

DESIGNING ROUNDAABOUTS FOR TRUCKS

JUNE 19, 2014
Ryan Hoyt, P.E.,PTOE

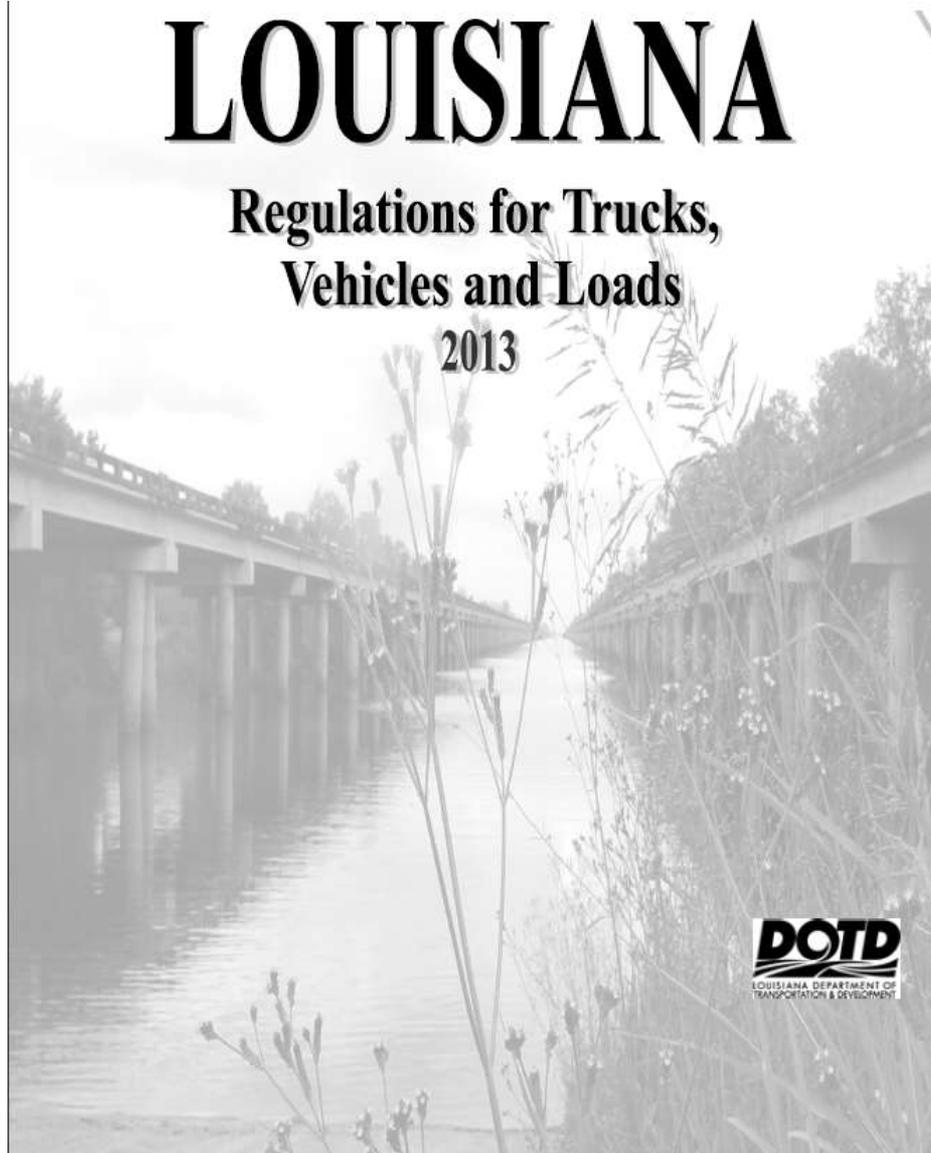




LOUISIANA TRUCK LAWS

LOUISIANA

Regulations for Trucks,
Vehicles and Loads
2013





LOUISIANA TRUCK LAWS

- Legal Truck Size
 - Width – 8'6"
 - Length – Max. Single unit = 45', Max. combination (truck + trailer(s)) on NON-Designated Truck Routes = 65' overall, Max. semi trailer on Designated Truck Route = 59'6" (trailer only)
 - Height – Max. interstate = 14', Max. non-interstate = 13'6"
- Interstate – Vehicles and loads over 16 feet wide may not travel on Interstate highways.



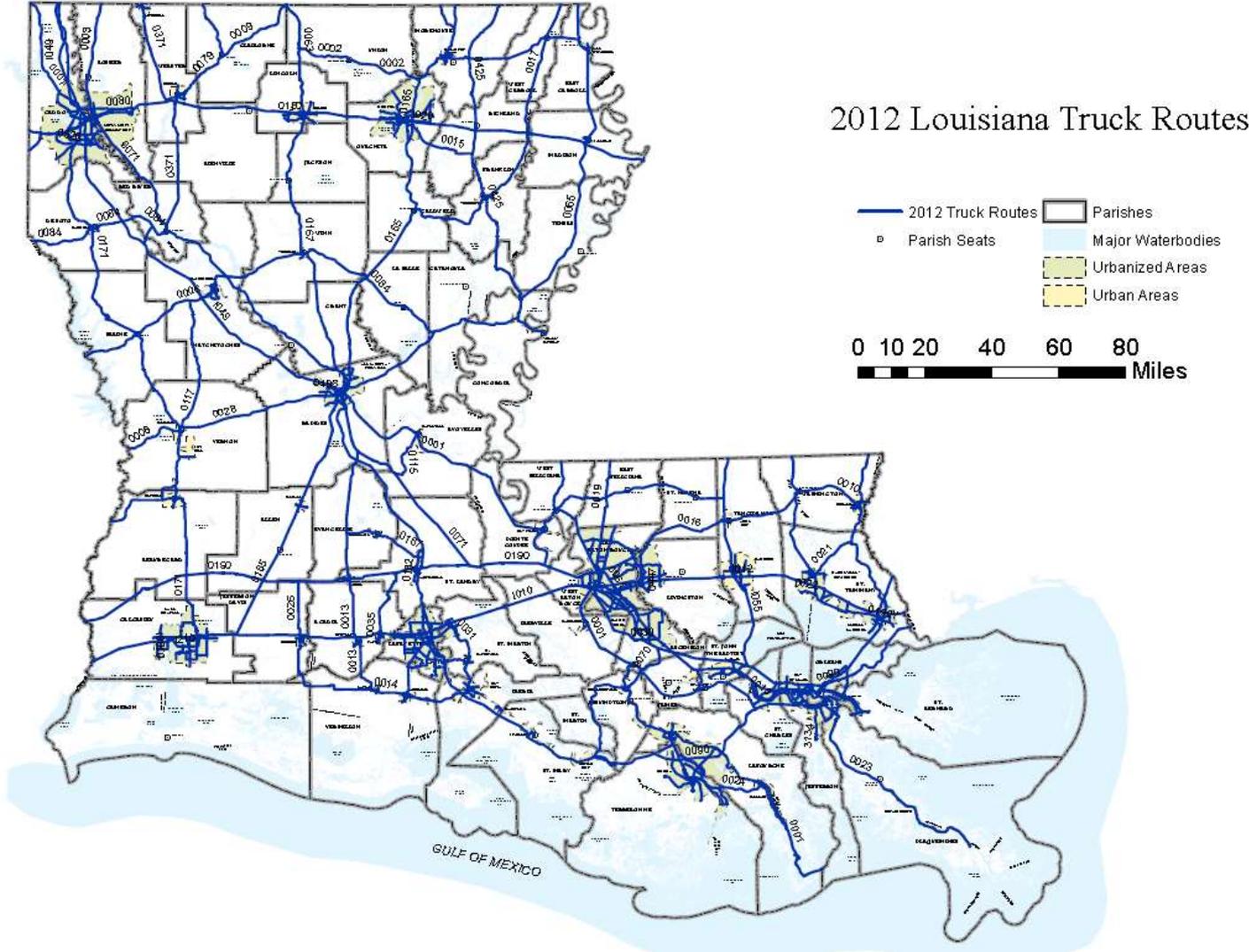
Where to Accommodate Large Trucks

- Current designated roadways
 - Truck permit section – Truck Destination Map (\\\\h85001ms001\85Common\85SharedMaps\1_PDFMaps\Truck Routes Map)



LOUISIANA DEPARTMENT OF
TRANSPORTATION & DEVELOPMENT

LOUISIANA TRUCK ROUTES OF 2012

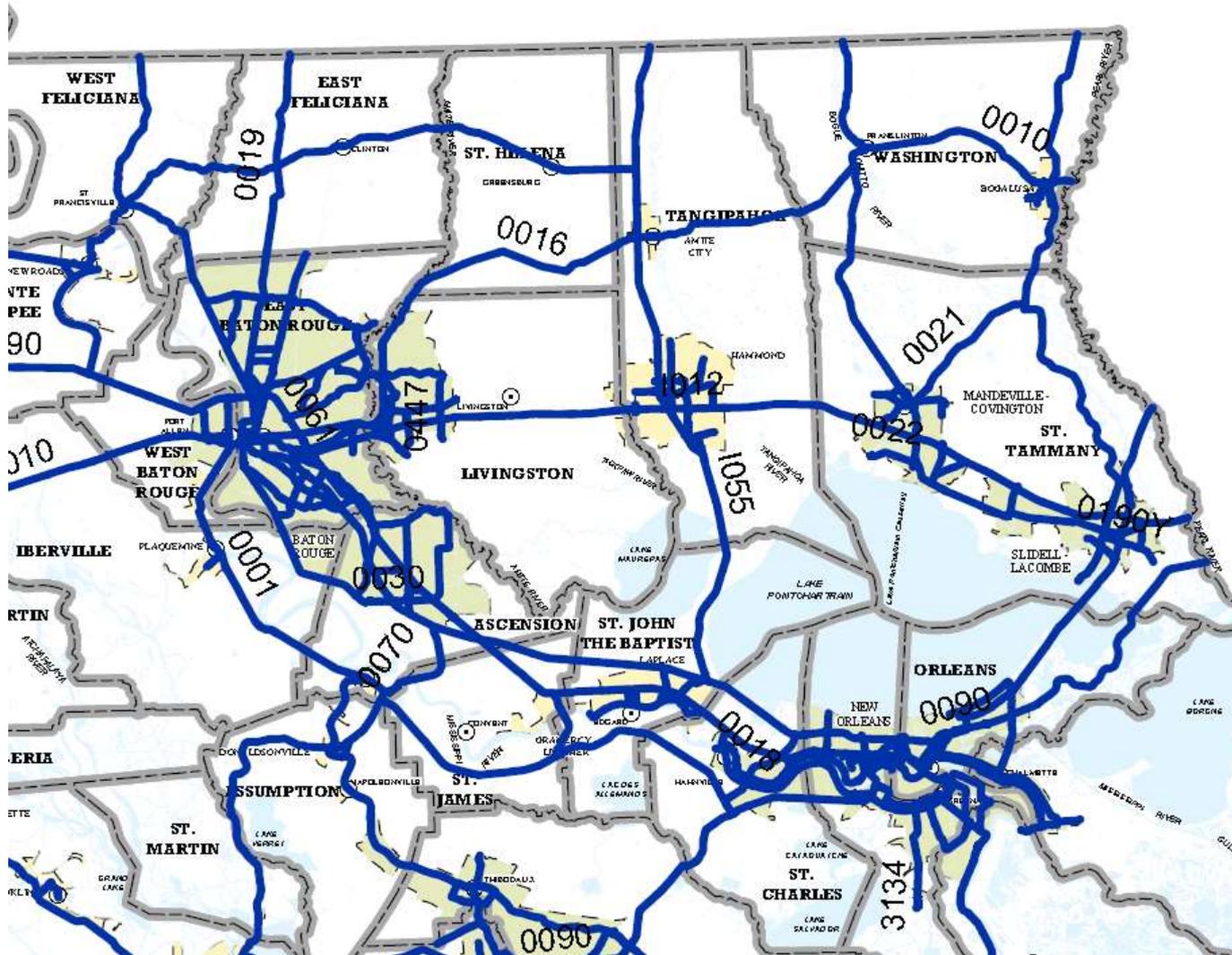




LOUISIANA DEPARTMENT OF
TRANSPORTATION & DEVELOPMENT

LA TRUCK ROUTES 2012

CONT'



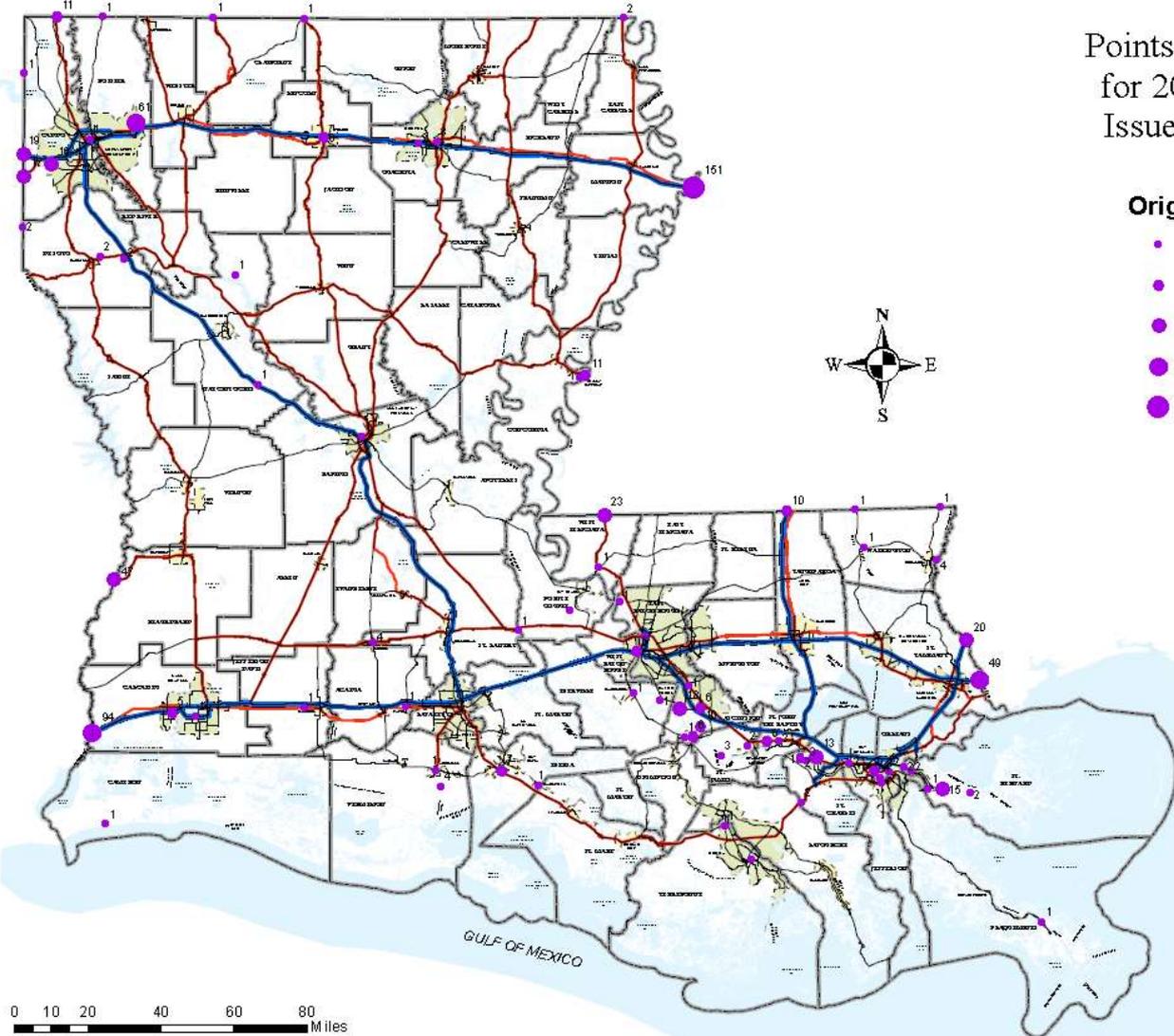
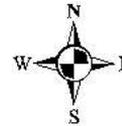
TRUCK ORGINATION 2013

Points of Origination Within LA
for 2013 DOTD Truck Permits
Issued to Lengths Over 130 Ft

Origin

- 1 - 4 (54)
- 5 - 11 (12)
- 12 - 47 (9)
- 48 - 94 (3)
- 95 - 151 (1)

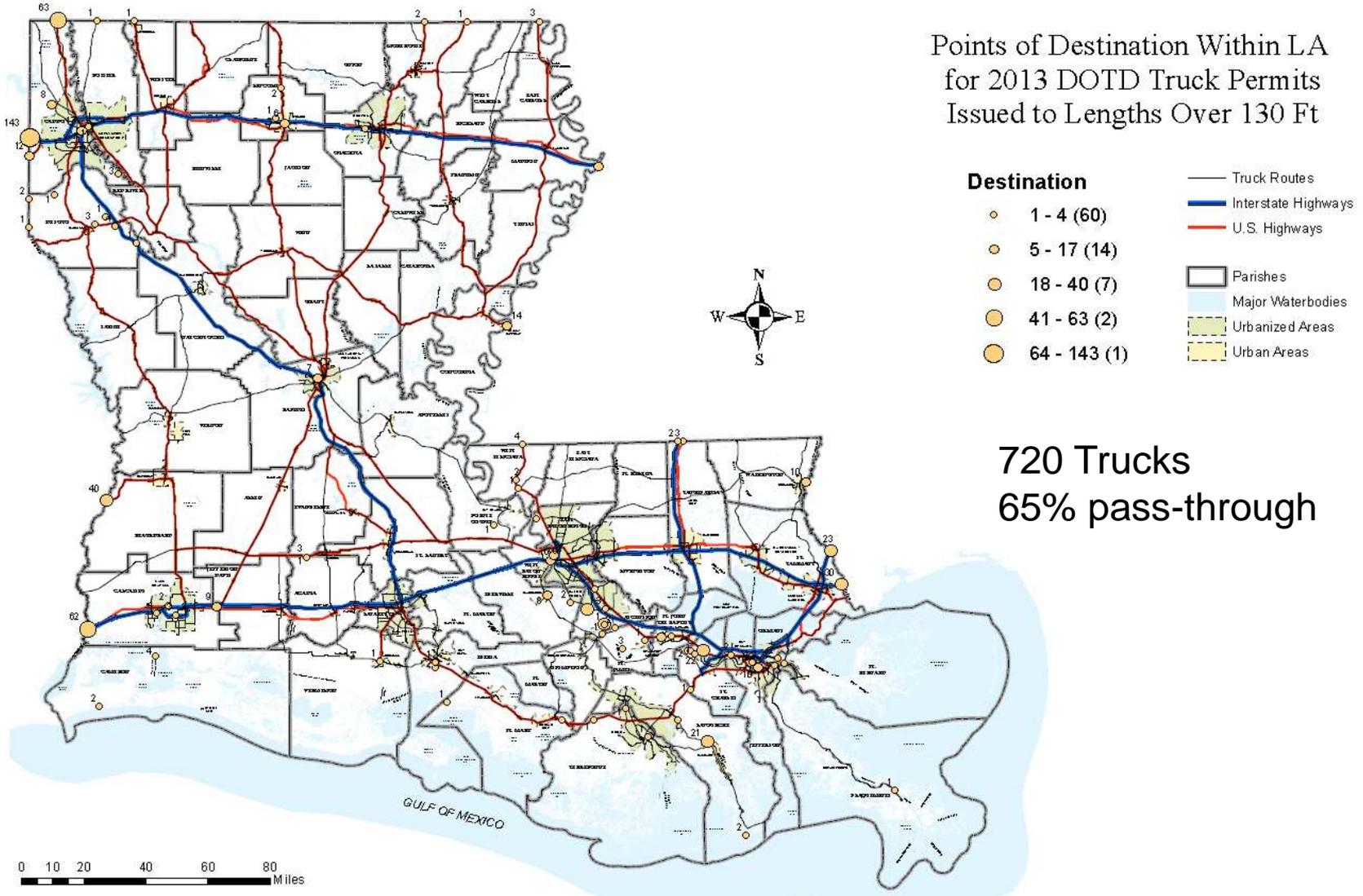
- Truck Routes
- Interstate Highways
- U.S. Highways
- ▭ Parishes
- ▭ Major Waterbodies
- ▭ Urbanized Areas
- ▭ Urban Areas



720 Trucks
65% pass-through

TRUCK DESTINATION 2013

Points of Destination Within LA
for 2013 DOTD Truck Permits
Issued to Lengths Over 130 Ft



720 Trucks
65% pass-through



Where to Accommodate Large Trucks

- Truck Generating Facilities (Check with access permit section and Local Government for any upcoming facilities.)
 - Construction sites
 - Large equipment sites
 - Industrial Plants (new plants and plant expansions)
 - Gas and oil sites
 - Trucking facilities

Trucking Facilities



Local Pilot Car Drivers



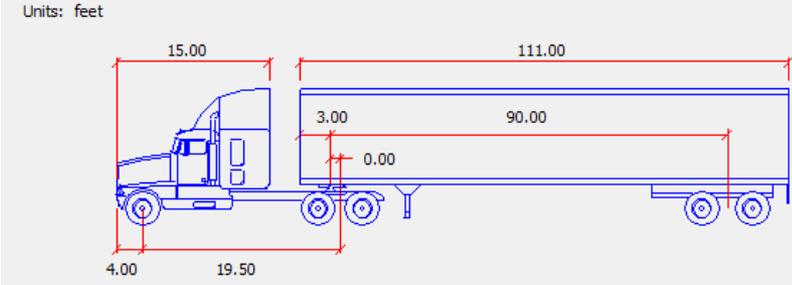
Verifying Movements in Autoturn

Select Current Vehicle

Group Vehicles By:
 Library Type
 Class Region
 # of Parts No Group
 Recent

Commercial Truck
 Custom
 Emergency Vehicle
 Forestry
 Fuel Tanker
 Passenger Vehicle
 Recreational
 Refuse Collection
 Transport - Special
Transport Truck

Units: feet



Library	Vehicle Name	Type	Region	Lock	# Parts	Length Δ	Wheelbase	Trailer Len.
AASHTOM 2011 (US)	WB-19M	Semitrail...	North A...	28.4	2	115.33	19.50	48.00
AUSTROADS (AU)	T1DUB	Double T...	Australia...	23.0	3	118.11	17.72	44.29
AUSTROADS 2006 (AU)	A-DOUBLE	Double T...	Australia...	23.4	3	118.77	18.04	44.62
AUSTROADS 2006 (AU)	B-TRIPLE	Triple Tra...	Australia...	17.2	4	119.75	13.45	29.53
AASHTOM 2011 (US)	WB-20M	Semitrail...	North A...	28.4	2	119.83	19.50	53.00
ALBERTA INFRA-HGD...	WB36	Double T...	North A...	17.1	3	124.67	16.73	53.15
Custom	OS 125 feet	Semitrail...	North A...	28.4	2	131.50	19.50	111.00
Custom	130 ft max w...	Semitrail...	North A...	28.4	2	150.50	19.50	130.00
AASHTOM 2011 (US)	WB-33DM	Double T...	North A...	12.6	3	160.36	12.20	48.00
AUSTROADS (AU)	T2TRI	Triple Tra...	Australia...	23.0	4	173.88	17.72	44.29
AUSTROADS 2006 (AU)	A-TRIPLE	Triple Tra...	Australia...	25.6	4	175.20	19.69	42.98

Copy Vehicle

OK Cancel Help

Editing Trucks in AutoTurn

Copy Vehicle [Close]

Group Types By:

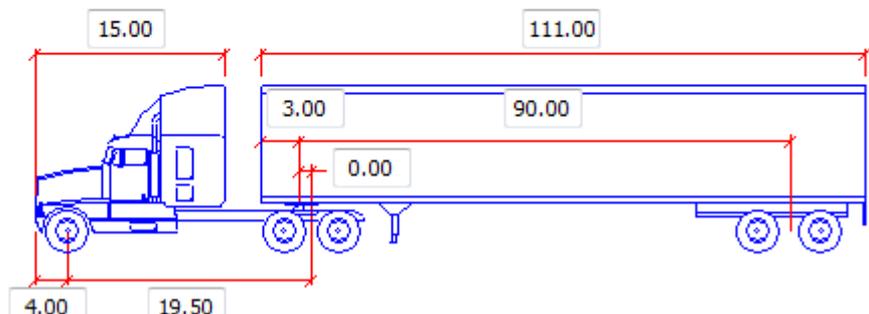
- Class
- # of Parts
- No Group

No groups available.

- Semitrailer CB
- Semitrailer CB1
- Semitrailer CB3
- Semitrailer CO
- Semitrailer CO1
- Semitrailer CO1 (2x4x4x4)
- Semitrailer CO2
- Semitrailer CO3
- Semitrailer CO4
- Semitrailer CO4-1
- Shuttle Van

General | **Parts View**

Creation Units: **feet**



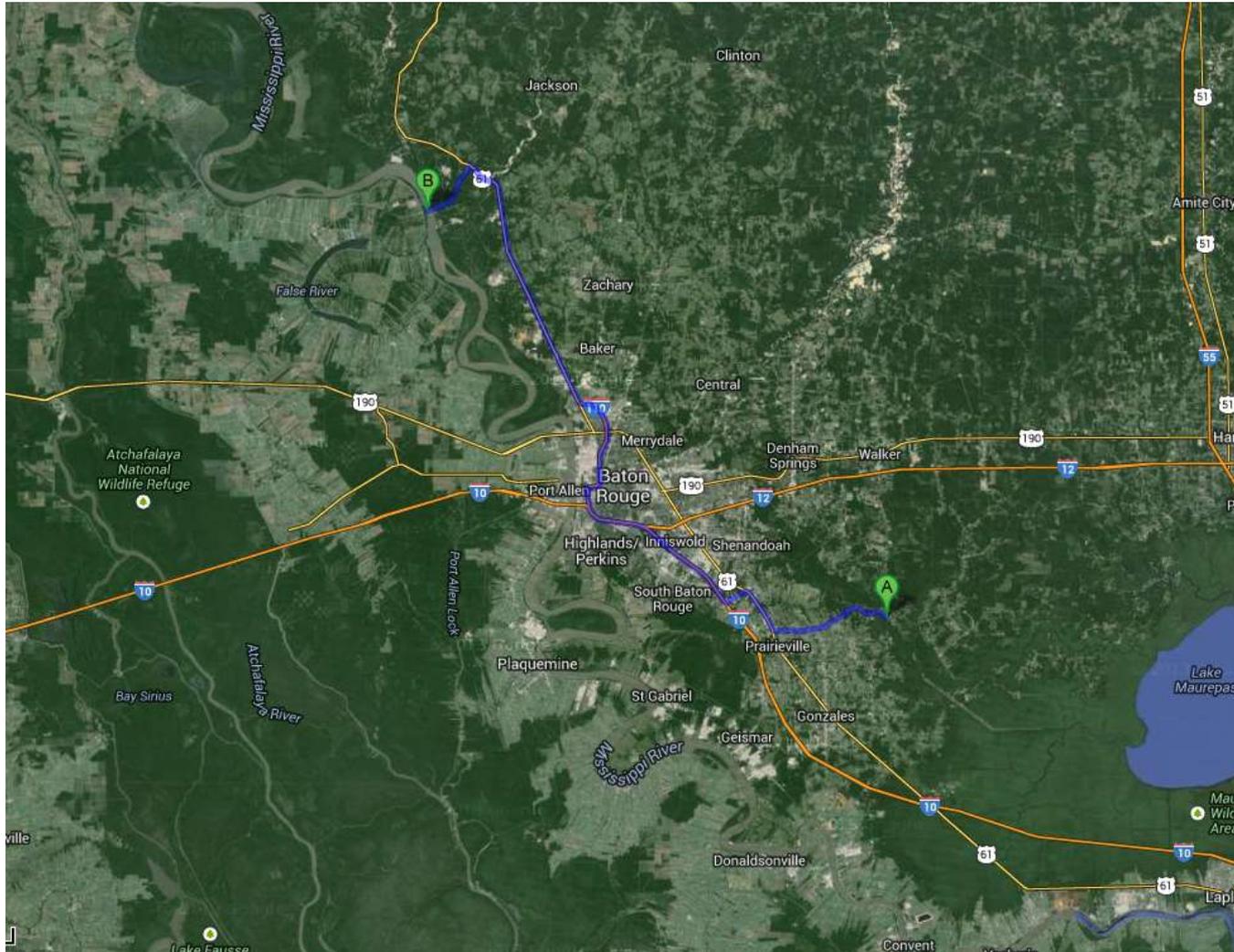
Overall Vehicle Length: 131.50 ft

General

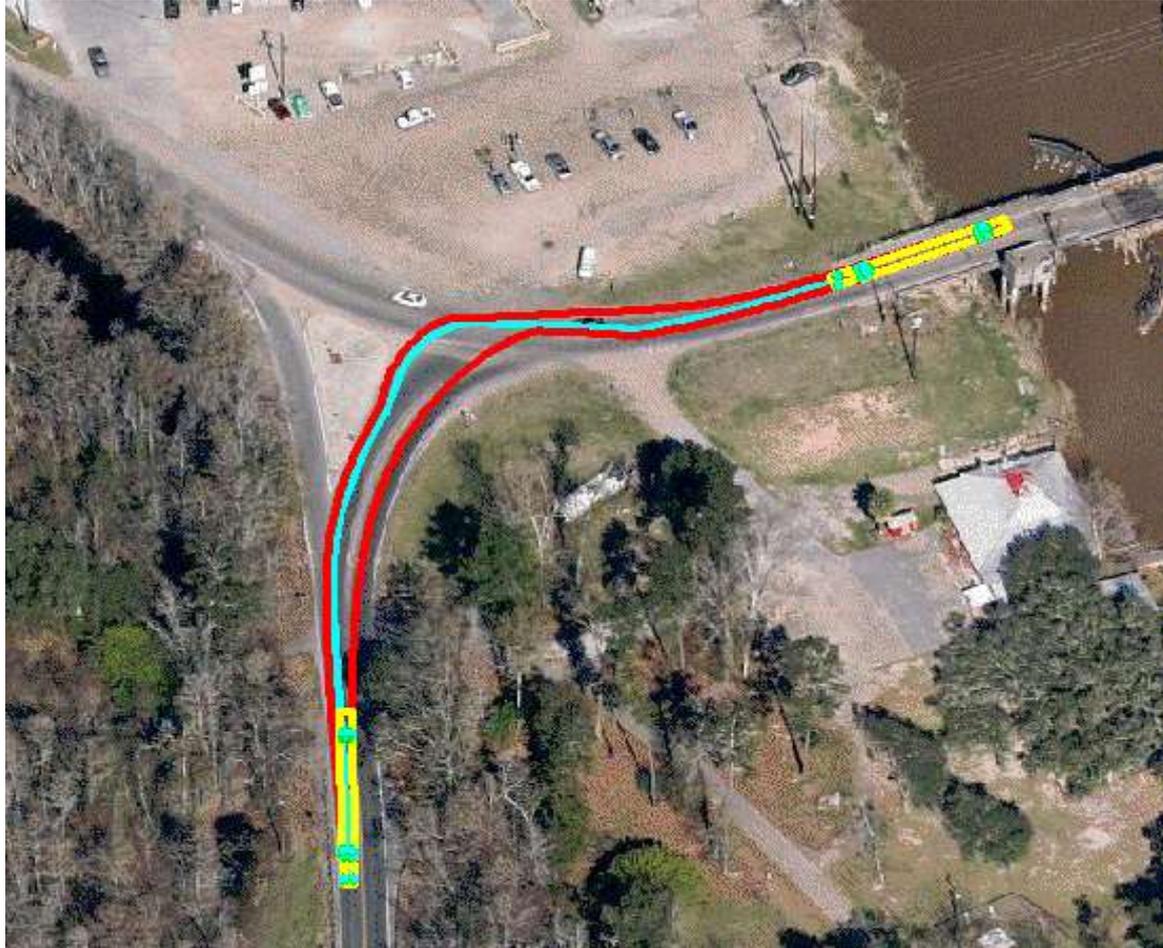
Name:	<input type="text"/>	Lock to Lock Time:	<input type="text" value="6.0"/>
Library:	Custom	Steering Lock Angle:	<input type="text" value="28.4"/>
Region:	North America	Tractor Width:	<input type="text" value="8.00"/>
Type:	Semitrailer CB	Tractor Front Track:	<input type="text" value="8.00"/>
Class:	Transport Truck	Tractor Rear Track:	<input type="text" value="8.00"/>
		Trailer Rear Track:	<input type="text" value="8.50"/>

OK Cancel Help

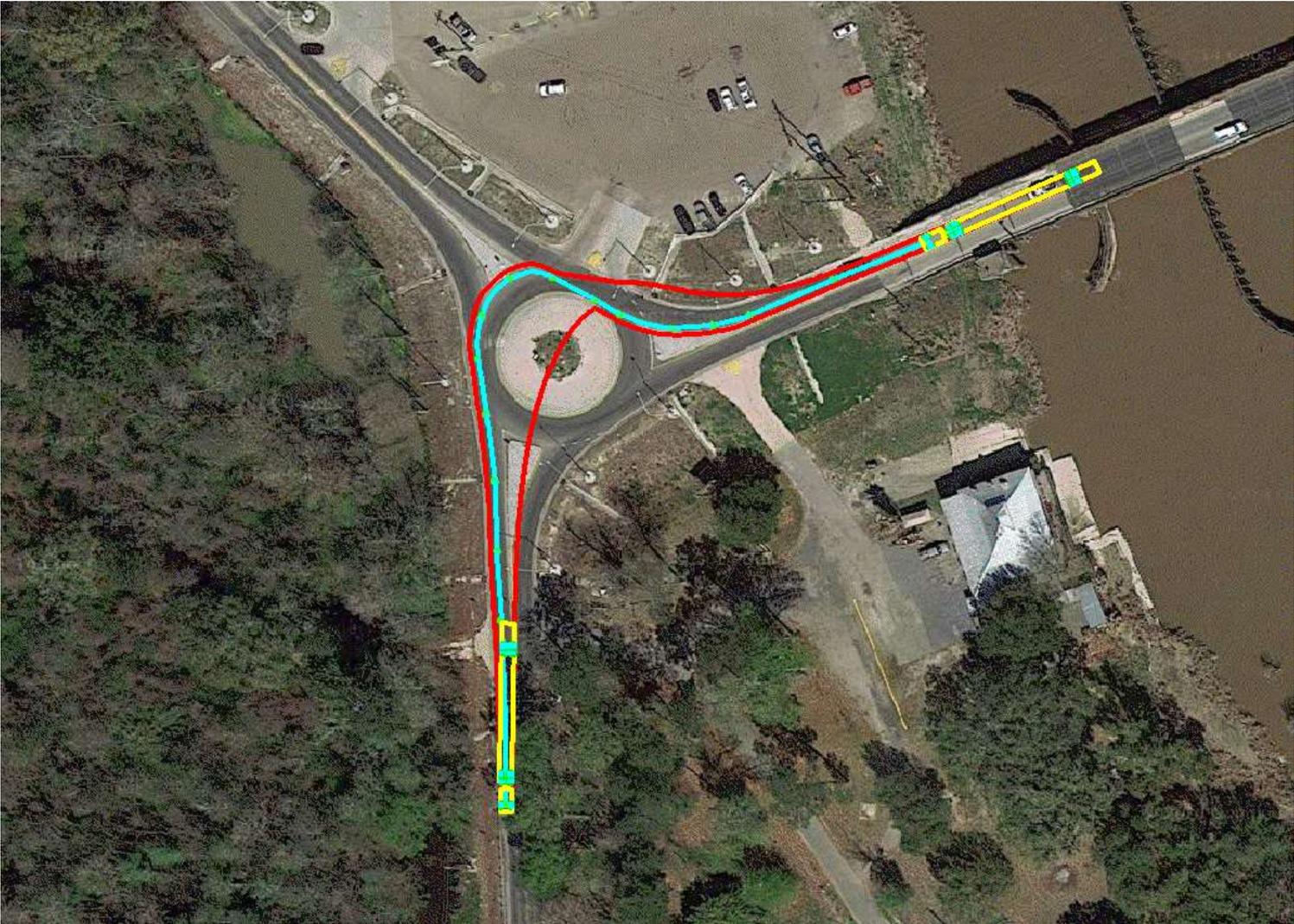
Two River Crossings that Accommodated Oversize Trucks Near Baton Rouge



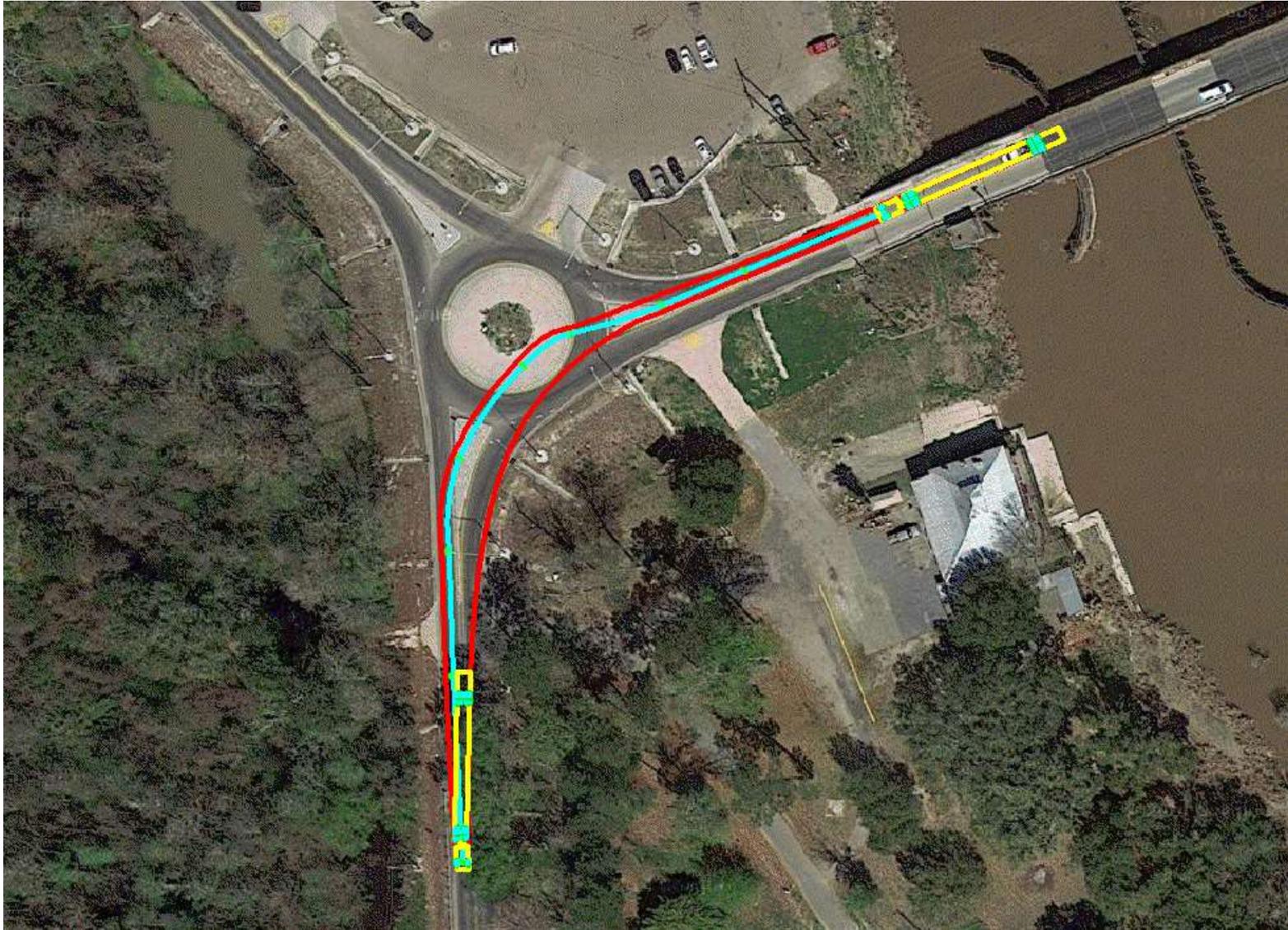
Existing intersection that Accommodated Oversize Trucks



New roundabout Intersection



Possible Escorted Route



Importance of Accommodating Large Trucks

- Always design to improve, never take away

Wisconsin

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Taxpayers to fork out \$165,000 to modify Waukesha County roundabout

By Gitte Laasby of the Journal Sentinel

Sept. 7, 2012

Tweet 10

g+1 0

EMAIL PRINT (89) COMMENTS

Costly redo of roundabout

Taxpayers will foot the \$165,000 bill to repair a Genesee roundabout so trucks can pass through.



Journal Sentinel

Click image to enlarge

Genesee - Taxpayers in Wisconsin are on the hook for up to \$165,000 for modifying a Waukesha County roundabout less than a year after it was initially constructed. State officials say the changes were necessary because some trucks on the designated truck route were unable to navigate the turns in the roundabout without getting stuck on the curb.

The roundabout at the intersection of state Highways 59 and 83 in Genesee, southwest of Waukesha, was first completed last fall. When the roundabout was designed years earlier, neither of the roads was designated high traffic. But while the work was wrapping up, Highway 59 became designated for overweight, oversize trucks, said Michael Pyritz, a spokesman for the Wisconsin Department of Transportation.

He said engineers assumed at the time, based on two-dimensional models, that trucks would be able to swing and navigate the roundabout just fine. However, he said, engineers did not have three-dimensional modeling, which would have allowed them to check for potential problems with the height of the 6-inch curb.

"The way the roundabout was built, they did not foresee, because the modeling did not exist at the time, that there'd be a problem," Pyritz said.

Soon after the roundabout opened on Oct. 7, 2011, law enforcement started getting calls about lowboy trailers getting stuck on the curb of the roundabout, which blocked the road. Lowboys are semi trucks with extremely low decks that are used to haul tall and heavy equipment, such as bulldozers and other industrial items.

"Since October of 2011, when that (the roundabout) opened up, there have been a total of 10 traffic incidents associated with vehicles, large trucks, having difficulty negotiating that roundabout," said Detective Chris Pedersen of the Waukesha County Sheriff's Office.

Example of oversize Lowboys

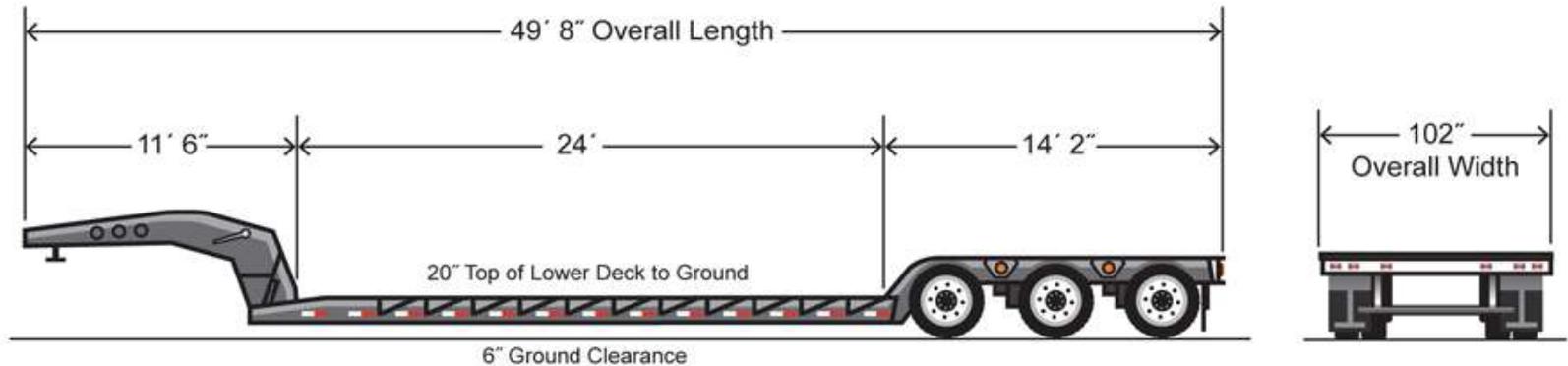


Curbing that effects Lowboys



Ex. Lowboy Dimensions

49' Lowboy (50 ton tri-axle detach)



Trailer Type	Exterior Dimensions			Trailer Weight (±5%)
	Length	Width	Lower Deck HT	Pounds
Lowboy	49'	102"	20"	17,500

For estimation purposes only - check Individual trailers for exact measures

[Download Lowboy PDF](#) | [Back to Main Lowboy](#)

Ways to Design For Truck



- Lower curb height and make the curbs mountable (splitter islands and inside/outside truck aprons)
- Make the inside truck apron larger.



?? Questions ??