



# OFFLOADING, TRANSPORTATION, AND SETTING

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**FIVE HORIZONTAL VESSELS**

BY

KENT GOODMAN

[www.maximumreach.com](http://www.maximumreach.com)

# **ETHYLENE STORAGE TANK (BULLET)**

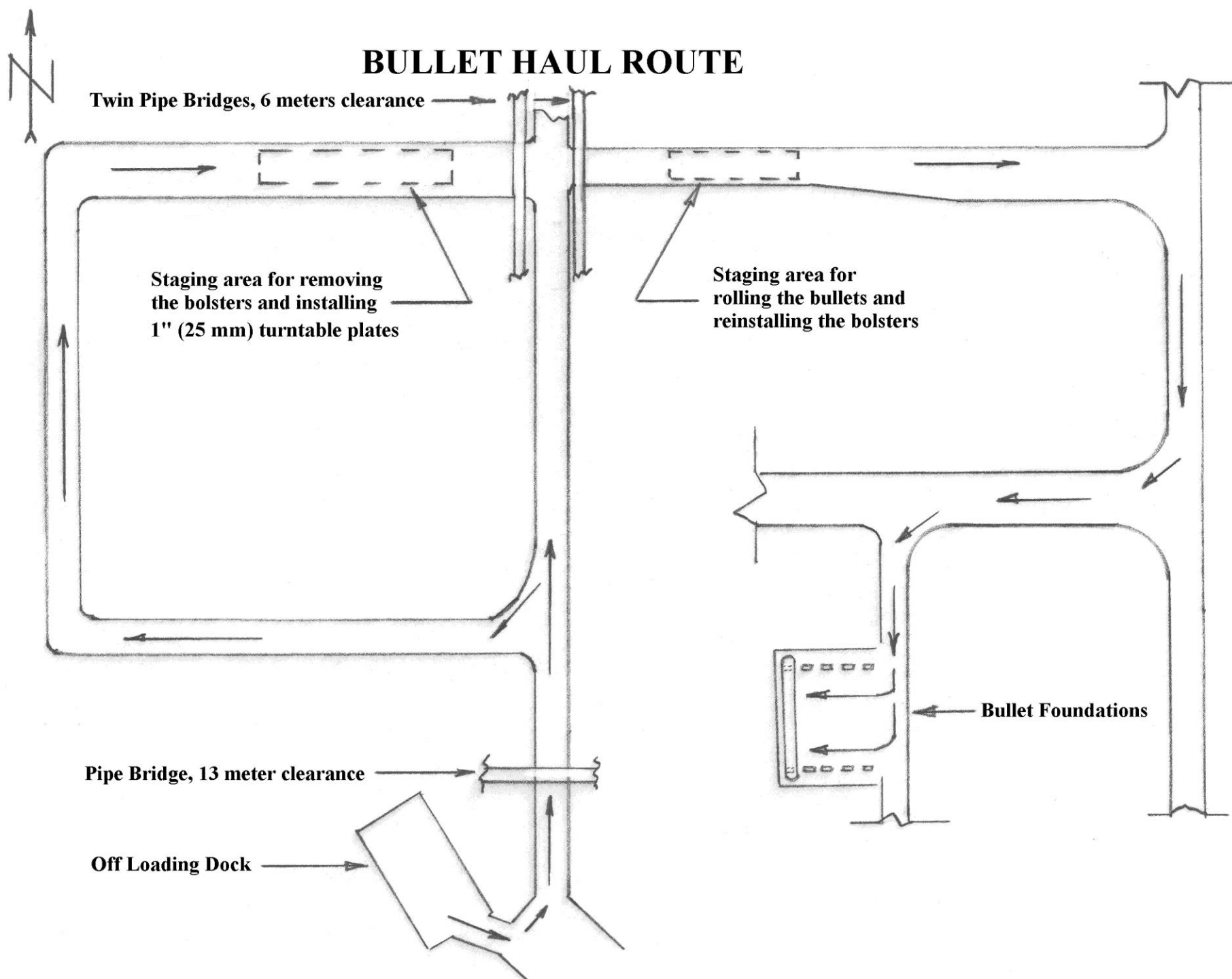
**Offloading,  
Transportation,  
And Setting**

**Dimensions:**

**5m x 80m x 390 Te**

**(17' x 263' x 429 tons)**

# BULLET HAUL ROUTE



# Offloading first Bullet from a barge

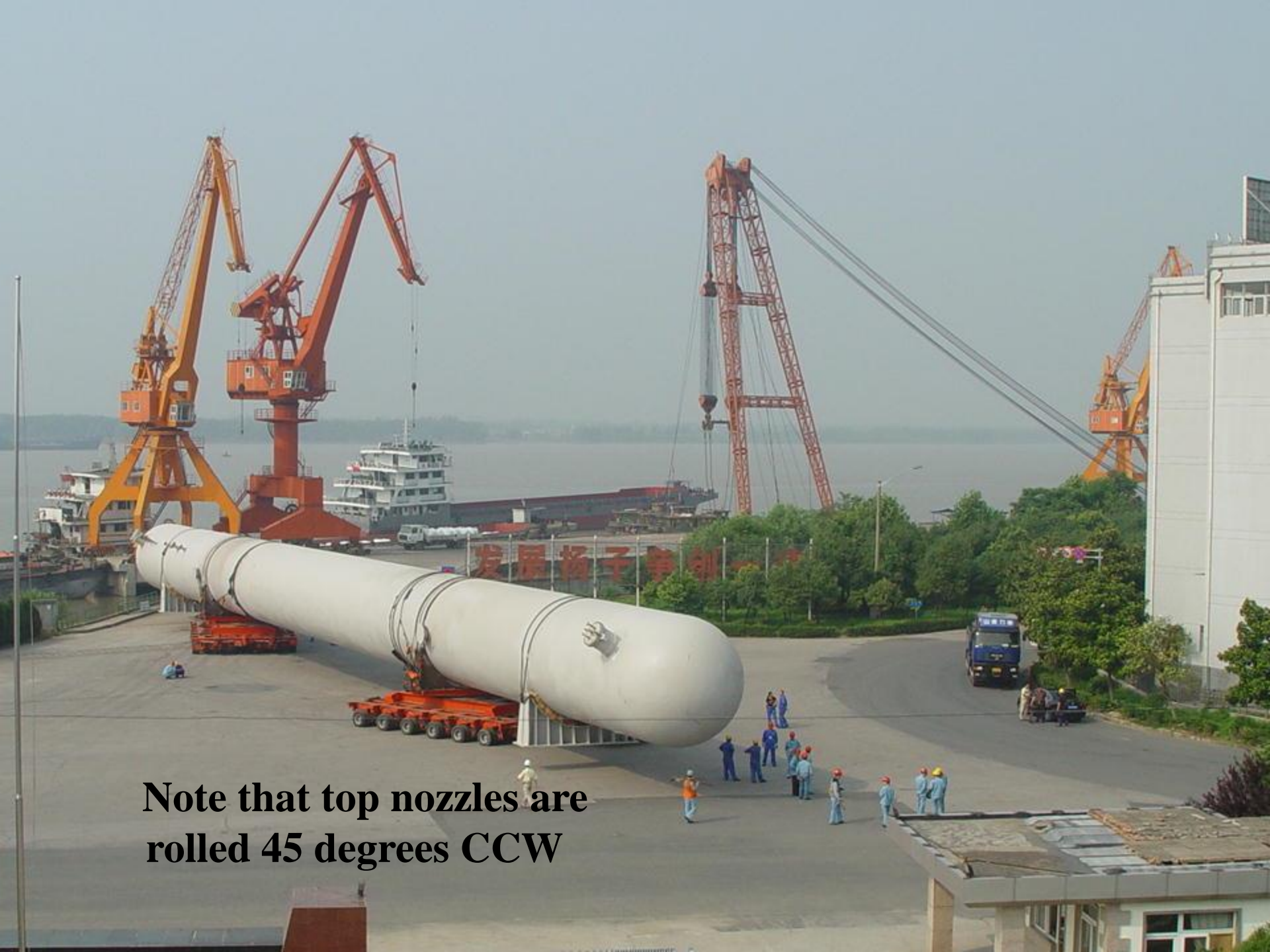




**600 Te  
Luffing  
Crane**

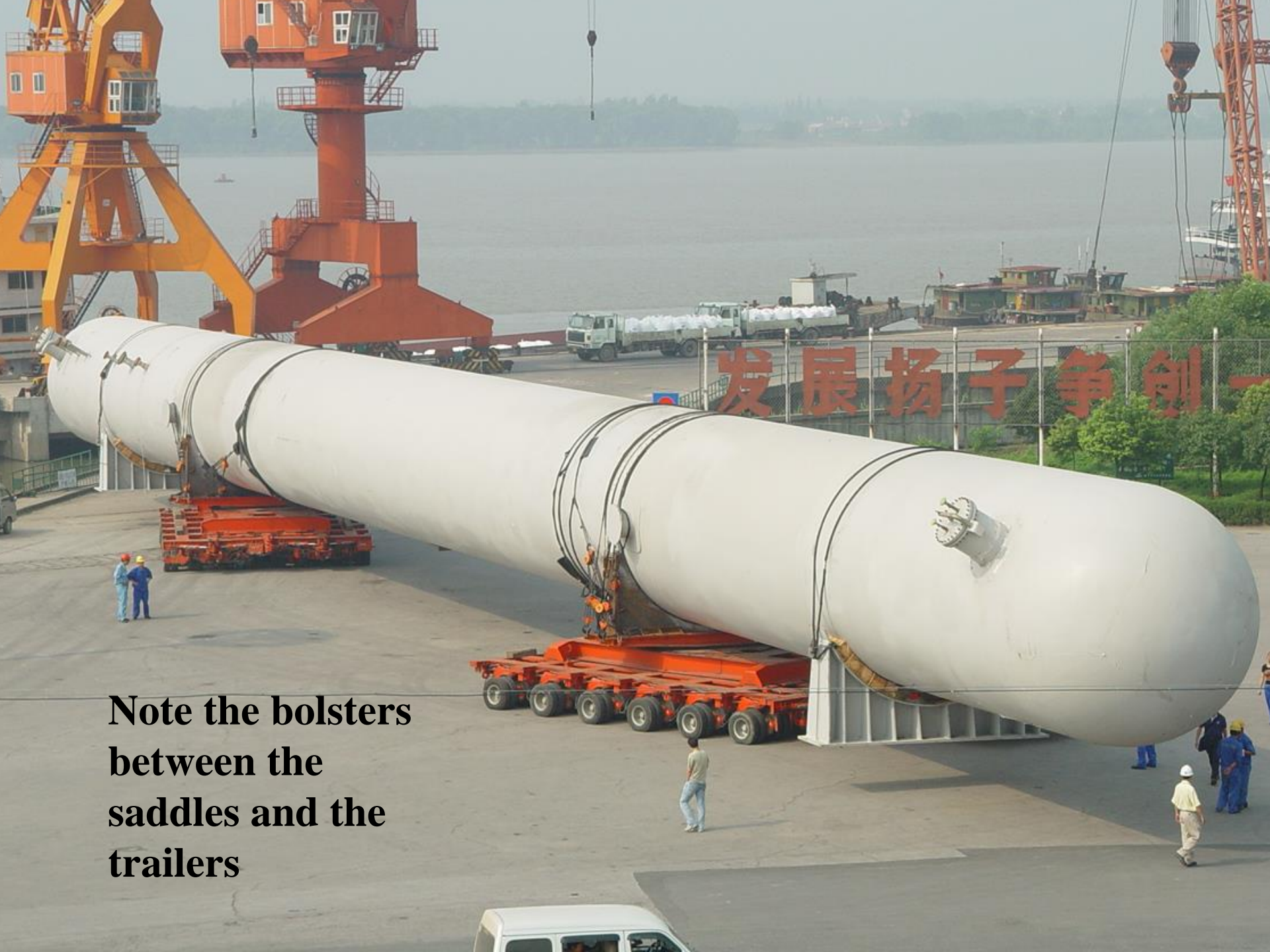
**600 Te  
Barge  
Crane**





**Note that top nozzles are  
rolled 45 degrees CCW**





**Note the bolsters  
between the  
saddles and the  
trailers**

# **Pipe Bridge**

## **13 m Clearance**



**The haul road was lowered 5' (1.5 m)  
under the pipe bridge for clearance**

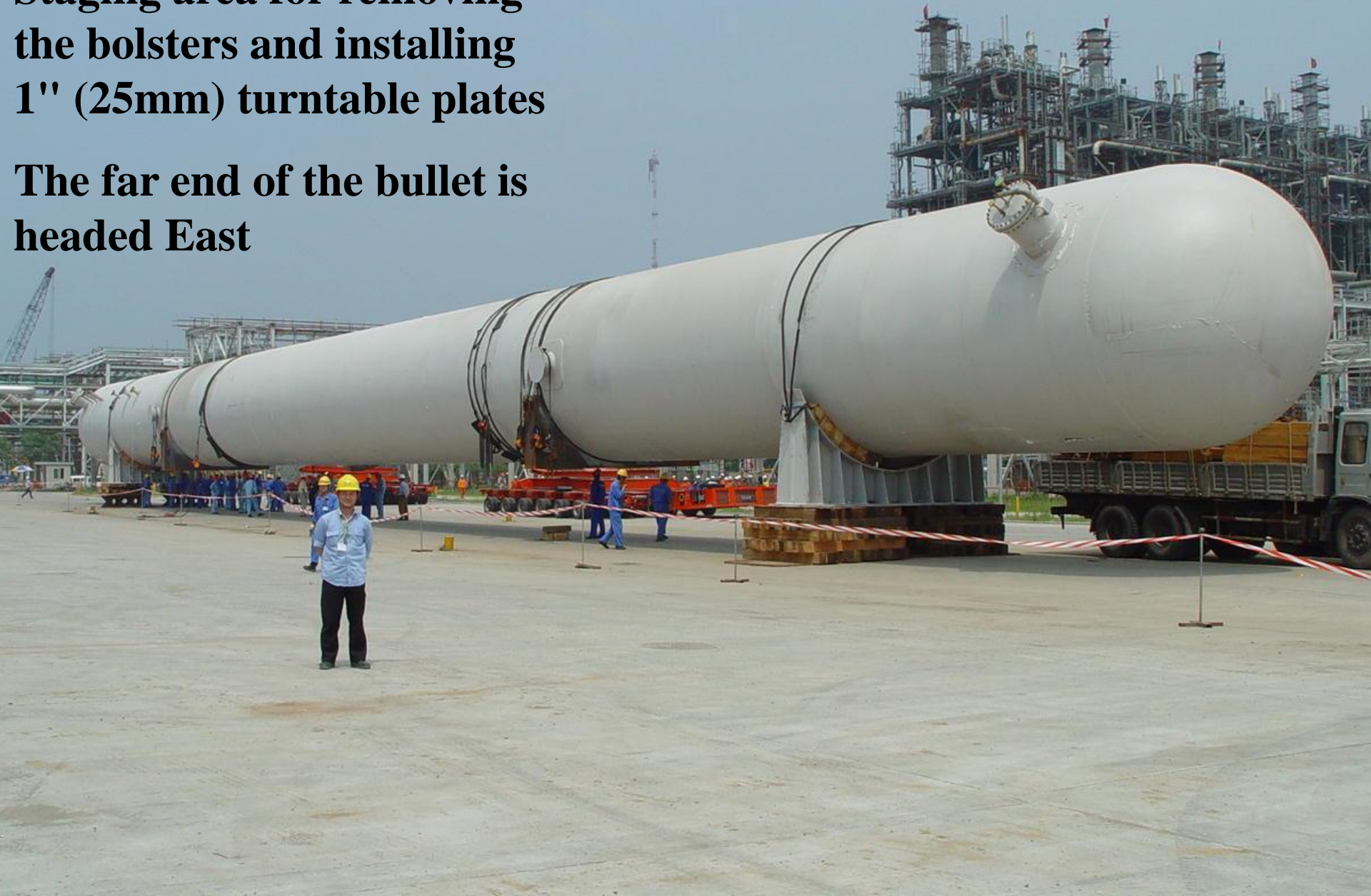


**Typical Tie down  
arrangement**



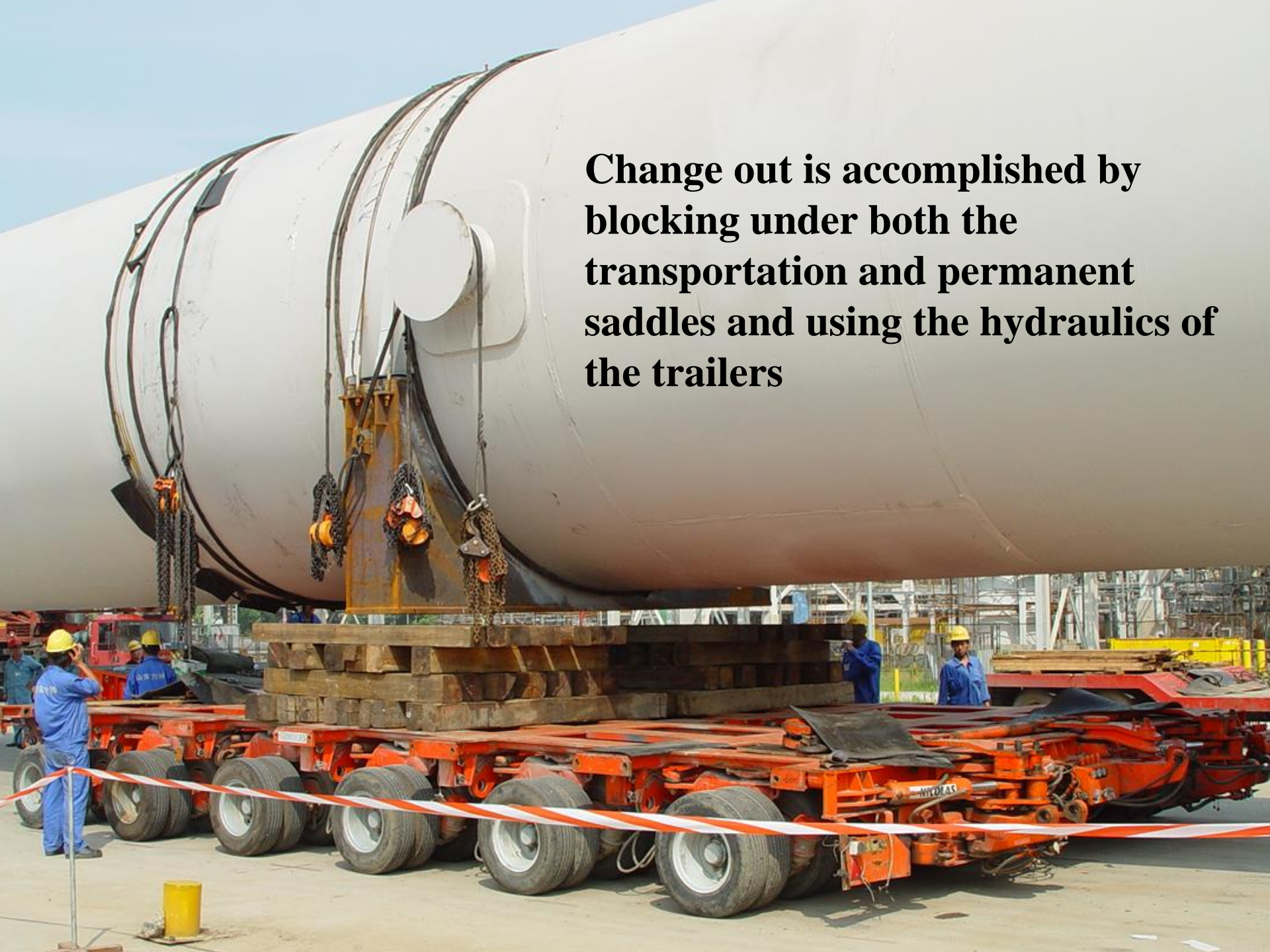
**Staging area for removing  
the bolsters and installing  
1" (25mm) turntable plates**

**The far end of the bullet is  
headed East**



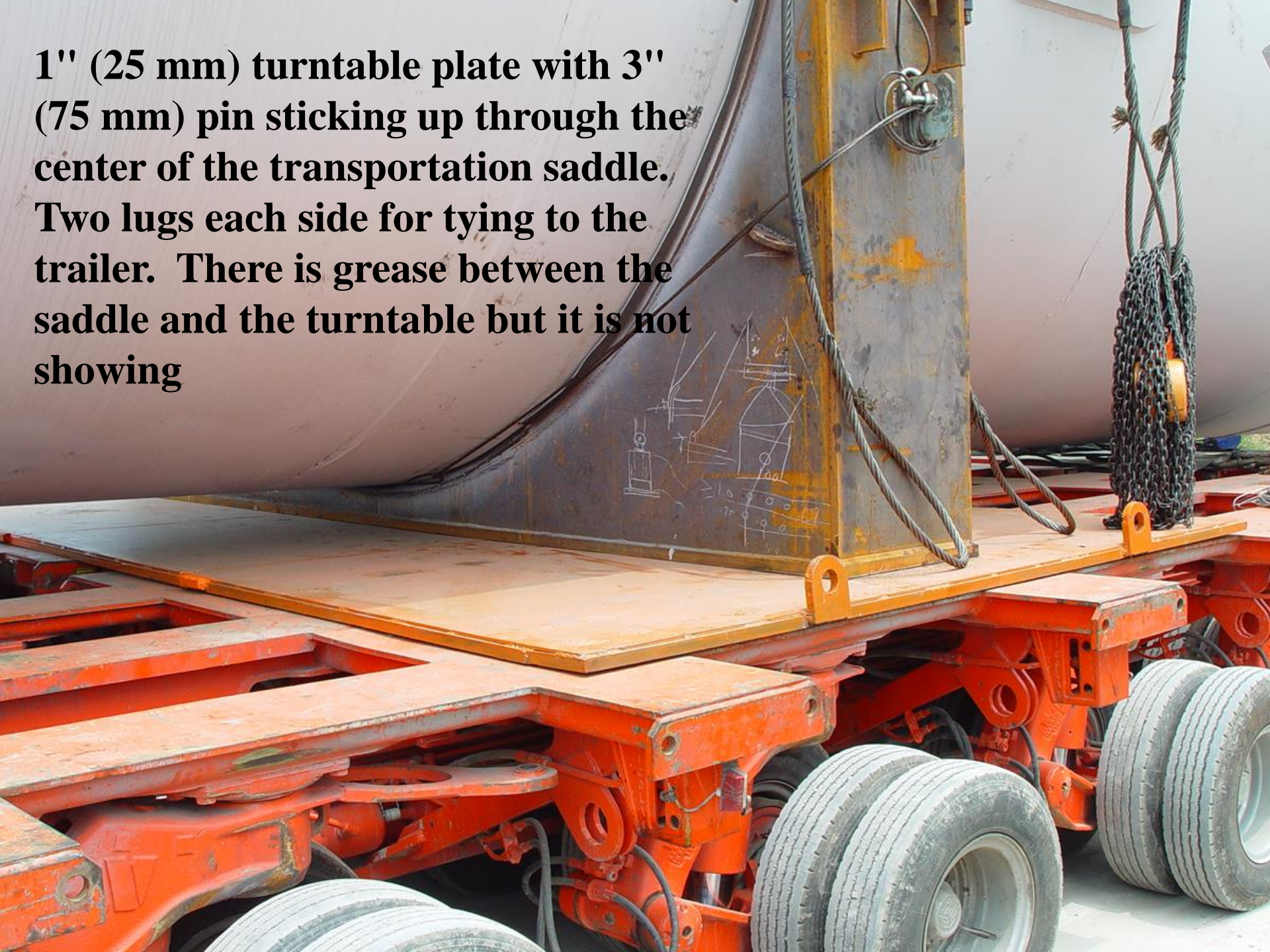


**Change out is accomplished by blocking under both the transportation and permanent saddles and using the hydraulics of the trailers**





**1" (25 mm) turntable plate with 3" (75 mm) pin sticking up through the center of the transportation saddle. Two lugs each side for tying to the trailer. There is grease between the saddle and the turntable but it is not showing**





**Change out complete. The Bullet is now ready to go under the twin pipe bridges dead ahead. Each pipe bridge has six meters clearance above road**

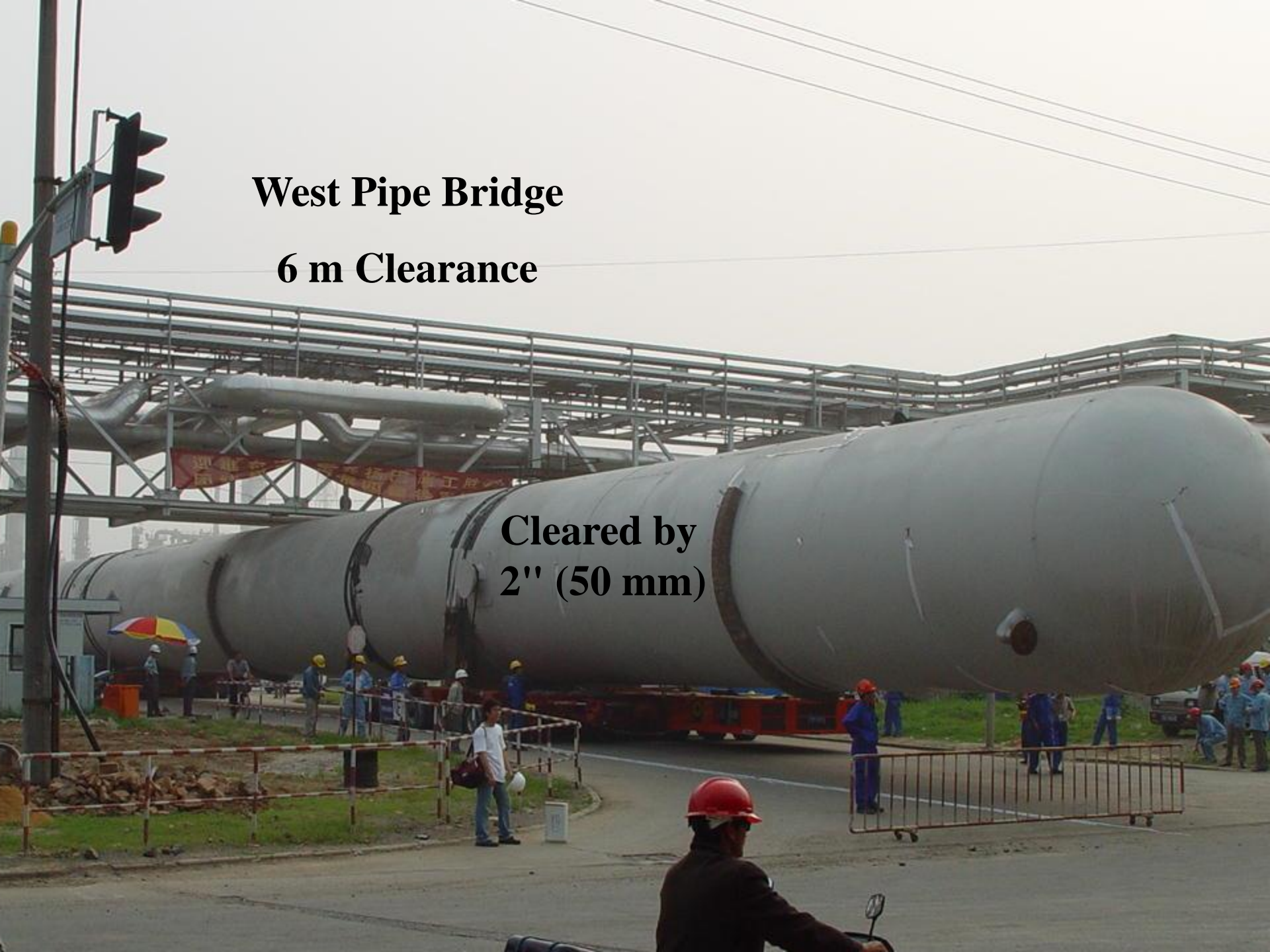


**It is a straight shot East from this point, under the twin pipe bridges and on to the area where the Bullet will be rolled 45 degrees and the bolsters reinstalled**

# **West Pipe Bridge**

**6 m Clearance**

**Cleared by  
2" (50 mm)**

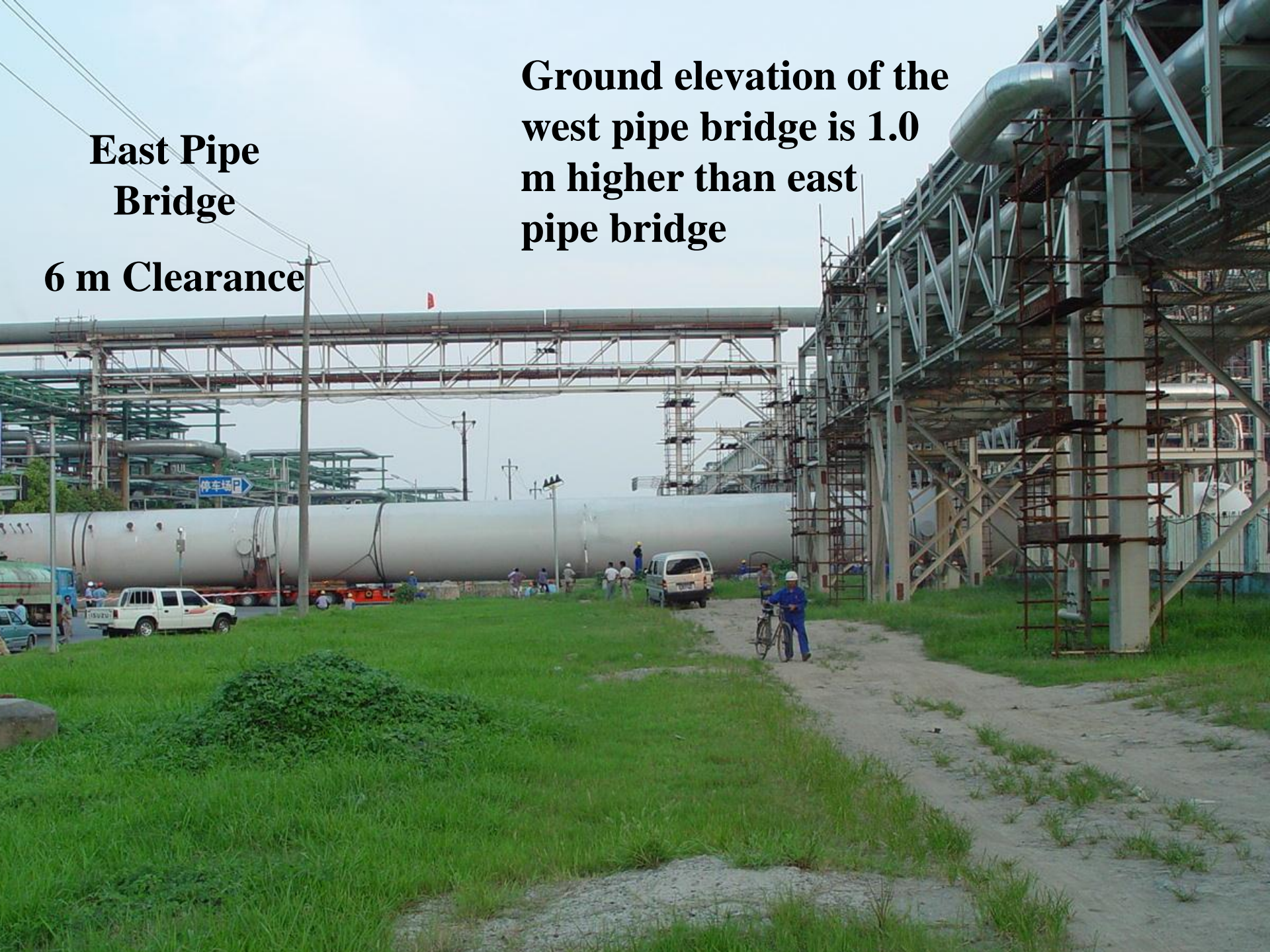





**East Pipe  
Bridge**

**6 m Clearance**

**Ground elevation of the  
west pipe bridge is 1.0  
m higher than east  
pipe bridge**





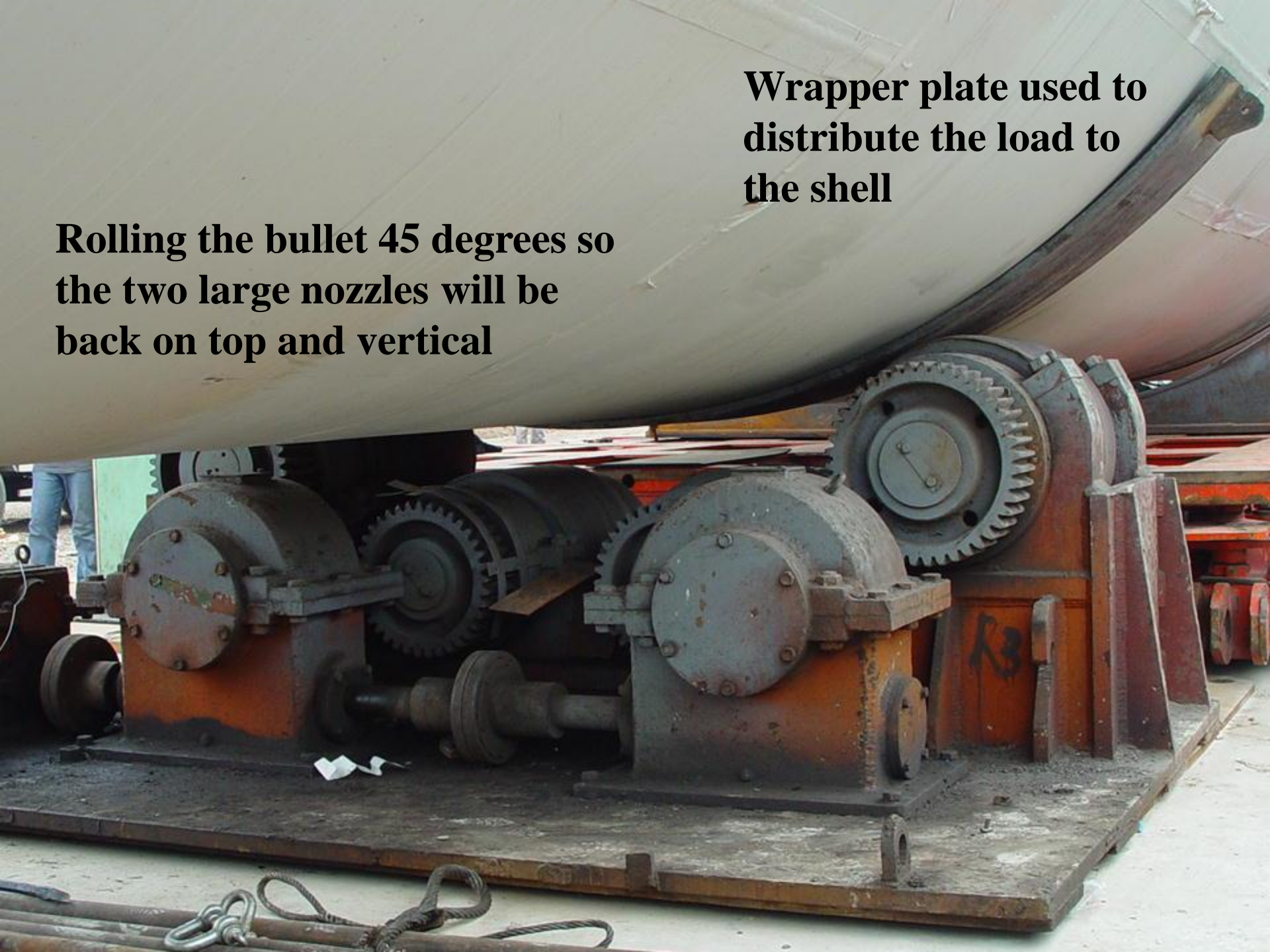
A large, white, cylindrical industrial pipe is being transported on a flatbed trailer under a green steel truss bridge. The pipe is oriented horizontally and is the central focus of the image. Several workers in blue uniforms and yellow hard hats are visible around the pipe, some standing and others crouching, likely supervising the movement. The ground is dirt and gravel, with some wooden planks laid out for the trailer. In the foreground, a person in a patterned shirt and dark pants is walking towards the camera. The bridge structure is made of green-painted steel beams and girders, with various pipes and conduits running along its length. The scene is outdoors, with some trees visible in the background.

**Cleared east  
pipe bridge  
by 2" (50  
mm)**



**Wrapper plate used to  
distribute the load to  
the shell**

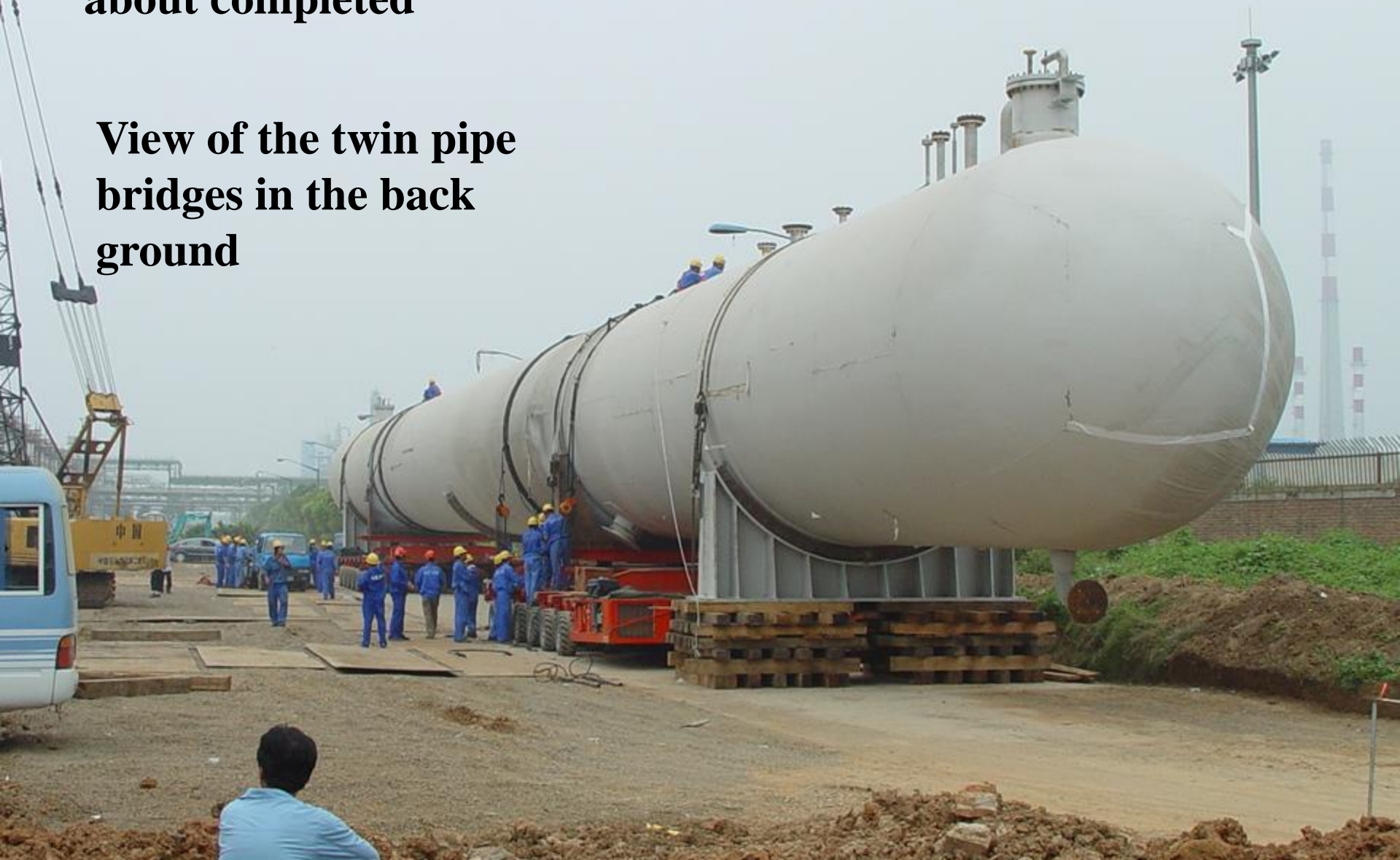
**Rolling the bullet 45 degrees so  
the two large nozzles will be  
back on top and vertical**





**Rolling and bolster installation just about completed**

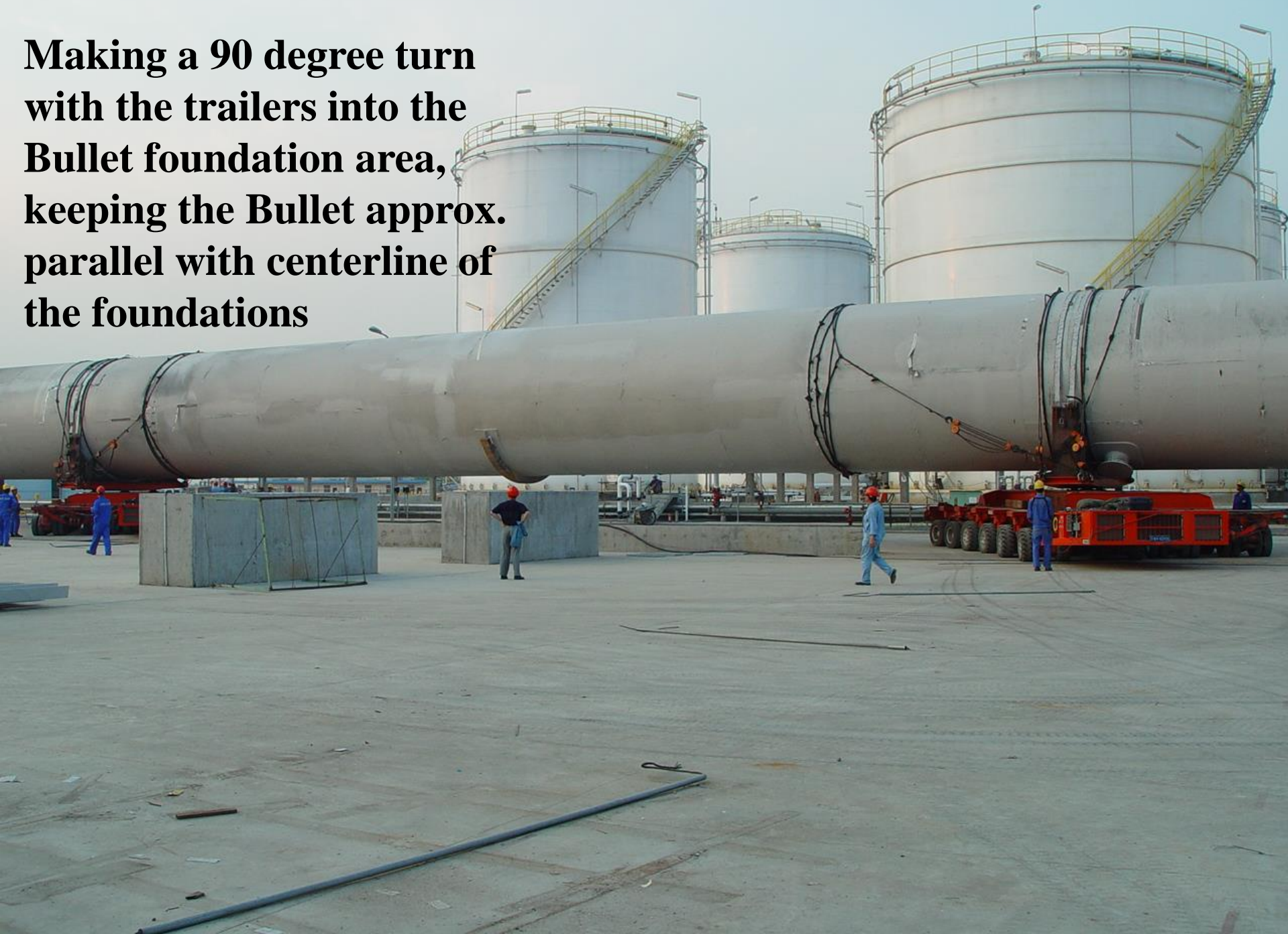
**View of the twin pipe bridges in the back ground**







**Making a 90 degree turn  
with the trailers into the  
Bullet foundation area,  
keeping the Bullet approx.  
parallel with centerline of  
the foundations**





**Trailers approx. perpendicular to the Bullet. The Bullet is approx. parallel to the centerline of the foundations**



**Adding cribbing between the transportation saddles and the bolsters so the permanent saddles will clear the foundations during setting**







**The 24" (610 mm) of usable trailer stroke was used to set the Bullets, so cranes were not required**





**Second Bullet set on a rainy day**

**Two down, three to go**



**FINÉ**

