

Annual Refresher 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.

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)

Definitions



“Truck” Single motor vehicle designed to carry freight.



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

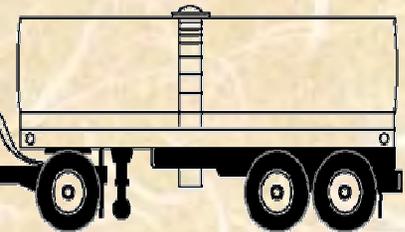


Definitions (cont'd)

RCW 46.04 Definitions



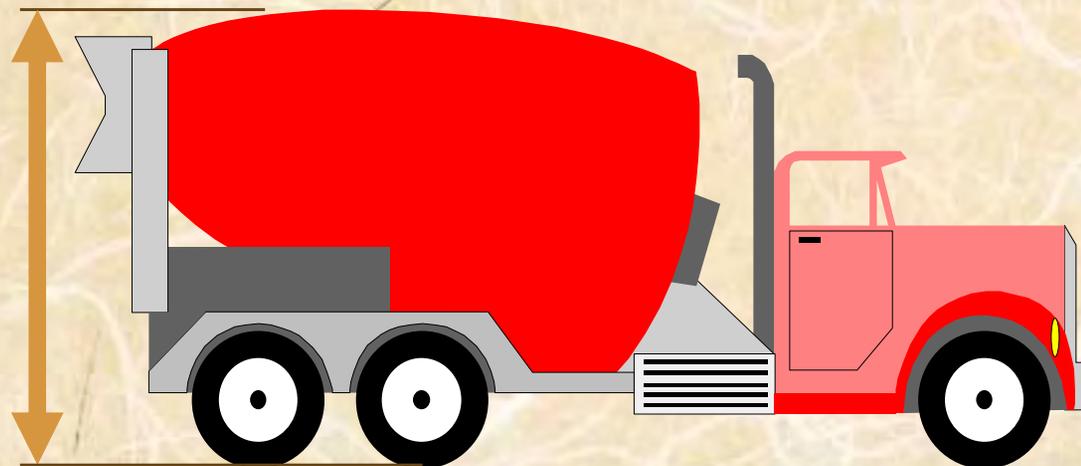
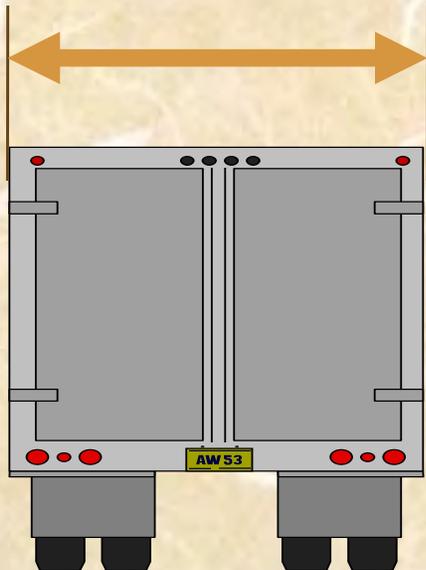
“Semi-trailer” designed to carry load and pulled by tractor. (shares the weight with the tractor.)



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

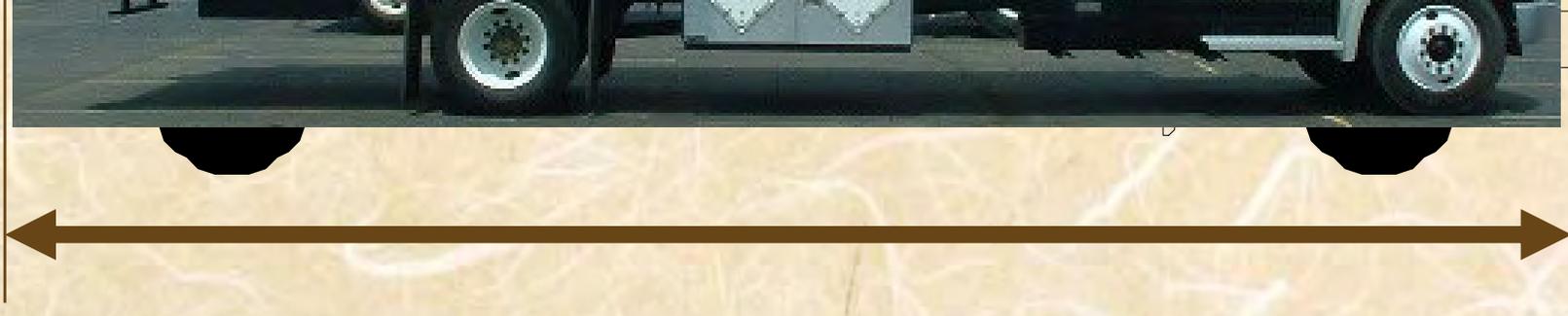
Width & Height Limits

- 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

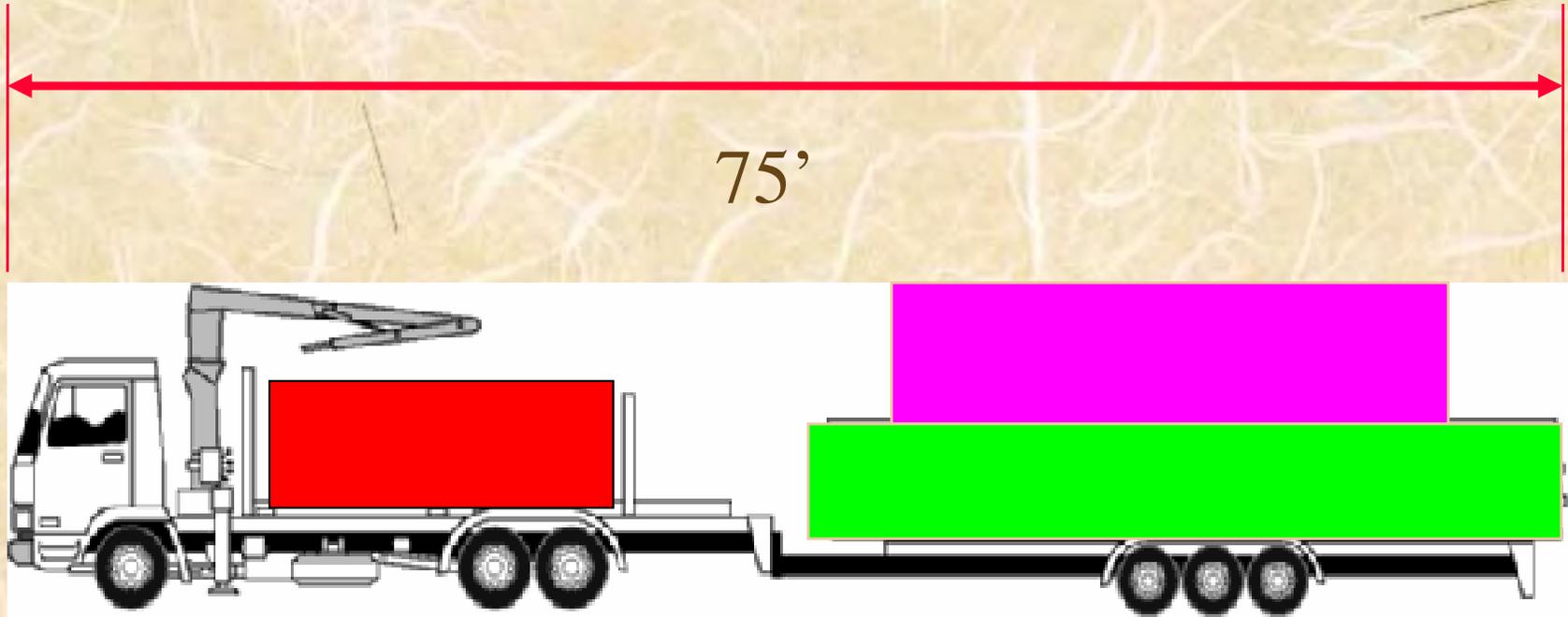
Single Trailer 53 ft



Permitted to 56 ft.

No overall length maximum

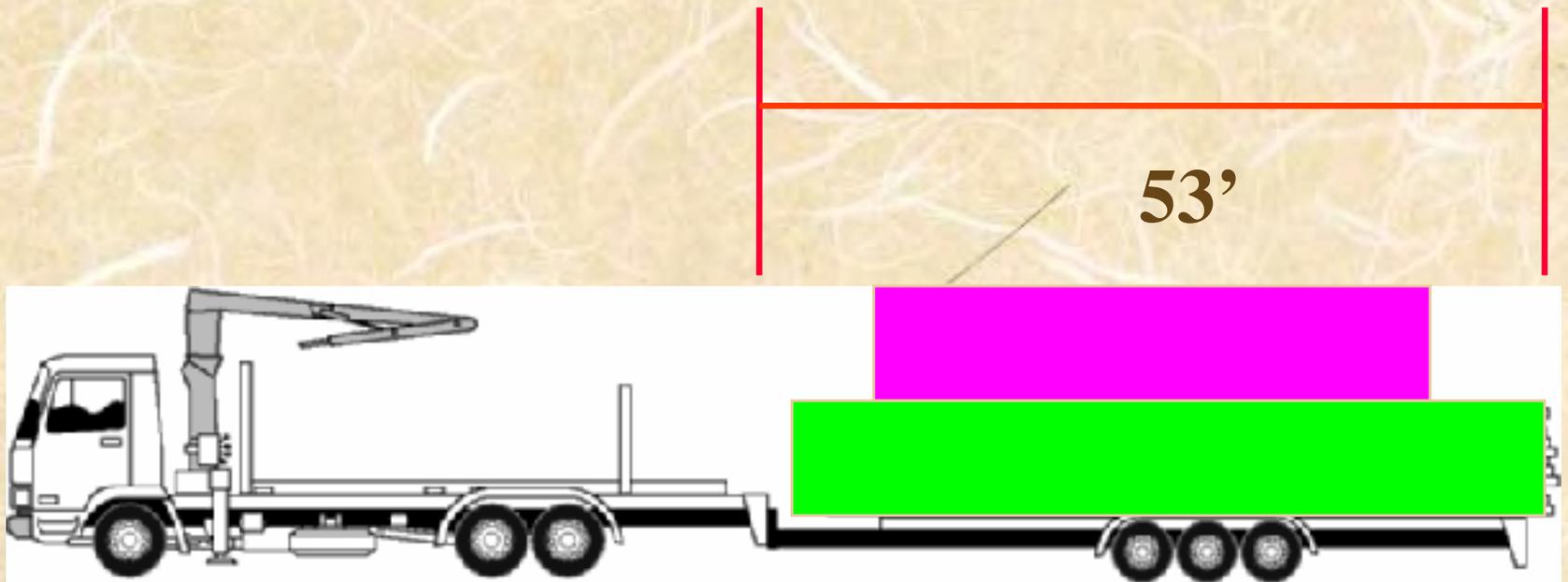
TRUCK/TRAILER LENGTH WITH LOAD



Permitted up to 85'

TRUCK/TRAILER LENGTH (EMPTY TRUCK)

Would now be considered as
Tractor/Trailer



Permitted up to 125'

Legal Dimensions

Double Trailers 61ft

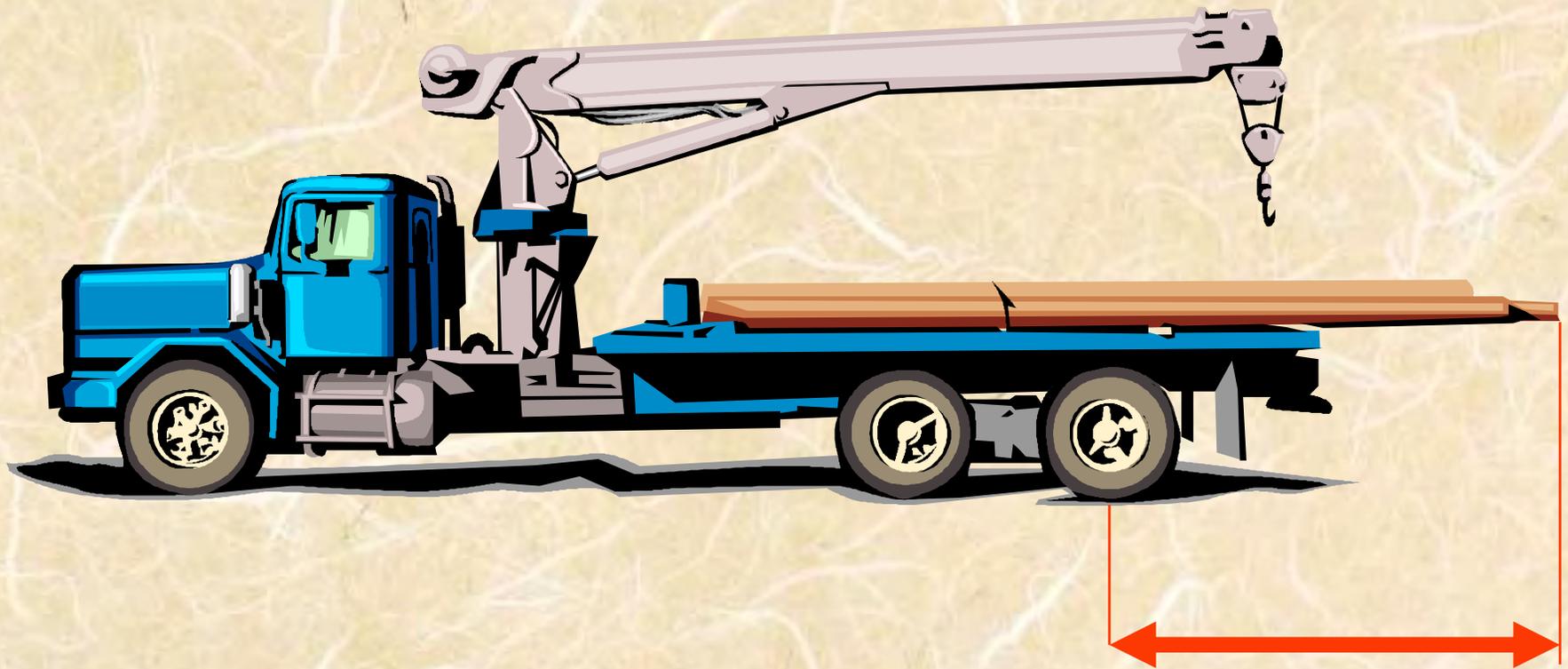


Permitted to 68 ft

No overall length maximum

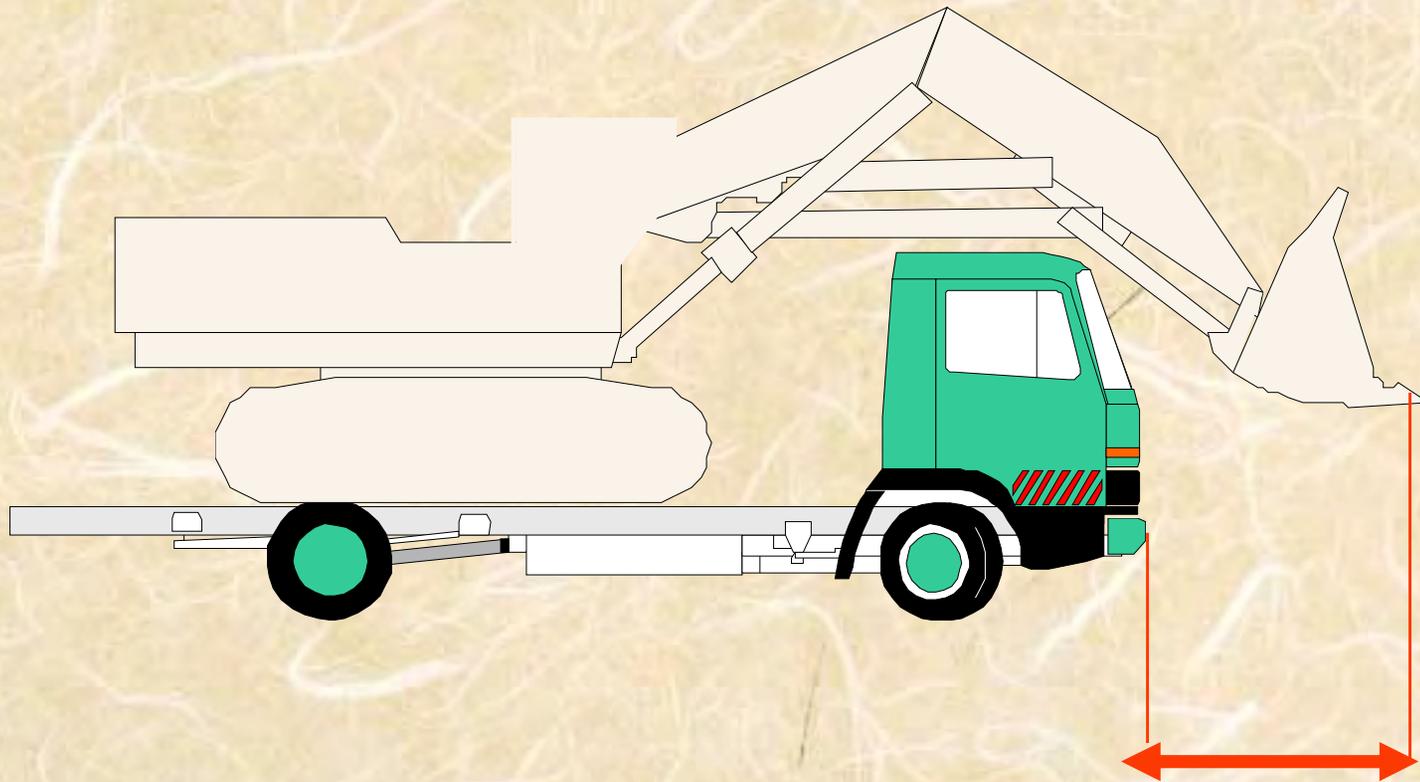
Legal Overhang-Rear

15 ft measured from center of last axle



Legal Overhang-Front

Measured 3 ft. from front
of the manufacture bumper



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.

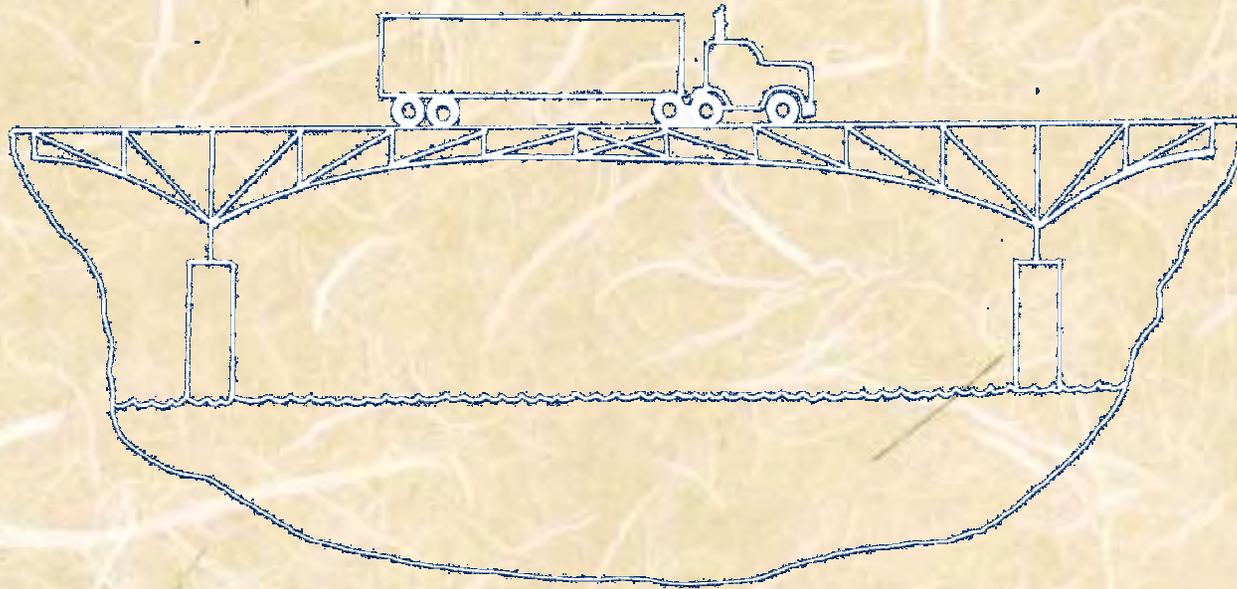
Monthly/Annual Non-Divisible Loads

14' wide; 15' high; 125' Trailer/Load length

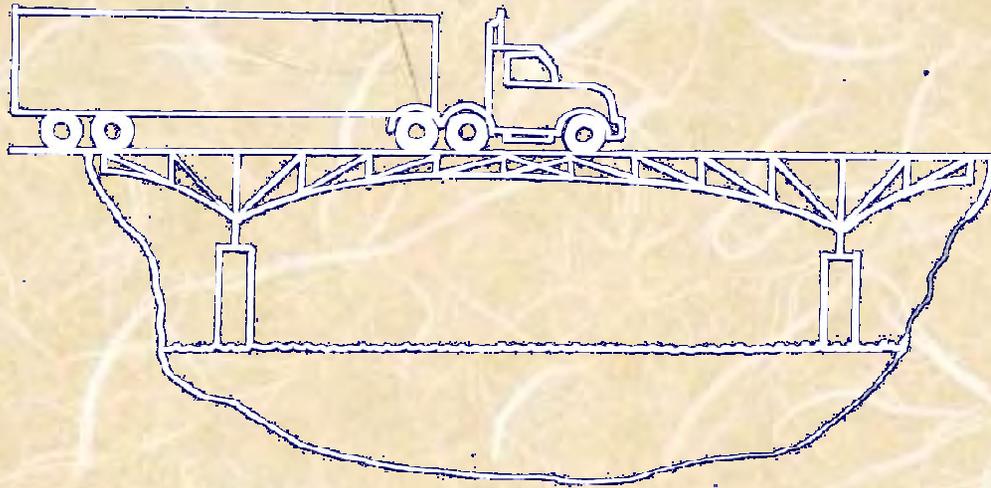
Can haul 61' non-divisible load with
this permit & be exempt from certain
over length requirements.

WAC 468-38-075 (e)

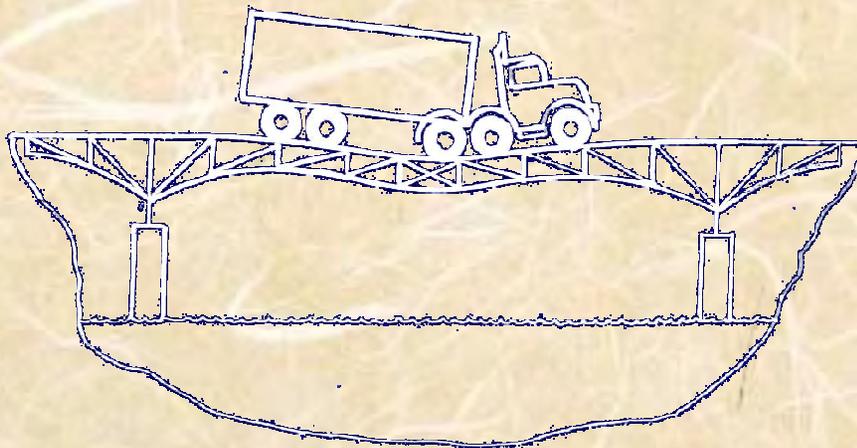
FEDERAL BRIDGE LAW & VEHICLE DESIGN



IMPACT ON BRIDGES cont.



Bridge Formula axle spread



Insufficient axle spread

WASHINGTON LAW

LEGAL WEIGHT OPERATIONS

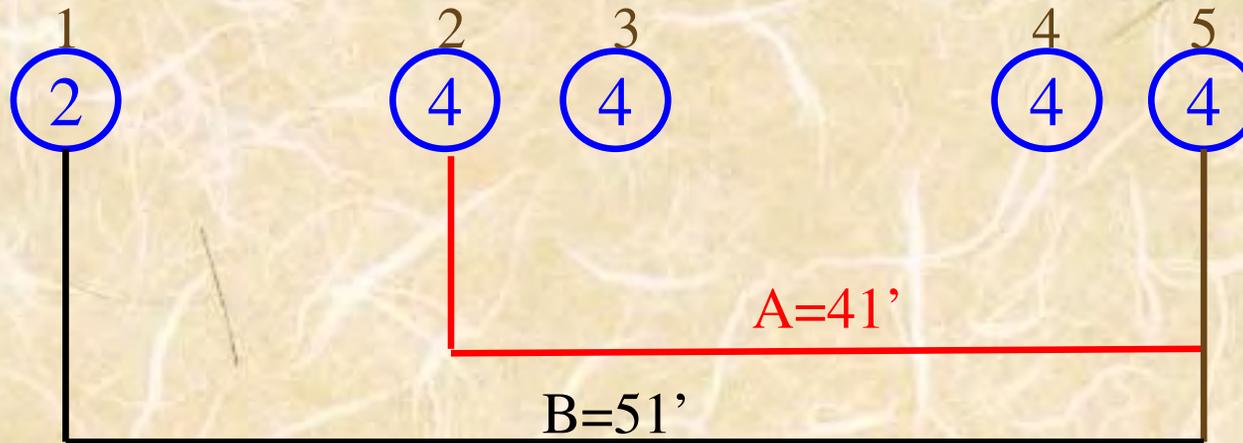
- Adopts Federal bridge Formula
 - Extends gross weight to 105,500 by grandfather rights
 - 20,000 lb. Single axle
 - 34,000 lb. Tandem axle
- Adds tire load limits
 - 600 lbs. Per inch width of tire on steer axle
 - 500 lbs. Per inch width of tire other axles
 - Some exceptions up to the 600 lb. limit

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
Total	<u>81,200</u>

Per Axle GROUP B (OVERALL):

Axle 1-5	<u>80,000</u>
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Per Axle GROUP A:

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

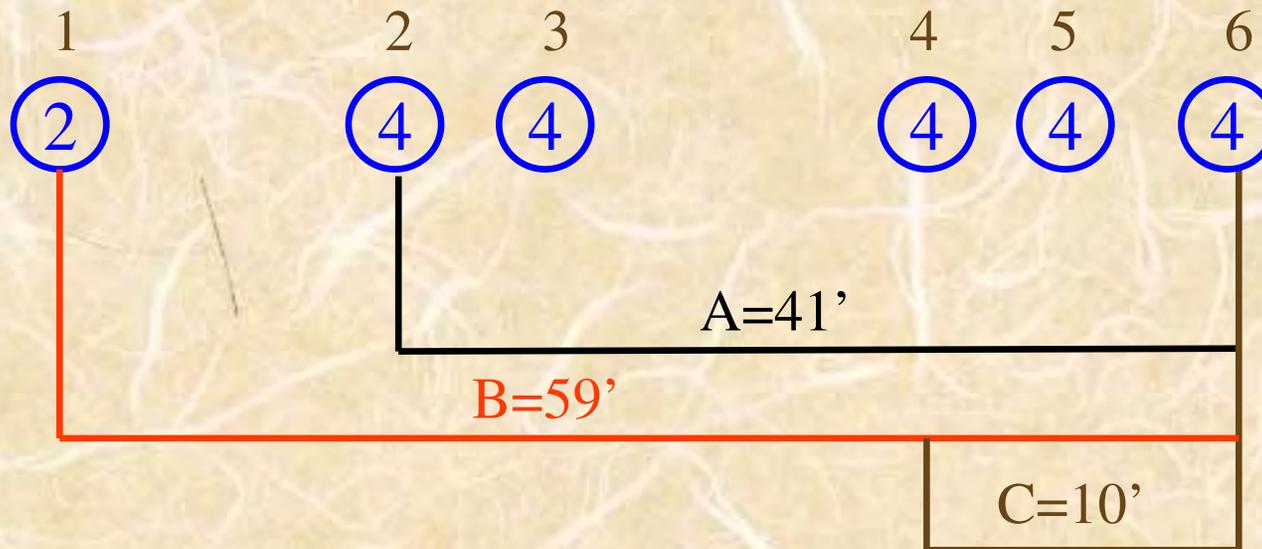
Per Axle GROUP 3 (OVERALL):

Axle 1-5	<u>80,000</u>
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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
Total	<u>91,900</u>

Per Axle Group A:

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

Per Axle Group B (overall):

Axle 1-6 Total	<u>89,500</u>
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Per Axle Group C:

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

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

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

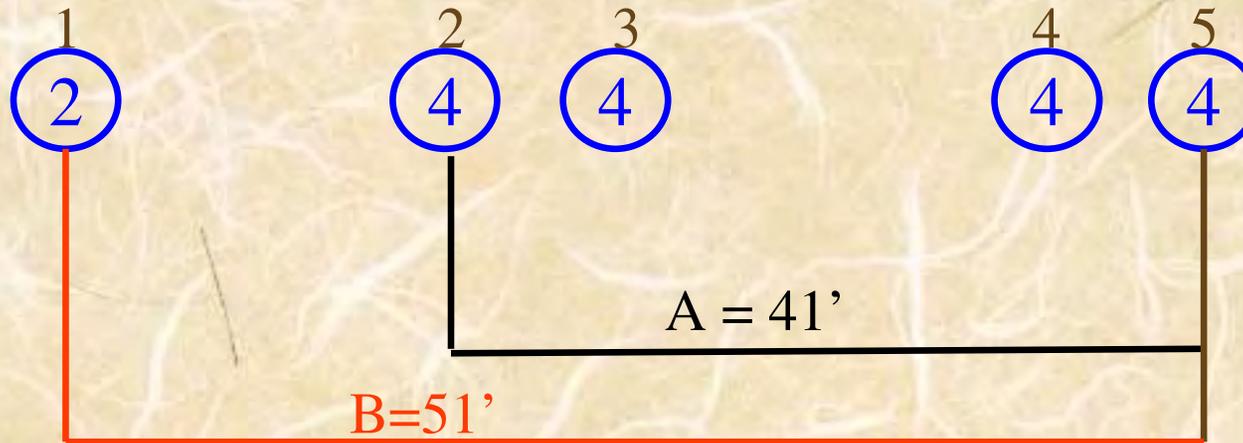
- In lieu of a special fuel license--IFTA
- Upon entering from out of state
- Required for vehicles with a gross weight of more than 26,000 lbs
- 3 axles or more regardless of weight
- For diesel, propane (RCW-82-38-075)
(090) (100)
- Cost is \$30.00
- Valid for 3 days-need, one every 72-hrs.
- Fuel 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
Total	<u>99,200</u>

Permitted weight limited by tire size and axle grouping.

99,200

Per Axle GROUP A:

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

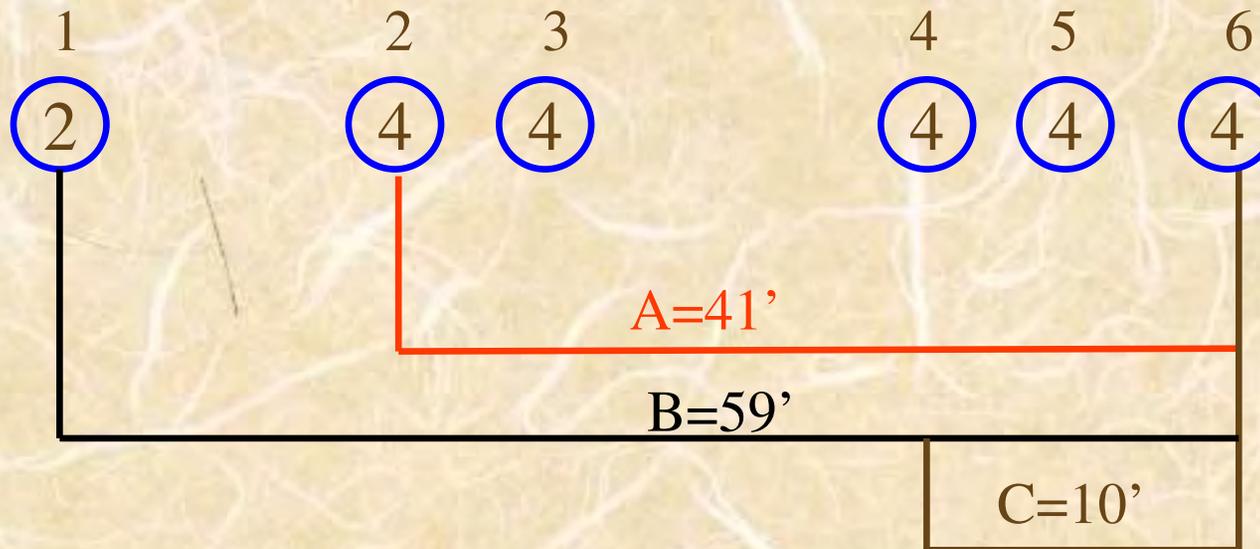
Per Axle GROUP B (OVERALL):

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

Total 122,400

Per Axle Group A:

Axle 1 14,400
 Axle 2-6 129,600

Total 144,000

Per Axle Group B (overall):

Axle 1-6 Total 158,000

Per Axle Group C:

Axle 4-6 65,000

Total 65,000

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

Axle Spacing Report

Axle Spacing Report No. [Look Up](#) [Calculate](#) [Clear](#) [Save](#) [Print](#) [Void](#) [Return](#)

Enter an Axle Spacing Report number above and click Look Up.
Or, enter axle spacing, tires per axle and tire sizes and click Calculate for a new Axle Sp

Axle No.	1	2	3	4	5	6	7	8
Axle Spacing (ft.)	13.5	4.5	11.16	4.5				
Tires per Axle	2	4	4	4	4			
Tires Size (in. or mm)	11							
Steer Axle		<input type="checkbox"/>						
Drop Axle		<input type="checkbox"/>						

- Periods are used when measurements are converted into decimal

Axle Spacing Report

Axle Spacing Report No. [Look Up](#) [Calculate](#) [Clear](#) [Save](#) [Print](#) [Void](#) [Return](#)

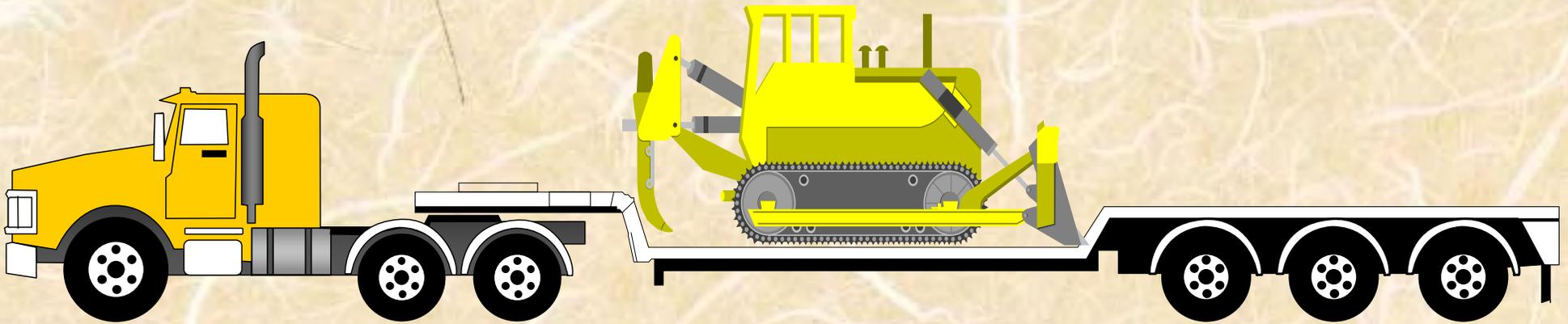
Enter an Axle Spacing Report number above and click Look Up.
Or, enter axle spacing, tires per axle and tire sizes and click Calculate for a new Axle

Axle No.	1	2	3	4	5	6	7	8
Axle Spacing (ft.)	13-6	4-6	11-2	4-6				
Tires per Axle	2	4	4	4	4			
Tires Size (in. or mm)	11							
Steer Axle		<input type="checkbox"/>						
Drop Axle		<input type="checkbox"/>						

- Dashes are used to indicate feet and inches

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, Oklahoma and Florida only.

Escort Car Requirements

WAC 468-38-100

(When escort cars are required)

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.

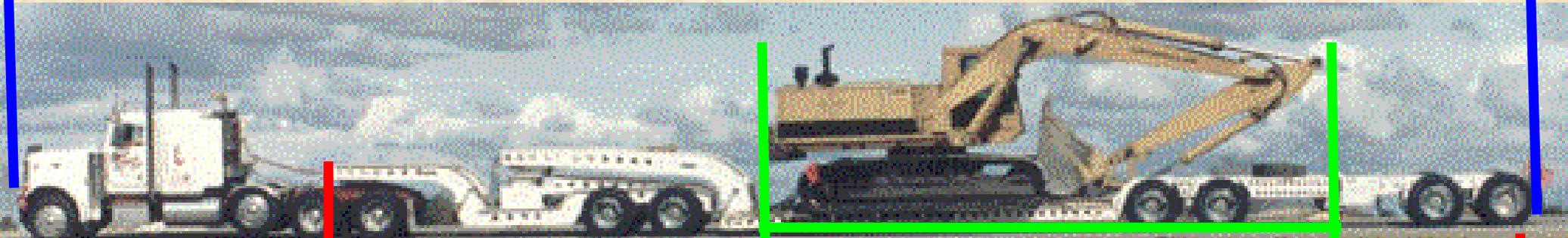
(single trip only)

From Office Reviews

- Put axle spacing report numbers on permit when provided by customers.
 - Applications must be completed by the customer.
 - Customer must provide complete VIN #
 - No writing on application
 - Includes County/City miles
- (County miles need to be listed on permits RCW 46-44-096. Customer must route around restrictions on state highways.)

Trailer/Load length
minus power unit

Overall length



Load length

Overall length minus power unit



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



Refuse and Recycle Trucks

Axle Truck –6000 lbs over single drive axle

3 Axle Truck-8000 lbs over tandem drive axle

Not good with lift axles

Permit not good on the Interstate

Front axle weight may exceed legal weight up to tire size.



Standard Collection Truck

Mobile Homes

Mobile Home Map

If the restriction is in your jurisdiction only, you may issue the permit.

If the restricted areas are in more than one jurisdiction, the permit needs to be approved by CVS.

Manufactured/Mobile Homes

Monthly Permits Maximum

- Width 15 feet, (14 ft box width with 12" eave)
- Height of 15 feet (WAC 468-38-120)

Maximum trailer length – 75 feet including tongue

All homes must abide by mobile home restriction map.

Pilot Car not required for mobile homes until height exceeds 15 ft. Height pole required.

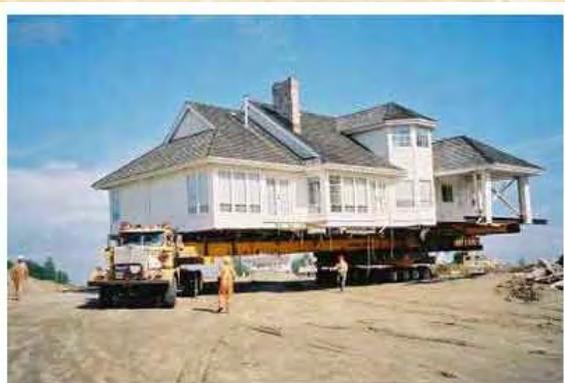
- Mobile Home Map due to unique rear overhang sweep.
- Modular Homes are the same as normal O/S permits.



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.



Farm Equipment

Criteria for annual permit :

- Must weigh less than 65,000 lbs.
- Less than 20 ft wide.
- Move on pneumatic tires or solid rubber tracks having protuberances that will not damage the highway.



Farm Equipment Annual Permit

- **Legal height.**
- **Farm tractor may pull no more than 2 implements.**
- **A vehicle capable of carrying a load, (ie, a truck of any kind) may not pull more than one trailing implement.**
- **Exempt from permits up to 16 ft. wide provided they follow certain safety requirements per WAC 468-38-290.**

Farm Exemptions

Annual Permit

Farmers and Implement Dealers

- Pilot Car Exceptions-certification, height pole, passengers, no vehicle description.

- Permit Requirements:

Dealers must use Original Permit

One permit per farm for farmers only

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

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.

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)

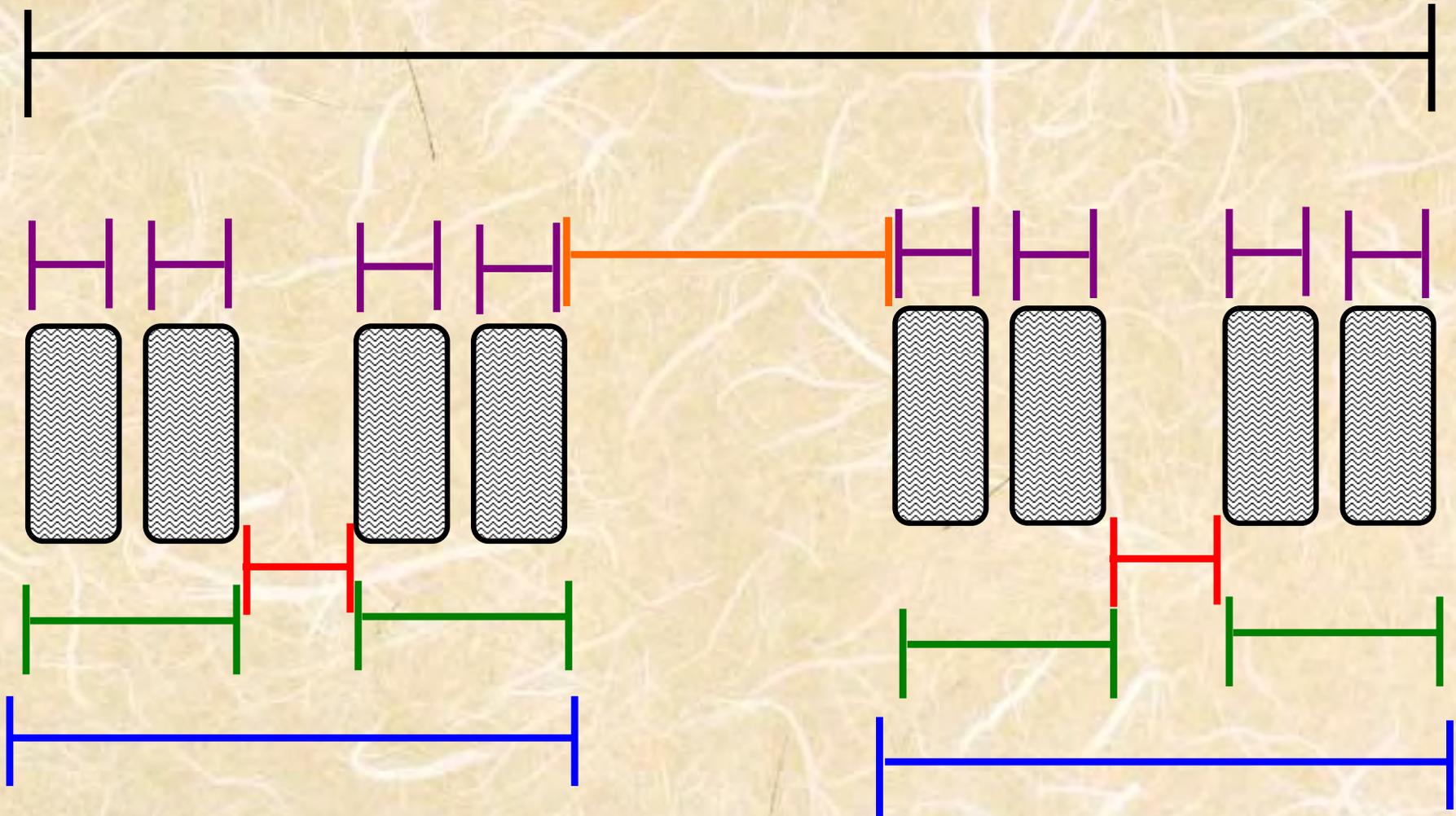
Loads in excess of 16 high or wide, 200,000 lbs,
125 feet trailer/load length



SUPERLOAD

- SUPERLOAD REQUEST
 - MUST INCLUDE HWYS (BEGINNING AND ENDING MILEPOST)
- AXLE SPACING REPORT (IF OVERWEIGHT)
- DIAGRAM OF VEHICLE COMBINATION
- TRAFFIC CONTROL PLAN
- DETAILED ROUTE SURVEY
 - MUST INCLUDE UPS AND OVERS
 - PULL OFFS FOR TRAFFIC BACK UP

8 TIRE AXLE INFO



SUPERLOAD (300,000LBS AND +)

TRUCK.....

- SIDE VIEW
- PLAN VIEW
- DIMENSIONS FROM TIRE CENTER
- TIRE PRESSURE
- WEIGHT OF TRUCK
- SPACING BETWEEN INSIDE TIRES

TRAILER.....

- SIDE VIEW
- PLAN VIEW
- DIMENSIONS FROM TIRE CENTER
- TIRE PRESSURE
- WEIGHT OF LOAD
- WEIGHT OF TRAILER
- SPACING BETWEEN INSIDE TIRES



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

Front Haul/Back Haul

- Run on two permits
 - 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”

Overlength and Overheight Permit Exceptions

- **Empty Apple bins**
- **Hay bales** (Own farm for his/her own use)
(Ranchers Only-No Commercial Carriers)
15 ft high by permit (468-38-071)
- Apple Bin and Hay Bale permit can be used along with 68 ft doubles or 56 ft single trailer permits



Tow Trucks



CHANGES IN WAC 468-38-265

Annual permits: Annual permits may be issued to tow truck companies by all offices.

For Class B & C tow trucks only. Must abide by RCW 46.44.091

Marine Highways



For Oversize/Overweight Information Call:

206-390-8543

Self Issuers

Access to their Company & Vehicles

Monthly/Annual Permits

Fixed Load Permits

Trip/Fuel Permits

Sometime in the near future

Overweight will be an option

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**

The End



One or two permits??