

53.21 PAINTED PAVEMENT MESSAGES

53.21.1 GENERAL

The Work consists of supplying paint and painting messages on pavement surfaces. The use of templates in the painting operation is required.

53.21.2 MATERIALS

53.21.2.1 Templates

The Contractor shall supply templates in conforming to drawings TEB 2.26, TEB 2.29, TEB 2.30, TEB 2.31, TEB 2.32, TEB 2.33, TEB 2.34, TEB 2.35 and TEB 2.37 and the attached Figures 53.21 A, 53.21 B, 53.21 C, 53.21 D and 53.21 E. The dimensions shown are in millimetres unless otherwise indicated.

The standard height of letters and numbers used in pavement messages is 2400 mm. Some of the plans contained in the "Standard Drawings Section" of the "Highway Maintenance Specifications" manual issued in 1995 refer to a height of 2040 mm. Unless otherwise shown in the special provisions, Contractors shall supply and use templates which provide a finished product height of 2 400 mm.

53.21.2.2 Paint and Glass Beads

The Contractor shall supply the paint and glass bead materials from the list of approved products shown in the Special Provisions. The Contractor shall be responsible for ensuring that the quality of the paint and beads supplied meets the requirements specified.

The Contractor shall advise the Engineer of any change in paint formulation.

The Contractor shall provide the Engineer with the following information prior to commencing the Work:

- Names and mailing addresses of the suppliers and manufacturers.
- Paint formulation to be supplied.
- Written confirmation from the manufacturer that the materials to be supplied meet all specified requirements.

The Contractor shall verify that all materials delivered and used in the Work are the type ordered.

No paint formulation shall be diluted or mixed with a different formulation or with any other material without the specific approval of the Engineer.

The Contractor shall take all necessary steps to prevent contamination of the materials. Paint shall be protected from freezing.

53.21.3 SAMPLING AND TESTING

The Contractor shall supply the Engineer with the manufacturer's quality control test results and a quality assurance sample for each batch of material as it is delivered to the Work. Quality Control results shall include a minimum of Specific Gravity, Hiding Power, Dry to Traffic and Viscosity results. Samples for quality assurance shall be

obtained from the manufacturer or taken from drums as delivered to the storage site.

If the Contractor obtains quality assurance samples at the time of delivery to his storage facility, sampling and minimum frequency of testing shall be as described in the Alberta Transportation and Utilities Test Methods TLT-636, Sampling Traffic Paint and TLT-601, Sampling Glass Beads From 205 Litre Drums or as directed by the Engineer. When glass beads are supplied in bags, a minimum of one 25 kilogram bag may be selected from each project.

All materials will be subject to further inspection, sampling and testing by the Department and the Contractor shall provide safe, convenient access, acceptable to the Engineer, for inspection and sampling of the materials, and shall cooperate in the inspection and sampling process when requested to do so. Paint products shall meet the testing requirements as shown in the Special Provisions.

53.21.4 PROCEDURE

53.21.4.1 General

All Work shall be performed during daylight hours only, unless adequate lighting exists which provides visibility of at least 700 metres and prior approval of the Engineer is obtained. No Work shall be performed when the visibility is less than 700 metres.

Traffic control and signing shall be performed in accordance with Specification 55.1, Traffic Accommodation and Temporary Signing.

53.21.4.2 Pavement Surface and Atmospheric Conditions

Painting shall not be performed during the following conditions:

- When the temperature is below 0°C.
- When wind conditions cause overspray.
- When the visibility is less than 700 metres.
- During periods of rainfall.

Areas to be painted shall be clean and dry during the application of paint.

Areas to be painted shall be inspected by the Contractor to ensure they are clean, free of sand and debris, and suitable for painting. The Contractor shall clean the pavement surface when required.

53.21.4.3 Paint and Bead Application

Messages shall be painted using the templates.

All painted messages shall be applied at the rate of 0.4 ℓ/m^2 of actual painted area. Glass beads shall be applied immediately following the paint application at a uniform application rate of 600 g/ ℓ of paint. Aircraft Patrol Zone markings do not require glass bead application. Painted messages initially applied at less than the specified application rate or which do not conform to the specified requirements shall be repainted at the full, specified application rate (including the application of glass beads) at the Contractor's expense.

All painted messages shall be uniform in thickness with no splatter, excessive overspray or other defects.

Traffic shall be kept off painted messages until the paint has dried and will not track under traffic.

The Contractor shall be responsible for the proper clean up of waste or spilled material, and the proper disposition of containers.

53.21.4.4 Removal of Incorrectly Painted Messages

All messages that are incorrectly painted by the Contractor, painted where no messages are specified or where tracking occurs shall be removed by the Contractor at his own expense and to the satisfaction of the Engineer. The method and equipment used by the Contractor to remove or rectify incorrectly painted messages will be subject to the approval of the Engineer.

53.21.5 TIME TO COMPLETE

In urgent situations, the Contractor shall complete the Work within 10 calendar days of the issuance of the Work Order. In all other cases, the Contractor shall complete the Work within 60 calendar days of the issuance of the Work Order.

53.21.6 MEASUREMENT AND PAYMENT

Measurement will be in square metres of the painted area in each message painted.

Payment will be made at the unit price bid per square metre for "Painting Pavement Messages". This payment will be full compensation for inspecting the areas to be painted, cleaning the pavement surface when required, supplying the templates, supplying and applying the paint and glass beads, quality control testing, quality assurance sampling, traffic accommodation and signing, and all labour, materials, equipment, tools and incidentals necessary to complete the Work.

In urgent situations where the Contractor is required to complete the Work within 10 calendar days of the issuance of the Work Order, an additional payment will be made at the unit price bid per occurrence for "Message Painting - Premium". This payment will be full compensation for complying with the accelerated scheduling required to complete the Work.

53.21.7 WARRANTY

The warranty period for this Work shall be 60 days.

FIGURE 18.1 A
STANDARD PAVEMENT MARKING LETTERS (A TO H)

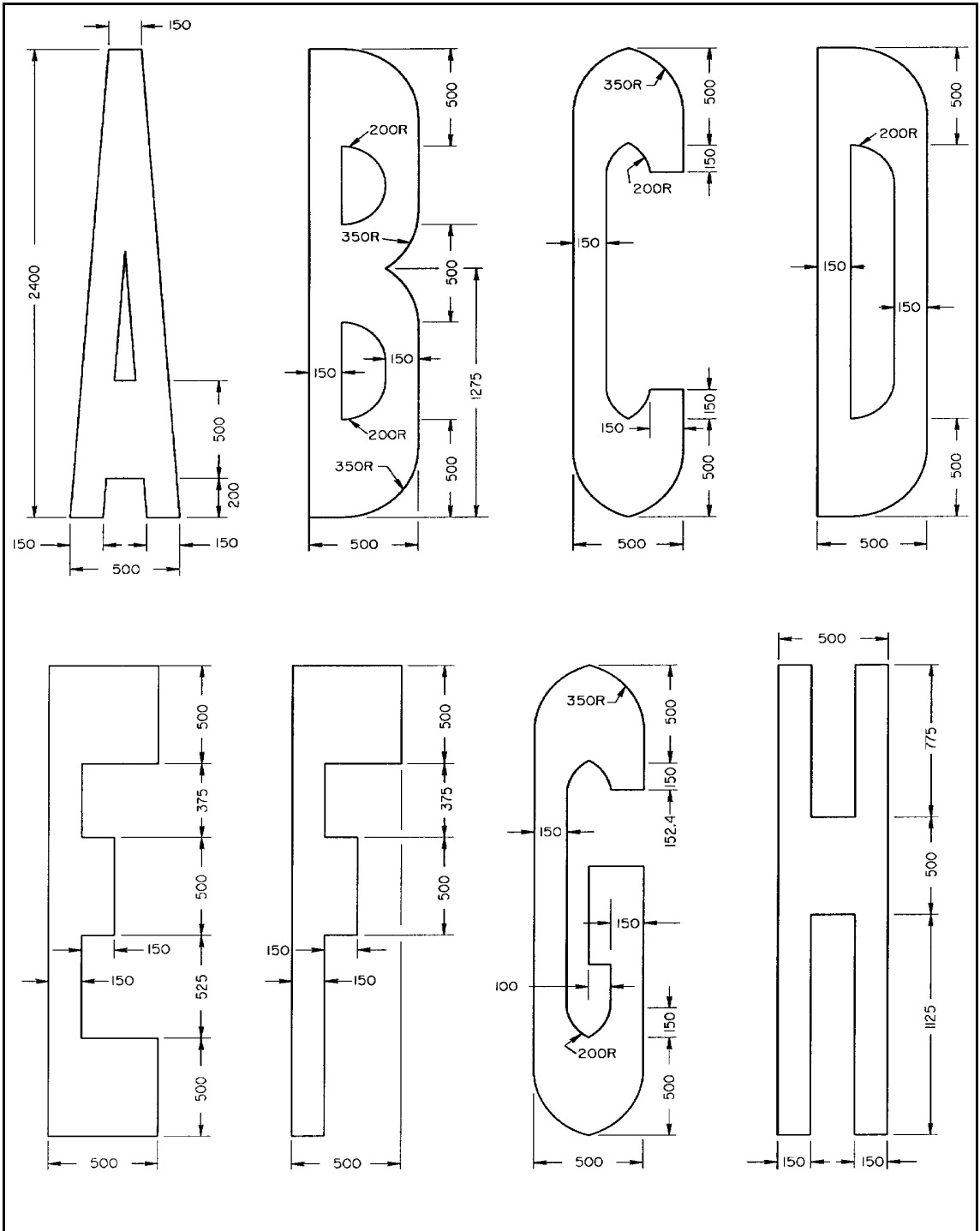


FIGURE 18.1 B
STANDARD PAVEMENT MARKING LETTERS (I TO R)

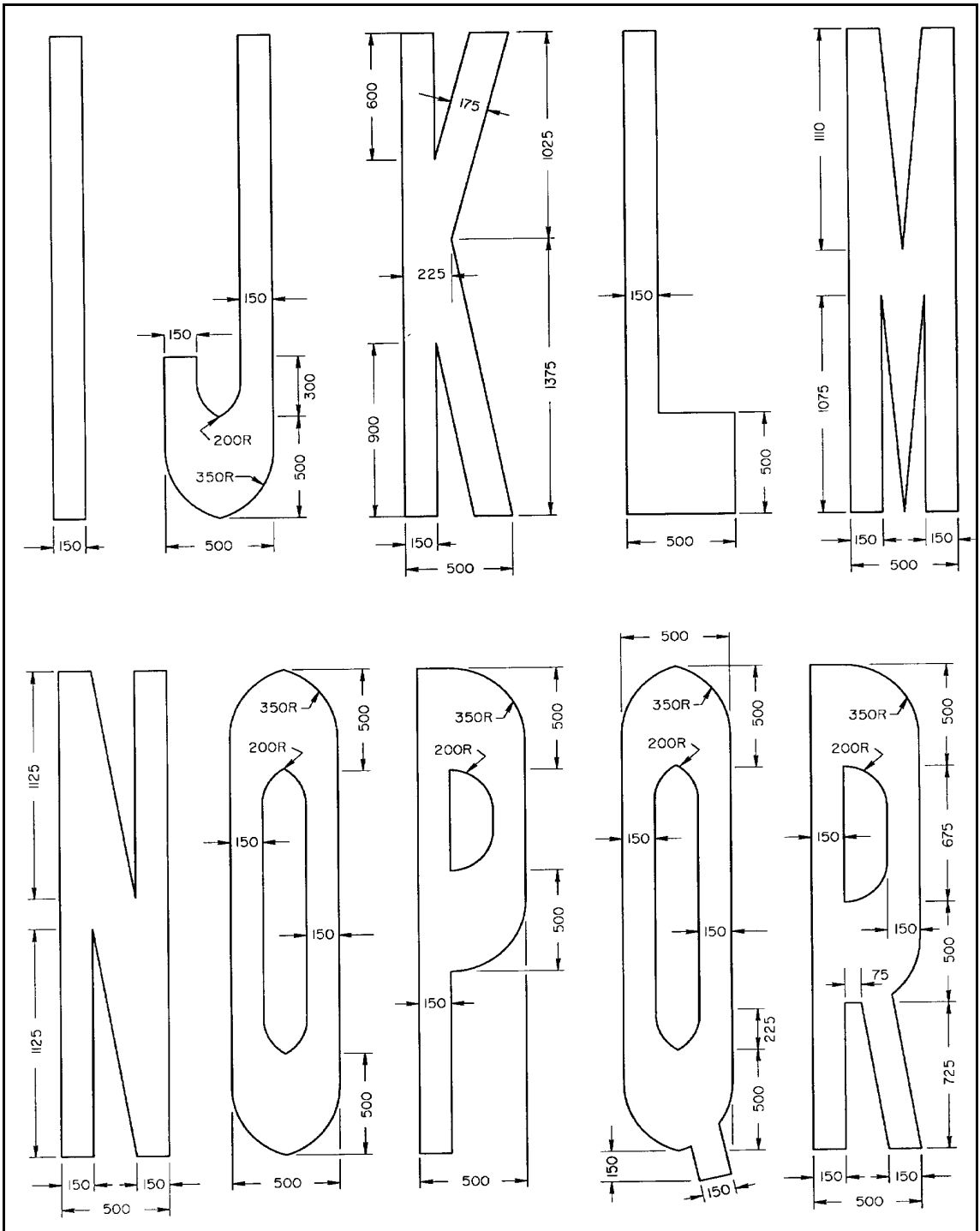


FIGURE 18.1 C
STANDARD PAVEMENT MARKINGS LETTERS(S TO Z)

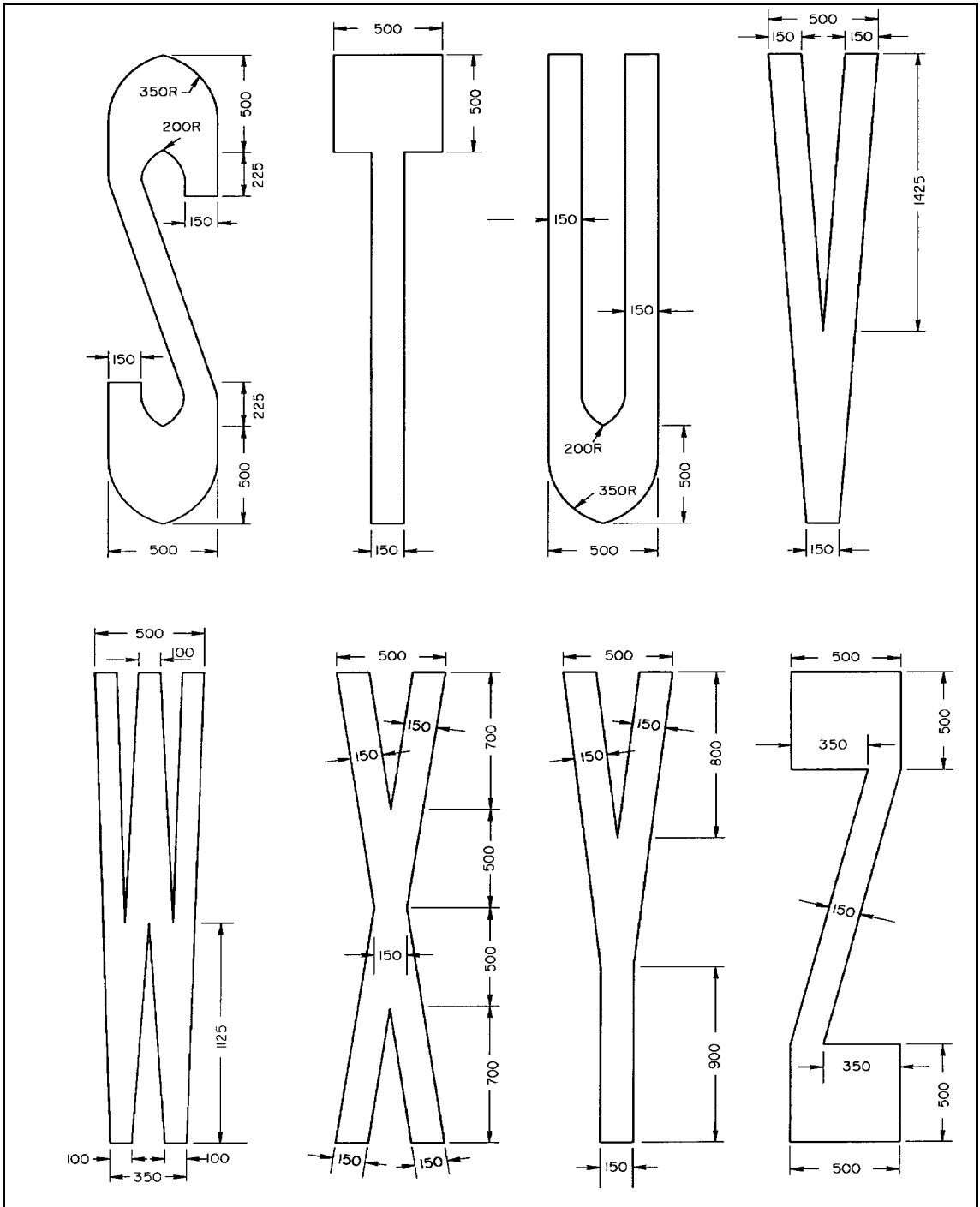


FIGURE 18.1 D
STANDARD PAVEMENT MARKINGS NUMBERS (1 TO 7)

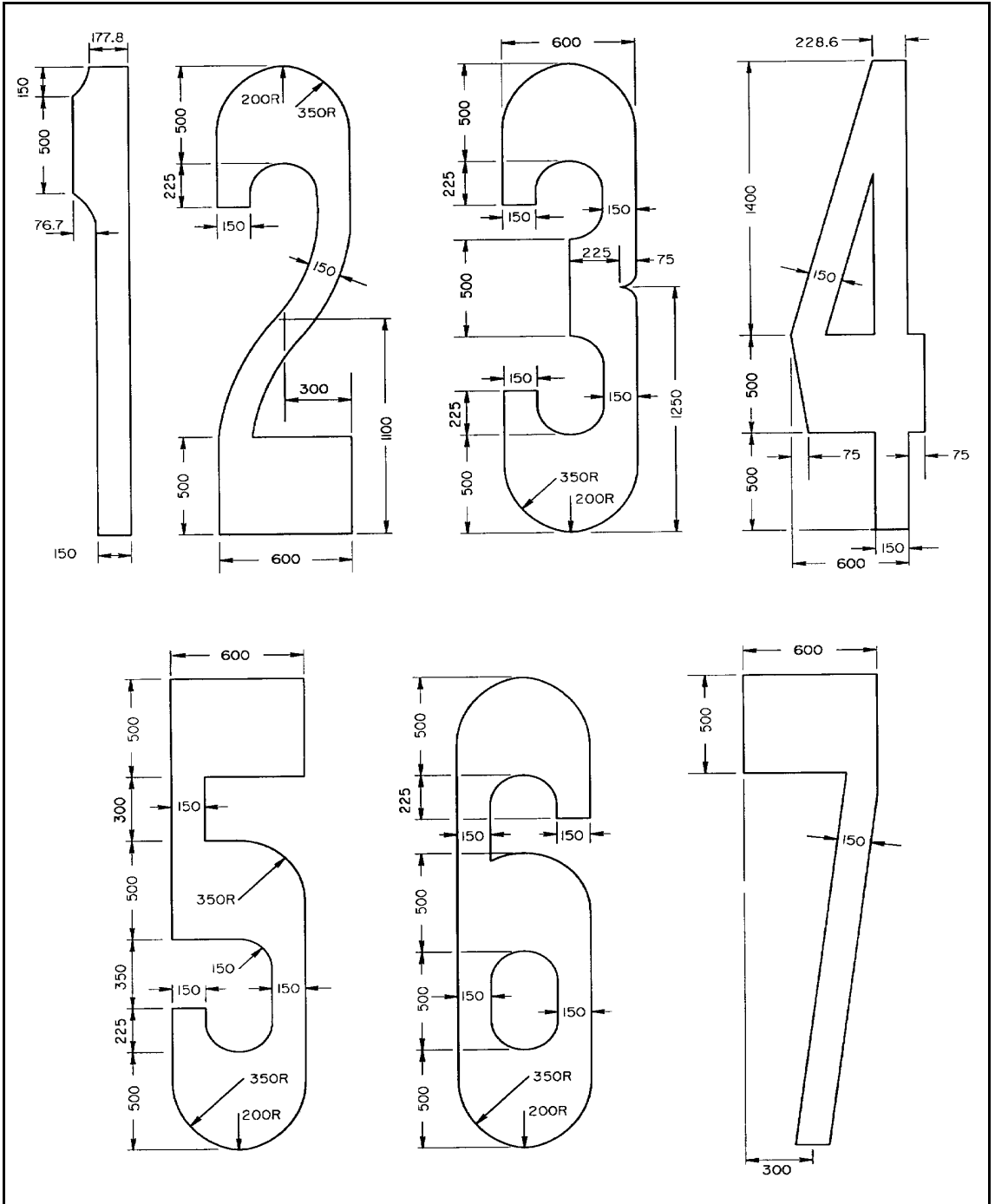


FIGURE 18.1 E
STANDARD PAVEMENT MARKINGS NUMBERS (8, 9 & 0)

