



# 129,000 Pound Evaluation of SH-52 M.P. 28.4 to M.P 30.42 (Case #201705SH52)

## Executive Summary

Savage Services Corporation submitted a request for 129,000 pound trucking approval on SH-52 between milepost (MP) 28.4 (plant entry point) and MP 30.42 (intersection with SH-16) for transportation of sand. The request projects approximately 195-205 trips annually which is a 33% reduction from current operations. The company also projects 25%-35% fuel savings. The requested section of SH-52 is designated as a red route and as such all trucks must adhere to the 6.5-foot off-track and 115-foot overall vehicle length criteria. ITD Bridge Section confirms the single bridge on the route will safely support 129,000 pound vehicles. District 3 analysis shows this section of road as an urban principal arterial in good condition with no deficiencies. The Office of Highway Safety analysis shows this section of SH-52 has two Non-Interstate High Accident Intersection Locations (HAL) and no HAL clusters. Department of Motor Vehicles, Highway Safety, Bridge Asset Management and District 3 all recommend proceeding with this request.

## Detailed Analysis

### **Department of Motor Vehicles (DMV) Review**

All Idaho Transportation Department routes are currently categorized by their ability to handle various extra-length vehicle combinations and their off-tracking allowances. The categories used when considering allowing vehicle combinations to carry increased axle weights above 105,500 pounds and up to 129,000 pounds are:

- Blue routes at 95 foot overall vehicle length and a 5.50-foot off-track
- Red routes at 115 foot overall vehicle length and a 6.50-foot off-track.

Off-tracking is the turning radius of the vehicle combination, which assists in keeping them safely in their lane of travel. Off-tracking occurs because the rear wheels of trailer trucks do not pivot, and therefore will not follow the same path as the front wheels. The greater the distance between the front wheels and the rear wheels of the vehicle, the greater the amount of off-track. The DMV confirms that the requested routes falls under one of the above categories and meets all length and off-tracking requirements for that route. **More specifically, the requested section of SH-52 from milepost 28.4 to 30.42 is designated as a red route and as such all trucks must adhere to the 6.5-foot off-track and 115 foot overall vehicle length criteria.**

### **Bridge Review**

Bridges on all publicly owned routes in Idaho, with the exception of those meeting specific criteria, are inspected every two years at a minimum to ensure they can safely accommodate vehicles. A variety of inspections may be performed including routine inspections, in-depth inspections, underwater inspections, and complex bridge inspections. All are done to track the current condition of a bridge and make repairs if needed.

When determining the truck-carrying capacity of a bridge, consideration is given to the types of vehicles that routinely use the bridge and the condition of the bridge. Load limits may be placed on a bridge if, through engineering analysis, it is determined the bridge cannot carry legal truck loads.

ITD Bridge Asset Management has reviewed the **single bridge** pertaining to this request and has determined it will safely support the 129,000-pound truck load, provided the truck's axle configuration conforms to legal requirements. To review load rating data for the bridge, see the Bridge Data chart below.

### ITD District 3 Evaluation

This segment has been evaluated and the District recommends proceeding.

District Three has evaluated the roadway characteristics, pavement condition, and traffic volumes on SH-52 between MP 28.4 – MP 30.42 in response to the request to make this segment a 129,000-pound trucking route and has no concerns with proceeding with this request.

### Roadway Characteristics

This roadway is an urban principle arterial on the south side of Emmett with predominantly straight, flat terrain. The speed limit is 55 miles per hour, but reduces to 50 approaching Emmett. The roadway geometry is outlined in the table below.

*Table 1. SH-52 Roadway Geometry*

MILEPOST	THROUGH LANES	TWO-WAY LEFT TURN LANE (TWLTL)	SHOULDER	PARKING LANE
28.4 – 29.79	2 – 1 each direction	No	Yes	No
	12'		6'	-
29.79 – 30.42	2 – 1 each direction	Yes	Yes	No
	12'		6'	-

### Pavement Condition

The road is in good condition and is not deficient in cracking, roughness, or ruts. Spring breakup limits do not pertain to this section at this time.

*Table 2. 2015 TAMS Visual Survey Data*

MILEPOST	PAVEMENT TYPE	DEFICIENT (YES/NO)	CONDITION STATE	CRACKING INDEX	ROUGHNESS INDEX
28.4 – 30.42	Flexible	No	Good	5.0	3.53

### Traffic Volumes

The speed limit of the highway is 55 mph and reducing to 50 mph approaching Emmett. The traffic volumes are provided below.

*Table 3. 2015 Traffic Volumes*

MILEPOST	MP	AADT	CAADT	% TRUCKS
28.4 – 30.42	78.209	4409	385	9

### Truck Ramps

No runaway truck ramps exist due to the flat terrain.

### Port of Entry (POE)

POE has one rover site on this section of highway.

### Highway Safety Evaluation

This SH-52 section has two Non-Interstate High Accident Intersection Locations (HAL) and has no HAL clusters.

Analyses of the 5-year accident data (2012-2016) shows there were a total of 26 crashes involving 45 units (0 fatalities and 26 Injuries) on SH-52 between MP 28.4 and MP 30.422 of which no crashes involved a tractor-trailer combination. Implementation of 129,000 pound trucking is projected to reduce truck traffic on this route.

*Table 4. HAL Segments for SH-52*

Route	Statewide Rank	Milepost Range	Length (miles)	County
SH-16/SH-52	211.5	30.422	Intersection	Gem
SH 52	366	29.785	Intersection	Ada

**Additional Data:*****Bridge Data:***

**Route Number:** SH 52  
**Department:** Bridge Asset Management  
**Date:** 7/12/2017

<b>Route</b>	<b>From:</b>	near Emmett, ID
	<b>Milepost:</b>	28.40
	<b>To:</b>	Emmett, ID
	<b>Milepost:</b>	30.40

<b>Highway Number</b>	<b>Milepost Marker</b>	<b>Bridge Key</b>	<b>121 Rating<sup>a</sup> (lbs)</b>
52	30.27	14641	248,000

<sup>a</sup>: The bridge is adequate if it has a rating value greater than 121,000 pounds or is designated as "OK EJ" (okay by engineering judgment).