

CITY OF TUCSON, ARIZONA
DEPARTMENT OF TRANSPORTATION

ENGINEERING DIVISION
ACTIVE PRACTICES GUIDELINES

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PREPARED BY: H. P. Shiao

EFFECTIVE: 5/16/96

APPROVED BY: *[Signature]*
City Engineer

DATE: 5/16/96

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**SUBJECT: CORRUGATED HDPE (HIGH DENSITY POLYETHYLENE)
PLASTIC PIPE GUIDELINES**

A. PURPOSE

To establish guidelines for usage of the subject material on a trial basis, for five years, from the above effective date.

B. BACKGROUND

The pipe material requirements shall conform to the PIMA COUNTY/CITY OF TUCSON "STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS, SECTION 1010-2.09".

C. GENERAL

The HDPE pipes may be permitted in the following areas:

- Privately maintained subdivision streets.
- Paved Local Public Streets, with ADT less than 2,000 vehicles per day (not in Arterial or Collector Streets).

The following restrictions shall apply for the installation and construction:

- (1) Minimum cover shall be 24-inches, and maximum cover shall not exceed 20-feet.
- (2) Not to be installed in "collapsing soil", silt, or clay soil condition areas.
- (3) Soil pH values range from 1.25 to 14.0.
- (4) Pipe sizes range from 18-inches to 48-inches.
- (5) For design use manning "n" value of 0.012.
- (6) All joints shall use the thermo-molder, water tight, fittings.
- (7) Minimum clearance between multiple pipe installation shall be 12-inches.
- (8) Backfill placement shall conform to Standard Specification, Section 501 requirements, and the minimum compaction shall be 95%.
- (9) Provide metal, or concrete, flare joint protection from sun exposure and mechanical damage.
- (10) Not be installed in Active Sediment Transport Area.

The developer for private projects, or the contractor for public projects, shall be required to submit manufacturer's test data substantiating that the pipe proposed for use is structurally adequate for the roadway, and overburden loading appropriate for the proposed use. Joints, elbows, tees, and fittings of the pipe shall conform to the manufacturer's recommendations for the proposed use. Polyethylene manholes shall not be used.

Certified Acceptance test of the completed installation shall be provided either by the developer or an Arizona Registered Civil Engineer.

GDT:eb1:HPS

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