR THIS WORK SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.

INTERIM MARKINGS
WITHIN 21 CALENDAR DAYS AFTER OPENING ANY LENGTH OF PAVEMENT TO TRAFFIC, THE 621 OR 847 PAVEMENT MARKINGS CALLED FOR IN THE PLANS SHALL BE APPLIED. EQUIVALENT 614 CLASS I, PAINT MARKINGS MAY BE USED IN LIEU OF FINAL MARKINGS. IN THIS EVENT, THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT AND MATERIAL NECESSARY TO PLACE AND MAINTAIN 614 CLASS I PAINT MARKINGS AS PART OF THE LUMP SUM BID FOR 614 MAINTAINING TRAFFIC.

FOR EACH CALENDAR DAY BEYOND 21 DAYS THAT THIS WORK SHALL REMAIN UNCOMPLETED, THE SUM OF \$200 PER CALENDAR DAY WILL BE DEDUCTED FROM ANY MONEY DUE THE CONTRACTOR, NOT AS A PENALTY BUT AS LIQUIDATED DAMAGES.

METHOD OF MEASUREMENT
TEMPORARY PAVEMENT MARKINGS WILL BE MEASURED COMPLETE IN PLACE, BY CLASS AND MATERIAL, IN THE UNITS DESIGNATED. LINE QUANTITIES WILL BE THE LENGTH OF THE COMPLETED STRIPE, INCLUDING GAPS, INTERSECTIONS, AND OTHER SECTIONS OF PAVEMENT NOT NORMALLY MARKED.

TEMPORARY PAVEMENT MARKINGS WILL INCLUDE THE LAYOUT, APPLICATION AND REMOVAL OF THE MARKINGS, WHEN REQUIRED.

BASIS OF PAYMENT
PAYMENT FOR ACCEPTED QUANTITIES COMPLETE IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR PLACEMENT, MAINTENANCE AND NECESSARY REMOVAL OF MARKINGS.

BASIS OF PAYMENT (CONTINUED)

| ITEM | UNIT | DESCRIPTION |
|------|----------|--|
| 614 | MILES | TEMPORARY LANE LINES, CLASS _____, . . |
| 614 | MILES | TEMPORARY CENTER LINES, CLASS _____, . . |
| 614 | LIN. FT. | TEMPORARY CHANNELIZING LINES, CLASS I, _____ |
| 614 | MILES | TEMPORARY EDGE LINES, CLASS I, _____ |
| 614 | LIN. FT. | TEMPORARY GORE MARKINGS, CLASS II, _____ |
| 614 | LIN. FT. | TEMPORARY STOP LINES, CLASS I, _____ |
| 614 | LIN. FT. | TEMPORARY CROSSWALK LINES, CLASS I, _____ |
| 614 | EACH | TEMPORARY LANE ARROWS, CLASS I, _____ |
| 614 | EACH | TEMPORARY RAILROAD SYMBOL MARKINGS, CLASS I, _____ |
| 614 | EACH | TEMPORARY WORD "ONLY" ON PAVEMENT, 72 INCH, CLASS I, _____ |
| 614 | LIN. FT. | TEMPORARY TRANSVERSE LINES, CLASS I, _____ |
| 614 | LIN. FT. | TEMPORARY DOTTED LINES, CLASS I, _____ |

* TYPE MATERIAL (621 PAINT, 947.03 TYPE B OR 947.03 TYPE C OR LEFT BLANK TO PERMIT ANY OF THE THREE)

614 WORK ZONE MARKING SIGNS

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND SUBSEQUENTLY REMOVE WORK ZONE MARKING SIGNS (OW-167 AND OW-168) WITHIN THE WORK LIMITS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS.

THE CONTRACTOR SHALL, IN ADVANCE OF ANY SECTION OF ROADWAY LACKING OMUTCD FULL PATTERN STANDARD DIMENSION EDGE LINE OR CENTER LINE MARKINGS, ERECT A "NO EDGE LINES" (OW-167-36) SIGN OR "UNMARKED NO PASSING ZONES" (OW-168-36) SIGN OR BOTH AS MAY BE APPROPRIATE. ON FREEWAYS AND EXPRESSWAYS AN OW-167-48 SIGN SHALL BE USED. THESE SIGNS SHALL BE IN PLACE PRIOR TO EXPOSING THE ROADWAY TO TRAFFIC. THESE SIGNS SHALL ALSO BE ERECTED ON EACH ENTRANCE RAMP, AT INTERSECTIONS OF THROUGH ROADS TO WARN ENTERING OR TURNING TRAFFIC OF THE CONDITION AND AT LEAST ONCE EVERY TWO MILES ALONG THE ROADWAY. THESE SIGNS SHALL BE REMOVED WHEN THEY NO LONGER APPLY.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED BUT GOOD CONDITION PROVIDED THE SIGNS MEET CURRENT DEPARTMENT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF 730.19. WORK ZONE MARKING SIGNS SHALL BE PROVIDED WITH SUITABLE YIELDING SUPPORTS OF SUFFICIENT STRENGTH AND STABILITY.

WORK ZONE MARKING SIGNS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. ALL OTHER WORK ZONE SIGNS SHALL BE INCLUDED IN 614 MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR PLACEMENT, MAINTENANCE AND REMOVAL OF THE SIGNS.

| ITEM | UNIT | DESCRIPTION |
|------|------|-------------------------|
| 614 | EACH | WORK ZONE MARKING SIGNS |

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| BUREAU OF DESIGN SERVICES DIVISION OF HIGHWAYS OHIO DEPARTMENT OF TRANSPORTATION | |
| MAINTENANCE OF TRAFFIC | DATE 11/14/86 |
| WORK ZONE PAVEMENT MARKINGS AND SIGNS | |
| STANDARD CONSTRUCTION DRAWING | MT-99.10 |
| APPROVED <i>[Signature]</i> ENGR. OF DESIGN SERVICES | |