

MCTAC Agenda

April 9, 2015

Time: 8:30 a.m.

Location:

**Motor Carrier Transportation Division
3930 Fairview Industrial Drive S.E.
Salem, Oregon 97302
2nd Floor Hearing Room**

Facilitator: Ed Scrivner

- I. Roundabout “Rodeo” Results & Recommendations (US20 & OR47) . . . Steve Litchfield, Bob Bryant, and Joel McCarroll.**
- II. DMV OAR update – bond requirement . . . Lydia Beebe**
- III. National Registry number required on medical certifications & the Commercial Learner Permit Project. . . Lydia Beebe**
- IV. EROAD: IFTA Release / Electronic Logging Solution Pilot Update . . . Gail Levario**
- V. Federal request for comment about accident causation . . . David McKane**
- VI. TSD Posters for bicycle/truck safety . . . David McKane**
- VII. 2015 Out-of-Service Criteria effective 4/1 . . . David McKane**
- VIII. Update on media coverage for the HHG action . . . Kim Cline**
- IX. OAR: 740-300-xxxx W/M Electronic Truck Tracking Solution . . . Ric Listella
Trailer Provision Update . . . Christy Jordan**

MINUTES
MOTOR CARRIER TRANSPORTATION ADVISORY COMMITTEE MEETING
April 9, 2015

Attendees:

Tony Coleman – ODOT/Region 2
Christy Jordan – ODOT/MCTD
Kim Cline – ODOT/MCTD
Dave Gray – Glostone Trucking Solutions
Mike Darling – ODOT/Region 4
Joel McCarroll – ODOT/Region 4
Scott Beaird – Kittelson & Associates, Inc.
Bert Hartman – ODOT/Bridge
Tara L. Caton – ODOT/MCTD
Ed Scrivner – ODOT/MCTD
Matt Garrett – ODOT Director
David McKane – ODOT/MCTD
Lanny Gower – Con-Way
Gail Levario – EROAD
Nina Elter – EROAD
Leon Fischer – Siletz Trucking Co.
Ric Listella – ODOT/MCTD
Bob Russell – OTA
Bob Bryant – ODOT/Region 4
Stephanie Rial – Omega Morgan
Mark Richardson – Omega Morgan
Gregg Dal Ponte – ODOT/MCTD
Dave Jostad – May Trucking Company
Roger Banks – Wildish Group of Companies
Bob Pappé – ODOT/Traffic-Roadway
David Ulmer – Gresham Transfer
Lydia Beebe – ODOT/DMV
Kristan Mitchel. – ORRA
Gayle Green – ODOT/MCTD
David Rios – FMCSA
Angela Kargel – ODOT/Region 2
Rich Crossler-Laird – ODOT/Technical Serv. Roadway
Kevin Haas – ODOT/Technical Serv. Traffic
Kristine Kennedy – Highway Heavy Hauling
Bob Wilhelm – Wilhelm Trucking
Andrew Eno – FMCSA
Bill Lundin – Independent Dispatch Inc. (IDI)

Facilitator: Ed Scrivner

Introduction . . . ODOT Director Matt Garrett

- ◆ Director Garrett welcomed everyone and thanked the committee members for their interest and dedication. He feels that the Motor Carrier Transportation Advisory Committee is one of the most productive committees we have and appreciates the group's straightforward approach to dealing with concerns. Representatives from trucking and related industries, law enforcement, ODOT, and other city, county, state, and federal offices regularly attend, sometimes from several hours away. Members are passionate and honest, which leads to great dialog, workable solutions, and allows us to grow.

The first topic on today's agenda is a discussion of the results of recent roundabout "roadeos". Conversations about roundabouts have been going on for almost 18 years here at ODOT. When first suggested as a potential traffic control option for an intersection in Sisters in 2010, the trucking industry raised several concerns. ODOT listened and we worked with our transportation partners and developed a Division Directive in April 2012. The goal is to design a solution that will best fit the needs of industry, promote traffic flow, and increase safety. Matt said it's been his experience that you will find a path and a solution when you bring folk together around the table. There are many elements that still need to be worked, but the fact that ODOT and the industry showed up, and showed up with solutions, means that all of our hard work has paid off. He thanked MCTAC members for what they do and said it's making ODOT better.

Roundabout "Roadeo" Results & Recommendations (US20 & OR47) . . . Bob Bryant and Joel McCarroll

- ◆ **(See Attach. A)**
People traveling both nationally and internationally have seen more and more roundabouts showcased to keep traffic moving safely through intersections instead of having it stop for signals. The first roundabout in Oregon was developed and installed in 1994 on Century Drive by the City of Bend. It's given everyone a better idea of the types of considerations we must make before installing additional roundabouts, and Bend has come a long way since then.

In some circumstances, there are certainly merits for a roundabout. It saves time and fuel to keep vehicles moving instead of idling at a stop light. As Director Garrett mentioned, the City of Sisters selected a roundabout on Hwy 20 and Barclay Road as their preferred traffic control device in 2010. Work on this intersection was tabled until the 2012 Highway Directive was complete and we have been working in collaboration with the trucking industry since then to make sure that the roundabout is properly designed, including a bypass lane for oversized loads that would be

unable to traverse the circle. Today we're here to share the results of that collaboration.

Several trucking companies supplied drivers and various vehicle combinations to physically test the design layouts at the roadeo for the proposed roundabouts on Hwy20 and US47. US20 is a proposed single lane roundabout for the intersection of US20 at Barclay/McKinney Butte Road. The design concept has been developed in collaboration with stakeholders and representatives of the freight industry to ensure the roundabout is properly sized to accommodate the design vehicle. The roundabouts are designed with a mountable truck apron and every configuration that came to the roadeo was able to make it through the roundabout as designed, though we still will have an available bypass. The practical test exceeded all of our computer models.

Bob Russell questioned the design regarding the bypass. He wanted to know if there would be one or two bypass lanes.

Bob Bryant answered that the design will incorporate at least one bypass lane, but the final determination hasn't yet been made on whether there will be one or two bypass lanes.

David McKane asked about vehicles that miss their turn and whether that was tested. Bob Bryant answered that we did test some U-turns and the 63' trailer was able to make it.

David Jostad indicated that the first roundabout in Bend on Century Drive was a disaster and he asked why the internal truck apron is designed to go up instead of making the driving lane wider. The answer is that part of the intent of the apron is to interrupt line of sight to divert drivers to the outer ring, forcing them to go slower. It's a balancing act to keep the lane narrow enough to prevent anyone trying to pass and still accommodate larger loads. The designers have also considered outside truck aprons to keep traffic to one lane.

David Jostad also asked about the visibility and any features installed in the center of the roundabout which could block a driver's view, as has happened in Bend with artwork installed in the center of the roundabout.

Bob Russell is concerned that we don't know about sight distance in the center island and we don't know for sure if there will be one or two bypass lanes.

Allowing for Bob's two considerations, a motion was made by David Jostad to approve the roundabout and seconded by Bob Russell. There is unanimous concurrence by those present that the roundabout on US20 is appropriately sized and is approved to proceed. Region 4 staff committed to continue to work with stakeholders as decisions are made about bypass lane placement and center island treatments.

◆ **(See Attach. B)**

The two roundabouts on OR47 were discussed at the previous MCTAC meeting and all agreed that they were properly sized contingent on physical testing. The testing was done at the recent roadeo and the designs performed as expected or better. The non-mountable portion of the central island as tested was an elliptical shape, providing a wider truck apron on the north-south direction and narrower truck apron in the east-west direction. This preliminary design was developed to accommodate overdimensional loads. The testing observations indicated that none of the test vehicles required use of the wider truck apron provided by the elliptical shape. Therefore, based on these observations and to facilitate ease of construction, the design has been modified to provide a consistent 20' wide central truck apron.

Bob Russell asked what the distance difference is between the circular 20' central apron and the original elliptical design. The answer is something between five and six feet on either side.

Christy Jordan confirmed that all annual permit holders can make it through as proposed.

Bob Russell moved to approve the two roundabouts on OR47 and Dave Jostad seconded. The motion passed unanimously.

DMV OAR Update – Bond requirement . . . Lydia Beebe

- ◆ May 2011 CDL testing rules included a bond requirement for third party entities who test prospective CDL drivers. The bond amount will be \$2,500. At this time, about 65% of CDL testing in Oregon is done by third party entities like the Department of Education. The intent of the bond is to have funding available to retest CDL drivers at DMV or with another third party tester in the event the initial third party tester's service is found to have been deficient in some manner. The bond requirement was scheduled to be implemented in Oregon 7/8/1015; however, due to system programming constraints, DMV will not be able to meet that deadline. DMV suspects that it will likely go into effect at the same time the Commercial Learner's Permit Project goes into operation.

Bob Russell asked if the third party testers have been notified of the bond requirement and suggested that DMV contact the Insurance Division so that the various insurance companies and bonding agents can be contacted about this new bond and be prepared to supply these new bonds.

Kristine Kennedy asked how DMV knows when someone needs to be retested due to testing deficiency.

Lydia said that DMV hasn't officially notified the third party testers in writing, but has verbally notified them of the upcoming bond requirement. DMV has people who oversee the third party testers and there are record keeping requirements which FMCSA oversees.

FMCSA representatives confirmed that Oregon has good testers and examiners and that none have been deemed deficient to date.

Oregon has had no incidents to this point that would require retesting. That's one of the reasons our bond amount is so low, especially compared to other states.

National Registry number on medical certifications & the Commercial Learner Permit Project . . . Lydia Beebe

- ◆ As of April 1, 2015, any medical card issued May 21, 2014 or later must have the physician's registry number listed on it. The cards must also include the date of the medical exam. DMV does not regularly verify the number on the card is valid; however, it can be checked at the discretion of the employee who receives the card. Cards that do not have complete information are returned to the driver with an explanatory letter.

Gregg Dal Ponte asked who does the testing to put the physicians on the National Registry. He also asked if the curriculum is provided by FMCSA.

Per David Rios and Andy Eno with FMCSA, contractors who have met the standards of the Medical Division of FMCSA conduct the physician testing and FMCSA provides guidelines to those contractors. Andy added that a letter went out to the testers from the Medical Division with additional information and clarification about sleep apnea.

Bob asked Lydia to provide a list of the most common things she sees that are problematic on medical cards. Per Lydia, the new requirements for the National Registry number and issuance date data wouldn't be reflected in current counts, so

DMV would like to take the month of April to gather up-to-date information about medical card deficiencies. The information will be available for the next MCTAC meeting.

- ◆ **Commercial Learner Permit Project:** The CDL Learner Permit (CLP) authorizes a driver to operate a designated class of vehicles if accompanied by a driver licensed to operate such vehicles. New requirements effective 7/8/2015 for taking a CDL skills test require that the applicant have a CLP. As with the new bond requirement mentioned earlier, the I.T. work necessary to implement these changes effective 7/8/2015 will not be complete.

DMV will not be ready to flip the switch to start issuing the CLPs by that deadline and that poses a problem because DMV takes the federal rule around CDLs and puts it into Oregon Statute. They started the process in 2011 and the House Bill passed, meaning DMV's authority under statute for the current process of issuing a Commercial Instruction Permit (CIP) will be repealed 7/8/15 and their authority to issue CLPs in their place will be granted, but DMV won't be capable of issuing the CLP at that time. As a result, DMV will continue to issue CIPs until the programming is in place to issue the new Commercial Learner Permit. DMV has decided not to apply the new CLP/CDL requirements that are effective 7/8/15 with the exception of the rule that a person can be issued a CDL or CLP only if they are a US citizen or a permanent legal resident. DMV will also apply that requirement to CIPs effective 7/8/15.

EROAD Electronic Logging Solution Pilot Update / IFTA Release . . . Gail Levario

- ◆ **(See Attach. C)**
EROAD shared a PowerPoint presentation highlighting their Electronic Logging Solution (ELS), which is about to enter the pilot testing phase. Features include dynamic counters which track time remaining until the driver must rest and one that shows resting time. There is also a violation indicator, an 8 day rolling view of each individual 24 hour duty day, and a driver event log. The ELS pilot will start April 27, 2015 and last for 2 months. EROAD has a target release date for the ELS sometime in the 3rd quarter 2015.
- ◆ EROAD's Enhanced IFTA Product was released April 1, 2015. Carriers can set up and manage organization, tax, and vehicle details. They can also import and manage fuel records, trip records, and view their IFTA fleet summary. The Fuel Exception Report feature identifies location, consumption, and fuel type exceptions across the fleet. The Trip Record automatically processes and determines IFTA exempt miles according to jurisdictional requirements.

David Gray asked how the driver would know if he's been off duty long enough to satisfy requirements. Gail answered that the dynamic counter for resting time shows exactly how long the driver has been resting and how much longer he has before he can return to duty.

David Rios asked how quickly EROAD can implement forthcoming rule changes into the programming. Gail answered that they can do it in real time and push the update out to everyone.

David Gray asked how long data will be retained in the EROAD database.

A: 7 years.

Federal request for comment about determining accident causation . . . David McKane

- ◆ The US DOT requested comments regarding the feasibility of using a motor carrier's role in crashes as an indicator of future crash risk. The Motor Carrier Transportation Division sent a letter dated February 24, 2015 in response to this request. Per David, we usually have a pretty good idea why a crash occurs. States already conduct review for all crashes to facilitate mandatory data sharing with the Federal Highway Administration and the National Transportation Safety Administration. At a local level, States make this analysis to determine what countermeasures may be appropriate at crash locations. MCTD feels that there should be no need to forward any report to the FMCSA for analysis in order to determine crash causation. **(See Attach. D)**

The period for comment has passed, but all comments submitted to FMCSA are visible at www.regulations.gov if you are interested in viewing them. Refer to DOT Docket No. FMCSA-2014-0177.

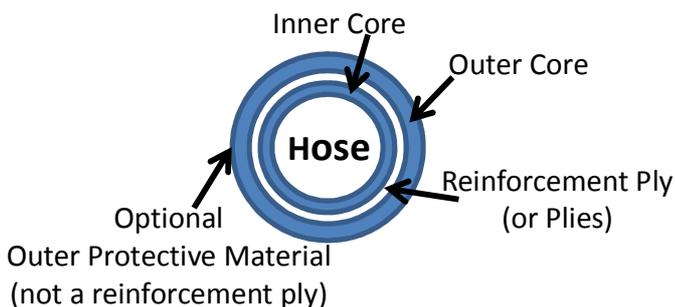
TSD Posters for bicycle/truck safety . . . David McKane

- ◆ David shared the most recent posters developed by the Transportation Safety Division to promote bicycle and truck safety. The message is directed more toward drivers than bikes this time around. If you are interested in obtaining copies please contact either David McKane or Tara Caton.

2015 Out-of-Service Criteria effective 4/1/2015 . . . David McKane

- ◆ As we do each year, ODOT/MCTD has adopted the North American Standard Out-of-Service Criteria which went into effect April 1, 2015. The major revisions are:
 - PART 1 – DRIVER
 - OPERATOR’S/CHAUFFEUR’S LICENS OR PERMIT (NON-CDL)
Page 2: REVISED – a. Vehicle 26,000 lbs or less GVWR not designed to transport 16 or more passengers or placarded loads of hazardous materials. (1) Is not licensed for the type of vehicle being operated. (391.11(b)(5)) **Declare driver out-of-service.** (Out-of-service action to be initiated only upon home jurisdiction license verification).
 - FATIGUE
Page 4: Entire paragraph REVISED – When a driver operates a commercial motor vehicle while his/her ability or alertness is so impaired, or so likely to become impaired, through fatigue as to make it unsafe for him/her to begin or continue to operate the commercial motor vehicle. (392.3) **Declare driver out-of-service until no longer fatigued.**
 - COMMUNICATION
The Out-of-Service for non-English speaking drivers has been removed. This is now a violation only.
 - PART II – VEHICLE
 - BRAKE SYSTEMS
Page 20: NEW – a. Defective Brakes (7)(b) Loose or missing brake caliper mounting bolt. (393.48(a))

Page 24: PICTURES AND CHART FOR ADDED CLARIFICATION – Air Brake Hose/Tubing (h)(1) Any damage extending through the reinforcement ply. (393.45(a)) (as per 4 and 5 below)



Ref #	Visual Characteristics	OOS Status
1	Wear extends into outer protective material.	Not "OOS"
2	Wear extends through outer protective material into outer cover.	Not "OOS"
3	Wear makes reinforcement ply visible, but ply is intact.	Not "OOS"
4	Reinforcement ply is visible and ply is frayed, severed, or cut through.	"OOS"
5	Wear extends through reinforcement ply.	"OOS"

- BUSES, MOTOR COACHES, PASSENGER VANS OR OTHER PASSENGER CARRYING VEHICLES – EMERGENCY EXITS/ELECTRICAL CABLES AND SYSTEMS IN ENGINE AND BATTERY COMPARTMENTS/SEATING

Page 63: NEW SECTION – C. Loose and/or Temporary Seating

(1) No bus, motor coach, passenger van or other passenger carrying vehicle:

- a. Shall be equipped with aisle seats unless such seats are so designed and installed as to automatically fold and leave a clear aisle when they are unoccupied. (393.91)
- b. Shall be operated if any temporary seating, occupied or not, therein is not secured to the vehicle in a workmanlike manner. This includes the use of items not designed for use as seats in vehicles, including but not limited to, milk crates, folding chairs, plastic steps, or plastic stools. (393.91)
- c. Shall be operated with the presence of any seating, whether secured or unsecured, in excess of the manufacturer's (manufacturer, remanufacturer, or final stage manufacturer) designed seating capacity. (390.33)

NOTE: (a), (b), or (c) does not apply to mobility devices (such as wheel chairs) secured using proper tie-downs.

Bob Russell asked if David would supply an electronic copy of the updated Out-of-Service Criteria.

A: No, but electronic copies can be purchased through CVSA. David can provide a paper copy upon request.

Update on media coverage for the HHG action . . . Kim Cline

- ◆ Recently, MCTD in cooperation with the Better Business Bureau conducted a Household Goods action in the Portland area which was covered by multiple news agencies. MCTD staff invited ten companies that were offering moving services on sites like Craig's List, without having the appropriate certification to provide such services. Nine of the ten companies invited showed up to the operation. Some of these non-certified movers had felony convictions, outstanding warrants, and no driver's license. One had even used marijuana just before appearing to the "move" jobsite.

Intrastate moving is a regulated industry in Oregon and monitored by ODOT/MCTD, so anyone providing these services must file an application with MCTD, charge an appropriate rate, and have criminal background checks done for each employee. (Interstate moves fall under federal jurisdiction.) MCTD's goal is to educate these companies and bring them into compliance with regulations while protecting our customers. You can check out the Consumer Guide to Moving on our website: <http://www.oregon.gov/ODOT/mct/Pages/moving.aspx>

OAR: 740-300-xxxx W/M Electronic Truck Tracking Solution . . . Ric Listella Trailer Provision Update . . . Christy Jordan

- ◆ Ric handed out a draft OAR intended to address an identified problem with carriers who have taxable operations but have consistently filed zero mileage reports. MCTD would like to require that these companies use an electronic truck tracking solution like EROAD to record correct mileage, file reports, and pay the w/m tax due to the State. The group reviewed the draft and had several suggestions to make the rule more specific. They asked Ric to incorporate the changes and provide an updated draft for further review.

Pending adjusting the language to clarify the target of the OAR, the group unanimously approves the draft of the administrative rule.

UPDATE – Amended rule language follows:

New Rule

740-300-xxxx (0005)

Failure to Report or Pay Oregon Highway Use Tax

(1) A motor carrier adjudicated to have repeatedly violated Oregon Revised Statute (ORS) Chapter 825 or the rules of the Department by failing to report and pay all

operations and Oregon Highway Use Tax, as described in ORS 825.450, et seq., at the discretion of the Department may be required to implement and use an “electronic system” defined in OAR 740-065-0005 (7) to report and pay its tax electronically through the “electronic system provider” defined in OAR 740-065-0005 (8) for all vehicles operating in Oregon.

(2) When notified by the Department of the requirement to use an “electronic system”, the motor carrier must prove, to the satisfaction of Department, the “electronic system” is installed and operational in all registered vehicles operating in Oregon within 30 calendar days from the date of the notification.

(3) As a condition of maintaining a continuing account with the Department, the motor carrier must satisfy payment requirements determined by the Department for any outstanding debt.

(4) After 36 months or the satisfaction of the debt, whichever occurs first, the motor carrier may request a review by the Department to report and pay taxes without a requirement to use an “electronic system”.

(5) Failing to comply with paragraphs (1) through (3) of this rule will result in the suspension of the motor carrier authority.

Stat. Auth.: ORS 184.616, 184.619 & 823.011

Stats. Implemented: ORS 825.137, 825.139, 825.135, 825.450, 825.474, 825.490 to 825.496 & 825.506

- ◆ Trailer Provisions: David Ulmer requested that we review trailer provisions in Division 82 at a previous MCTAC meeting. Christy shared that the process is underway, but is very involved. She hopes to have updated OAR language to share at the next meeting.

Roundtable:

- ◆ Bill Lundin asked if anyone else had difficulty with the new IRP FRP renewal process. His company renewed their vehicles in November and the data was uploaded in December, but it didn't all get posted to the states.

Gregg said that the data is uploaded via CVIEW and then it's downloaded from them by the various jurisdictions. The issues Bill mentioned appear to be unique to Independent Dispatch.

- ◆ Lanny Gower said that the data from Motor Carrier Trucking Online and the data people can view in the Enforcer database doesn't always match. Con-Way weekly

has trucks that have been renewed and show up correctly in TOL but don't show up in Enforcer. Gay Rowan, Registration Manager, has had to manually go in and push the individual truck data out to Enforcer as these discrepancies are identified.

Gregg will look into this further and report back to Lanny.

Meeting adjourned at 10:45 a.m.

US 20: Barclay Roundabout Agreement Update

Sisters

MCTAC

April 9, 2015

Background

ODOT Region 4 and the City of Sisters have proposed a single lane roundabout for the intersection of US 20 at Barclay/McKinney Butte Road. Pursuant to Highway Division Directive DES-2, the design concept (shown in Figures 1 and 2 of the attached Memorandum by *Kittleson*) has been developed in collaboration with stakeholders and representatives of the freight industry to ensure the roundabout is properly sized to accommodate the design vehicle.

Figures 1 and 2 illustrate the proposed design of the roundabout that resulted from the collaboration among representatives from ODOT, designated representatives from the trucking industry, and the City of Sisters, and shows the tracking paths of various truck configurations. This roundabout design was laid out to full scale and tested with multiple truck/trailer combinations at the Deschutes County Fairgrounds on February 27th and 28th, 2015, and at Portland Meadows on March 5, 2015 (see attached testing summary report).

Conclusion

All of the vehicles tested with the proposed design were able to be accommodated within the roundabout, which shows that the roundabout design is properly sized for the freight design vehicle and can accommodate over-dimensional freight vehicles. Even larger over-dimensional vehicles than those tested would be able to use the design's bypass lane, as shown by the attached Figure 2.



KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

354 SW Upper Terrace Drive, Suite 101, Bend, Oregon 97702 P 541.312.8300 F 541.312.4585

MEMORANDUM - DRAFT

Date: March 23, 2015

Project #: 12146

To: Mike Darling
ODOT Region 4

From: Scott Beaird and Jeff Whitman

Project: US 20/Barclay Roundabout

Subject: Roundabout Field Test Documentation

In April 2014, at the request of the freight industry, ODOT and the City of Sisters agreed to field test the design for the proposed US 20/Barclay roundabout. This was a step in the process that ODOT, the City, and the freight industry have undertaken to ensure concurrence among all parties regarding the sizing of the proposed roundabout. The intended outcomes of the field test were to:

- Ensure the proposed design has been developed and properly sized for the agreed upon accommodation and design vehicles
- Allow drivers to experience the proposed design and become comfortable using the roundabout

This memorandum documents the vehicles tested and summarizes key findings.

TEST OVERVIEW

Two field tests were conducted. The first test was conducted in Redmond, OR at the Deschutes County Fairgrounds on February 27, 2015. The test was intended to allow drivers based in Central Oregon to experience the proposed roundabout. The test vehicles at this location were generally standard dimension vehicles (i.e. not oversize/overweight). The second test was conducted at Portland Meadows in Portland, OR on March 5, 2015. This test was conducted to allow overdimensional vehicle combinations, most of which are based in the Portland area, to test the design.

The setup for both tests included surveyed points to ensure the test was an accurate representation of the proposed design. Cones and sandbags were placed on the surveyed points to represent non-mountable and mountable curbs, respectively. The tests were documented through video, photos, and observation logs. Observers used the logs to note where overtracking occurred and measured the distance of overtracking on non-mountable and mountable curb.

The primary design elements being tested included:

- **Overall roundabout sizing** – The roundabout diameter, entry widths, and exit widths were tested to ensure adequate accommodation of the test vehicles.
- **Central island truck apron** – A standard design feature for roundabouts is a mountable truck apron around the central island. This apron is generally designed such that the cab of the truck is not required to use the apron, but the trailer may track over the mountable apron.
- **Outside truck aprons** – In cases where vehicles larger than a standard semi-trailer (WB-67) must be accommodated through a roundabout, mountable truck aprons are sometimes included on the outside of the entry and/or exit. In the case of this design, outside entry truck aprons were tested for the outside of both US 20 approaches.
- **Roundabout bypass** – ODOT and the City agreed to test the feasibility of a bypass of the roundabout for use by overdimensional vehicles that are not able to pass through the roundabout. If constructed, a bypass would likely be provided in one quadrant of the intersection and would be gated.

SUMMARY OF TRUCKS TESTED

Between the two test locations, eighteen unique tractor-trailer combinations were tested through the US 20/Barclay roundabout design. This section summarizes those combinations and documents basic dimensions for each combination. The truck number assigned to each combination in this section will be referenced in the following sections.

Deschutes County Fairgrounds

A total of twelve combinations were evaluated at the Deschutes County Fairgrounds test location. At this test location, most of the test vehicles made each of the movements (left, through, and right) from each direction.

Truck #1 – Central Oregon Trucking

Tractor with 53' flat-bed trailer, Total Length=73'



Truck #2 – Central Oregon Trucking

Tractor with 48' flat-bed trailer with load, Total Length=70'



Truck #3 – Art Davis Towing

Tractor with 44' low-boy trailer, Total Length=66'



Truck #4 – Art Davis Towing

Class C semi tow truck (37' long) with Truck #3 in tow, Total Length=106'



Truck #5 – Les Schwab

Tractor with 35' standard trailer and 28' standard trailer, Total Length=82'



Truck #6 – Tewalt and Sons

Dump truck (26' long) with 48' dump trailer, Total Length=74'



Truck #7 – City of Redmond

Dump truck and dump trailer (Dimensions not recorded)



Truck #8 – Stinger Transport

Tractor with 53' standard trailer, Total Length=73'



Truck #9 – Road Runner

Tractor with two 28' standard trailers, Total Length=75'



Truck #10 – Cascade Transport

Tractor with 53' standard trailer, Total Length=73'



Truck #11 – Charlie Every Trucking

Tractor with 76' booster trailer, Total Length=101'



Truck #12 – Charlie Every Trucking

Tractor with 30' mountain trailer and 24' mountain trailer, Total Length=90'



Portland Meadows

A total of seven combinations were evaluated at the Portland Meadows test location. With a few exceptions, these test vehicles were primarily testing the through movements on US 20.

Truck #13 – Redmond Heavy Haul

Tractor with 110' booster trailer, Total Length=130'



Truck #14 – Gresham Transfer

Tractor with 90', 75', and 65' retractable flat-bed trailer, Total Length=112' (with 90' trailer)



Truck #15 – Phil Sterling Home Service

Tractor with 75' trailer and manufactured home load, Total Length=101', Load Width=14'



Truck #16 – Ken Montgomery Trucking

Tractor with 70' logging trailer and 102' long load, Total Length=112'



Truck #17 – Redmond Heavy Haul

Tractor with 101' booster trailer, Total Length=125'



Truck #18 – Wilhelm Trucking Company

Tractor with 90' booster trailer, Total Length=113', Axle Width = 13.5'



TEST OBSERVATIONS

With each test run, any encroachment of the test vehicle onto mountable or non-mountable curbs was observed, marked, and measured. Appendix A presents a table summarizing the maximum encroachment for each test vehicle on the entry, circulatory roadway/truck apron, and exit. Figure 1 summarizes the encroachment observations graphically.

Summary observations from the test include:

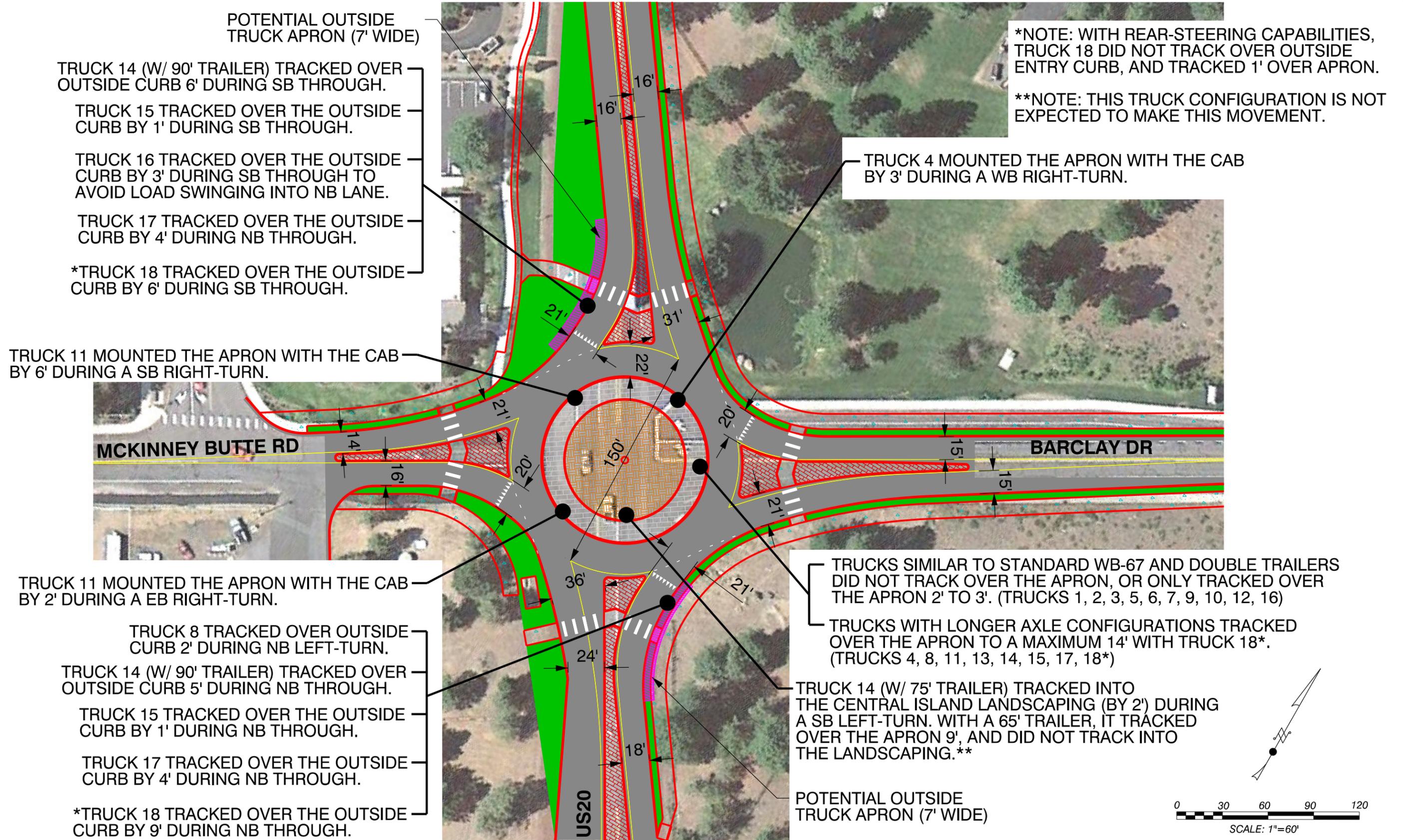
- Only one of the test vehicles at the Deschutes County Fairgrounds test location utilized the outside mountable truck aprons on the entries.
- Most of the test vehicles at the Deschutes County Fairgrounds test location utilized the central island truck apron as intended with their trailer tracking over the apron.
- Truck #4, Art Davis tow vehicle with truck in tow, was able to make the left-turn movement from US 20 to Barclay Drive (towards the industrial park).
- At the Portland Meadows test location, Truck #14 (with the 90' stretch trailer) encroached the most on both the entry and central island truck aprons. The length of this trailer, lack of articulation, and rear axle placement combined to make this the worst-case test vehicle.
- Truck #18 tested the design both without rear steering active and with rear steering. Without rear steering, this combination made it through the roundabout by utilizing most of the

central and outside truck aprons. With rear steering, Truck #18 did not use the outside truck aprons and only minimally encroached (<1 foot) on the central island truck apron.

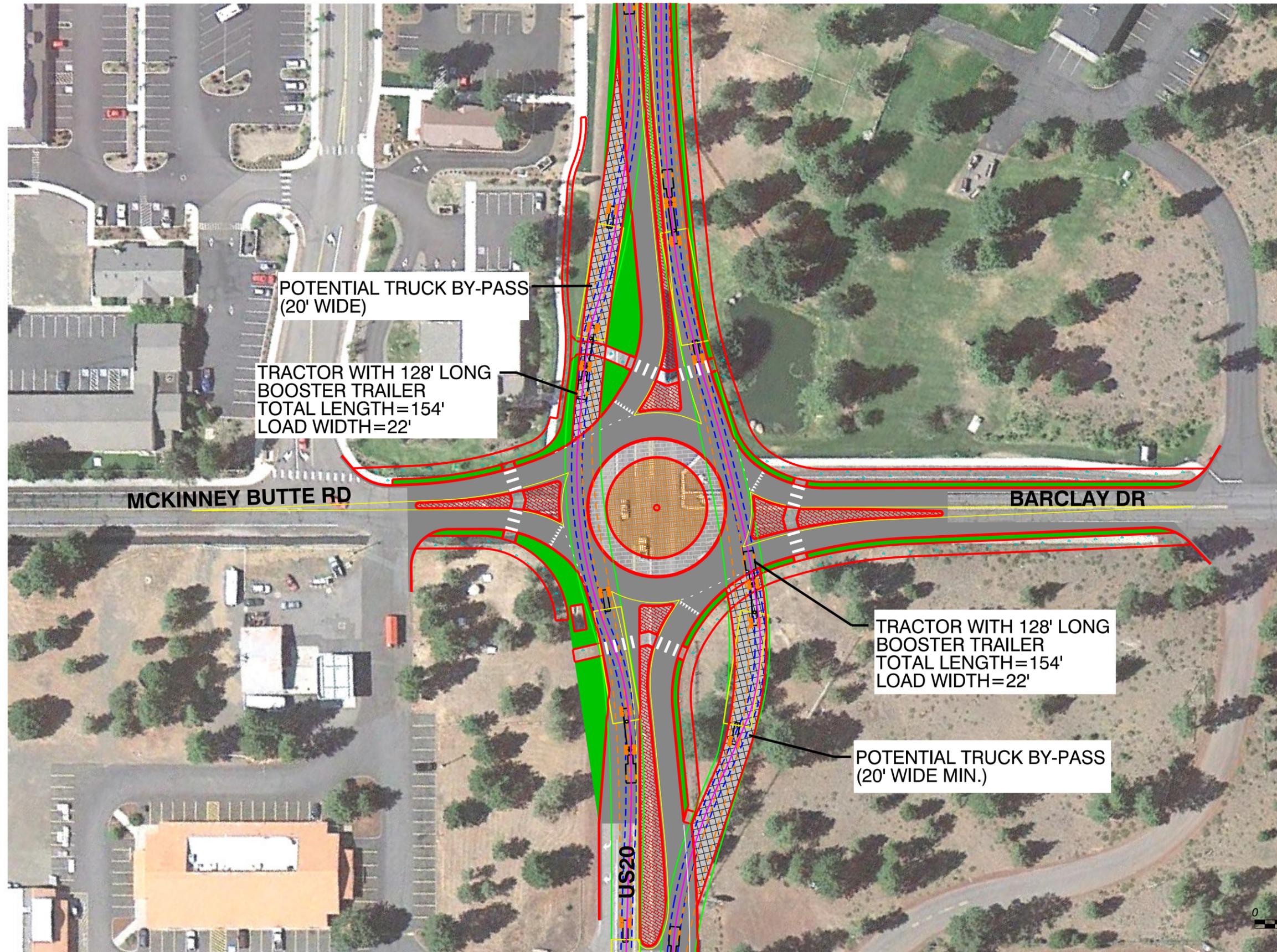
- With the exception of Truck #18 mentioned above, no test vehicle encroached more than 6 feet onto the outside truck aprons.
- Truck #18, the manufactured home transport, was able to make the left-turn movement from US 20 to Barclay Drive (towards the industrial park). The central island truck apron had been designed to accommodate this vehicle type making this movement.

Based on the field observations, the outside truck aprons will be sized to a width of 7 feet, as shown in Figure 1. Also based on field observations and modeling in AutoTurn, the potential bypass has been sized at a width of 20 feet at the narrowest points. The potential bypass options are shown in Figure 2. As previously mentioned, only one of the bypass options is likely to be built given project cost constraints. As shown in Figure 2, either bypass option could accommodate a 154' booster combination based on results from the AutoTurn modeling. Design treatments that could allow vehicles of greater length to use the bypass, such as compacted shoulders for the bypass, will be considered through future design refinements.

DRAFT



TRUCK TESTING SUMMARY
OVERTRACKING OF ENTRY CURB AND CENTRAL ISLAND
SISTERS, OREGON



POTENTIAL TRUCK BY-PASS
(20' WIDE)

TRACTOR WITH 128' LONG
BOOSTER TRAILER
TOTAL LENGTH=154'
LOAD WIDTH=22'

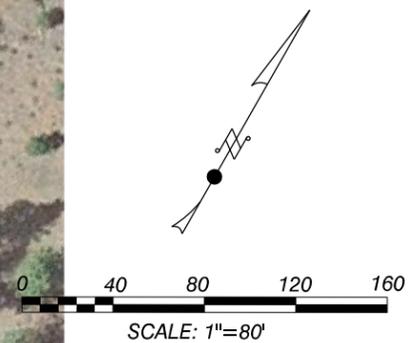
MCKINNEY BUTTE RD

BARCLAY DR

TRACTOR WITH 128' LONG
BOOSTER TRAILER
TOTAL LENGTH=154'
LOAD WIDTH=22'

POTENTIAL TRUCK BY-PASS
(20' WIDE MIN.)

US20



TRUCK TESTING SUMMARY
POTENTIAL TRUCK BY-PASS
SISTERS, OREGON

FIGURE
2

Appendix A - Summary of Test Vehicle Encroachment

		Truck #1			Truck #2			Truck #3			Truck #4			Truck #5			
Movement	Overtracking?	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	
NB	RT	Inside	X	X	X	X	X	X	X	X	X	NT	NT	NT	X	X	X
		Outside	X	X	X	X	X	X	X	X	X	NT	NT	NT	X	X	X
	TH	Inside	X	X	X	X	1'	X	NT	NT	NT	X	1'	X	NT	NT	NT
		Outside	X	X	X	X	X	X	NT	NT	NT	X	X	X	NT	NT	NT
	LT	Inside	X	2'	X	X	2'	X	X	3'	X	X	1'	X	X	X	X
		Outside	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
WB	RT	Inside	X	X	X	X	X	X	X	X	X	3'	X	X	X	X	
		Outside	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	TH	Inside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
	LT	Inside	X	2'	X	X	3'	X	X	2'	X	NT	NT	NT	X	X	X
		Outside	X	X	X	X	X	X	X	X	X	NT	NT	NT	X	X	X
SB	RT	Inside	X	X	X	X	X	X	X	X	X	NT	NT	NT	X	X	X
		Outside	X	X	X	X	X	X	X	X	X	NT	NT	NT	X	X	X
	TH	Inside	X	X	X	X	X	X	NT	NT	NT	X	X	X	NT	NT	NT
		Outside	X	X	X	X	X	X	NT	NT	NT	X	X	X	NT	NT	NT
	LT	Inside	X	1'	X	X	3'	X	X	2'	X	X	7'	X	X	X	X
		Outside	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EB	RT	Inside	X	X	X	X	X	X	X	X	X	NT	NT	NT	X	X	X
		Outside	X	X	X	X	X	X	X	X	X	NT	NT	NT	X	X	X
	TH	Inside	X	2'	X	X	1'	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
	LT	Inside	X	X	X	X	2'	X	NT	NT	NT	NT	NT	NT	X	X	X
		Outside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	X	X	X
		Truck #6			Truck #7			Truck #8			Truck #9			Truck #10			
Movement	Overtracking?	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	
NB	RT	Inside	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		Outside	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	TH	Inside	NT	NT	NT	NT	NT	NT	X	1'	X	NT	NT	NT	NT	NT	NT
		Outside	NT	NT	NT	NT	NT	NT	X	X	X	NT	NT	NT	NT	NT	NT
	LT	Inside	X	X	X	X	1'	X	X	5'	X	X	X	X	X	1'	X
		Outside	X	X	X	X	X	X	2'	X	X	X	X	X	2'	X	X
WB	RT	Inside	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
		Outside	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	TH	Inside	NT	NT	NT	NT	NT	NT	X	1'	X	NT	NT	NT	NT	NT	NT
		Outside	NT	NT	NT	NT	NT	NT	X	X	X	NT	NT	NT	NT	NT	NT
	LT	Inside	X	X	X	X	X	X	X	4'	X	X	X	X	X	2'	X
		Outside	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
SB	RT	Inside	X	X	X	X	X	X	X	X	X	X	X	X	NT	NT	NT
		Outside	X	X	X	X	X	X	X	X	X	X	X	X	NT	NT	NT
	TH	Inside	NT	NT	NT	NT	NT	NT	X	1'	X	NT	NT	NT	X	X	X
		Outside	NT	NT	NT	NT	NT	NT	X	X	X	NT	NT	NT	X	X	X
	LT	Inside	X	X	X	X	X	X	X	3'	X	NT	NT	NT	X	2'	X
		Outside	X	X	X	X	X	X	X	X	X	NT	NT	NT	X	X	X
EB	RT	Inside	X	X	X	X	X	X	X	X	X	X	X	X	NT	NT	NT
		Outside	X	X	X	X	X	X	X	X	X	X	X	X	NT	NT	NT
	TH	Inside	NT	NT	NT	NT	NT	NT	X	1'	X	X	X	X	NT	NT	NT
		Outside	NT	NT	NT	NT	NT	NT	X	X	X	X	X	X	NT	NT	NT
	LT	Inside	X	X	X	X	X	X	X	3'	X	NT	NT	NT	X	2'	X
		Outside	X	X	X	X	X	X	X	X	X	NT	NT	NT	X	X	X
		Truck #11			Truck #12			Truck #13			Truck #14 (w/ 90' Trailer)			Truck #14 (w/ 75' Trailer)			
Movement	Overtracking?	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	
NB	RT	Inside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	
		Outside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	
	TH	Inside	X	3'	X	NT	NT	NT	X	4'	X	X	12'	X	NT	NT	NT
		Outside	X	X	X	NT	NT	NT	X	X	X	5'	X	X	NT	NT	NT
	LT	Inside	X	8'	X	X	2'	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
WB	RT	Inside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	
		Outside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	
	TH	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	LT	Inside	X	X	X	X	2'	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	X	9'	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
SB	RT	Inside	X	6'	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	
		Outside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	
	TH	Inside	X	3'	X	NT	NT	NT	X	3'	X	X	13'	X	NT	NT	NT
		Outside	X	X	X	NT	NT	NT	X	X	X	6'	X	X	NT	NT	NT
	LT	Inside	X	6'	X	X	2'	X	X	5'	X	NT	NT	NT	X	17'	2'
		Outside	X	X	X	X	X	X	X	X	X	NT	NT	NT	X	1'	2'
EB	RT	Inside	X	2'	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
	TH	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	LT	Inside	X	7'	X	X	2'	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	X	X	X	X	X	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Truck #14 (w/ 65' Trailer)			Truck #15			Truck #16			Truck #17			Truck #18*			
Movement	Overtracking?	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	Entry	Circulating	Exit	
NB	RT	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
	TH	Inside	NT	NT	NT	X	6'	X	X	X	X	X	8'	X	X	14'	X
		Outside	NT	NT	NT	1'	X	X	X	X	X	4'	X	X	9'	X	X
	LT	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
WB	RT	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
	TH	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	LT	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
SB	RT	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
	TH	Inside	NT	NT	NT	X	4'	X	X	X	X	X	7'	X	X	13'	X
		Outside	NT	NT	NT	X	X	X	3'	X	X	4'	X	X	6'	X	X
	LT	Inside	X	9'	X	X	8'	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	X	X	X	1'	X	X	NT	NT	NT	NT	NT	NT	NT	NT	NT
EB	RT	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	
	TH	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
	LT	Inside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT
		Outside	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT	NT

Notes:
 X= No Overtracking Observed
 NT= Not Tested





MEMORANDUM

Date: April 3, 2015

Project #: 17891

To: Steve Litchfield, PE
CH2M HILL

From: Scott Beaird, PE, Jeff Whitman, PE and Wade Scarbrough, PE

Project: OR47/Verboort Road/Purdin Road and OR47/David Hill Road Roundabouts

Subject: Roundabout Field Test Documentation

At the request of the freight industry, ODOT and Washington County conducted a field test representative of the designs for the proposed OR47/Verboort Road/Purdin Road and OR47/David Hill Road roundabouts. This was a step in the process that ODOT and the freight industry have undertaken to ensure concurrence among all parties regarding the sizing of the proposed roundabouts. The intended outcomes of the field test were to:

- Ensure the proposed designs have been developed and properly sized for the agreed upon accommodation and design vehicles
- Allow drivers to experience the proposed designs and become comfortable using the roundabouts

This memorandum documents the vehicles tested and summarizes key findings.

TEST OVERVIEW

The field test was conducted at Portland Meadows in Portland, Oregon on March 5, 2015. This test was conducted primarily to allow overdimensional vehicle combinations to test the design. It is expected these vehicles will only travel through the roundabouts in the northbound and southbound directions; therefore, these were the only movements tested.

The setup for the tests included surveyed points to ensure the test was an accurate representation of the proposed designs. Cones and sandbags were placed on the surveyed points to represent non-mountable and mountable curbs, respectively. The tests were documented through video, photos, and observation logs. Observers used the logs to note where overtracking occurred and measured the distance of overtracking on non-mountable and mountable curbs.

The primary design elements being evaluated included:

- **Overall roundabout sizing** – The roundabout diameter, and the approach/exit width and geometry were tested to ensure adequate accommodation of the test vehicles.
- **Central island truck apron** – A standard design feature for roundabouts is a mountable truck apron around the central island. This apron is generally designed such that the cab of the truck is not required to use the apron, but the trailer may track over the mountable apron.
- **Outside truck aprons** – In cases where vehicles larger than a standard semi-trailer (WB-67) must be accommodated through a roundabout, mountable truck aprons are sometimes included on the outside of the entry and/or exit. In the case of this design, outside entry truck aprons were tested for the outside of both OR47 approaches.
- **Approach geometry** – the proposed designs include advance curvature on the highway approaches. Thus, the approach geometry was tested to ensure trucks could be accommodated within the proposed curbs.

SUMMARY OF TRUCKS TESTED

Eight unique tractor-trailer combinations were tested through the roundabout designs. This section summarizes those combinations and documents basic dimensions for each combination. The truck number assigned to each combination in this section will be referenced in the following sections.

Truck #1 – Wilhelm Trucking Company

Tractor with 90' booster trailer, Total Length=113', Axle Width = 13.5'



Truck #2 – Highway Heavy Hauling

Tractor with booster trailer, Total Length=105'



Truck #3 – Ken Montgomery Trucking

Tractor with 70' logging trailer and 102' long load, Total Length=112'



Truck #4 – Phil Sterling Home Service

Tractor with 75' trailer and manufactured home load, Total Length=101', Load Width=14'



Truck #5 – Gresham Transfer

Tractor with 90' retractable flat-bed trailer, Total Length=112'



Truck #6 – Redmond Heavy Haul

Tractor with 101' booster trailer, Total Length=125'



Truck #7 – Puget Sound/Haney Truck Lines

Tractor with standard 53' trailer (Total length not recorded)



Truck #8 – Gresham Transfer

Dump truck (28' long) with 19' dump trailer, Total Length=75'



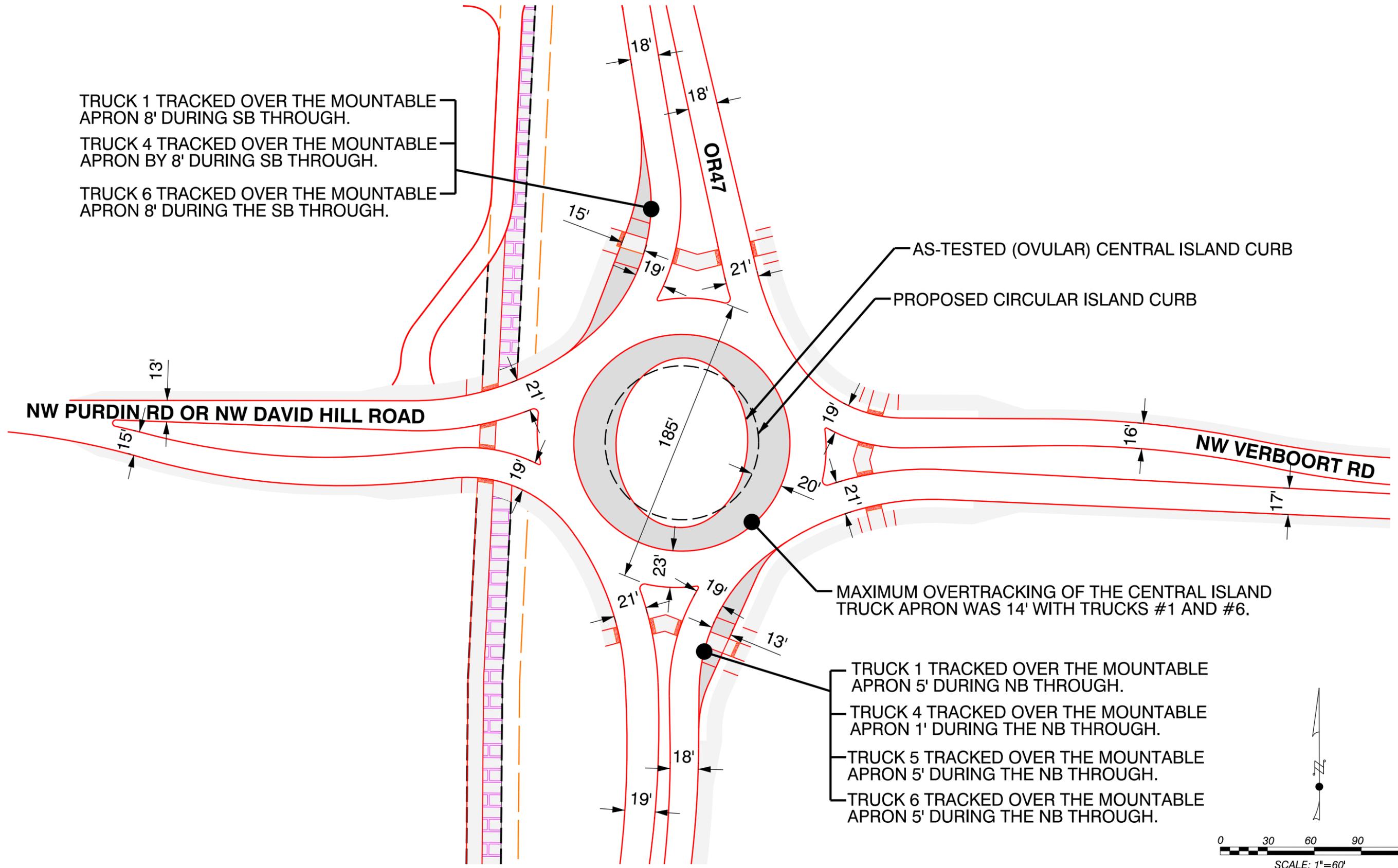
TEST OBSERVATIONS

With each test run, any encroachment of the test vehicle onto mountable or non-mountable curbs was observed, marked, and measured. Appendix A presents a table summarizing the maximum encroachment for each test vehicle on the entry, circulatory roadway/truck apron, and exit. Figure 1 summarizes the encroachment observations graphically.

Summary observations from the test include:

- Trucks #1 and #6 encroached onto to the central island truck apron 14 feet, the most of any test vehicle.
- No test vehicle encroached more than 8 feet onto the outside truck aprons.
- All test vehicles were accommodated within the approach geometry without knocking over any markers.

The non-mountable portion of the central island as tested was an elliptical shape, providing a wider truck apron in the north-south direction and narrower truck apron in the east-west direction. This preliminary design was developed to accommodate overdimensional loads. The testing observations indicated that none of the test vehicles required use of the wider truck apron provided by the elliptical shape. Therefore, based on these observations and to facilitate ease of construction, the design has been modified to provide a consistent 20-foot wide central island truck apron.



TRUCK TESTING SUMMARY
OVERTRACKING OF ENTRY CURB AND CENTRAL ISLAND
FOREST GROVE, OREGON

FIGURE
1

Appendix A - Summary of Test Vehicle Encroachment

		Truck #1			Truck #2			Truck #3			Truck #4		
Movement	Overtracking?	Entry	Circulating	Exit									
NB TH	Inside	X	14'	X	X	5'	X	X	1'	X	X	6'	X
	Outside	5'	X	X	X	X	X	X	X	X	1'	X	X
SB TH	Inside	X	12'	X	X	4'	X	X	X	X	X	6	X
	Outside	8'	X	X	X	X	X	X	X	X	8'	X	X
		Truck #5			Truck #6			Truck #7			Truck #8		
Movement	Overtracking?	Entry	Circulating	Exit									
NB TH	Inside	X	8'	X	X	14'	X	X	3'	X	X	X	X
	Outside	5'	X	X	5'	X	X	X	X	X	X	X	X
SB TH	Inside	X	NR	X	X	10'	X	X	2'	X	X	X	X
	Outside	NR	X	X	8'	X	X	X	X	X	X	X	X
U TURN	Inside	NT	NT	NT	NT	NT	NT	X	4'	X	X	X	X
	Outside	NT	NT	NT	NT	NT	NT	X	X	X	X	X	X

Notes:

X= No overtracking observed

NR= Overtracking dimension not recorded

NT= Not tested



Green cells represent encroachment on mountable curbs

ATTACH. C



EROAD

EROAD

THE FUTURE OF TRANSPORT TECHNOLOGY



Electronic Logging Solution Pilot | Enhanced IFTA Product
Gail Levario, Stakeholder Manager | Nina Elter, Senior Analyst, EROAD Inc.
MCTAC Meeting | Salem, April 9, 2015

ELS Main View



- Change Duty Status buttons
- Dynamic Driver and Duty Period Limit counters
- Dynamic Next Action Counter
- Driver summary
- Current 24hr Graph Grid
- Swipe up for 8 Day Rolling View
- Swipe left for Main Menu

Logbook Settings

Please select or confirm your logbook Hours of Service rules to continue

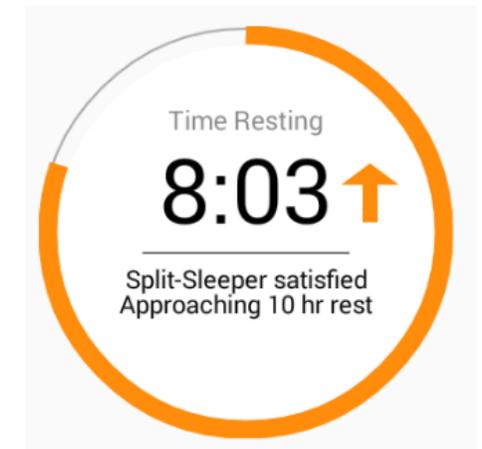
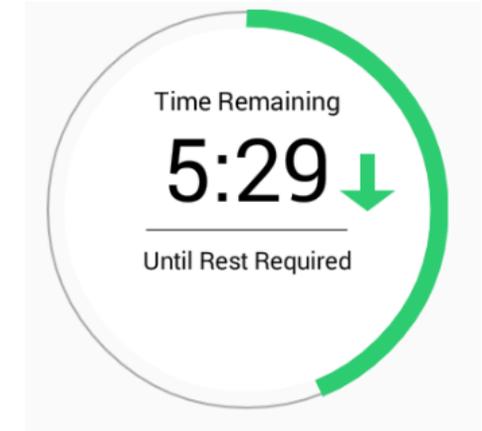
Duty Period
Max drive hours/days for duty period **70/8** 60/7

Cancel Save

Next Action Counter



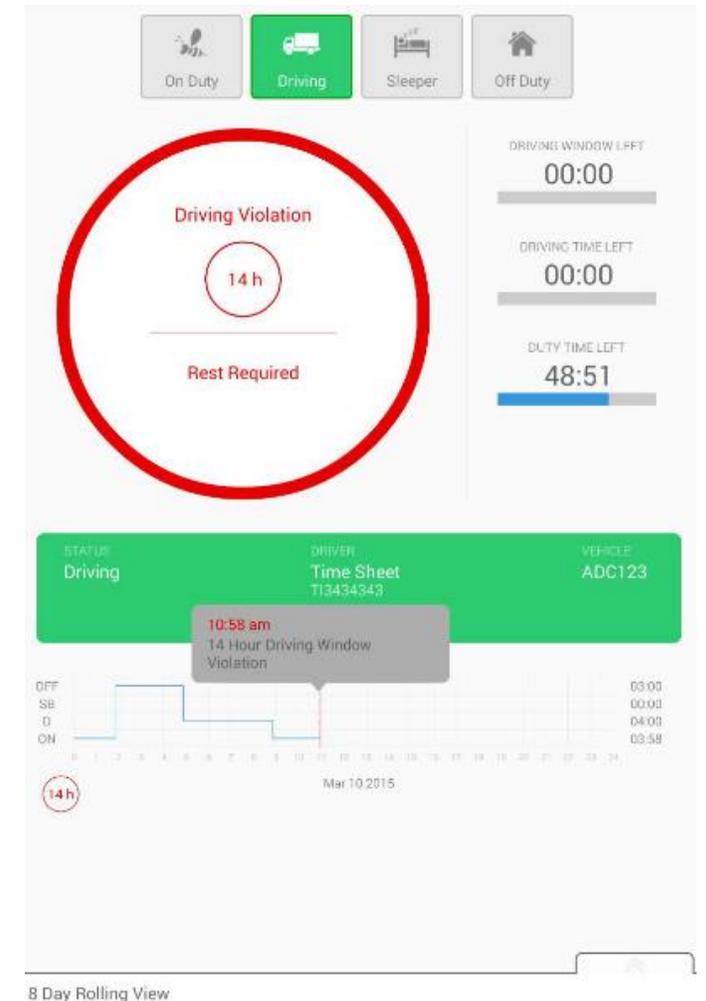
- Dynamic Counters display suggested next action to remain HOS compliant
- ON and D duty status count down to next rest requirement
- SB and OFF duty status count up to next rest(s) to satisfy
- Short and simple messaging



Violation Indicator



- Driving violation displayed in
 - DR duty status only
 - Next Action counter
 - Graph Grid with message bubble
- Driving violations do not appear on snapshot report
- Driving violations do not have durations



Change Duty Status Pop Ups



- Driver overview indicating duty and driving time remaining
- Dynamic messaging
- Auto populate required information
- Manually enter additional details
- Real-time duty status changes only
- Duty Period toggle following satisfactory rest

A screenshot of the EROAD Driver v2.0.4 mobile application. The app's interface is dark-themed. A white pop-up window titled "Start Driving" is centered on the screen. The pop-up contains the following information and fields:

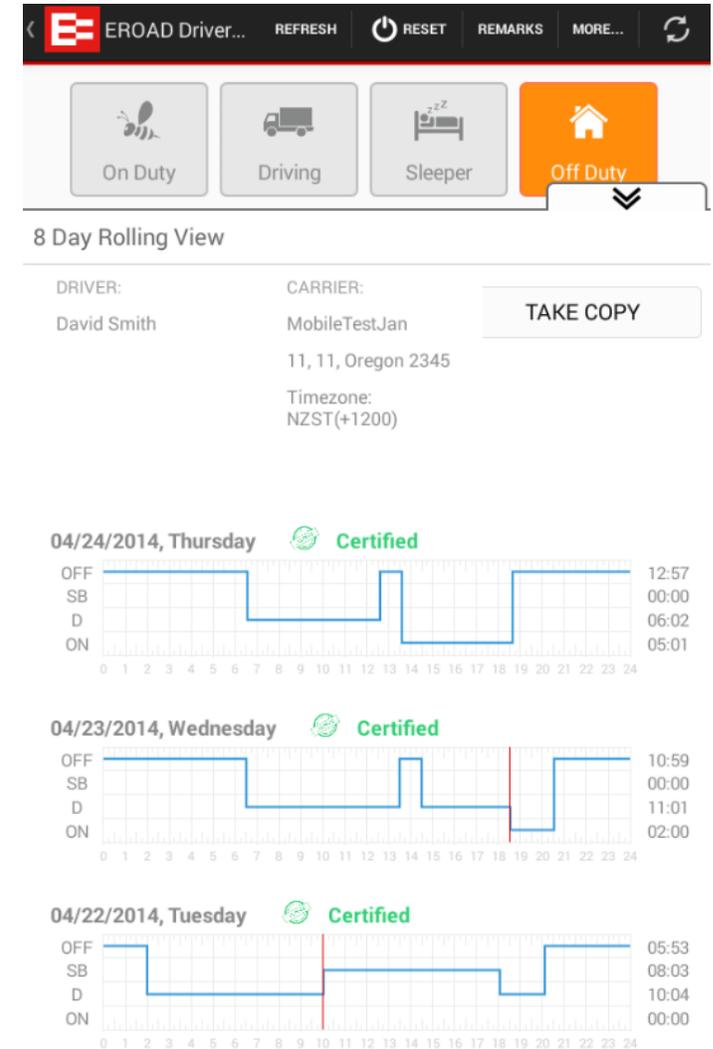
- At the top, two boxes show "70:00 REMAINING HOURS FOR DUTY PERIOD" and "03/14 9:26 am SUGGESTED END DRIVING".
- A message states: "You have rested for 72h:00m. 34hr restart is satisfied. You will start a new Duty period."
- A section titled "LOCATION DETAILS" shows the date and time "14/03/2015 9:26:59 am" and a text input field for "City, Town, State".
- A section titled "VEHICLE DETAILS" includes fields for "Registration" (ADC123), "Dist. Reading" (100 mi), and "Trailer" (Enter Trailer).
- A section titled "ADDITIONAL DETAILS" includes fields for "Co-Driver" (Enter Co-driver (Optional)), "Bill of Lading" (Enter Bill of Lading (Optional)), and "Remarks" (Enter Remark (Optional)).
- A "Duty Period" section has a toggle for "Max drive hours/days for duty period" with "70/8" selected and "60/7" as an alternative.
- A disclaimer at the bottom reads: "By confirming, you agree that info entered here is correct and accurate."
- At the bottom of the pop-up are "Cancel" and "Confirm" buttons.

The background of the app shows a "8 Day Rolling View" of duty status with various icons and a clock.

8 Day Rolling View



- Driver and Carrier information
- 8 day view of each individual 24hr duty day
- Driver certification indicator
- Take Copy button



Driver Event Log



- 24hr duty day summary
- Midnight to midnight event log
- Manual entry indicator *(M)
- Certification button / indicator
- Carrier presented with similar view in Depot (Driver Activity Report)

The screenshot displays the EROAD Driver Event Log interface. At the top, there is a navigation bar with the EROAD logo, a title 'EROAD Driver...', and buttons for 'REFRESH', 'RESET', 'REMARKS', 'MORE...', and a refresh icon. Below this is a summary row for 'Apr 23 2014' showing '13h:01m' Time On duty, '11h:01m' Time Driving, and '492.0 mi' Miles Driven. A 'CERTIFIED' badge and a refresh icon are also present. The main log consists of several entries:

- Off Duty (06h:31m)**: 12:00 am - 6:31 am, 10hr rest satisfied, *(M)I-20, Bend, OR.
- Driving (06h:59m)**: 6:31 am - 1:30 pm, 13520 mi - 13910 mi (390 mi), Driving time has been reset, Start: *(M)I-20, Bend, OR, End: *(M)NE 12TH AVE, PORTLAND, OR.
- Off Duty (01h:01m)**: 1:30 pm - 2:31 pm, Rest duration is 01h:01m, *(M)NE 12TH AVE, PORTLAND, OR.
- Driving (04h:02m)**: 2:31 pm - 6:33 pm, 13910 mi - 14012 mi (102 mi), Start: *(M)NE 12TH AVE, PORTLAND, OR, End: *(M)SW MOHAWK ST, TUALATIN, OR.
- 11 Hour Driving Limit Violation**: 6:32 pm, Driving not permitted as Driving Limit exceeded.
- On Duty (02h:00m)**: 6:33 pm - 8:33 pm, *(M)SW MOHAWK ST, TUALATIN, OR.
- Off Duty (03h:27m)**: 04/23 8:33 pm - 04/24 12:00 am, 10hr rest satisfied, *(M)SW Mowhawk St, Tualatin, OR.
- Driver Certified**: I David Smith, certify that the information contained thereon is true and correct.

Take a Copy Snapshot Report



- Compliance view of Driver Logbook for last 8 days
- Graph Grid for overview, Event Log for detail
- Does not display system notes or Driving violations
- Preview and email capability
- Sync to Depot with PDF storage Driver Snapshot Report

Driver Logbook Report

Driver: Time Sheet

Carrier: MobileTestLan
11, 11, Oregon 2345
Timezone: NZST(+1300)

Report Number: 7bd118ab0ee4f

Generated: 10/03/2015 8:53:07 am

Period: 8/03/2015 8:36:07 pm - 10/03/2015 8:53:07 am

Tuesday, 10 March 2015

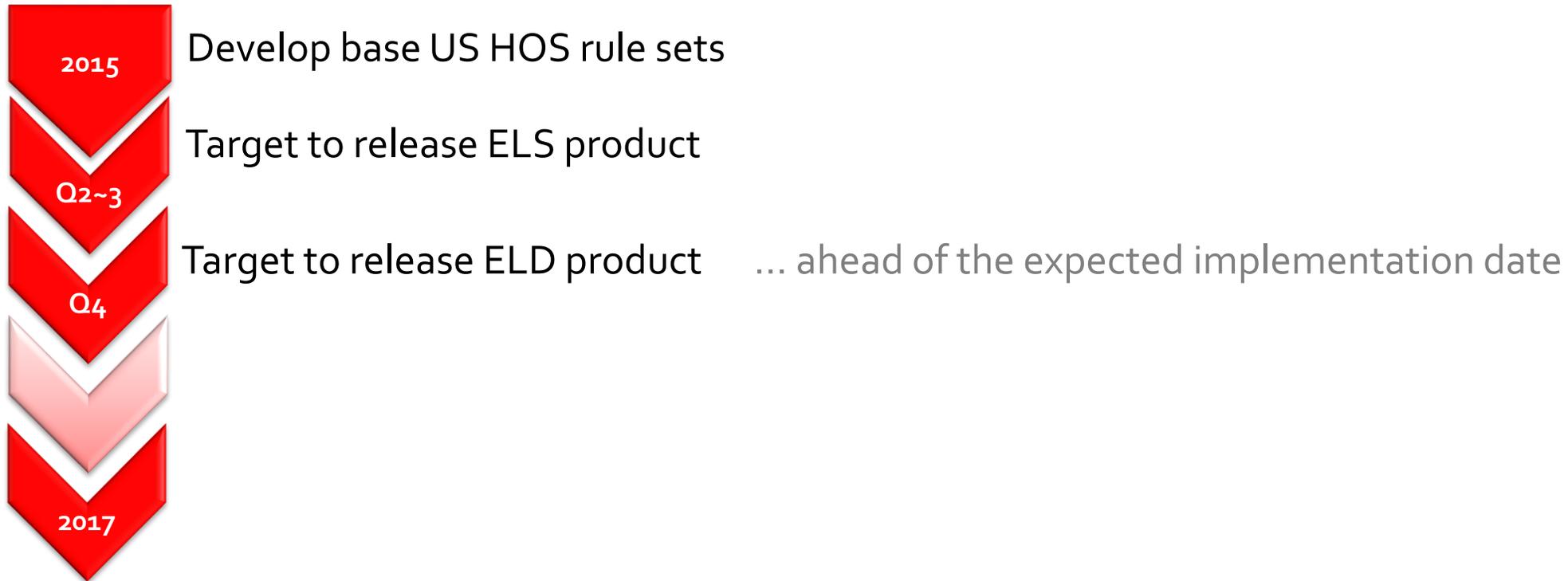
Miles Driven in day: 0 mi

Duty time in day: 06 Hrs 53min

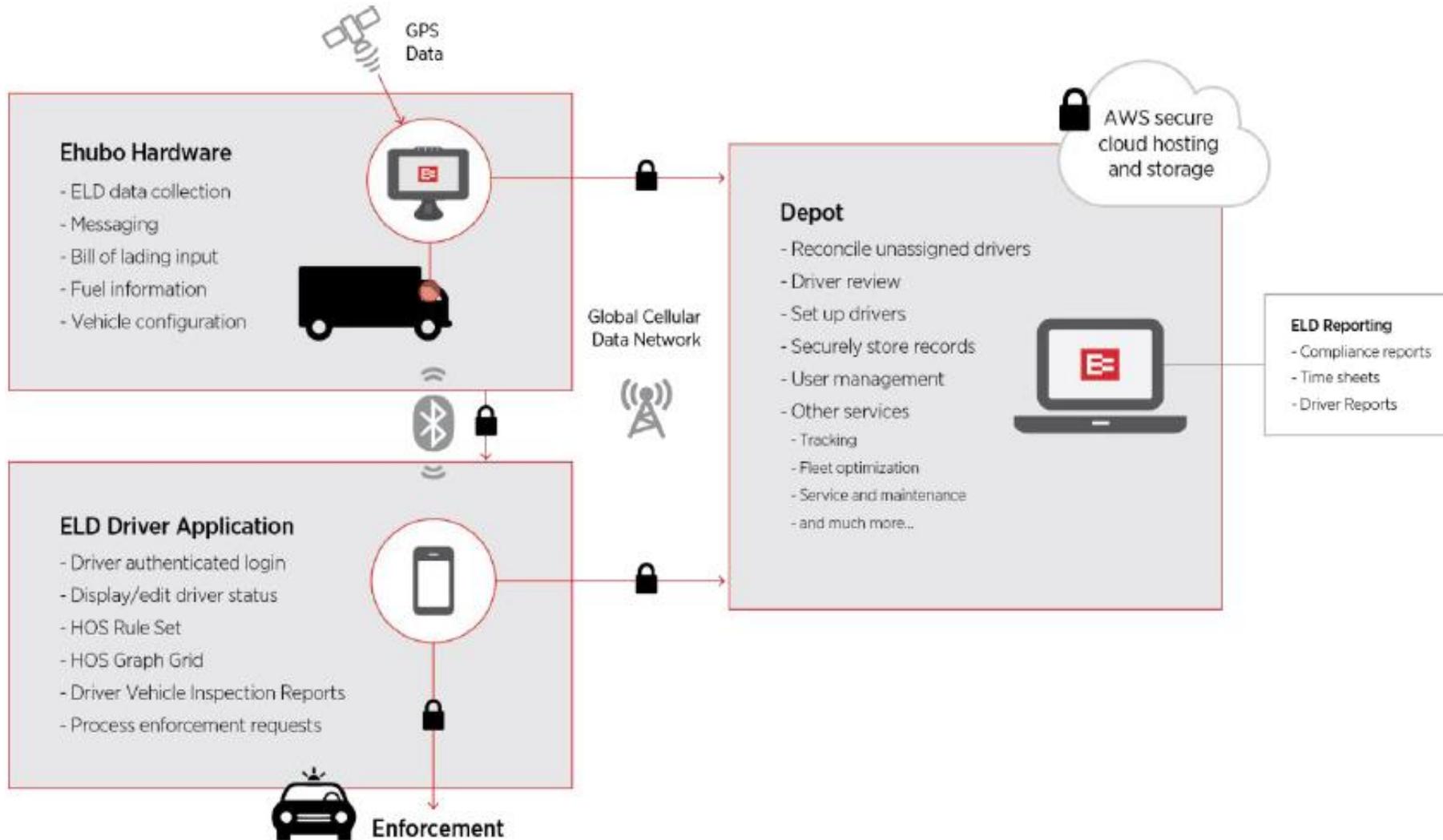


STATUS / DURATION	TIME	LOCATION	VEHICLE NUMBER	ODOMETER / DISTANCE	REMARKS
On Duty / 01h:51m	12:00am - 1:51am	*(M)City, town, state			
Off Duty / 03h:00m	1:51am - 4:51am	*(M)City, town, state			
Driving / 04h:00m	4:51am - 8:51am	*(M)City, town, state	ADC123	Start: 100 End: 100 Dist: 0	
On Duty / 00h:02m	8:51am - 8:53am	*(M)City, town, state	ADC123		

EROAD's Roadmap



Architecture



ELS Pilot is Coming Soon...



What will we pilot?

- Electronic logging system
- With standard interstate property-carrying CMV driver HOS rules
- Timesheet reports

Why?

- Feedback from carriers and drivers on UI, record keeping capability, automated HOS rules, etc.
- Validate that ELS meets regulatory requirements
- Validate performance of ELS technical architecture

When?

- Kick off April 27, 2015
- Duration of 2 months

Who?

- 7 carriers / various driver types

EROAD

Enhanced IFTA Product released April 1, 2015



EROAD



Administration



- Carriers can set up and manage organization, tax and vehicle details

The screenshot displays two overlapping windows from the EROAD software interface. The top window is titled "My Organization" and shows details for "EROD Test Inc". A callout box points to the "IFTA Licenses" section, which includes a table for Base Jurisdiction and License Number, and an "Update IFTA Licenses" button.

Base Jurisdiction	License Number
Oregon	OR - 1222222
Washington	WA - 1234567

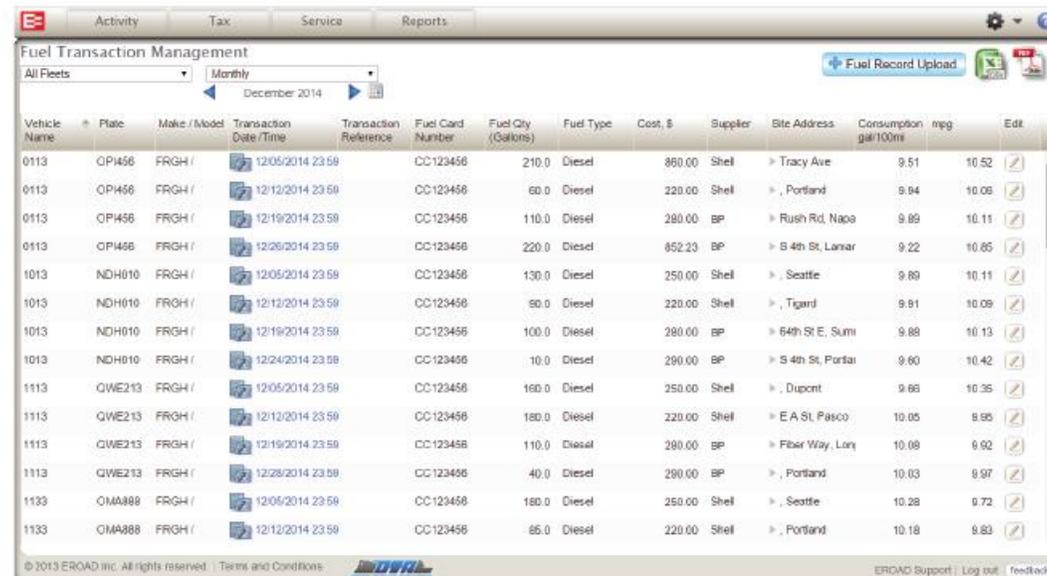
The bottom window is titled "Manage Vehicle - 2113" and shows details for a vehicle. A callout box points to the "Tax Service" section, which includes checkboxes for "Weight Usage", "IFTA Tax", and "IRP Tax", and a dropdown for "IFTA License".

Weight	Usage
46	46,000 lbs
80	80,000 lbs
98.16	98,000 lbs / 3 Axles
98.17	98,000 lbs / 3 Axles
105.8	105,000 lbs / 3 Axles

Fuel Records

- Carriers can create, import and manage fuel records in EROADS' Fuel Management Module
- Fuel transactions can be entered using the Ehubo hardware or by uploading fuel card or bulk fuel data
- Fuel Exception Report identifies location, consumption and fuel type exceptions across the fleet

Ehubo hardware supports driver to enter fuel fill details

The screenshot shows the EROAD Fuel Transaction Management interface. At the top, there are tabs for 'Activity', 'Tax', 'Service', and 'Reports'. Below the tabs, there is a 'Fuel Transaction Management' header with a 'Fuel Record Upload' button. The main area contains a table with columns for Vehicle Name, Plate, Make / Model, Transaction Date / Time, Transaction Reference, Fuel Card Number, Fuel Qty (Gallons), Fuel Type, Cost, \$, Supplier, Site Address, Consumption gal/100mi, and mpg. The table lists 18 fuel transactions for various vehicles, including details like fuel type (Diesel), cost, and location.

Vehicle Name	Plate	Make / Model	Transaction Date / Time	Transaction Reference	Fuel Card Number	Fuel Qty (Gallons)	Fuel Type	Cost, \$	Supplier	Site Address	Consumption gal/100mi	mpg	Edit
0113	OP456	FRGH /	12/05/2014 23:59		CC123456	210.0	Diesel	860.00	Shell	Tracy Ave	9.51	10.52	
0113	OP456	FRGH /	12/12/2014 23:59		CC123456	60.0	Diesel	220.00	Shell	Portland	9.94	10.09	
0113	OP456	FRGH /	12/19/2014 23:59		CC123456	110.0	Diesel	280.00	BP	Rush Rd, Napa	9.89	10.11	
0113	OP456	FRGH /	12/26/2014 23:59		CC123456	220.0	Diesel	852.23	BP	B 4th St, Lamar	9.22	10.65	
1013	NDH010	FRGH /	12/05/2014 23:59		CC123456	130.0	Diesel	250.00	Shell	Seattle	9.89	10.11	
1013	NDH010	FRGH /	12/12/2014 23:59		CC123456	90.0	Diesel	220.00	Shell	Tigard	9.91	10.09	
1013	NDH010	FRGH /	12/19/2014 23:59		CC123456	100.0	Diesel	280.00	BP	64th St E, Sumi	9.88	10.13	
1013	NDH010	FRGH /	12/24/2014 23:59		CC123456	10.0	Diesel	290.00	BP	S 4th St, Portlan	9.60	10.42	
1113	QWE213	FRGH /	12/05/2014 23:59		CC123456	160.0	Diesel	250.00	Shell	Dupont	9.88	10.35	
1113	QWE213	FRGH /	12/12/2014 23:59		CC123456	180.0	Diesel	220.00	Shell	E A St, Pasco	10.05	9.95	
1113	QWE213	FRGH /	12/19/2014 23:59		CC123456	110.0	Diesel	280.00	BP	Fiber Way, Lon	10.08	9.92	
1113	QWE213	FRGH /	12/28/2014 23:59		CC123456	40.0	Diesel	290.00	BP	Portland	10.03	9.97	
1133	QMA888	FRGH /	12/05/2014 23:59		CC123456	60.0	Diesel	250.00	Shell	Seattle	10.28	9.72	
1133	QMA888	FRGH /	12/12/2014 23:59		CC123456	85.0	Diesel	220.00	Shell	Portland	10.18	9.83	

Trip Records



- Fuel Trip Record combines all distance and fuel information by vehicle and jurisdiction
- Automatically processes and determines IFTA exempt miles according to jurisdictional requirements

All reports can be exported in CSV and PDF format.

The screenshot displays the EROAD Fuel Trip Record interface. At the top, there are tabs for Activity, Tax, Service, and Reports. Below the tabs, the 'Fuel Trip Record' section shows a table with columns: Day of trip, State, Fuel Type, Entry Point (Distance (mi)), Exit Point (Distance (mi)), Highways Traveled, Total Miles, IFTA Taxable Miles, IFTA Exempt Miles, and Fuel Fill (gall). The table lists three trips for January 2015. A red box highlights the 'IFTA Exempt Miles' column for the second trip, which shows a value of 23. Below the table, there is a summary row for 'Totals'.

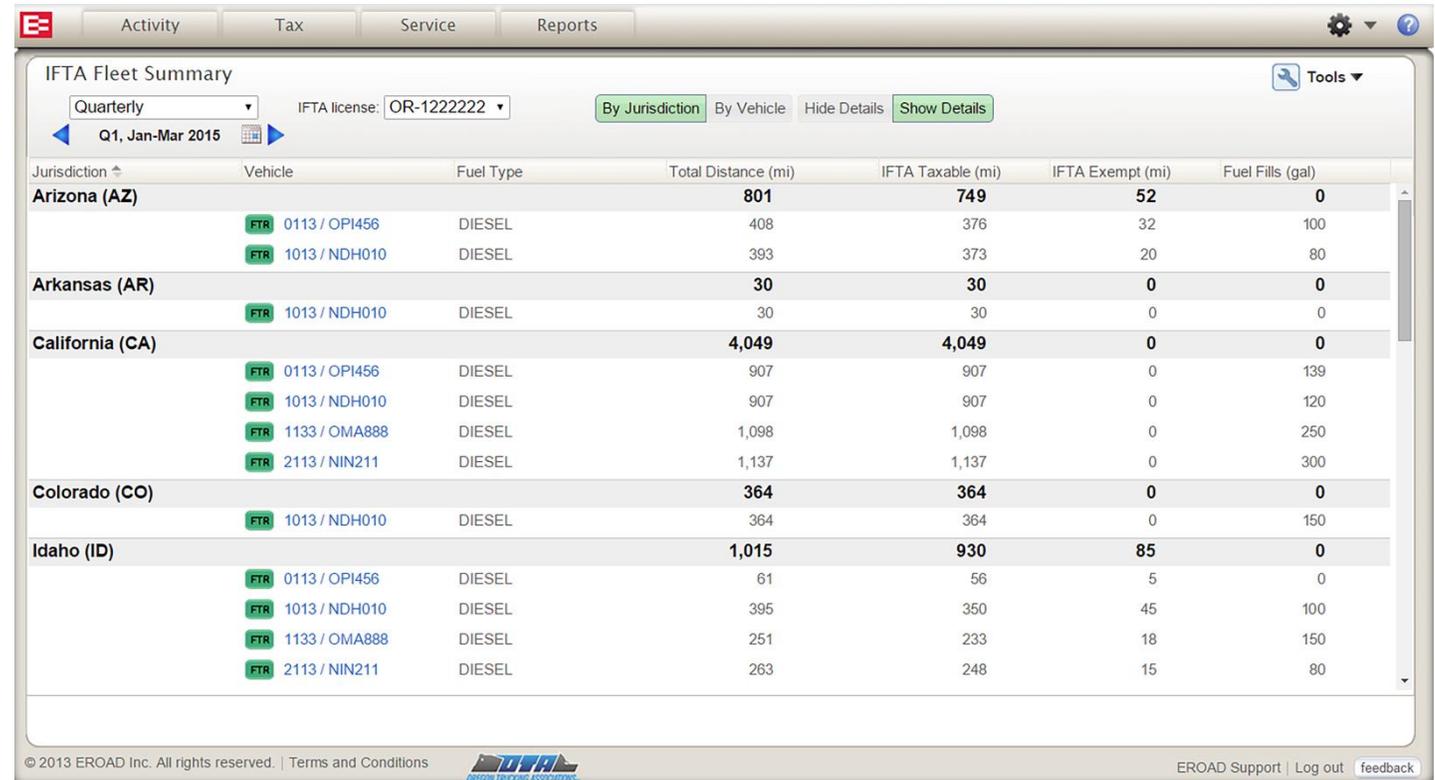
Day of trip	State	Fuel Type	Entry Point (Distance (mi))	Exit Point (Distance (mi))	Highways Traveled	Total Miles	IFTA Taxable Miles	IFTA Exempt Miles	Fuel Fill (gall)			
Jan 21	WA	DIESEL	N Floral Ave, Near Cle Elum, Washington 28,673	48th Ave S, Near Tukwila, Washington 29,132	I-90, I62, I-5, S MICHIGAN ST, 1ST AVE BRG S, S BAILEY ST, 194A, 15, 25, US-97, WA, 970, 1ST ST E, 85, US-2, US HIGHWAY 97A, W WOODIN AVE, US-97-ALT, CORSON AVE S, 2C	459	424	35	250			
Jan 22	WA	DIESEL	48th Ave S, Near Tukwila, Washington 29,132	S 224th St, Near Kent, Washington 29,526	S BOEING ACCESS RD, 1ST AVE BRG S, S BAILEY ST, I-5, S MICHIGAN ST, I-90, 164A, 15, US-97, WA-970, 1ST ST E, 85, US HIGHWAY 97A, US-2, US-97-ALT, W WOODIN AVE, WA-18, 2C, 2B, WA-599 VALLEY FWY, 2, 154A, I-405, WA-99	394	371	23	0			
Jan 23	WA	DIESEL	S 224th St, Near Kent, Washington 29,526	48th Ave S, Near Tukwila, Washington 29,912	E MARGINAL WAY S, S BAILEY ST, I-5, 1ST AVE BRG S, S MICHIGAN ST, I-90, 164A, 15, US-97, WA-970, US-2, US-97-ALT, US HIGHWAY 97A, W WOODIN AVE, 1ST ST E, I-405, 2B, PACIFIC HWY	394	371	23	0			
Totals:						Total Miles	IFTA Taxable Miles	IFTA Exempt Miles	Non-IFTA Miles	Fuel Fill (gall)	MPG	
						DIESEL	6,452	6,312	140	0	1,173	5.5

Below the table, there is a detailed view of an 'IFTA Exempt Trip' for 0113 on Tuesday, January 22, 2015. It shows a map of the route and trip details:

- IFTA Exempt Trips: 0113
- State: WASHINGTON
- Road Type: OFF_HIGHWAY
- Fuel Type: DIESEL
- Start: 30,836.19 mi 2015-01-22 21:38:35.0
- End: 30,836.21 mi 2015-01-22 21:47:41.0
- Exempt Distance: 23 mi

IFTA Fleet Summary

- Displays distance and fuel information by fleet or by jurisdiction on a monthly or quarterly basis
- Summary view of the fuel trip record for all your IFTA qualified vehicles under the IFTA license number



The screenshot shows the 'IFTA Fleet Summary' interface. At the top, there are tabs for 'Activity', 'Tax', 'Service', and 'Reports'. Below the tabs, the interface displays 'Quarterly' as the selected period, 'Q1, Jan-Mar 2015' as the current quarter, and 'OR-1222222' as the IFTA license number. There are buttons for 'By Jurisdiction', 'By Vehicle', 'Hide Details', and 'Show Details'. The main data is presented in a table with the following columns: Jurisdiction, Vehicle, Fuel Type, Total Distance (mi), IFTA Taxable (mi), IFTA Exempt (mi), and Fuel Fills (gal). The table is grouped by jurisdiction: Arizona (AZ), Arkansas (AR), California (CA), Colorado (CO), and Idaho (ID). Each jurisdiction group has a summary row followed by individual vehicle records. The 'California (CA)' group has the highest total distance of 4,049 miles.

Jurisdiction	Vehicle	Fuel Type	Total Distance (mi)	IFTA Taxable (mi)	IFTA Exempt (mi)	Fuel Fills (gal)
Arizona (AZ)			801	749	52	0
	FTR 0113 / OPI456	DIESEL	408	376	32	100
	FTR 1013 / NDH010	DIESEL	393	373	20	80
Arkansas (AR)			30	30	0	0
	FTR 1013 / NDH010	DIESEL	30	30	0	0
California (CA)			4,049	4,049	0	0
	FTR 0113 / OPI456	DIESEL	907	907	0	139
	FTR 1013 / NDH010	DIESEL	907	907	0	120
	FTR 1133 / OMA888	DIESEL	1,098	1,098	0	250
	FTR 2113 / NIN211	DIESEL	1,137	1,137	0	300
Colorado (CO)			364	364	0	0
	FTR 1013 / NDH010	DIESEL	364	364	0	150
Idaho (ID)			1,015	930	85	0
	FTR 0113 / OPI456	DIESEL	61	56	5	0
	FTR 1013 / NDH010	DIESEL	395	350	45	100
	FTR 1133 / OMA888	DIESEL	251	233	18	150
	FTR 2113 / NIN211	DIESEL	263	248	15	80

© 2013 EROAD Inc. All rights reserved. | Terms and Conditions  EROAD Support | Log out | feedback

IFTA Overview Report



- Complete summary of all mileage and fuel data facilitating the filing of quarterly IFTA return
- The report automatically calculates average fleet MPG, displays distance for each jurisdiction and completes all necessary calculations on screen which can simply be exported into a CSV file

	IFTA Miles	Non-IFTA Miles	Total Miles	Total Gallons	Average Fleet MPG
DIESEL	138,509	0	138,509	23,677	5.85
Total	138,509	0	138,509		

Jurisdiction	Fuel Type	Total Miles	Taxable Miles	Taxable Gallons	Tax Paid Gallons	Net Taxable Gallons
AR	DIESEL	122	103	21	2,157	(2,136)
CA	DIESEL	9,880	9,880	1,689	247	1,442
CO	DIESEL	368	368	63	2,600	(2,537)
ID	DIESEL	1,888	1,843	315	240	75
LA	DIESEL	544	544	93	579	(486)
MT	DIESEL	2,883	2,877	492	1,180	(688)
NE	DIESEL	353	353	60	1,380	(1,320)
OK	DIESEL	41	41	7	326	(319)
OR	DIESEL	51,434	0	0	9,430	(9,430)
TX	DIESEL	641	641	110	2,019	(1,909)
WA	DIESEL	69,427	69,427	11,868	3,210	8,658
WY	DIESEL	926	926	158	309	(151)

THANK YOU

Gail Levario

Stakeholder Manager

Strategy & Market Development

503.313.6979

gail.levario@eroad.com

Nina Elter

Senior Analyst

Strategy & Market Development

971.303.3132

nina.elter@eroad.com



EROAD





Oregon

Kate Brown, Governor

Department of Transportation
Motor Carrier Transportation Division
3930 Fairview Industrial Dr. SE
Salem, OR 97302-1166
www.oregon.gov/ODOT/MCT/

February 24, 2015

FILE CODE:

DOT Docket No. FMCSA-2014-0177
Docket Management Facility, M-30
U.S. Department of Transportation
West Building, Ground Floor Room W12-140
1200 New Jersey Avenue, S.E. Washington, D.C. 20590-0001
Filed via www.regulations.gov.

The Oregon Department of Transportation (ODOT), Motor Carrier Transportation Division (MCTD), welcomes the opportunity to submit comments regarding the feasibility of using a motor carrier's role in crashes as an indicator of future crash risk.

Oregon's long history of motor carrier safety activities includes a comprehensive roadside inspection program made up of over 500 State and local certified inspectors. In addition to Oregon's inspection program, ODOT has staff conducting over 350 safety compliance reviews annually. Oregon was the first state to have a 100% performance-based Commercial Vehicle Safety Plan (CVSP). Oregon is unique in the supplying of real-time motor carrier event data to State and Federal enforcement officials for use in hours-of-service enforcement. With this experience we provide the following comments.

In Oregon today, commercial motor vehicle crashes are analyzed for many reasons. One is to determine if the crash meets the definition of a "reportable crash" as defined in 49 CFR Part 390.5. Reportable crashes are entered into the SAFETYNET System and shared with FMCSA. Another reason is to determine causation. Yet another reason is to determine fault. It has long been thought in Oregon that the best strategy to reduce crashes involving trucks is to understand why these crashes occur.

This analysis of commercial motor vehicle crashes results in crashes being categorized by fault. CMV crashes occurring because of equipment failure are categorized as "Truck-at-Fault". CMV crashes occurring because of the actions of the CMV driver are categorized as "Truck Driver-at-Fault". Likewise, when the cause of a crash is determined to not be the CMV or the CMV driver, the crash is categorized as "Other Vehicle-at-Fault", or "Other Driver-at-Fault".

The analysis to determine crash causation is conducted when the various post-crash reports are reviewed. Post-crash reports may include a Police Accident Report, Oregon DMV Accident and Insurance Report, and Oregon Motor Carrier Crash Report. All three reports, if available, are collected by ODOT. The Oregon DMV Accident and Insurance Report, and Oregon Motor Carrier Crash Report are reports required by statute. The DMV Accident and Insurance Report is completed by all drivers involved in a crash when minimum criteria are met. The Motor Carrier Crash Report is completed by the Motor Carrier when a CMV is

February 24, 2015

Page Two

involved in a "reportable crash" in Oregon. An analyst reviews all reports to determine crash causation. Once the cause of the crash is determined, fault can be assigned and used to determine any appropriate follow-up action with the motor carrier.

States are already required to upload truck crash data using FMCSA's SAFETYNET Data System. States conduct some level of truck crash data review today to facilitate the crash data entry into SAFETYNET and subsequent upload to FMCSA. Oregon suggests that the data entry into SAFETYNET include data related to crash causation. A review of post-crash documentation can lead to determinations where it is clear the truck and the truck driver were not the cause of the crash.

States already conduct this type of review for all crashes to facilitate mandatory data sharing with the Federal Highway Administration and the National Transportation Safety Administration. At a local level, States make this analysis to determine what countermeasures may be appropriate at crash locations.

There should be no need to forward any report to the FMCSA for analysis in order to determine crash causation. FMCSA should utilize and/or strengthen the review process currently in place at the State level and facilitate the upload of this data to FMCSA.

Respectfully Submitted,

David McKane, Manager
Motor Carrier Transportation Division
Investigations, Safety and Federal Programs
(503) 373-0884
Fax (503) 373-1940