Perkins Specialized Transportation Contracting

Industry Perspective on Bridge Ratings & Analysis

Western Association of State Highway and Transportation Officials
Agenda:

- Understanding the trailer,
- Research the cargo,
- Vehicle combination planning,
- Drawing preparation,
- What is the process?
The Vehicle, do you know?

- Axle spacing?
- Combination Geometry?
- Tare weight?
- In multi-unit combinations, each component’s mass & centroid?
- Tire sizes, axle width & axle profile?
The Cargo, do you know?

- Overall dimensions?
- Center of gravity?
  - Longitudinal COG?
  - Lateral COG?
- Support points?
- Securement attachment points?
- Securement points
- Eccentric COG
- LL Moment Capacity?
Vehicle Combination

- Orientation of cargo
- Exceed Moment capacity of trailer?
- Distribution
Corridor Planning

- What states are in the route?
- Does every state accept the trailer?
- Does the state have an established process?
- Does each state have defined weight allowances?
- Plan for the most restrictive state in the route?
- Does a dimension or GVW trigger a different permit category?
Drawing Preparation

- Does the state have a specific form?

- Does the state require specific drawing details?
  - Axle track?
  - Axle & Tire profile?
  - Tare weight & LL by axle? By Group?
  - View arrangement?
  - Imperial and / or metric units?
PERKINS SPECIALIZED TRANSPORTATION LAYOUT

SUPERLOAD INFORMATION & DRAWING WITH DIMENSIONS

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80 TIRE, 10 LINE (AXLES)
245/70R X 17.5 TIRES
AIR BRAKES ON ALL AXLES
STEERING ON ALL AXLES
HYDRAULIC SUSPENSION CARRIES
EQUAL WEIGHT ON ALL TIRES
16' DECK WIDTH X 89'-6" DECK LENGTH

DUAL LANE LOADING
GROSS VEHICLE WEIGHT = 448,000 LBS
Challenges

- States that don’t have defined process?
- Limited staff to analyze route?
- Cities & Counties may not have staff to properly vet local routing
- Does every state allow corridor movement?
- Does the state have a process for analyzing out of gauge combinations?
Challenges (Cont’d)

- Bridge or route geometrics come first?
- Route development in timely manner to coordinate utilities?
- Inaccurate cargo data?
- Permit release in timely manner to coordinate patrol?
- Construction re-routes?
Extra-Legal Shipments...
Extra-Legal Shipments...
Extra-Legal Shipments...
Extra-Legal Shipments...
Recommendations

- Measure and weigh your trailer,
- Understand trailer variables (sliding locations)
- Research cargo prior to submitting permits
- Contact each state & understand process
- Create generic drawings (or tables) that are easily duplicated
- Develop database with state processes & documentation
Contact Information

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...when execution matters most