

097.13-DPWH
4-7-98



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Bonifacio Drive, Port Area, Manila

07 January 1998

DEPARTMENT ORDER)
NO. 64)
Series of 1998)

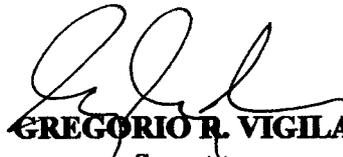
**SUBJECT : Revised DPWH Standard Specification
for Item 606 - Pavement Markings**

In view of the unavailability of raw materials (natural resin) for pavement marking paint in the market, the existing standard specifications for pavement markings under Item 606 of the DPWH Standard Specifications for Highways, Bridges and Airports, 1988, Volume II are hereby revised to suit the present condition.

As such, it is hereby directed that the attached Revised Standard Specifications for Pavement Markings (Item 606) shall be adopted effective immediately. In no case should any pavement marking paint be used in the project without conforming to the material requirements as prescribed herein.

For strict compliance.

This Order shall take effect immediately.


GREGORIO R. VIGILAR
Secretary

Attachment: As stated.

ITEM 606 - PAVEMENT MARKINGS

606.1 - Description

This item shall consist of placing markings on the finished pavement. The work shall include the furnishing of premixed reflectorized traffic paint or thermoplastic reflectorized pavement marking paint, whichever is called for in the Contract, sampling and packing, preparing the surface, and applying the paint to the pavement surface, all in accordance with this Specification.

The paint shall be applied to the size, shape and location of the markings shown on the Plans, or as required by the Engineer.

606.2 - Premixed Reflectorized Traffic Paints

Premixed reflectorized traffic paint is a paint in which the glass beads are mixed in the paint during the process of manufacture, so that upon application and drying the paint line is capable of retroreflection of the light beams.

Premixed reflectorized traffic paints which are available in both white and yellow are paints that provide reflective marking for concrete, bituminous, bricks or stone surface of highways, bridges, tunnels, streets, parking lots and airports.

606.2.1 Classification

Premixed reflectorized traffic paint shall be classified according to the following types based on the vehicles used:

- Type I - Alkyd
- Type II - Chlorinated Rubber Alkyd

606.2.2 Material Requirements

The paint shall consist of pigments, vehicles and glass beads so combined as to produce a paint that will conform to the following requirements.

- a. Condition in container - The packaged material shall be free from lumps and mixed readily to a smooth homogenous state.
- b. Skinning - The packaged material shall not skin within 48 hours in a 3/4 filled, tightly closed container.
- c. Appearance of Dried Film - The paint film shall dry to a smooth uniform finish.

- d. Flexibility - The dried paint film shall not show cracking or flaking after being bent about 180 degrees over a 12.7 mm mandrel.
- e. Resistance to Water - The dried paint film shall not show blistering, peeling, wrinkling and discoloration when immersed in water for 18 hours.
- f. The paint shall also conform to the physical properties specified in Table 1.

Table 1 - Physical Properties

| Properties | Type I and Type II | |
|----------------------------------|--------------------|---------|
| | Minimum | Maximum |
| Specific Gravity | 1.5 | - |
| Drying Time, No Pick Up, minutes | - | 40 |
| Consistency (Kreb Units) at 20 C | 65 | 95 |

- g. Premixed reflectorized traffic paint composition shall conform to the requirements given in Table 2.

Table 2 - Composition Requirements

| Paint Composition | Requirements | | | |
|---|--------------|---------|---------|---------|
| | Type I | | Type II | |
| | Minimum | Maximum | Minimum | Maximum |
| Total Dry Solids, percent by weight | 60 | - | 60 | - |
| Titanium Dioxide, Rutile percent by weight | 16.0 | - | 16.0 | - |
| Medium Chrome Yellow, percent by weight | 12.0 | - | 12.0 | - |
| Extenders, percent by wt. | | | | |
| White | - | 13.0 | - | 13.0 |
| Yellow | - | 17.0 | - | 17.0 |
| Non-volatile Content (based on the vehicle) percent by weight | 40 | - | 41 | - |
| Glass Beads, percent by weight | 31.0 | 35.0 | 31.0 | 35.0 |

h. Glass Spheres or Beads Requirements

Quantity: The amount of glass beads to be mixed with the paint shall be 500 grams per litre of paint.

Beads Diameter: The percentage of beads that will pass through the US Standard Sieves shall be as follows:

| Sieve No. | Percent Passing |
|----------------|------------------|
| 70 (212 - um) | 100 percent |
| 80 (186 - um) | 85 - 100 percent |
| 140 (106 - um) | 15 - 55 percent |
| 230 (63 - um) | 0 - 10 percent |

Index of Refraction: The index of refraction of the beads shall be within the range of 1.50 to 1.60 when tested by the liquid immersion method at 29 °C.

Appearance: The glass beads shall be transparent, colorless and the sum of particles that are fused, plane, angular and colored and contains bubble shall not exceed 20 percent.

606.2.3 Construction Requirements

The painting of lane markers and traffic strips shall include the cleaning of the pavement surfaces, the application, protection and drying of the paint coatings, the protection of the pedestrians, vehicular or other traffic, the protection of all parts of the road structure and its appurtenances against disfigurement by spatters, splashes or smirches of paints or of paint materials, and the supplying of all tools, labor and traffic paint necessary for the entire work.

The paint shall not be applied during rain or wet weather or when the air is misty, or when in the opinion of the Engineer, conditions are unfavorable for the work. Paint shall not be applied upon damp pavement surfaces, or upon pavement which has absorbed sufficient water and or intense heat due to sunlight to cause the paint to blister and produce a porous film of paint.

The application of paint shall preferably be carried out by a machine specially made for this purpose but where brushes are used, only round or oval brushes not exceeding 100 mm in width will be permitted. The paint shall be so applied as to produce a uniform, even coating in close contact with the surface being painted.

Traffic paint shall be applied to the pavement at the rate of 0.33 l/m² and shall dry sufficiently to be free from cracking-in from 15 to 30 minutes.

All markings shall present a clean cut, uniform and workmanlike appearance. Markings that fail to have a uniform, satisfactory appearance either by day or night, shall be corrected by the Contractor in a manner acceptable to the Engineer and at no cost to the Government.

606.2.4 Sampling

The paint shall be sampled in accordance with PNS 484/ISO 1512 or other Philippine Standard Method of Sampling Paints and Varnishes.

606.2.5 Test Methods

The paints shall be tested in accordance with the methods specified in PNS 461 or other Philippine Standard Method of Tests for Paints and Varnishes.

606.2.6 Packing, Packaging and Marking

The paints shall be packed, packaged and marked in accordance with PNS 140.

606.3 Reflectorized Thermoplastic Pavement Markings

Reflectorized Thermoplastic Paint shall conform to the DPWH Specification for Reflectorized Thermoplastic Pavement Markings per D.O. 202, Series of 1992 dated November 1992.

The materials shall be sampled, tested, packed and labelled according to the requirements of Nos. 5, 6 and 7 of the aforesaid DPWH specification.

606.4 Method of Measurement

The quantity of pavement markings to be paid for shall either be the length as shown on the Plans of painted traffic line of the stated width or the area as shown on the plans of symbols, lettering, hatchings, and the like, completed and accepted. Separate items shall be provided for premixed reflectorized traffic paint and reflectorized thermoplastic pavement markings.

606.5 Basis of Payment

The quantities measured as determined in subsection 606.4, Method of Measurement, shall be paid for at the appropriate contract unit price for the Pay Items shown in the Bid Schedule which price and payment shall constitute full compensation for furnishing and placing all materials, sampling and packing, for the preparation of the surface, and for all labor, equipment, tools and incidentals necessary to complete the Item.

Payment will be made under:

| Pay Item Number | Description | Unit of Measurement |
|-----------------|--|---------------------|
| 606 (1) | Pavement Markings (Premixed Reflectorized) | Square Meter |
| 606 (2) | Pavement Markings (Reflectorized Thermoplastic) | Square Meter |

COMPARISON OF THE PRESENT AND PROPOSED PROVISION OF ITEM 606 (PAVEMENT MARKINGS)

| ITEM NO. SECTION | PRESENT PROVISION | PROPOSED PROVISION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|---------------------------|--------------|-----|----------------------|-----|------------------------------|-----|-----------------------------------|-----|----------|---------------------------|---------|----------------|---------|----------------|----------|---------------------------|--------------------------------------|------|----------------------|---------|-----------------------|------------|----------|---------|--|-------------------|--------------|--|--|--|--------|--|---------|--|--|---------|---------|---------|---------|-------------------------------------|----|---|----|---|--|------|---|------|---|---|------|---|------|---|-------------------------------|--|--|--|--|-------|---|------|---|------|--------|---|------|---|------|---|------|---|------|---|--------------------------------|------|------|------|------|
| Section 606.1 - Description | The work shall include the furnishing of non-reflective or reflective pavement marking paint, whichever is called for in the Contract, sampling and packing, preparing the surface, and applying the paint to the pavement surface, all in accordance with this Specification. | The work shall include the furnishing of premixed reflectorized traffic paints or thermoplastic reflectorized pavement marking paint, whichever is called for in the Contract, sampling and packing, preparing the surface, and applying the paint to the pavement surface, all in accordance with this Specification. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Section 606.2 - Material Requirements | <p>Composition of Pavement Marking Paint</p> <p>Composition of Solvent</p> <table border="1"> <thead> <tr> <th>Material</th> <th>Composition by Volume (%)</th> </tr> </thead> <tbody> <tr> <td>Raw Tung Oil</td> <td>15%</td> </tr> <tr> <td>Normal Butyl Alcohol</td> <td>17%</td> </tr> <tr> <td>Acetone cp (dimethyl Ketone)</td> <td>34%</td> </tr> <tr> <td>Denatured Alcohol (Formula No. 1)</td> <td>34%</td> </tr> </tbody> </table> <p>The alcohol and acetone shall first be mixed then the oil added to form a clear solution at 21 C.</p> <p>Composition of Paint</p> <table border="1"> <thead> <tr> <th>Material</th> <th>Composition by Weight (%)</th> </tr> </thead> <tbody> <tr> <td>Pigment</td> <td>42 - 45% ; 23%</td> </tr> <tr> <td>Vehicle</td> <td>55 - 58% ; 77%</td> </tr> </tbody> </table> <p>Color : White ; Yellow</p> <p>Composition of Pigment</p> <table border="1"> <thead> <tr> <th>Material</th> <th>Composition by Weight (%)</th> </tr> </thead> <tbody> <tr> <td>Tetanium dioxide (anatase) ASTM D476</td> <td>100%</td> </tr> <tr> <td>Medium chrome yellow</td> <td>- ; 66%</td> </tr> <tr> <td>Para toner (light) CP</td> <td>- ; Note I</td> </tr> <tr> <td>Extender</td> <td>- ; 34%</td> </tr> </tbody> </table> | Material | Composition by Volume (%) | Raw Tung Oil | 15% | Normal Butyl Alcohol | 17% | Acetone cp (dimethyl Ketone) | 34% | Denatured Alcohol (Formula No. 1) | 34% | Material | Composition by Weight (%) | Pigment | 42 - 45% ; 23% | Vehicle | 55 - 58% ; 77% | Material | Composition by Weight (%) | Tetanium dioxide (anatase) ASTM D476 | 100% | Medium chrome yellow | - ; 66% | Para toner (light) CP | - ; Note I | Extender | - ; 34% | <p>A. Composition of Premixed Reflectorized Traffic Paints</p> <p>Composition Requirements</p> <table border="1"> <thead> <tr> <th rowspan="2">Paint Composition</th> <th colspan="4">Requirements</th> </tr> <tr> <th colspan="2">Type I</th> <th colspan="2">Type II</th> </tr> <tr> <td></td> <th>Minimum</th> <th>Maximum</th> <th>Minimum</th> <th>Maximum</th> </tr> </thead> <tbody> <tr> <td>Total Dry Solids, percent by weight</td> <td>60</td> <td>-</td> <td>60</td> <td>-</td> </tr> <tr> <td>Titanium Dioxide, Rutile percent by weight</td> <td>16.0</td> <td>-</td> <td>16.0</td> <td>-</td> </tr> <tr> <td>Medium Chrome Yellow, percent by weight</td> <td>12.0</td> <td>-</td> <td>12.0</td> <td>-</td> </tr> <tr> <td>Extenders, percent by weight.</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>White</td> <td>-</td> <td>13.0</td> <td>-</td> <td>13.0</td> </tr> <tr> <td>Yellow</td> <td>-</td> <td>17.0</td> <td>-</td> <td>17.0</td> </tr> <tr> <td>Non-volatile Content (based on the vehicle) percent by weight</td> <td>40.0</td> <td>-</td> <td>41.0</td> <td>-</td> </tr> <tr> <td>Glass Beads, percent by weight</td> <td>31.0</td> <td>35.0</td> <td>31.0</td> <td>35.0</td> </tr> </tbody> </table> | Paint Composition | Requirements | | | | Type I | | Type II | | | Minimum | Maximum | Minimum | Maximum | Total Dry Solids, percent by weight | 60 | - | 60 | - | Titanium Dioxide, Rutile percent by weight | 16.0 | - | 16.0 | - | Medium Chrome Yellow, percent by weight | 12.0 | - | 12.0 | - | Extenders, percent by weight. | | | | | White | - | 13.0 | - | 13.0 | Yellow | - | 17.0 | - | 17.0 | Non-volatile Content (based on the vehicle) percent by weight | 40.0 | - | 41.0 | - | Glass Beads, percent by weight | 31.0 | 35.0 | 31.0 | 35.0 |
| Material | Composition by Volume (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Raw Tung Oil | 15% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Normal Butyl Alcohol | 17% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acetone cp (dimethyl Ketone) | 34% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Denatured Alcohol (Formula No. 1) | 34% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material | Composition by Weight (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigment | 42 - 45% ; 23% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vehicle | 55 - 58% ; 77% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material | Composition by Weight (%) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tetanium dioxide (anatase) ASTM D476 | 100% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium chrome yellow | - ; 66% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Para toner (light) CP | - ; Note I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Extender | - ; 34% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Paint Composition | Requirements | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Type I | | Type II | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Minimum | Maximum | Minimum | Maximum | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Dry Solids, percent by weight | 60 | - | 60 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Titanium Dioxide, Rutile percent by weight | 16.0 | - | 16.0 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Medium Chrome Yellow, percent by weight | 12.0 | - | 12.0 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Extenders, percent by weight. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| White | - | 13.0 | - | 13.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Yellow | - | 17.0 | - | 17.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Non-volatile Content (based on the vehicle) percent by weight | 40.0 | - | 41.0 | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Glass Beads, percent by weight | 31.0 | 35.0 | 31.0 | 35.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

COMPARISON OF THE PRESENT AND PROPOSED PROVISION OF ITEM 606 (PAVEMENT MARKINGS)

| ITEM NO. SECTION | PRESENT PROVISION | PROPOSED PROVISION | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---------------------------|----------------------------|----------|---------|----------|--|------------|--------------------|--|---------|---------|------------------|-----|---|----------------------------------|---|----|----------------------------------|----|----|
| | Composition of Vehicle | Physical Properties | | | | | | | | | | | | | | | | | | | | |
| | <table border="1" style="width: 100%;"> <thead> <tr> <th data-bbox="391 459 630 515">Material</th> <th data-bbox="630 459 837 515">Composition by Weight (%)</th> </tr> </thead> <tbody> <tr> <td data-bbox="391 548 630 593">Gum (East Indian DBB Boea)</td> <td data-bbox="630 548 837 593">35 - 37%</td> </tr> <tr> <td data-bbox="391 593 630 638">Solvent</td> <td data-bbox="630 593 837 638">65 - 63%</td> </tr> </tbody> </table> | Material | Composition by Weight (%) | Gum (East Indian DBB Boea) | 35 - 37% | Solvent | 65 - 63% | <table border="1" style="width: 100%;"> <thead> <tr> <th data-bbox="853 459 1149 515" rowspan="2">Properties</th> <th colspan="2" data-bbox="1149 459 1404 515">Type I and Type II</th> </tr> <tr> <th data-bbox="1149 515 1292 571">Minimum</th> <th data-bbox="1292 515 1404 571">Maximum</th> </tr> </thead> <tbody> <tr> <td data-bbox="853 604 1149 660">Specific Gravity</td> <td data-bbox="1149 604 1292 660">1.5</td> <td data-bbox="1292 604 1404 660">-</td> </tr> <tr> <td data-bbox="853 672 1149 750">Drying Time, No Pick Up, minutes</td> <td data-bbox="1149 672 1292 750">-</td> <td data-bbox="1292 672 1404 750">40</td> </tr> <tr> <td data-bbox="853 761 1149 840">Consistency (Kreb Units) at 20 C</td> <td data-bbox="1149 761 1292 840">65</td> <td data-bbox="1292 761 1404 840">95</td> </tr> </tbody> </table> | Properties | Type I and Type II | | Minimum | Maximum | Specific Gravity | 1.5 | - | Drying Time, No Pick Up, minutes | - | 40 | Consistency (Kreb Units) at 20 C | 65 | 95 |
| Material | Composition by Weight (%) | | | | | | | | | | | | | | | | | | | | | |
| Gum (East Indian DBB Boea) | 35 - 37% | | | | | | | | | | | | | | | | | | | | | |
| Solvent | 65 - 63% | | | | | | | | | | | | | | | | | | | | | |
| Properties | Type I and Type II | | | | | | | | | | | | | | | | | | | | | |
| | Minimum | Maximum | | | | | | | | | | | | | | | | | | | | |
| Specific Gravity | 1.5 | - | | | | | | | | | | | | | | | | | | | | |
| Drying Time, No Pick Up, minutes | - | 40 | | | | | | | | | | | | | | | | | | | | |
| Consistency (Kreb Units) at 20 C | 65 | 95 | | | | | | | | | | | | | | | | | | | | |
| | | <p>B. Composition of ReflectORIZED Thermoplastic Pavement Markings</p> | | | | | | | | | | | | | | | | | | | | |
| | | <p>It shall conform to DPWH D.O. 202, series of 1992 dated November 1992.</p> | | | | | | | | | | | | | | | | | | | | |
| <p>Section 606.3 - Construction Requirements</p> | | | | | | | | | | | | | | | | | | | | | | |
| <p>2nd Paragraph, 2nd Sentence</p> | <p>Paint shall not be applied upon damp pavement surfaces, or upon pavement which has absorbed the sufficient to cause the paint to blister and produce a porous film of paint.</p> | <p>Paint shall not be applied upon damp pavement surfaces, or upon pavement which has absorbed sufficient water and or intense heat sur to sunlight to cause the paint to blister and produce a porous film of paint.</p> | | | | | | | | | | | | | | | | | | | | |
| <p>3rd and 4th Paragraph</p> | <p>The application of paint shall preferably be carried out by a machine specially made for this purpose but where brushes are used, only round or oval brushes not exceeding 100mm in width will be permitted. The paint shall be so applied as to produce a uniform, even coating in close contact with the surface being painted.</p> | <p>A. Premixed ReflectORIZED Traffic Paints.</p> | | | | | | | | | | | | | | | | | | | | |
| | <p>Traffic paint shall applied to the pavement at the rate of 0.33l/m2 and shall dry sufficiently to be free from cracking-in from 15 to 30 minutes.</p> | <p>The same provision applies to premixed reflectORIZED traffic paints.</p> | | | | | | | | | | | | | | | | | | | | |
| | | <p>B. ReflectORIZED Thermoplastic Pavement Markings</p> | | | | | | | | | | | | | | | | | | | | |
| | | <p>The application properties per D.O. 202, Series of 1992 is different which states that:</p> | | | | | | | | | | | | | | | | | | | | |
| | | <p>The material shall readily extrude @ temperature of 211 +- 7 C, from approved equipment to produce a line 3.2 to 4.8 mm thick which shall be continuous and uniform in shape having clear and sharp dimensions.</p> | | | | | | | | | | | | | | | | | | | | |

COMPARISON OF THE PRESENT AND PROPOSED PROVISION OF ITEM 606 (PAVEMENT MARKINGS)

| ITEM NO. SECTION | PRESENT PROVISION | PROPOSED PROVISION |
|--|--|--|
| | | <p>The material shall not exude fumes which are toxic, obnoxious or injurious to persons or property when heated during applications.</p> <p>The application of additional glass beads by drop-in methods shall be at a rate of not less than 350 g/L of glass beads having a size range for drop-in type. The typical size range of spheres of a drop-in type paints is as follows.</p> <p>Passing 850 um (#20) sieve and retained on 250 um (#60) sieve, % 80 - 100</p> <p>Additional paragraph was added:</p> <p>All markings shall present a clean cut, uniform and workmanlike appearance. Markings that fail to have a uniform, satisfactory appearance either by day or night, shall be corrected by the Contractor in a manner acceptable to the Engineer and at no cost to the Government.</p> |
| Additional Paragraph | | |
| Section 606.4 - Method of Measurement | | |
| Last sentence | Separate items shall be provided for reflective and non-reflective markings. | Separate items shall be provided for premixed reflectorized traffic paint and reflectorized thermoplastic pavement markings. |