

W.S.C.

I-5 Vertical Clearance Discussion

In reviewing the heights of various structures over I-5, I've used the following list of items to determine which structures were critical obstructions to the movement of freight: providing a border to border route which includes I-205, opening corridors within the border to border route, detour routes that involved local jurisdictions and detours with significant out of direction travel. Table 1 lists the structures on I-205 that were not included in the I-5 vertical clearance spreadsheets previously provided.

In reviewing the spreadsheets titled, "I-5 Southbound Structures less than 17' 00" Vertical Clearance" and "I-5 Northbound Structures less than 17' 00" Vertical Clearance" I have identified the structures in Table 2 as needing improvement in order to maintain the movement of freight on the I-5 corridor. Table 2 lists the structures in order of priority.

Priority Methodology

To determine the level of priority I used the following method:

- Does this structure limit the corridor that it is in?
- Is there an available detour route?
 - If a detour is available, what is the length of the detour?
 - Are there city streets or county roads included in the detour?
 - Does the city and/or county place any limitations on the size of the load or the hours in which they can move?
 - Does the detour involve being routed through a downtown area?
- If there was an improvement to the vertical clearance, how many miles of I-5 would now be available?
- If there was an improvement to the vertical clearance, what would the new clearance limit be?
 - Would the clearance significantly increase along the route?
 - Are there other limiting structures?
- With the volume of manufactured homes that are shipped out of the state, southbound clearance issues have a higher priority. A larger percentage of over height loads travel south on I-5, which is due in part to the large number of homes headed south.

To summarize, I tried to determine which structures would provide the greatest improvement to the entire system. If the vertical clearances under the structures identified in Table 2 are increased, this would open I-5 to loads up to 16' 06" without using any out of direction detours. There would be "up & overs," but the loads would be on the interstate system and not traveling through communities on two lane state highways, county roads or city streets.

Priority Discussion

Southbound I-5 was examined first. The limiting structures southbound are I-105 WB over I-5 MP 194.04 and Egge Rd over I-5 MP 197.70. The maximum load height is 15' 07". Additionally Reed Service Road is 15' 09". If we increase the vertical clearance

southbound underneath structures one through eight in Table 2 this will open I-5 SB between MP 182.83 and MP 228.08 to loads up to 16' 05" high, which is the maximum height under Beltline Highway MP 195.45. We could avoid routing oversized loads up to 16' 05" high through Junction City and Monroe on a long stretch of 2-lane highway.

In addition, if we increase the vertical clearance underneath both southbound and northbound I-5 on structures one through eight in Table 2 this will open I-5 NB between MP 182.83 and MP 228.08 up to 16' 06" high, an increase of ten inches (maximum height under Beltline Hwy MP 195.45). This stretch is currently limited to loads up to 15' 09" high. We could avoid routing oversized loads up to 16' 05" high through Junction City and Monroe on a long stretch of 2-lane highway. Within this stretch of highway is the S. 6th Street Structure over I-5. It was not included in this list because it is scheduled for replacement through the OTIA III program. Until replaced it limits southbound I-5 to 14' 03".

Increase the vertical clearance southbound and northbound underneath structures nine through fourteen in Table 2 will open I-5 southbound to loads up to 16' 04" (maximum height under Perkins Rd MP 261.90) and opens I-5 between MP 216.57 and I-205 northbound to loads up to 16' 07" (maximum height under Battle Creek Rd MP 250.32). This stretch of highway is currently limited to loads up to 15' 02" high northbound and 15' 10" high southbound. The detour route for southbound traffic through this section involves routing loads off of I-5 Salem Parkway, to OR99E Business to OR22 (across the Marion Street Bridge in Salem) to OR99W to OR34 to I-5. However, this detour is limited to loads up to 15' 11" high on the Van Buren Street Bridge. In addition, that bridge is weight restricted to 80,000 pounds gross vehicle weight (legal axle weights only). Loads exceeding those limitations must continue on OR99W to OR34 West to the District 4 shops, turn around, travel east on OR34 to OR34 Bypass and re-enter OR34 east of the Van Buren Street Bridge at MP 0.13 on the Corvallis-Lebanon Highway. This detour route, while all on state highway takes oversized loads through several local communities and across a very congested bridge (Marion Street Bridge). In addition to that, we have recently received photographs of loads that were unable to negotiate the turns through the City of Salem.

Currently the highest any load could be that would travel north on I-5 without out of direction travel is 15' 02" between MP230.12 and MP242.13. The limiting structure northbound is Viewcrest Lane over I-5 at MP 237.67.

Increasing the clearance northbound under Grant Smith Road at MP119.18, will open I-5 northbound to 16' 02" high loads from the OR/CA border to OR34 (MP228.08) using "up & overs" in some locations. This structure is listed fifteenth in Table 2. We would not need to detour onto county roads or route loads through downtown Winston. This bridge was listed next in the priority list because the detour involved county roads and is only an issue for northbound loads. The result is a 4" increase in the height of loads that can stay on I-5 for a 228 mile stretch of the interstate. This does not quite meet our 16' 06" goal, but there are structures further south, which are listed in the last group of structures on the priority list (21-26).

Structures 16-18 in Table 2, limit I-5 northbound and southbound to 16' 02" high. We currently route anything coming into the state over 16' 02" from California or going to California down US97. At this point in our list we have reached a maximum load height of 16' 04". To get to our goal of 16' 06", we would then have to improve the clearance underneath structures 19-27 in Table 2. There would be nine "up & overs" northbound and six "up & overs" southbound using the off/on ramps for loads up to 16' 06" high. Perkins Road, listed 26th in Table 2, is further down on our priority list because the detour involves a small amount of out of direction travel and is on state highways. However, if the clearance was improved by just 2 inches and we could gain one more inch of clearance underneath Beltline Highway, listed 27th in Table 2, we would achieve our goal of 16' 06" load height on I-5 between MP 33 and MP 288 (I-205 exit).

The two I-205 structures are low on the priority list because Clackamas County is very accommodating. Their blanket approval for oversized loads is generous at this location. Those locations that have county road detours and size limitations are listed in Table 2.

Table 1

Structure	MP	NB Height	SB Height	Detour
OR212/224 over I-205	12.67	17' 03"	16' 03"	Exit 12 to OR212/224; 82 nd Ave; re-enter exit 11 – 82 nd Ave is a Clackamas County Rd.
Strawberry Ln over I-205	11.98	16' 00"	16' 02"	Same as above.

Table 2

Structure	MP	NB Height	SB Height	Detour
1. I-105 WB over I-5	194.04	16' 06"	15' 07"	Option 1 – see bottom of table. Option 2 – see bottom of table. Both require out of direction travel.
2. Egge Rd over I-5	197.70	16' 05"	15' 07"	Would have to use Option 2 for the I-105 detour.

Structure	MP	NB Height	SB Height	Detour
3. Reed Service Rd over I-5	198.39	17' 05"	15' 09"	Exit 199 to Pearl St; Coburg Rd; Re-enter I-5 at exit 194; (Lane County Roads) NOTE: Lane County does not allow 80' long manufactured homes. Maximum OAL ¹ for Manufactured homes is 95'. Maximum OAL for heavy haul combinations is 100'.
4. Wilkins Rd over I-5	201.28	15' 11"	15' 11"	I-105 Option 2
5. Coleman Rd over I-5	203.44	15' 09"	15' 10"	I-105 Option 2
6. Centennial Blvd over I-5	193.49	15' 11"	16' 02"	I-105 Option 2
7. EB I-105 Exit over I-5	193.94	15' 11"	16' 07"	I-105 Option 2
8. McVay Hwy (30 th Ave) over I-5	189.87	16' 03"	17' 10"	No detour available. Limits height on I-5 to 16' 03"
9. Viewcrest Ln. over I-5	237.67	15' 02"	16' 07"	OR34 ² ; OR99W; OR22; OR99E Business Salem Parkway
10. US20 Exit 233 over I-5	233.23	15' 06"	16' 03"	Same as above
11. Grand Prairie Rd over I-5	231.91	15' 08"	16' 00"	Same as above
12. Seven Mile Ln. over I-5	230.12	15' 09"	16' 00"	Same as above
13. Dever-Conner Rd over I-5	239.67	15' 10"	16' 05"	Same as above
14. Talbot Rd over I-5	242.13	15' 11"	15' 10"	Same as above
15. Grant Smith Road over I-5	119.18	15' 10"	16' 09"	Exit 112 to Douglas County Rds; Re-enter I-5 at exit 119 or 120 depending on weight.
16. River Dr over I-5	180.55	16' 07"	15' 11"	Exit 182 to OR99 through downtown Cottage Grove; Re-enter I-5 at exit 170
17. Market Rd	182.06	17' 04"	16' 00"	Same as above
18. Farm Rd Equipment Pass over I-5	149.39	16' 06"	16' 02"	Exit 150 to Douglas County Roads; Re-enter I-5 at exit 146. ³

¹ OAL is Overall Length

² For loads that would be traveling east on OR34, they are limited to 80,000 pounds maximum gross weight and 15' 11" high. Loads exceeding those limitations must continue on OR99W to OR34 West to the District 4 shops, turn around, travel east on OR34 to OR34 Bypass and re-enter OR34 east of the Van Buren Street Bridge at MP0.13 on the Corvallis-Lebanon Highway.

Structure	MP	NB Height	SB Height	Detour
19. Mountain Ave over I-5	16.70	16' 02"	16' 02"	US97 --The City of Ashland will not allow us to use city streets. OR99 through Ashland was transferred to the City.
20. East Main St over I-5	14.77	16' 02"	21' 08"	US97
21. SPRR (Wall Creek) over I-5	11.96	16' 04"	17' 08"	US97
22. Butler Creek Rd over I-5	18.56	20' 08"	16' 04"	US97
23. Table Rock Rd over I-5	31.30	16' 04"	16' 09"	US97
24. Upton Rd over I-5	33.85	16' 04"	16' 09"	US97
25. Del Rio Rd over I-5	129.22	16' 11"	16' 04"	Use Douglas County Roads through Roseburg
26. Perkins Rd over I-5	261.90	17' 00"	16' 04"	Exit 271 to OR214; OR99E to Salem
27. Beltline Highway	194.45	16' 05"	16' 06"	
28. Strawberry LN. over I-205	11.98	16' 00"	16' 02"	Exit 11 to 82 nd Dr; OR212/224; Re-enter I-205 at exit 12 (82 nd Dr is Clackamas County)
29. OR212/224 over I-205	12.67	17' 03"	16' 03"	Same as above.

I-105 Detours

Option 1: Southbound take exit 194 to OR126; Pioneer Parkway; OR126 Business; McVay Hwy; re-enter I-5 at exit 189. These are all state highways.

Option 2: Depending on height and beginning location, exit I-5 at Salem to Salem Parkway; OR99E Business; OR22; OR99W; OR99; OR126; I-105; re-enter I-5 at exit 194; If they can travel down I-5 to OR34 they would exit at 228 to OR34; OR99W and continue down OR99. This route requires out of direction travel, extra pilot car costs (2-lane highways vs. Interstate) and takes oversized loads through the center of many communities.

³ It is unknown whether or not Douglas County would approve 80' manufactured homes. Due to other height restrictions, we have not required the use of their roads for 80' manufactured homes.

