

# STRUCTURAL PLATE PRODUCTS

**LANE'S FULL LINE  
OF STRUCTURAL  
PLATE ASSURES  
THE RIGHT  
PRODUCT FOR  
YOUR APPLICATION.**

Lane designs, manufactures and field erects a full line of corrugated steel structural plate. These products are available in six basic shapes: pipe, pipe arches, horizontal ellipses, arches, underpasses and box culverts. Each type is used in a wide variety of installations such as storm drain systems, culverts, stream enclosures, conveyor covers and conveyor

tunnels. Lane structural plate is also used as vehicle, animal and pedestrian underpasses.

Structural plates are formed, corrugated, galvanized steel sections which are bolted together in the field to satisfy specific customer needs. These structures have many of the same

benefits of factory-made corrugated steel drainage pipe, but the heftier cross section and thicker gages allow for much larger structures.



*Structural Plate Pipe 22 feet in diameter, Elongated Railroad Tunnel*



*Drain with Lane*


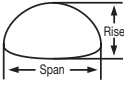
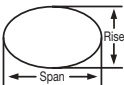
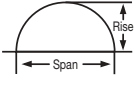
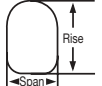
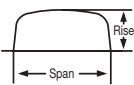


# LANE'S STRUCTURAL PLATE PRODUCTS OFFER USERS NUMEROUS BENEFITS AND ADVANTAGES

- **Lightweight** — compared to other types of structures of similar size, such as structural steel or concrete bridges.
- **Strong** — the 6" by 2" corrugation is significantly stronger than other corrugations of the same thickness.
- **Easily installed** — light equipment, simple tools and unskilled labor under adequate supervision can easily complete the assembly.
- **Made to last** — our structural plate is protected by a 3-ounce zinc coating, which gives the structure a long life with 50% more zinc than regular corrugated steel pipe.
- **Conveniently delivered** — plates are shipped in compact nested bundles, minimizing handling and freight costs.

Collectively, these benefits qualify Lane structural plate as a practical and economical construction material that meets all accepted state and national specifications.

## LANE STRUCTURAL PLATE PRODUCTS AT A GLANCE

Lane Structural Plate Products		
Shape	Range of Sizes	Common Uses
Structural Plate Pipe — Round 	5' to 26' (1500mm to 8010mm)	Culverts, subdrains, sewers, service tunnels, etc. All plates same radius. For medium and high fills (or trenches). For appearance and where backfill compaction is only moderate, 5% vertically elongated is available.
Pipe Arch 	6'1" x 4'7" to 20'7" x 13'2" (1850mm x 1400mm to 6270mm x 4010mm)	Perfect for economical bridges, where headroom is limited. Has hydraulic advantages at low flows. Corner plate radius, 18" or 31".
Horizontal Ellipse 	7'4" x 5'6" to 14'11" x 11'2" (2240mm x 1680mm to 4550mm x 3400mm)	Culverts, grade separations, storm sewers, tunnels.
Arch 	Span x Rise 5' x 1'9 1/2" to 26' x 13' (1520mm x 550mm to 7920mm x 3960mm)	For low-clearance large waterway openings and aesthetics.
Underpass 	Span x Rise 5'8" x 5'9" to 20'4" x 17'9" (1730mm x 1750mm to 6200mm x 5410mm)	For pedestrians, livestock, golf carts or vehicles.
Low Profile Box Culverts 	9'8" x 2'7" to 20'9" x 10'2" (2950mm x 790mm to 6320mm x 3100mm)	Low-wide waterway enclosures, culverts, storm sewers.

This brochure is intended for informational purposes only. For more detailed technical information, please reference Lane's structural plate handbook.

## LANE'S VALUE-ADDED SERVICES:

### DESIGN

Lane can provide design assistance to help you determine the correct structure for your specific job. We'll help you consider the hydraulics, overall profile, structural requirements and economic factors related to your particular situation. Lane is the only domestic structural plate manufacturer that has total in-house capability to assist you with shop or field erection requirements.

### ERECTION

Lane Fabricators Division personnel are on the job with the experience to get the structure assembled in place — economically and on time.

### SPECIAL FABRICATIONS

Special fabrications are easily handled by our experienced craftsmen. Skews, bevels, stubs and manholes can all be shop installed to speed field installation and meet job requirements.

### SPECIAL APPLICATIONS

Reclaim Tunnels  
Storm Retention Systems  
Equestrian Tunnels  
Golf Cart Underpasses  
Mine Canopies

## ACCESSORIES

### ANCHOR BOLTS

Anchor Bolts are available for anchoring the ends of structural plate conduits into concrete headwalls, or other end treatment (when required).

### BASE CHANNELS FOR ARCHES

Galvanized base channels and hardware are available to fasten (anchor) arch or low profile box culvert plates to their foundations.

## SPECIFICATIONS

Lane structural plate is covered by several nationally-known specifications, which cover material, design and installation requirements:

### MATERIAL SPECIFICATIONS:

#### Plate

ASTM A761  
AASHTO M167  
AREA Part 4

#### Fasteners

ASTM A-307  
ASTM A-563 Grade C  
ASTM A-153  
ASTM A-449

### DESIGN SPECIFICATIONS

ASTM A796  
AASHTO Standard Specification for Highway Bridges,  
Division 1, Section 12  
AASHTO LRFD Bridge Design Specifications  
(new code for 1994)  
AREA Part 4



*Above: Structural Plate Pipe Raw Material Reclaim Tunnel. Right: Structural Plate Pipe Arch Bridge Replacement.*



## INSTALLATION SPECIFICATIONS

ASTM A807

AASHTO Standard Specification for Highway Bridges,  
Division II, Section 26  
AREA Part 4

Note: Proper installation and backfill techniques are vitally important.  
Please reference above specifications upon installation.



*Box culvert at residential development entrance.*



### **Drain with Lane**

Lane Enterprises, Inc.  
3905 Hartzdale Drive, Suite 514  
Camp Hill, PA 17011  
717-761-8175 • FAX 717-761-5055

#### **New York**

Ballston Spa • (518) 885-4385  
Bath • (607) 776-3366

#### **North Carolina**

Statesville • (704) 872-2471

#### **Pennsylvania**

Bedford • (814) 623-1191  
Carlisle • (717) 249-8342  
King of Prussia • (610) 272-4531  
Pulaski • (724) 652-7747

#### **Virginia**

Bealeton • (540) 439-3201  
Dublin • (540) 674-4645

# W

**HAT YOU WANT ...  
WHERE YOU WANT IT ...  
WHEN YOU WANT IT.**

From consultation to installation, you can depend on Lane for your drainage product needs. As a full-line manufacturer of metal and HDPE plastic drainage products, Lane is able to provide the right product for your particular need. Regardless of the application, you can be assured a Lane product brings you the best in strength, durability and economy.

### **Corrugated Metal Pipe**

### **Spiral Rib Pipe**

### **High Density Polyethylene Pipe (HDPE)**

### **Storm Water Management Systems**

### **Open-Top Slotted Drain**

### **Welded Wire Mesh Gabions**

### **Rebar & Custom Powder Coating**

The information contained in this brochure is for general use and should not be used without first securing competent engineering advice as to suitability for any specific application. THE PUBLICATION OF THIS INFORMATION IS NOT INTENDED AS A REPRESENTATION OR WARRANTY INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

© Lane 7/96 10M OP