The Freight Shuttle System: A Private Sector Freight Transportation Solution

Briefing for:
U.S.-México Border Mayors Association

El Paso, Texas, August 16, 2011
TTI’s Freight Shuttle System
Freight Shuttle: Trailers or Containers
Length – 75 feet
Velocity – 62 mph
Loading – 35 tons
The Freight Shuttle System

• A new approach to regional Intermodal & cross-border freight transport
  – Concept developed over the last 7 years at the Texas Transportation Institute (TTI)
  – Based on known and understood technology
  – Effectively addresses both community and commercial needs

*Combines technology and operational strategies to provide freight transportation in an environmentally responsible manner*
The Freight Shuttle System

- **Automated Freight Shuttles**
  - Hybrid system; uses the best features of truck and rail
  - Single-container transports
  - Linear induction motors (LIMs)
  - Dedicated, small footprint guide way
  - Fully elevated on existing highway ROW

24/7 operations offer an option that may overcome throughput, capacity, and impact issues affecting freight transportation.
The Freight Shuttle System

• **High reliability**
  – Steel-on-steel for low rolling friction/low cost
  – LIM – linear motion from vehicle-guideway interaction
    • Small number of moving parts
  – Automated control system
Texas Department of Transportation

- April 8th – TxDOT issued a RFP for “Low-carbon Emitting Freight Transportation Facilities”
  - The stated intent: **lease existing highway rights of way for alternative freight transportation technologies**
  - No public funds will be expended/no public costs incurred
  - Designed to monetize “under-performing” assets through leasing arrangements
  - Expecting D-B-O-M proposals that are privately funded
I-35 Corridor - First Project

Approx. 600 Route Miles
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III. Freight Shuttle System Business Model

Figure 3-5. Estimated Average Daily Long-Haul Truck Traffic on the National Highway System: 2035

Texas Transportation Institute
Port of Entry Security
2009 DOE – funded study assessing the Feasibility of bi-national FS operations Over a secure, elevated guideway with pre-Clearance in secure facilities
Parallel Scanning Stations Allow for 100% Inspection Using High-Energy Scanning Equipment
Overview of Freight Shuttle International

- FSI was formed to commercialize the Freight Shuttle technology developed by the Texas Transportation Institute.

- The Freight Shuttle System is a hybrid mode of freight transportation that can move freight over international borders on a secure, grade-separated, electric-powered guideway.

- The Freight Shuttle System will move freight in a more secure and sustainable manner than is currently possible.
FREIGHT SHUTTLE BUSINESS MODEL

SHIPPER
- Lower Cost of Goods
- Lower Cost — Higher Performance Transportation Service

PUBLIC SECTOR
- Reduced Road Maintenance
- Lower Congestion
- Improved Safety
- Cleaner Air

PRIVATE INVESTORS
- ROI
- Investment

DOT
- Transportation Fees
- Lease Fees
- ROW Leasing

Benefit Stream
- Financial Flow
- Transactions
Improving Energy Efficiency

Based on BTU Equivalency

![Graphs showing energy cost per mile and traveled miles per gallon of diesel for different modes of freight transportation.](Image)