

# Commercial Vehicle Services Training



*Presented by*

*Commercial Vehicle Services*

*WSDOT (360) 704-6340*

# Objectives of Class

- Understanding the purpose of permitting loads and issuing the different types of permits.
- Understanding basic vehicle configurations
- Knowing the legal dimensions of vehicles and loads that require a permit.
- Accurately calculate legal and permitted weights of vehicles.
- Correctly write a motor vehicle permit using an automated permit system.

# Definitions



**“Truck”** Single motor vehicle designed to carry freight.



**“Tractor”** Single motor vehicle designed to pull semi-trailer. (Fifth Wheel)

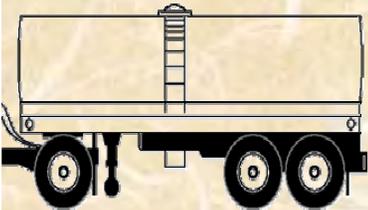


# Definitions (cont'd)

RCW 46.04 Definitions



**“Semi-trailer”** designed to carry load and pulled by tractor. (shares the weight with the tractor.)



**“Trailer”** designed to carry load and pulled by pintle hitch. Towing unit does not share weight.

# Legal Dimensions

Height: 14 feet

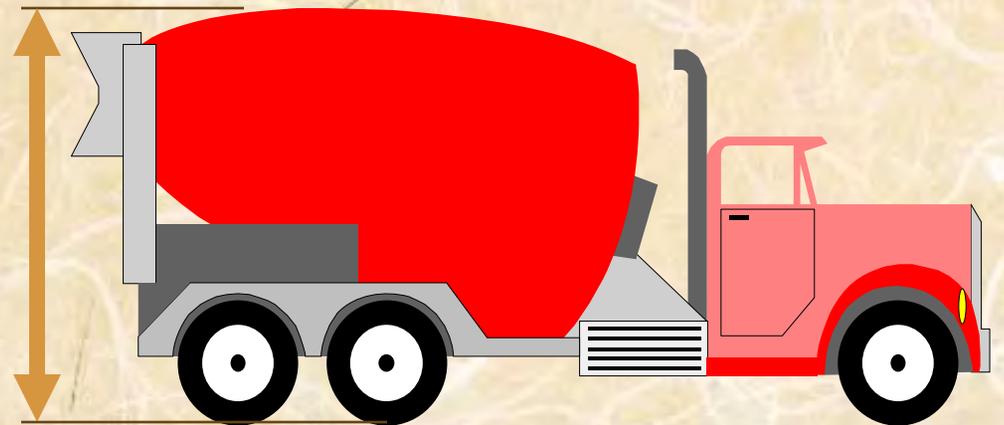
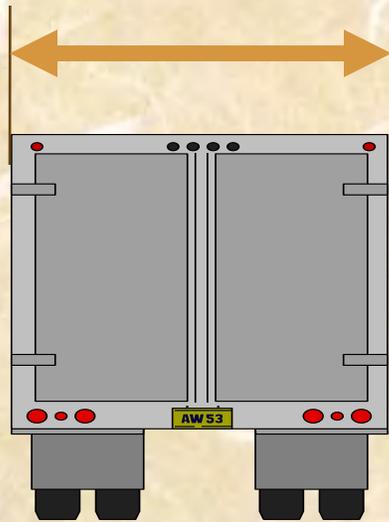
Width: 8 feet 6 inches

Length:

- Single Unit 40 feet
- Single Trailer 53 feet
- Double Trailer 61 feet
- Truck and Trailer 75 feet
- Rear Overhang 15 feet
- Front Overhang 3 feet (from bumper)

# Width & Height Limits

- Legal Width Maximum 8' 6"
- Legal Height Maximum 14'
- Safety appurtenances may extend 3" on each side of vehicle. (ie. door hinges, rub rails).



# Legal Dimensions-Single Unit

## 40 ft legal length



# Legal Dimensions

Single Trailer 53 ft



Permitted to 56 ft.

No overall length maximum

# Legal Dimensions

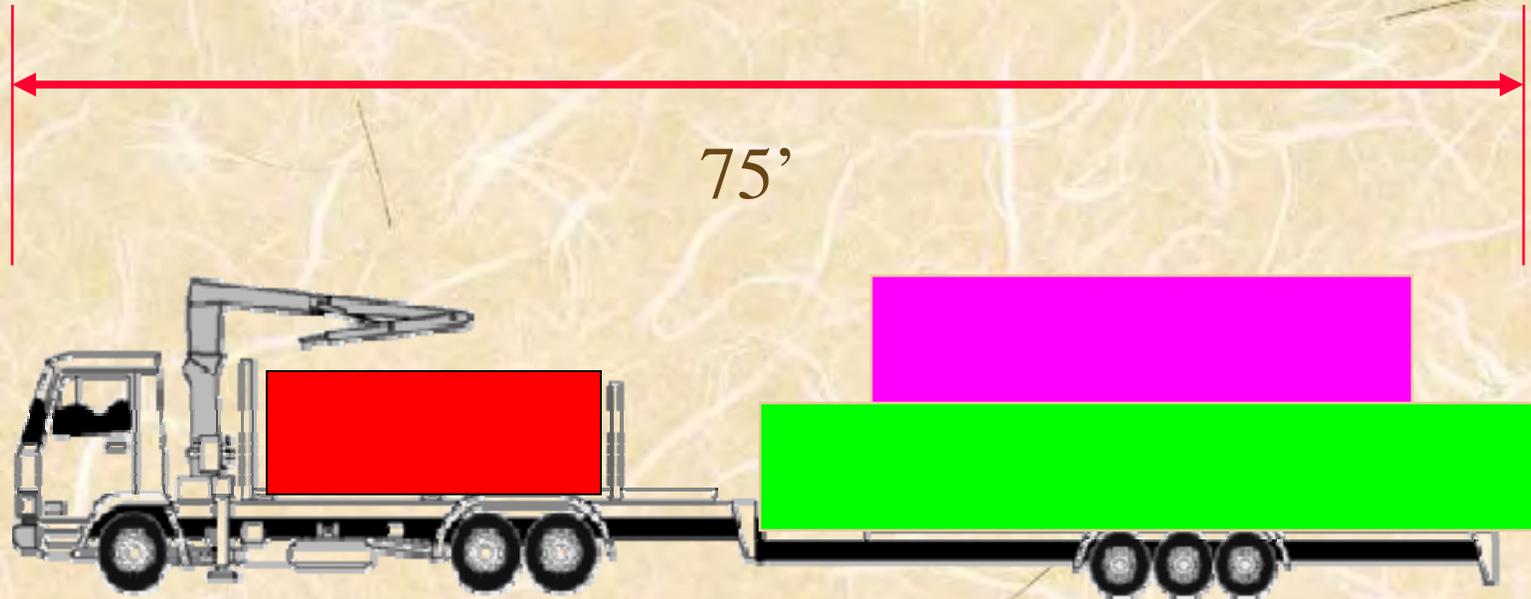
Double Trailers 61ft



Permitted to 68 ft

No overall length maximum

# TRUCK/TRAILER LENGTH WITH LOAD



Permitted up to 85'

# TRUCK/TRAILER LENGTH (EMPTY TRUCK)

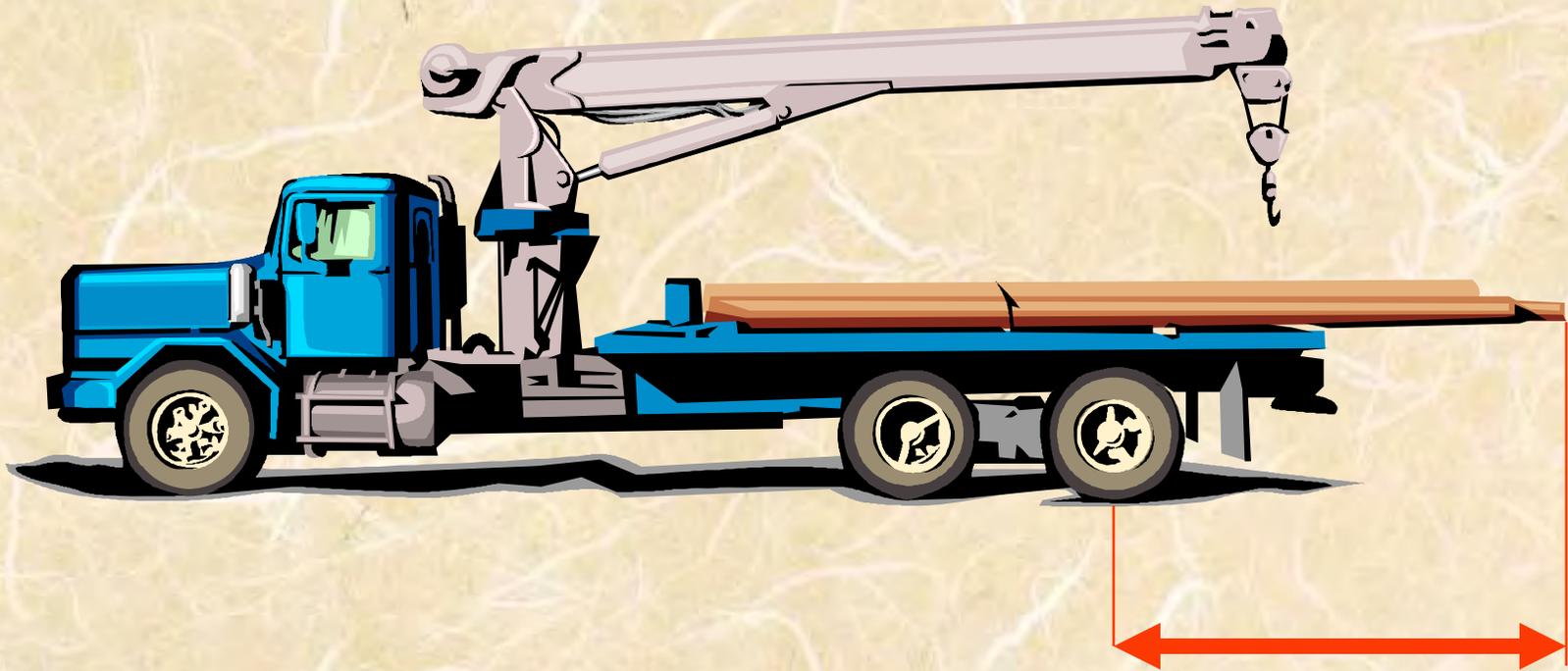
Would now be considered as  
Tractor/Trailer



Permitted up to 125'

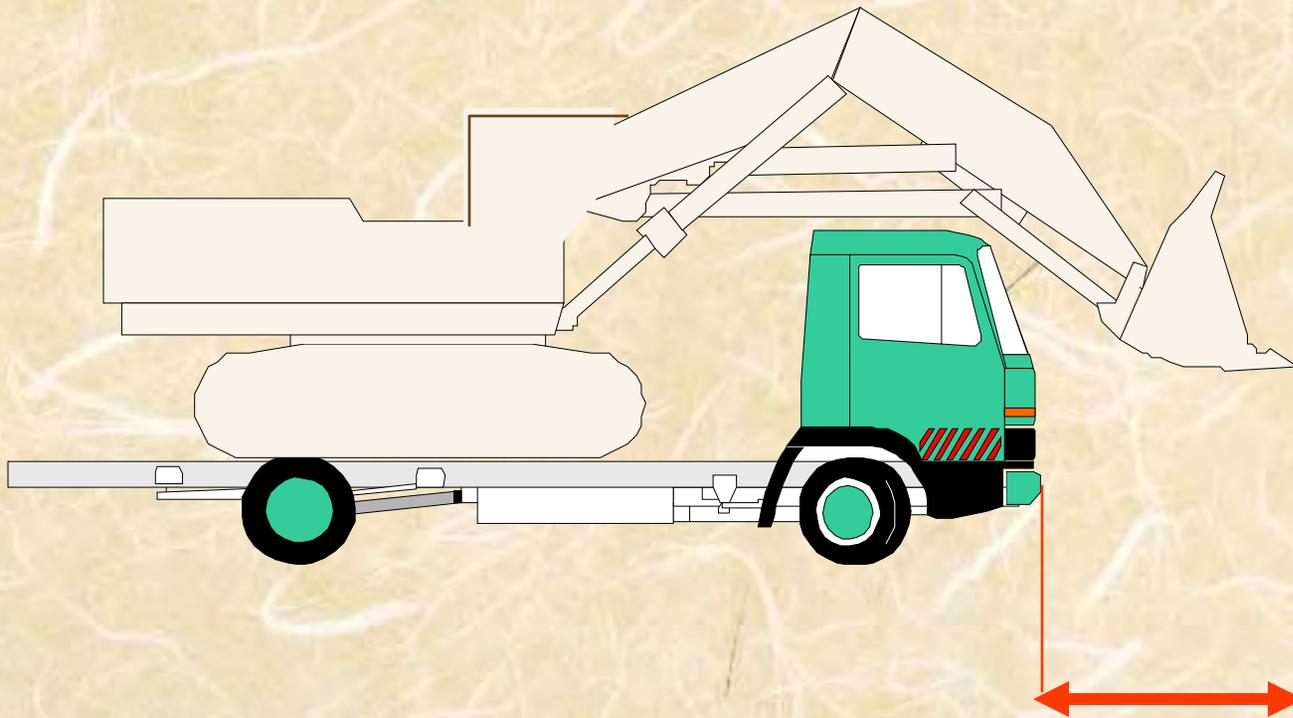
# Legal Overhang-Rear

15 ft measured from center of last axle



# Legal Overhang-Front

Measured 3 ft. from front  
of the manufacture bumper



**Admit it ...**  
**you feel like doing this to at  
least one person everyday!**



# Divisible Loads

Multiple pieces cannot go over legal axle weights or legal dimensions.





# Single Trailer Permits

Haul multiple pieces up to 56 feet  
trailer/load length

Can use a monthly permit for width or,  
a single 3-day oversize permit.

# 61 ft Non-Divisible Load



- Longest item on load must be single continuous piece.
- Rebar, laminated beams most frequent loads
- ROH not to exceed 15 feet

# Special Vehicle Permits

## Trusses: Truck/Semi Trailer Combinations

**Legal @ 75 feet, Can permit to 85 feet with overhangs entirely to the rear of the trailer, or to the front of the truck.**

**Empty truck & trailer can use the 85 foot permit.**

## Tractor/Semi Trailer Combinations

**If truck is empty it would be considered a tractor and they could get a tractor/semi-trailer monthly permit up to 125 feet, trailer/load length, for a monthly.**

# Monthly/Annual Non-Divisible Loads

**14' wide; 15' high; 125' Trailer/Load length  
Tractor/Trailer Combination**

Can haul 61' non-divisible load with  
this permit & be exempt from certain  
over length requirements.

WAC 468-38-075 (e)

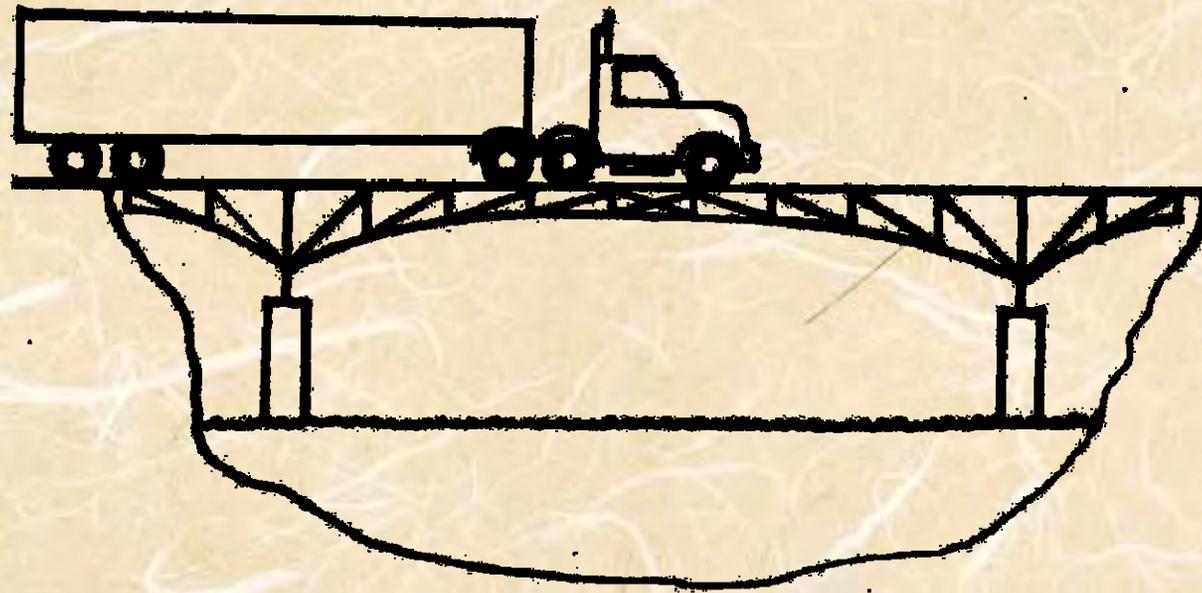
# Getting Familiar with the Web Page

[www.wsdot.wa.gov/commercialvehicle](http://www.wsdot.wa.gov/commercialvehicle)

# Break Time



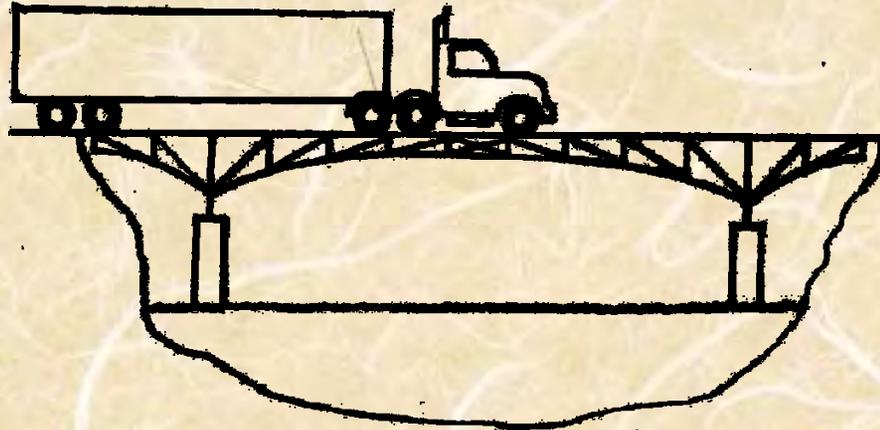
# FEDERAL BRIDGE LAW & VEHICLE DESIGN



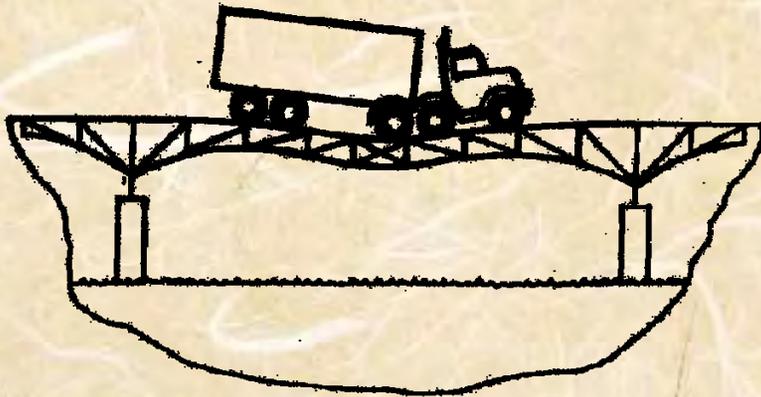


6,000,000 lbs

# IMPACT ON BRIDGES cont.



Bridge Formula axle  
spread



Insufficient axle  
spread

# WASHINGTON LAW

## LEGAL WEIGHT OPERATIONS

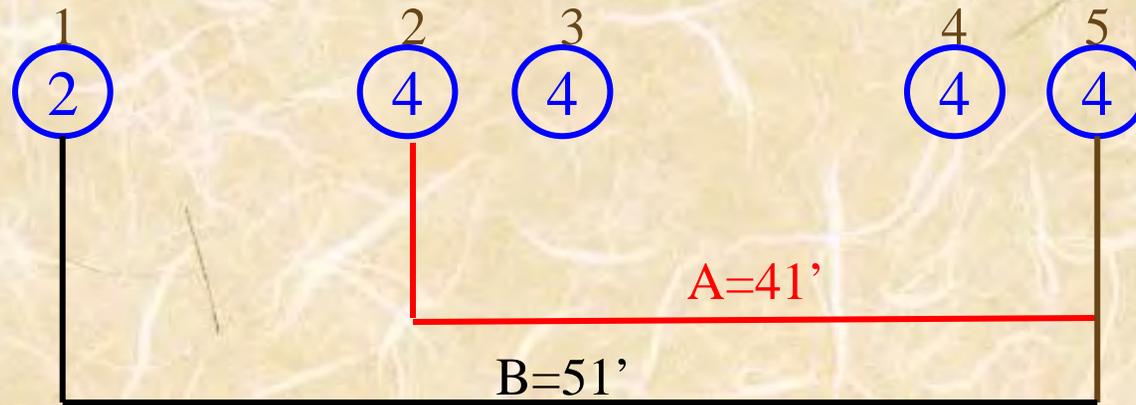
- Adopts Federal bridge Formula
  - Extends gross weight to 105,500 by grandfather rights
  - 105,500 lbs max
  - 20,000 lb. Single axle
  - 34,000 lb. Tandem axle
- Adds tire load limits
  - 600 lbs. Per inch width of tire on steer axle
  - 500 lbs. Per inch width of tire other axles
  - Some exceptions up to the 600 lb. limit

# Calculating Axle Weights

## Legal Weight

- **Weight tables-Federal rules state “rounding”  
6” goes up.**
- **Single Axle - 20,000 lbs legal max**
- **Tandem Axles - 34,000 lbs. legal max**
- **Steer Axle Tires 600 lbs per inch others 500 lbs**

# BRIDGE FORMULA : AS A TOOL



## Per Axle:

Axle 1	13,200
Axle 2-3	34,000
Axle 4-5	34,000
<b>Total</b>	<b><u>81,200</u></b>

## Per Axle GROUP B (OVERALL):

Axle 1-5      80,000

## Per Axle GROUP A:

Axle 1	13,200
Axle 2-5	69,500
<b>Total</b>	<b><u>82,700</u></b>

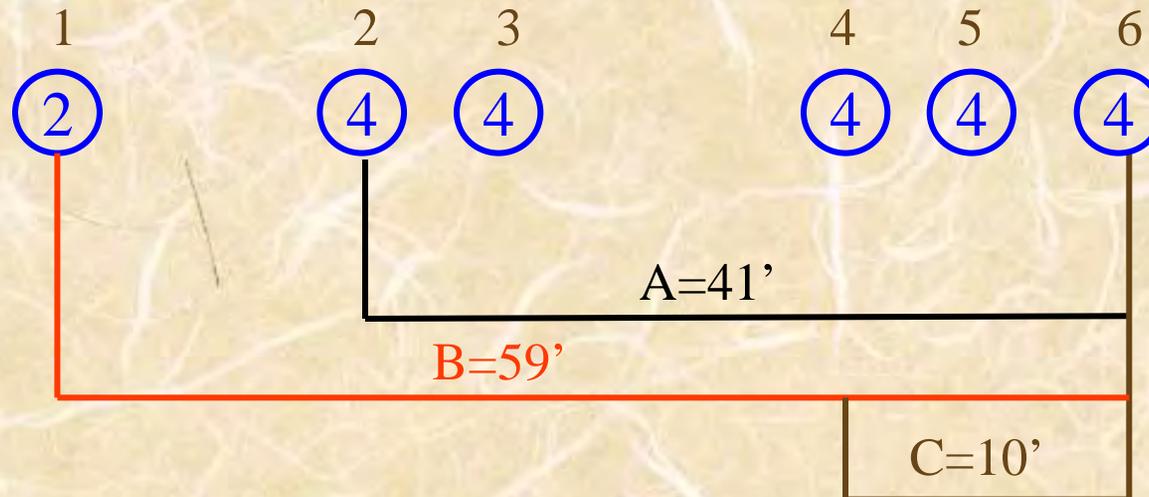
## Per Axle GROUP 3 (OVERALL):

Axle 1-5      80,000

Tire size assumed to be 11:00

GVW is restricted to the lesser of the combined axle group totals

# BRIDGE FORMULA : AS A TOOL



## Per Axle:

Axle 1	14,400
Axle 2-3	34,000
Axle 4-6	43,500
<b>Total</b>	<b><u>91,900</u></b>

## Per Axle Group A:

Axle 1	14,400
Axle 2-6	73,500
<b>Total</b>	<b><u>87,900</u></b>

**Per Axle Group B (overall):**  
**Axle 1-6 Total 89,500**

## Per Axle Group C:

Axle 4-6	43,500
<b>Total</b>	<b><u>43,500</u></b>

**Limit by wheelbase from axle 2 to last axle**  
**Total 87,900**

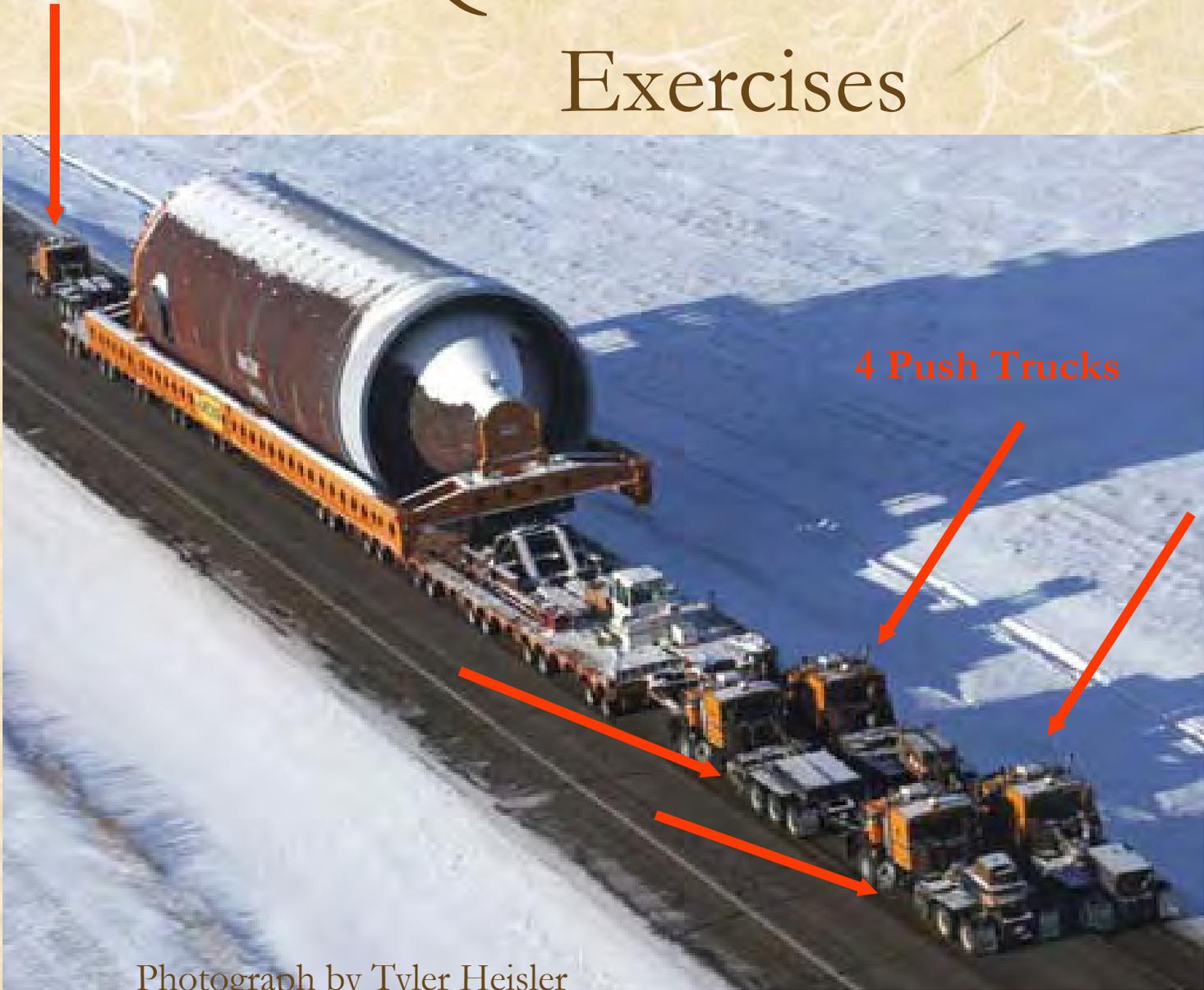
Steer axle tire assumed to be 12:00

GVW is restricted to the lesser of the combined axle group totals

# QUESTIONS ?

## Exercises

1 Leading Trucks



4 Push Trucks

Photograph by Tyler Heisler

# Temporary Additional Tonnage

- **Must have valid licensed tonnage to 40,000 lbs for a single unit or 80,000 lbs for a combination.**
- **Fee rate: \$2.80 for each 2000 lbs or fraction thereof.**
- **Minimum permit is 5 days and \$14.00**
- **Legal weights only**

# Trip Permits

## Department of Licensing

- Legal license and tonnage up to 40,000 lbs. for a single unit - Combination units 80,000 lbs.
- 2 axle over 26, 000 GVW
- 3 axle regardless of weight
- For legal weights only
- Maximum of 3 in a 30 day period
- Cost is \$25.00
- May be used to increase valid tonnage



# Fuel Permits

## Department of Licensing

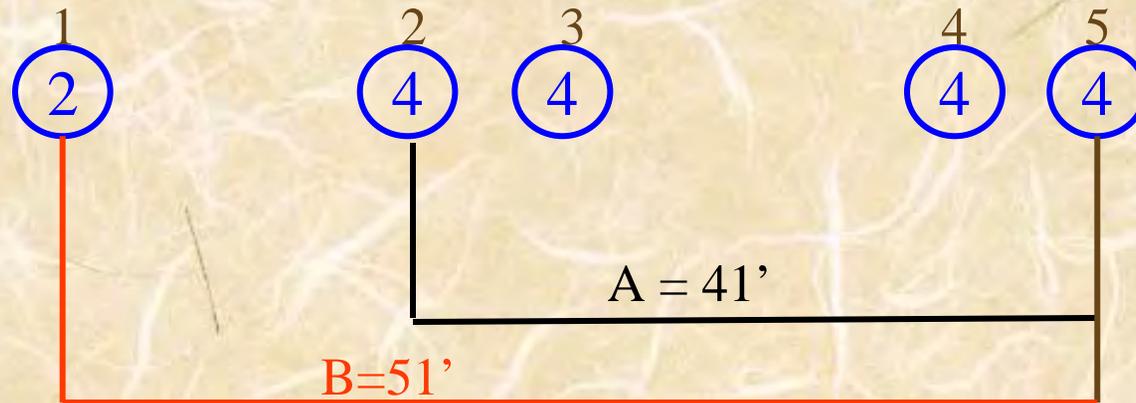
- In lieu of a special fuel license--IFTA
- Upon entering from out of state
- Required for vehicles with a gross weight of more than 26,000 lbs
- 3 axles or more regardless of weight
- For diesel, propane (RCW-82-38-075)  
(090) (100)
- Cost is \$30.00
- Valid for 3 days-need, one every 72-hrs.
- Fuel Tax Division (360)-664-1868

# Calculating Permitted Weights

## Over Weight

- **Overweight Formula-No rounding-Allow no more than is needed to move the load**
- **Single Axle - 22,000 lbs**
- **Tandem Axle - 43,000 lbs**
- **Tire weight all axles - 600 lbs inch tire width**

# BRIDGE FORMULA : AS A TOOL



## Per Axle:

Axle 1	13,200
Axle 2-3	43,000
Axle 4-5	43,000
<b>Total</b>	<b><u>99,200</u></b>

Permitted weight limited by tire size and axle grouping.

99,200

## Per Axle GROUP A:

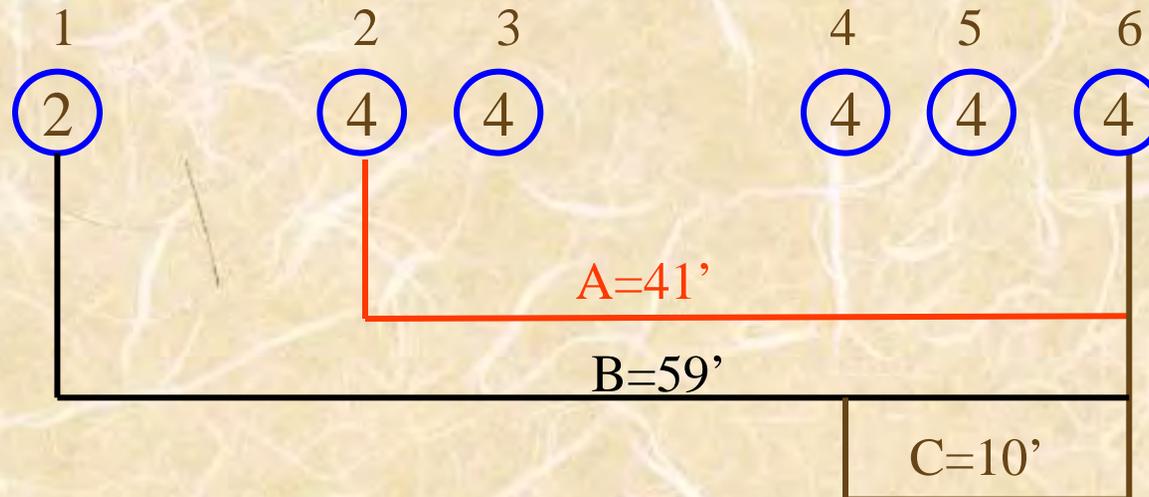
Axle 1	13,200
Axle 2-5	129,600
<b>Total</b>	<b><u>142,800</u></b>

**Per Axle GROUP B (OVERALL):**  
**Axle 1-5**      **145,600lbs**

Tire size assumed to be 11:00

GVW is restricted to the lesser of the combined axle group totals

# BRIDGE FORMULA : AS A TOOL



## Per Axle:

Axle 1	14,400
Axle 2-3	43,000
Axle 4-6	65,000
<b>Total</b>	<b><u>122,400</u></b>

## Per Axle Group A:

Axle 1	14,400
Axle 2-6	129,600
<b>Total</b>	<b><u>144,000</u></b>

## Per Axle Group B (overall):

Axle 1-6 Total	<b><u>158,000</u></b>
----------------	-----------------------

## Per Axle Group C:

Axle 4-6	65,000
<b>Total</b>	<b><u>65,000</u></b>

Permitted weight limited by tire size and axle grouping.

**122,400**

Steer axle tire assumed to be 12:00

GVW is restricted to the lesser of the combined axle group totals

# Exercise Permitted Weights



Launch Pad



3 Miles = 8hrs

**Look up:** This option allows user to view an axle spacing report. User must have a report number

**Calculate:** Once the user has entered in the axle spacing; tires per axles; tires size information eSNOOPI will figure out the legal and permitted weights.

**Clear:** This option will erase information in all the fields

**Save:** This option allows user to generate and save a new axle spacing report number.

**Print:** This option allows a user to print a report (PDF file) and send it to the customer.

**Return:** This option will take the user back into the eSNOOPI program

### Vehicle Size & Weight Permits

## Axle Spacing Report

Axle Spacing Report No.

1 2 3 4 5 6 7 8  
○-----○-----○-----○-----○-----○-----○-----○  
(8 Axles - Length: 57.98 ft. - Axle Groups: 2-3, 4-5, 7-8)

Axle No.	1	2	3	4	5	6	7	8	9	10
Axle Spacing (ft.)	9.16	5.41	7.25	5.41	14.75	11.00	5.00			
Tires per Axle	2	2	2	2	2	4	4	4		
Tires Size (in. or mm)	20.50	20.50	20.50	20.50	20.50	11.00	11.00	11.00		
Steer Axle		<input type="checkbox"/>								
Drop Axle		<input type="checkbox"/>								
Permitted Weight (* see Remarks)	22,000*	22,000*	22,000*	22,000*	22,000*	22,000*	22,000*	22,000*		

Total Permitted  Legal Weight  [More Axles](#) [Less Axles](#)

#### Axle Restrictions and Remarks

Axles separated by less than 7 ft. NTE 43,000 lbs.  
Axles 1-5 NTE 103,906 lbs.  
Axles 2-5 NTE 83,754 lbs.  
Axles 2-8 NTE 142,112 lbs.

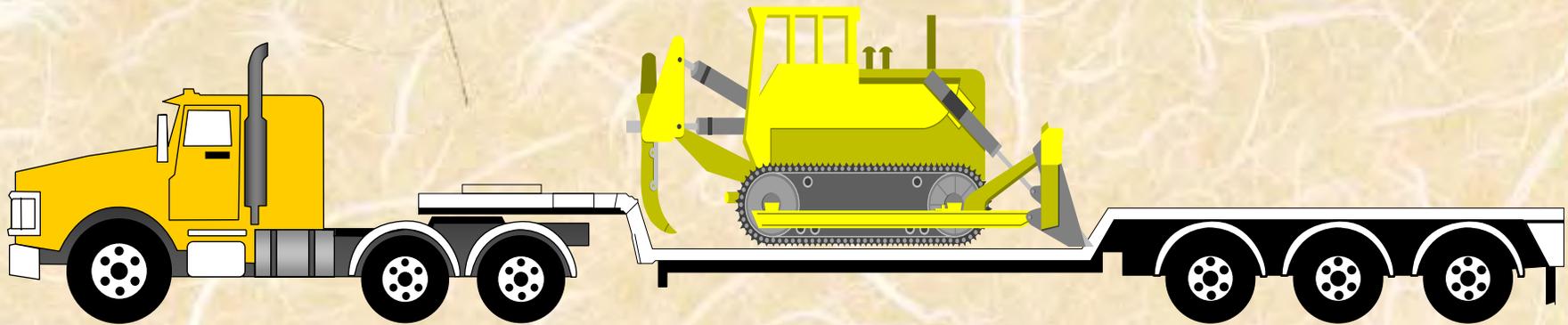
# Mile Post Map



- the number in parenthesis is the Hwy
- the number next to that is the milepost

# Non-divisible Load

Single piece, object or equipment



Exceptions: (overweight)

- Dozers may have blade detached sitting on trailer. No multiple blades.
- Loaders may have bucket detached as long as it is a pertinent piece for that equipment. No multiple buckets.
- WAC 468-38-050 (3) Can dismantle the dozer.

# Escort Drivers

WAC 468-38-100



- Must be certified in the State of Washington  
Must have valid card on person while performing escort vehicle duties.
- Certification reciprocity with the States of Utah, North Carolina, Colorado and Florida only.

## Escort Car Requirements

WAC 468-38-100

(When escort cars are required)

# Why Having an Escort Might Help??



# Escort Requirements

## Width

Over 11 ft. wide \* 2 pilots on 2-lane highways

Over 14 ft. wide \* 1 rear pilot on all highways

## Height

Over 14'6" \* 1 front pilot on all highways with a height pole

The pole to be set higher than the load at all times.

## Length

Over 105 ft. trailer/load length-One rear pilot on 2-lane highway

Over 125 ft. One rear pilot on all highways

## Overhangs

Over 20 ft FOH \* One front pilot on all highway

ROH exceeding 20' of a single unit vehicle, requires 1 rear on 2  
lane hwys

If you exceed 1/3 of your actual overall length single unit or

Over 1/3 of trailer/load length-One rear pilot on all highways.

(single trip only)



I-82 Bridge

Trailer/Load length  
minus power unit

**Overall length**



**Load length**

**Overall length minus power unit**

# House Moves

Permits are written in the DOT Region office where the move is taking place.

- 5 mile limit on State Hwys.
- Usually done on house dollies
- Maintenance Superintendent is to put restrictions on the permits.
- All DOT agents have access to “house move” on the pull down menu.



# Poles/Log Trucks

If a pole is hauled on a log truck,  
the combination becomes a  
tractor/semi trailer



# Wide Loads on Double Trailers

WAC 468-38-070

- Must be legal length (61 feet)
- 10 foot width limit
- May have wide load on both trailers with widest load on first trailer
- Must be legal height

# Front Haul/Back Haul

- Run on two permit
    - monthly/single trip: oversize trailer
    - Oversize: oversize load that is to be picked up
  - The single trip oversize permit will reference the front haul on it.
- “Approved front haul, legal boats on oversize trailer”



**6,000,001bs Some where in the Middle East**

# Routine Night-time Travel

WAC: 468-38-075 (3)

Limited to:

Width            12 ft.

Height           14 ft. 6 in.

Length           **105 ft.**

Extremities of load must have lights amber to front, red to rear.

**\*\*If the move is within your region only; region can approve\*\***

No notation on permit is required within above restrictions

---

**Beyond these limits, a letter must be submitted to CVS for special approval. If approval is granted, approval must be stated on the permit.**

# Lighting Requirements

Federal Regulations CFR 393.11

Amber to the front

Red to the rear

All four corners of the extremities must be flagged during daylight & lit at night.



# Permits Exempt From Restrictions

WAC 468-38-075

Signs

Commuter Hours

Pass Conditions

Night-time Movement

Holiday Restrictions

- Single Trailer
- Double Trailer
- Fixed Load (45 foot limit)
- 61 Foot Non-Divisible (legal overhang)
- Front overhang may not exceed 7 feet beyond the front bumper

# Flat Racks/Crated Loads and Container Loads

Must submit a letter on the shipping companies letterhead stating why the item must be transported in a crate, on a flat rack, or in a container. These loads must be approved by the Commercial Vehicle Services office.



# Super Loads WAC (468-38-405)

Loads that exceed....

- 16ft wide
- 16ft high
- 200,000lbs
- 125ft long (trailer/load length)





Excavator



Aircraft Wing



Transformer



Aircraft Chassis



Culvert



Transformer

# Western Regional Permits

**Arizona, Colorado, Idaho, Montana, New Mexico,  
Nevada, Louisiana, Oklahoma, Oregon, Texas, Utah,  
Washington**

**Utah & Nevada are currently using our E-SNOOPI to  
issue regional permits.**

## **Limitations**

**Height 14 ft    Width 14 ft.    Length 110 ft overall**

## **Weight:**

**600 lbs inch tire width                      21,500 lbs single**

**43,000 lbs tandem    53,000 lbs tridem                      160,000 gross**

# Fixed Load

- Drill rigs, concrete pumps, cranes
- 30 day permit
- 3 axle to 65,000 lbs max
- 4 axle to 86,000 lbs max
- Not to exceed max permittable weight
- Must have axle spacing report # assigned



# Marine Highways



**For Oversize/Overweight Information Call:  
206-390-8543**

# The End



One or two permits??