



FG 300 Curb Systems

Modular Lane Separation and Median Barrier Systems



Davidson Traffic Control Products

"Creating products to save lives"



Celebrating 60 Years of Innovation

Product Overview

FG 300 Curb Systems: A Breakthrough in Channelization

The FG 300 Curb Systems are FHWA approved passive traffic control devices consisting of modular raised curb sections and the toughest channelizer posts on the market! The systems are designed for use in areas where pavement markings are not sufficient to provide safe channelization. Utilizing FG 300 Curb Systems can dramatically improve traffic safety in locations where traffic hazards are a problem.

Our curb systems are built rock solid with superior engineering resins to endure multiple high-speed impacts and the rigors of years in the field. The radial rib structure of the curb provides over 10,000 pounds of crush strength. The FG 300 EFX channelizer posts are simply unmatched in resilience – the EFX post is still standing after all other posts have failed. Combining the curb unit and the EFX post into one easy to install curb system results in an incredibly tough channelization system that will improve traffic safety where you need it most.

Lowest Maintenance and Low Cost

The curb unit features an optimal blend of durability, color conspicuity, reflectivity and low maintenance. The solid color throughout requires no painting, thereby reducing maintenance costs. The tough, flexible polyurethane plastic used in our FG 300 Model EFX channelizer post provides the greatest rebound of any flexible polymer. This allows our posts to be struck repeatedly and rebound to an upright position, even at speeds over 60 mph!

**Our Curbs are Backed by a
5 Year Warranty**

**Our EFX Posts Carry a
1 Year Warranty**



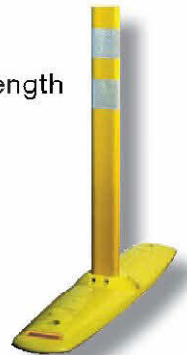
Interstate Grade Curb System

- One piece construction utilizes high impact polymers and solid color throughout
- Designed to be linked in continuous applications
- Narrow design creates much smaller footprint than concrete barrier and fully mountable by emergency vehicles
- Superior durability – Curbs withstand 10,000 pounds of loading – FG 300 EFX and UR Posts withstand 50 impacts at 60 MPH
- Proven safety and performance - FHWA approved, NCHRP 350 tested and accepted at 70 mph/112kph
- Endless applications!



Turnpike Grade Curb System

- Free standing product spaced along length of the installation
- Designed for high speed applications
- Only requires 4 bolts per unit
- 25 to 40% labor savings
- Picket fence effect (See page 4)
- NCHRP 350 accepted



Why Use FG 300 Curb Systems?

One piece construction utilizes UV stable, high impact engineering polymers and solid color throughout:

- Superior durability
- Low maintenance – no painting required
- Curb sections withstand 10,000 lbs of loading
- Nest with previous section (IG)
- Carry a 5-year limited warranty

Proven safety & proven performance:

- NTPEP tested (FG 300 Posts)
- NCHRP 350 tested at 70 mph and Accepted (complete system)

FG 300 upright posts placed every 3 feet:

- Dramatic picket fence effect creates strong psychological barrier for drivers
- Enhanced channelization vs. single posts alone
- High-visibility colors provide improved visual target for drivers

Narrow Design:

- Smaller footprint than concrete barrier, preserves lane width
- Fully mountable by emergency vehicles
- Can be installed on bridge decks using Adhesive 795A
- Unique design allows for curved installations, even roundabouts

Built-in reflective lenses:

- Improved visibility at night and during dangerous wet conditions



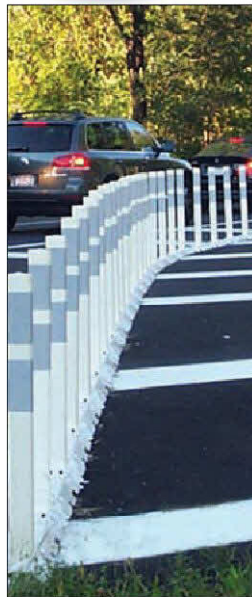
System features the FG 300 EFX Channelizer Post:

- Virtually indestructible post resists tearing and puncturing
- 1 year warranty
- Made from polyurethane alloy with very high tensile and elongation properties

No special equipment or tools required for installation

- Simple to install
- Just minutes per curb section

- ✓ Withstands multiple high-speed impacts (70 MPH / 112 KPH)
- ✓ Innovative anchor bolt system allows for rapid installations
- ✓ Lower installation costs due to simplicity of design
- ✓ Modular construction allows easy replacement of worn parts
- ✓ Fully mountable, offers minimal resistance to emergency vehicles and meets AASHTO standards for mountable separators



1st Place Winner

“Innovation of the Year”

ATSSA Traffic Expo

Fort Lauderdale, FL March 2006



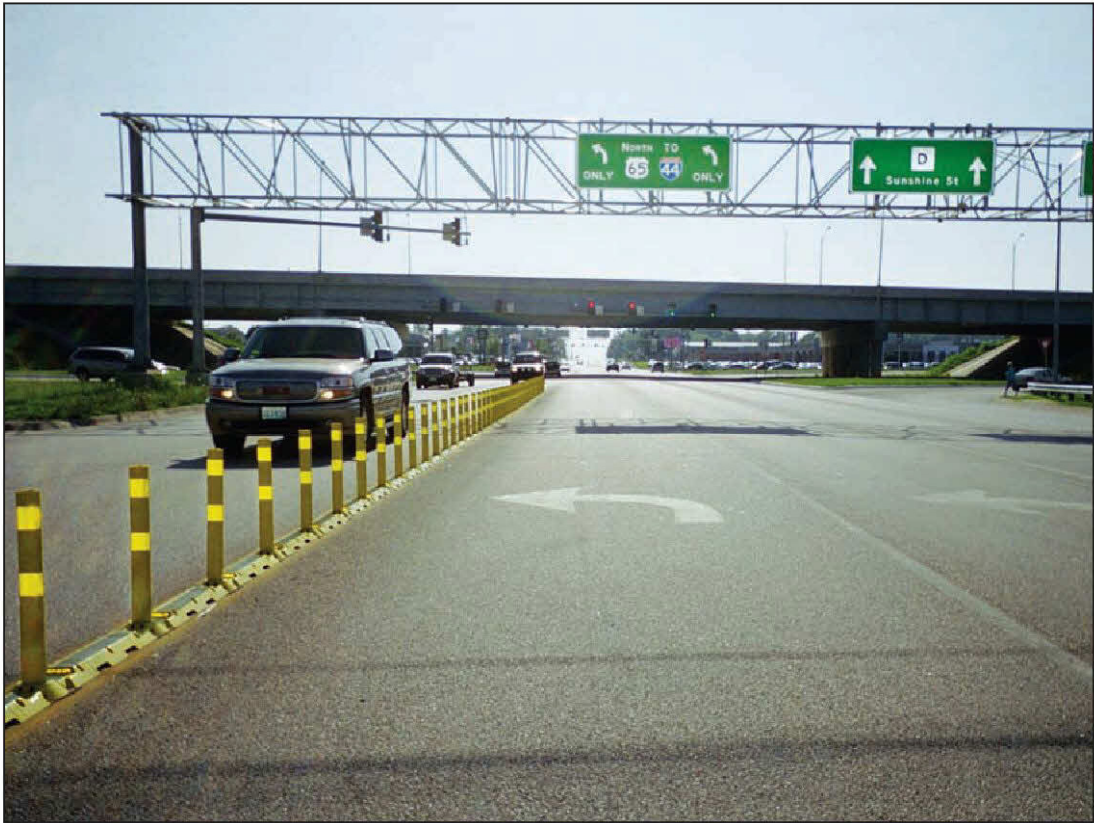
Continuous Applications

Thru-Lane Protection ▶



◀ Rail-Highway At-Grade Crossings

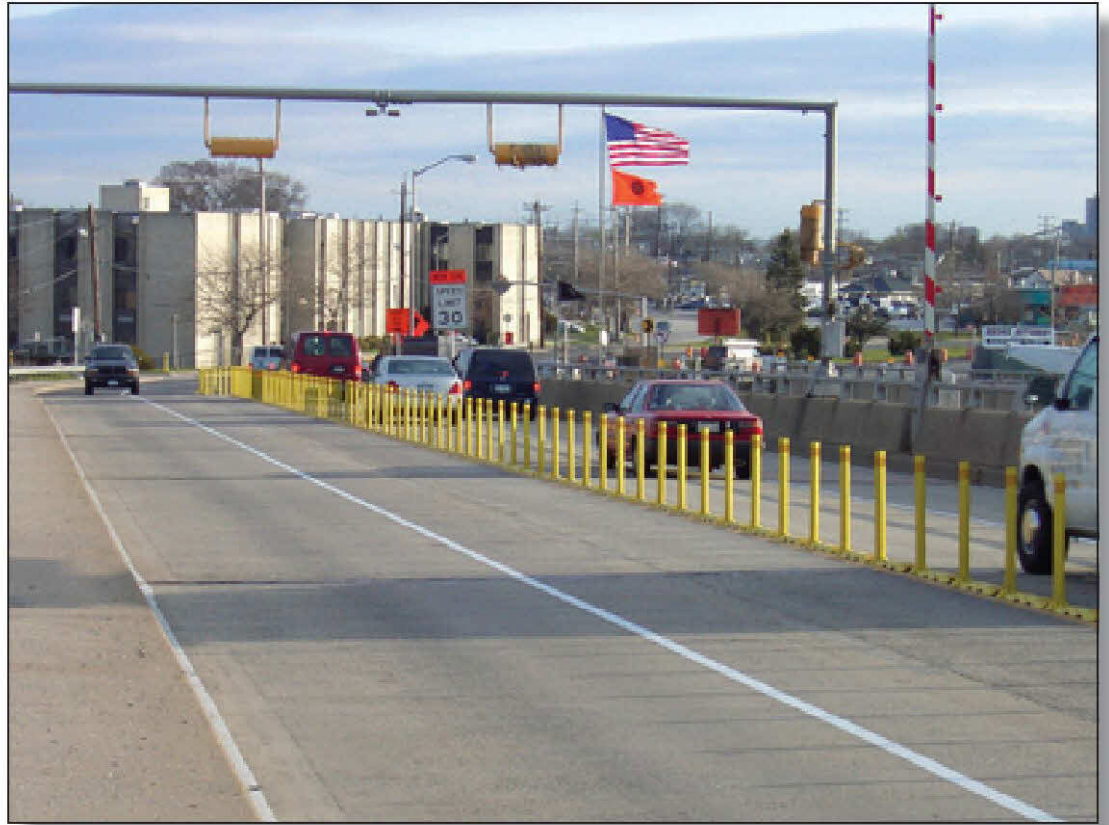
Curved Installations ▶



◀ Left Turn Restrictions

Incredibly Tough Channelization

Bridge Decks ▶



◀ Toll Plazas

Where You Need It Most

Construction Zones ▶



◀ Impact Attenuator Protection

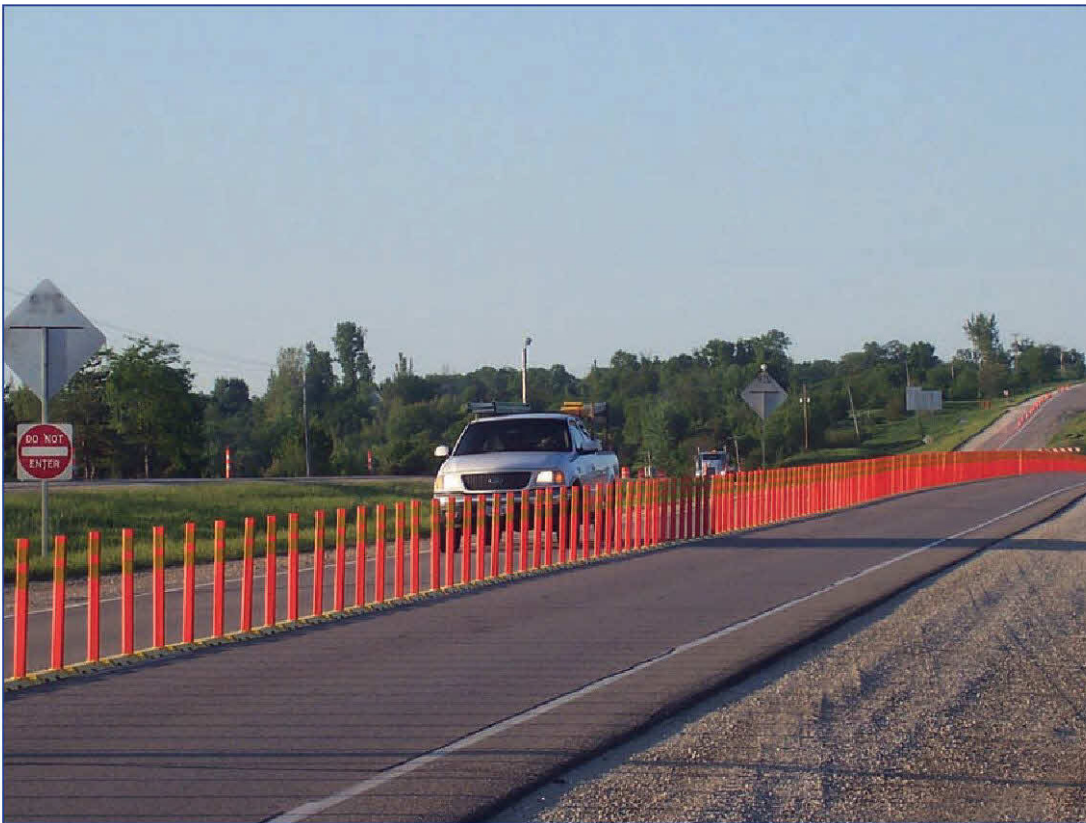
5 Year Warranty on Curb Section

Off Ramps & Merges ▶



◀ Acceleration Lanes

Restricted Access ▶



◀ **2-Way 2-Lane Detours**

FG 300 Turnpike Grade Curb System — New!

Modular Lane Separation System

The FG 300 Turnpike Grade Curb System is a raised lane separator with durable upright channelizer posts that provide efficient and cost-effective channelization of traffic on Managed Lanes, 2-way 2-lane Work Zones, and other areas where discontinuous channelization is preferred.

The Turnpike Grade Curb consists of individual curb sections so tough they carry a **5 Year Warranty** and upright polyurethane channelizers so tough they are the **only Channelizers in the world to carry a 1-year warranty against breakage.**

Impact tested at 70 MPH at Texas Transportation Institute, and NCHRP 350 accepted by the US/DOT FHWA.

Turnpike Grade Curb Separators

- Divide lanes going in same or opposite directions
- Features engineering polymer alloys for superior toughness at temperature extremes
- Engineered to stand up to the toughest of conditions
- For high speed, high volume applications where continuous curb is too costly or not needed
- Use where pavement markings alone are not sufficient to safely channelize traffic



Turnpike Grade Curb Applications

- HOT and HOV Lane Installations
- 2-way 2-lane detours on Interstate rehab projects
- Divided highway entrance/exits
- Cross-over prevention

Stable Platform for High Speed Installations

- Low-profile base for low-impact roll over
- Smooth transition from road surface – no hard lines
- Designed to eliminate vehicle vaulting

Superior Retro-Reflectivity

- Curb leading edge has an imbedded cube corner reflective lens
- Reflectivity meets ATSM D-4280 for raised pavement markers
- Optional glass bead road stud
- Low profile design on both ends for 2-way applications
- Available in White, Yellow and Fluorescent Orange
- Features the incredibly tough FG 300 Model EFX post
- Accepts all grades of FG 300 posts: PE, UR and EFX



We offer free downloadable CAD drawings and specifications from our web site. Contact your local sales representative or e-mail: hwysales@pexco.com for details





FG 300 Model EFX Channelizer Post - The "Bullet Proof" Post

The FG 300 Curb features extremely durable upright posts, utilizing a unique clover-leaf design for better rebound than simple round tubes. All models of our channelizer posts are designed for the rigors of the field. The new model EFX post is 65% stronger and designed to hold up and rebound in the most challenging installations. The EFX post is so tough it is the 1st and only post that comes with a 1-year limited warranty!



Options to Enhance your Curb System

Custom configurations are available by special order. Our posts can be sheeted with High Intensity or Abrasion-Resistant Super-HI Prismatic sheeting to provide the highest levels of reflectivity and guidance. FG 300 posts and curbs are available in nine different colors including true fluorescent yellow green. Custom reflective sheeting such as black-on-yellow left-slant pre-stripe is available by special order.



Vertical Panels Increase Visibility

Vertical panels placed on curb systems increase guidance and provide a high value target for motorists. In addition to increasing safety they are very durable and can withstand tremendous abuse. The combination of the unique geometry and urethane alloy used to build the EFX allows it to rebound and reorients the panel towards traffic after an impact. Vertical panels conform to Section 6F.61 of the MUTCD and are available in multiple sizes.

Widely Used

| Agency | Roadway | Application |
|--|--|--|
| California DOT | Interstate 80 San Francisco Bay Bridge | Toll Booth Lane Separation |
| Missouri DOT | Columbia, Jefferson City, Springfield & Fulton Districts | Merge Lanes, Merge Installations, Acceleration Lanes |
| North Carolina DOT | Highway 301 @ Rocky Mount | Turn Restriction |
| Texas DOT | Atlanta, Austin, Bryan, College Station, Corpus Christi, Dallas, El Paso, Grand Prairie, Houston, & Laredo Districts | Merge Lanes, Median Installations Acceleration Lanes HOV Lane Separation |
| City of Cupertino, CA | <i>Pictured Below</i> | Traffic Calming, Turn Restrictions |
| City of Sacramento, CA | Commerce Way | Traffic Calming, Turn Restrictions |
| City of Virginia Beach, VA | Pleasure House Road | Turn Restrictions |
| Golden Gate Bridge District, CA | Highway 101 | Toll Booth Lane Separation |
| Triborough Bridge & Tunnel Authority, New York, NY | Brooklyn Battery Tunnel & Queens Midtown Tunnel | Tunnel Channelization (FG 300 Posts) |
| Westchester County, NY | Westchester Ave @ I-287 | Off-Ramp Channelization |

*For more information on curb installations and actual applications
please e-mail us at: hwysales@pexco.com*



Our curb system has been tested and approved in many applications. The unique polymers used in the FG 300 curb sections and upright posts absorb high-speed vehicle impacts allowing the system to sustain hits at high speed with no damage to the system or danger to the driver.

National Cooperative Highway Research Program (NCHRP) Report 350: Complete Curb System

- Tested and accepted as a crashworthy traffic control device for use in work zones on National Highway Systems (NHS)
- Complete curb system including upright posts tested at 70 MPH
- Acceptance Letter WZ-193 (Interstate Grade)
- Acceptance Letter WZ-282 (Turnpike Grade)

Texas Transportation Institute Tested: Complete FG 300 Curb System

- Interstate Grade impact tested @ 70 MPH July 2004
- Turnpike Grade impact tested @ 70 MPH April 2009

National Cooperative Highway Research Program (NCHRP) Report 350: FG 300 UR & EFX Posts

- FG 300 Model UR and EFX comply with the requirements of a Category 1, Traffic Control Device in accordance with the guidelines and recommendations of the Federal Highway Administration, and the National Cooperative Highway Research Program (NCHRP) Report 350

National Transportation Product Evaluation Program (NTPEP)

- **FG 300 UR Posts** Tested and Accepted Report # 6020.1 TTCD 2005 (S-W)-13
Summer Test – 10/20/06; Winter Test – 2/9/06
- **FG 300 EFX Posts** Tested and Accepted Report TTCD 2006 (W-S) 1300
Summer Test – 6/28/06; Winter Test – 3/15/06

Texas Transportation Institute Tested: FG 300 Posts – 50 Impacts / No Failure

- **FG 300 UR Posts** Tested July 2004
- **FG 300 EFX Posts** Tested April 2009

Approved or accepted for use by these and other agencies:

California DOT
Iowa DOT
Maryland SHA

Texas DOT
Colorado DOT
Kansas DOT

Massachusetts Hwy
Virginia Dot
Illinois Tollway

Louisiana DOT & D
Minnesota DOT
Washington DOT



Texas Transportation Institute
FG 300 Curb & Post 70 MPH Impact Test

FG 300 for At-Grade Railroad Crossings

The Danger at Railroad Crossings

In the United States in 2008, over 280 people were killed and over 900 seriously injured in 2,400 rail-highway grade crossing collisions. Nearly half of all vehicle/train collisions occur at crossings with active warning devices (gates, lights and bells). Innovative traffic control devices like our FG 300 Curb system address the need for greater safety.

Safety Improvements in Quiet Zones with Whistle Ban

The "Train Horn" Rule now requires "Supplementary Safety Measures" at grade crossings to prevent motorists from driving around gates. Supplementary Safety Measures, like our FG 300 Curb System, are engineering improvements that compensate for the absence of the train horn. If employed at every crossing in a Quiet Zone, they can automatically qualify the Quiet Zone.

Economic Solutions...Compare the costs:

FRA Supplementary Safety Measures for Compliance with Quiet Zones

FG 300 Curb System

Completely mountable median separator curb system with 100 feet installed on each side of gate. Includes FG 300 EFX channelizer posts with prismatic super high intensity sheeting.

Estimated Cost: \$10,000

Temporary Closure of a Public Highway at Rail Grade Crossing

This technique requires daily set-up and removal of closure materials.

Estimated Annual Cost: \$50,000



Photo Enforcement

Installation of photographic equipment to capture motorists image as they gate run.

Estimated Cost: \$60,000 with an annual operating cost of \$20,000 to \$30,000

Barrier Curb Medians with or without channelization devices

Permanent curb system installed to prohibit gate running. This approach may require widening of the roadway. **Estimated Cost: \$60,000**

Four-Quadrant Gates

A pair of dual gate arms which are lowered on each side of a bi-directional crossing prevents any vehicle from crossing in-between the lowered gates because their path is blocked on both the front and rear of the railroad crossing. **Estimated Cost: \$250,000**

Low Maintenance and Low Cost Davidson FG 300 Curb System

Our curb system is an optimal blend of durability, color, conspicuity, reflectivity and low maintenance. The tough, flexible polyurethane plastic used in our FG 300 delineator posts provide the greatest rebound of any flexible polymer. This allows our posts to be struck repeatedly and rebound to an upright position. Their solid color throughout requires no painting, thus reducing maintenance costs. A typical installation of the FG 300 curb system can be done in a few hours, providing durable safety in a cost-effective manner. The FG 300 curb system is proven to be a low-cost investment with a high rate of return in safety at crossings.

**Innovative - Reliable - Simple
FG 300 Curb Systems**

- Improved Channelization of Traffic
- Proven Safety and Performance
- Low Cost and Low Maintenance
- Outstanding Durability and Quality
- Enhanced Driver Safety
- No Special Tools or Equipment Needed for Installation
- Numerous Highway, Rail and Traffic Calming Applications
- FG 300 EFX Posts Support Optional Vertical Panels
- 5-Year Warranty on Curb, 1-Year Warranty on EFX Post



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