



# Bridge Overview, Load Ratings, & Specialized Haul Vehicles



Seattle Freight Advisory Board  
Art Brochet & Jamie O'Day  
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# SDOT's mission & vision

Mission: delivering a first-rate transportation system for Seattle.



Vision: a vibrant Seattle with connected people, places, and products.

# SDOT's core principles



# Presentation overview

- Overview of Seattle's Bridges
- Current Bridge Load Limits & Vehicle Types
- Specialized Hauling Vehicles (SHVs)
- Bridge Evaluations Required
- SDOT's SHV Load Evaluation Program
- Cowen Park Bridge Restrictions
- 3 Other Bridge Evaluations in 2015
- Bridge Restriction Signage
- Next Steps
- Outreach Plans

# Overview of Seattle's Bridges

- 83 Bridges
- 4 Operable
  - Ballard Bridge
  - Fremont Bridge
  - University Bridge
  - Spokane Street Swing Bridge
- 1990's Load Rating Program – all bridges
- Ongoing Inspection Program

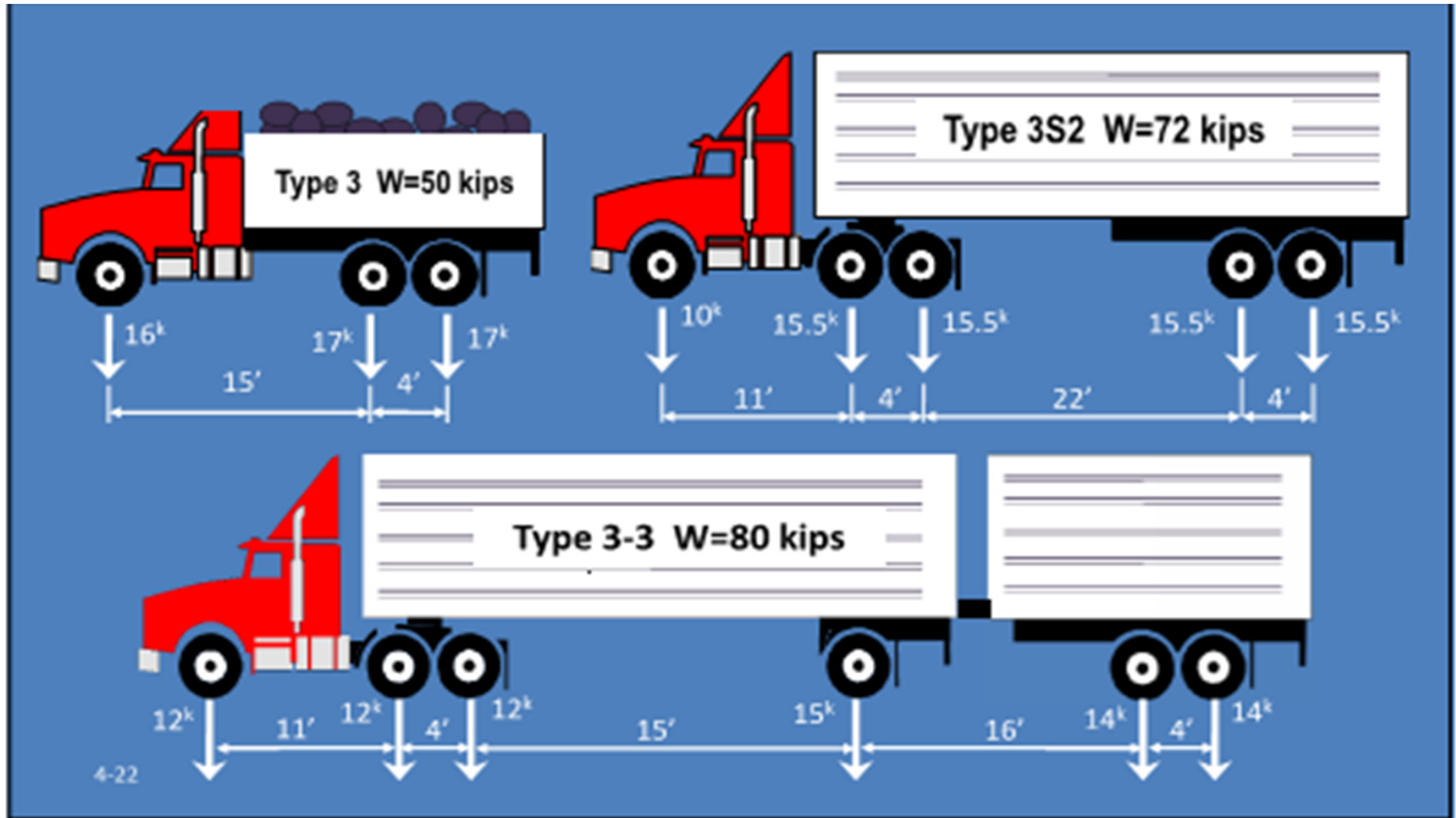


# Current Bridge Load Limits

(based on 3 AASHTO Truck Types)

Structure	Restriction
Airport Way over ARGO	Legal Loads Only, No Overloads
Magnolia Bridge, Pier 91 Ramps	No Trucks Allowed
McGraw Street Bridge	2 Axle – 14T 3 Axle – 18T Truck & Semi Trailer – 28T Truck & Trailer – 35T
East Interlaken Blvd.	5 Tons
Fairview Ave N. (southbound)	40 Tons
Post Alley – Marion to Columbia	Single Axle – 19 Tons

# 3 AASHTO Truck Types



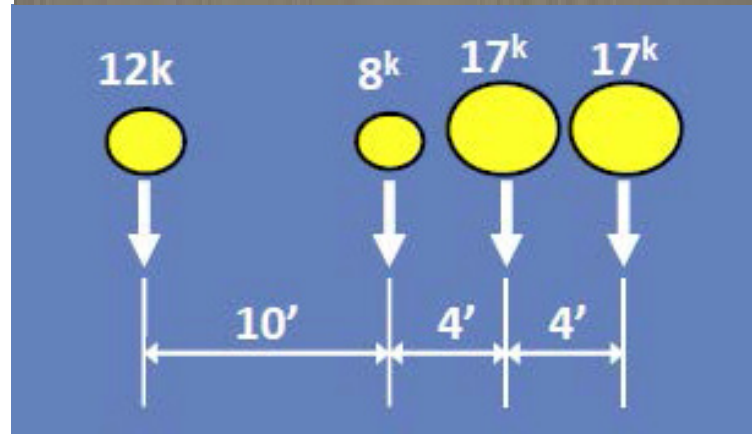
# Specialized Hauling Vehicles

- Single Vehicles with 4-7 closely spaced axles – weighing up to 40T (loaded)
- Relatively recent introduction
- Four types – for 4, 5, 6 & 7 axles

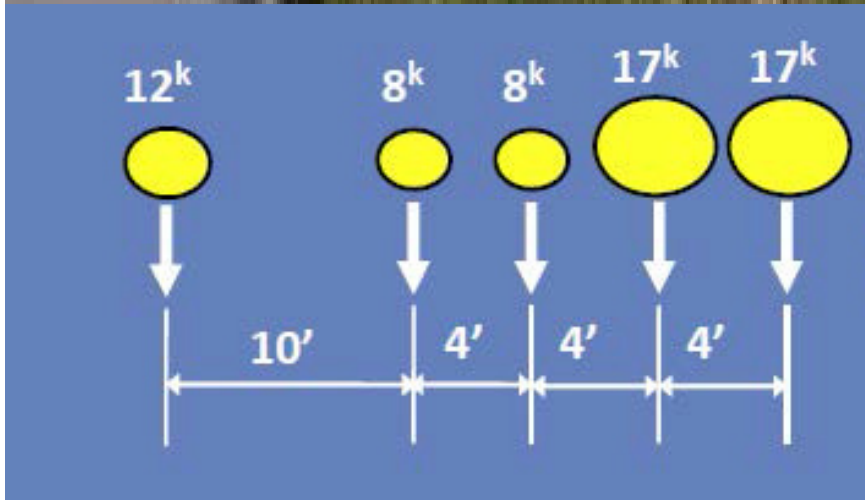




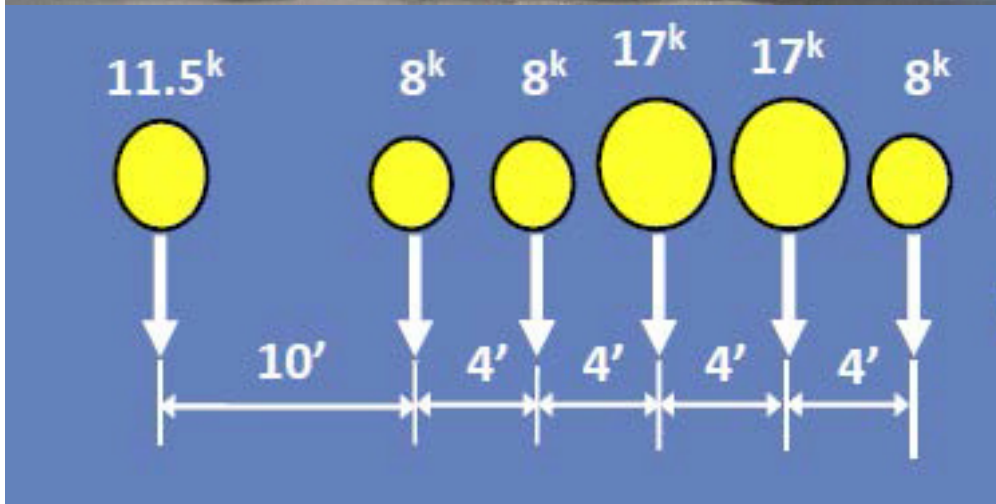
# SU4 Truck GVW= 54 kips



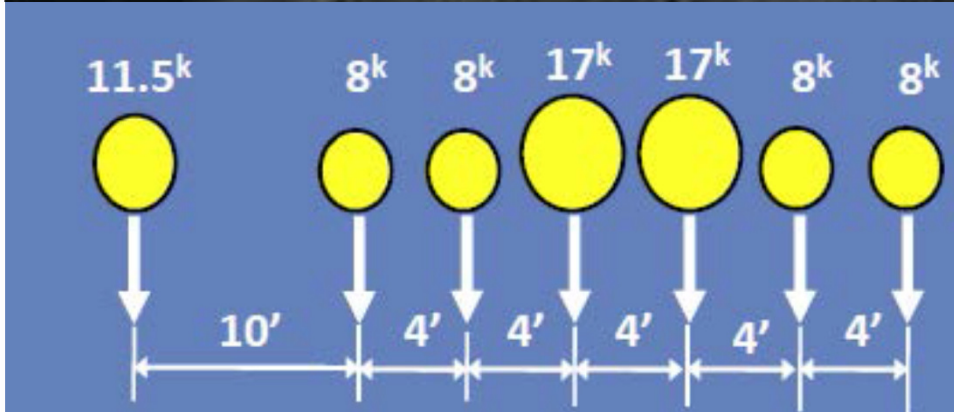
# SU5 Truck GVW = 62 kips



# SU6 Truck GVW = 69.5 kips



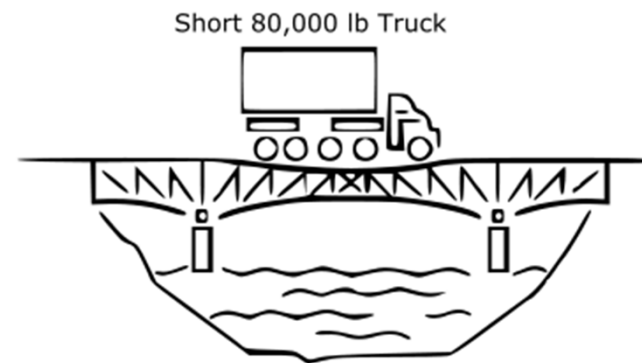
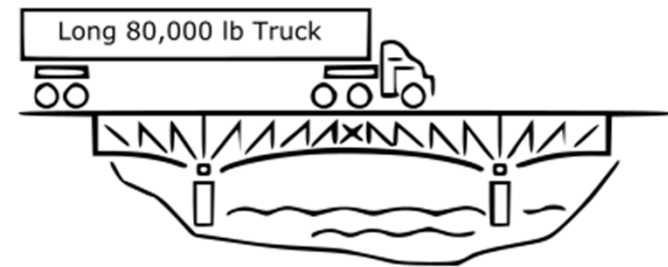
# SU7 Truck GVW = 77.5 kips



# Bridge Evaluations Required

All bridges with clear spans  $>$  20' must be evaluated for SHV loads.

Bridges which have shorter spans or lower spare capacity for loads must be evaluated before 2018: otherwise before 2023.



# SDOT's SHV Load Evaluation Program

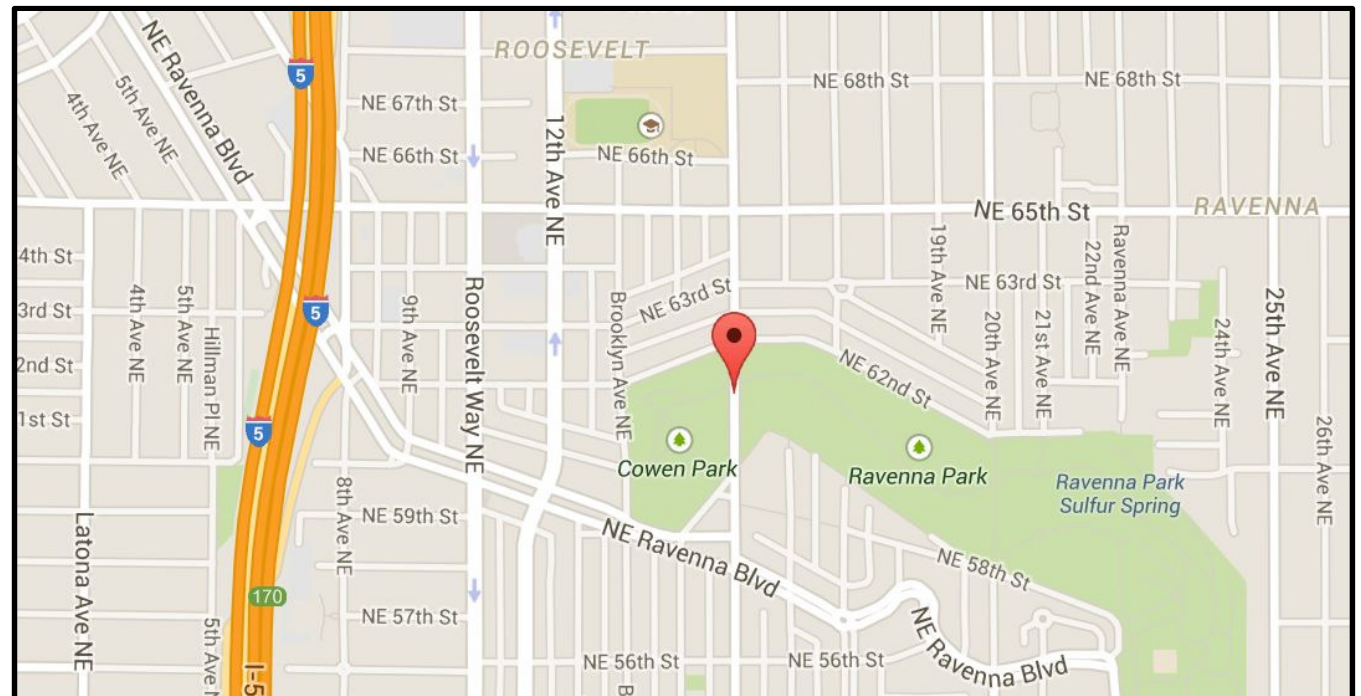
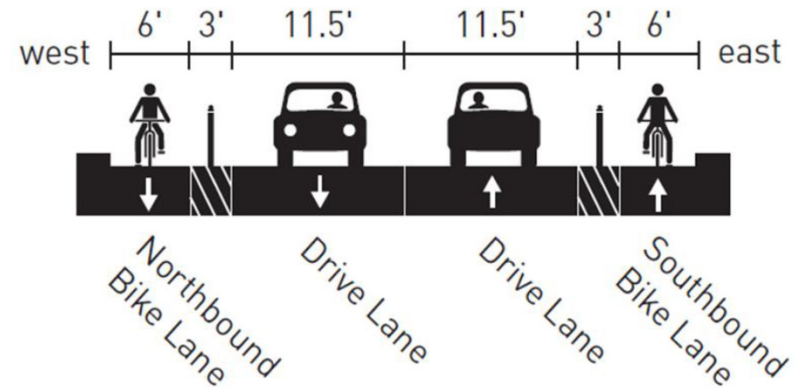
83 bridges with spans > 20'

- 10 already evaluated
  - 9 now proven OK
  - Cowen Park Bridge needs to be limited
- 3 additional structures will be evaluated this year
- 21 more (minimum) will need evaluation in 2016 - 2017
- 49 more will need evaluation before end of 2022

# Cowen Park Bridge

Restrictions for SU-7 will be needed, possible others – final load ratings TBD

Minor arterial - 41 feet wide - 1 travel lane in each direction, now with bicycle lanes on each side.



# Other Bridge Evaluations in 2015

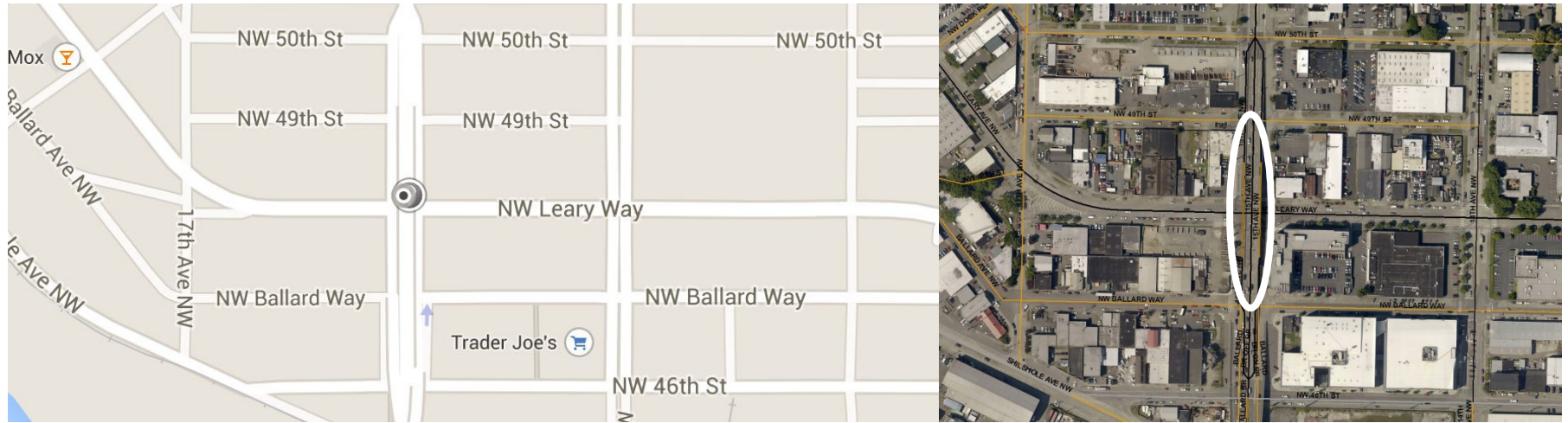
- NW 57<sup>th</sup> Street crossing of RR
  - Non-arterial street
  - In non-commercial zone
- 15<sup>th</sup> Ave NW over NW Leary Way
  - Major Truck Route and Transit Way
  - Over Principal Arterial
  - In industrial/commercial zone
- W. Dravus St. over 15<sup>th</sup> Ave W.
  - Principal Arterial and Minor Transit Street
  - Over Major Truck Street
  - In industrial buffer zone



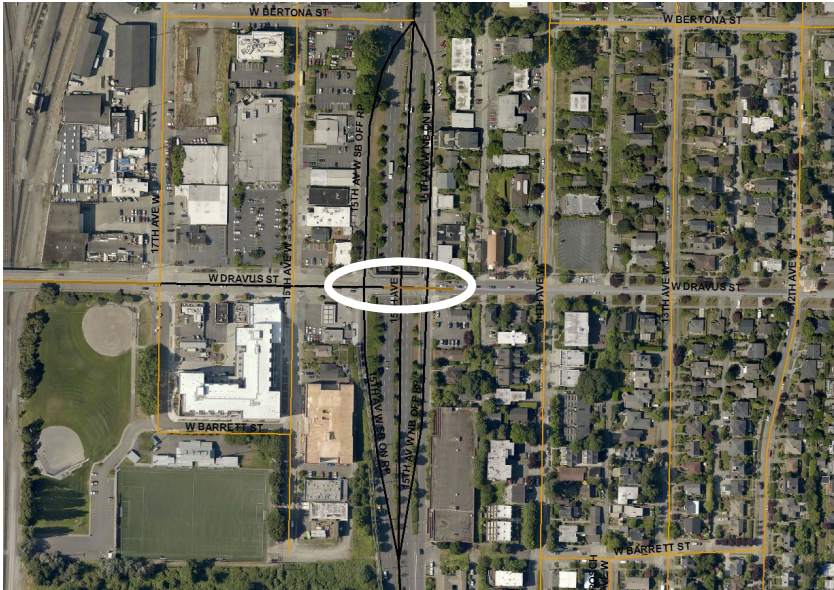
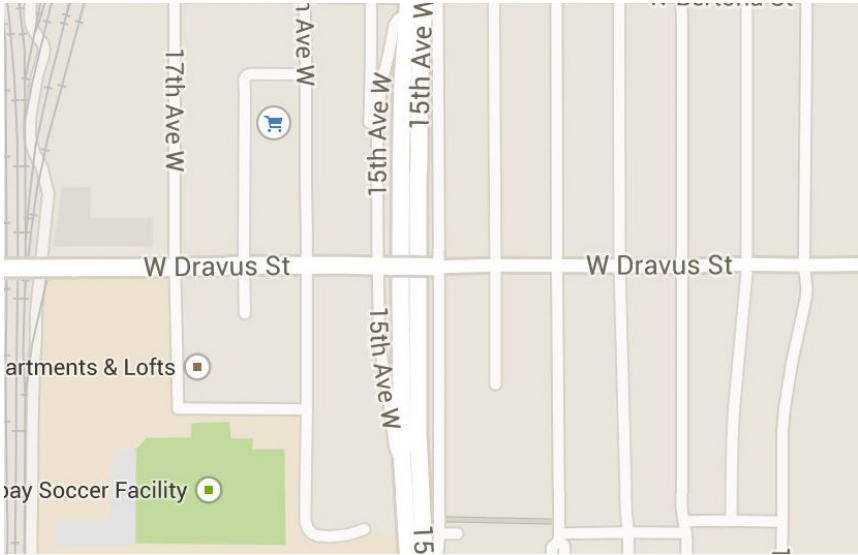
# NW 57th St over RR (near 36th Ave NW)



# NW 15th Ave over NW Leary Way



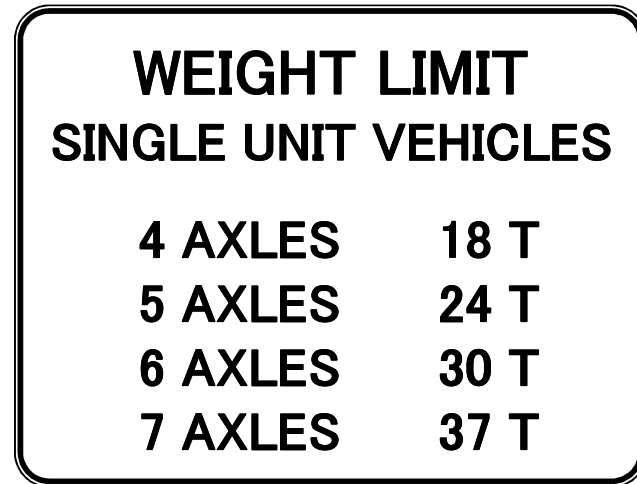
# West Dravus St over 15th Ave W



# Bridge Restriction Signage



Signage for 3  
AASHTO Trucks  
(now in use)



Sample of Signage  
for Specialized  
Hauling Vehicles

# Next steps

April 2015	Determine load restriction needed for SHVs on Cowen Park Bridge
May 2015	Design, place Cowen signage
May 2015	Begin outreach to SHV owners and operators re: restrictions & program
In 2015	Rate 15th & Leary, NW 57th & 36th Ave NW, and Dravus over 15th
2016 - 2017	Rate 21 more bridges (minimum)
Before 2023	Rate remaining 49 bridges

# Outreach Plans

- SHV owners/operators
  - Washington Trucking Association (WTA)
  - Manufacturing Industrial Council (MIC)
  - Duwamish Transportation Management Association (DTMA)
- Other outreach ideas?

# Questions?

art.brochet@seattle.gov | (206) 615-0786

jamie.oday@seattle.gov | (206) 386-4635

<http://www.seattle.gov/transportation>

