

## June 2019 – What's New with CARS?

**June, 2019** – In this edition we describe a number of improvements to sign creation and selection, improvements to the curve report, where you can now choose the rounding method used for the recommended advisory speed calculation, and a variety of bug fixes and other enhancements. The curve report now includes a table showing the calculated side friction limit at each recommended advisory speed. In addition, we now accept speed limit data within the mile marker file which will save users time by automatically entering the appropriate speed limit when a curve is created.

**Create Signs for various curve geometries, Compound curves and ramps**– An update to the create signs button now provides users the ability to easily and properly generate signs, properly located, for multiple curve geometries including Compound curves, Reverse curves, Winding roads and Exit ramps. You can now also differentiate between and Curves, Turns and Hairpin Curves, based on deflection angles. The enhancement gives the user more control over exact signing plans while maintaining proper placement and spacing guidelines based on the MUTCD.

Which signs do you want to create?

☒ **Pass 2 - Right (-10 mph differential)**  
☒ Turn (W1-1) ☐ Curve (W1-2) ☐ Loop (W1-15) ☐ Reverse Turn (W1-3)  
☐ Winding Road (W1-5) ☐ Hairpin Curve (W1-11)  
☒ Advisory Speed Plaque (W13-1P)  
☐ Combination Turn/Advisory Speed (W1-1a) ☐ Combination Curve/Advisory Speed (W1-2a)  
☒ Chevron (W1-8) ☐ Directional arrow (W1-6)  
☐ Exit Speed (W13-2) ☐ Combination Loop Curve/Exit Speed (W13-6)  
☐ Ramp Speed (W13-3) ☐ Combination Loop Curve/Ramp Speed (W13-7)

☒ **Pass 5 - Left (-5 mph differential)**  
☒ Turn (W1-1) ☐ Curve (W1-2) ☐ Loop (W1-15) ☐ Reverse Turn (W1-3)  
☐ Winding Road (W1-5) ☐ Hairpin Curve (W1-11)  
☒ Advisory Speed Plaque (W13-1P)  
☐ Combination Turn/Advisory Speed (W1-1a) ☐ Combination Curve/Advisory Speed (W1-2a)  
☒ Chevron (W1-8) ☐ Directional arrow (W1-6)  
☐ Exit Speed (W13-2) ☐ Combination Loop Curve/Exit Speed (W13-6)  
☐ Ramp Speed (W13-3) ☐ Combination Loop Curve/Ramp Speed (W13-7)

☐ Redirect to signs tab

5 mph	10 mph	15 mph	20 mph	>25 mph or more
Recommended	Required	Required	Required	Required
Recommended	Required	Required	Required	Required
Recommended	Required	Required	Required	Required
Optional	Recommended	Required	Required	Required
Optional	Optional	Recommended	Required	Required
Optional	Optional	Recommended	Required	Required

5 mph	10 mph	15 mph	20 mph	>25 mph or more
Recommended	Required	Required	Required	Required
Recommended	Required	Required	Required	Required
Recommended	Required	Required	Required	Required
Optional	Recommended	Required	Required	Required
Optional	Optional	Recommended	Required	Required
Optional	Optional	Recommended	Required	Required

Create

Cancel

**Rounding Method Based on User Settings** – The Recommended Advisory Speed on curve reports and exports is now rounded based on the option selected in Settings page, by the user signed in. Previously, reports were saved with the rounding method of the last user to save the curve. Now, you can view and export curve reports with the Recommended Advisory Speed rounding method of your choice by signing in, navigating to Settings tab, and selecting the desired method.

### Rounding method:

- Round down – The min calculated advisory speed will be rounded down to the lower 5 mph increment to determine the RAS. (ie, 39.5 will round to 35 mph advisory)
- FHWA-SA-11-22 Procedures for Setting Advisory Speed - 1.0 mph is added to the unrounded min. calculated advisory speed before rounding down to the lower 5 mph increment. (ie, 39.5 will round to 40 mph advisory)

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**Singular Export Button Enabled for Expired Licenses** – License expired? No problem! Your account and access to your data never expires. And now your access to the Export button on the data sessions page will remain active even after your license expires. This enhancement builds upon the existing access for accounts with expired licenses, which has always been able to Bulk Export all of your collected and processed data under the Bulk Export tab. We've added some enhancements to the Bulk export schema diagram which is available on the Bulk Export page. As a reminder, accounts can be created for users who only need to view/export data which is useful for maintaining data integrity while providing outside access during a project.

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**Settings** **Help** Hi aferrol! Your subscription expired 1/22/2019 Logout

Data Sessions Curves Flags Non GPS Data Mile Marker Data Signs Vertical Curves (Beta) Bulk Data Export

File Name	# of data points	Collected by	Collected on	Uploaded on	Corridor	
<filter>	<filter>	<filter>	From: To:	From: To:		
jcaruso 2015/08/04 22:35:50 (edit)	1,025	jcaruso	08/04/2015 22:35	08/05/2015 03:04	(edit)	export delete
jcaruso 2015/08/04 23:09:23 (edit)	7,035	jcaruso	08/04/2015 23:09	08/05/2015 03:04	(edit)	export delete
jcaruso 2015/08/05 01:33:37 (edit)	1,320	jcaruso	08/05/2015 01:33	08/05/2015 03:04	(edit)	export delete
jcaruso 2015/08/05 02:31:54 (edit)	8,523	jcaruso	08/05/2015 02:31	08/05/2015 03:05	(edit)	export delete
jcaruso 2018/12/22 16:17:43 SN963083 (edit)	4,992	jcaruso	12/22/2018 16:17	12/22/2018 22:35	(edit)	export delete
jcaruso 2018/12/22 19:35:01 SN963083 (edit)	3,289	jcaruso	12/22/2018 19:35	12/22/2018 22:35	(edit)	export delete
jcaruso 2018/12/22 19:47:28 SN963083 (edit)	605	jcaruso	12/22/2018 19:47	12/22/2018 22:35	(edit)	export delete

<< < 1 2 3 ... 46 > >>

Select all Clear filters Clear selection Zoom to selected data sessions Show all: ☐ Flags ☐ Mile Markers ☐ Signs ☐ Show altitude

Click in the map area to cast a net and find data sessions in the selection area

collapse

**Mile Marker Column on Sign Placement Detail** – The Sign Placement Detail table available on the HTML report (online), PDF report, and Text data (csv) export now includes a Mile Marker column. This allows users the ability to decipher what mile marker the sign is nearest to. This column will only populate if Mile Marker (LRS) data has been uploaded for your territory/route system.

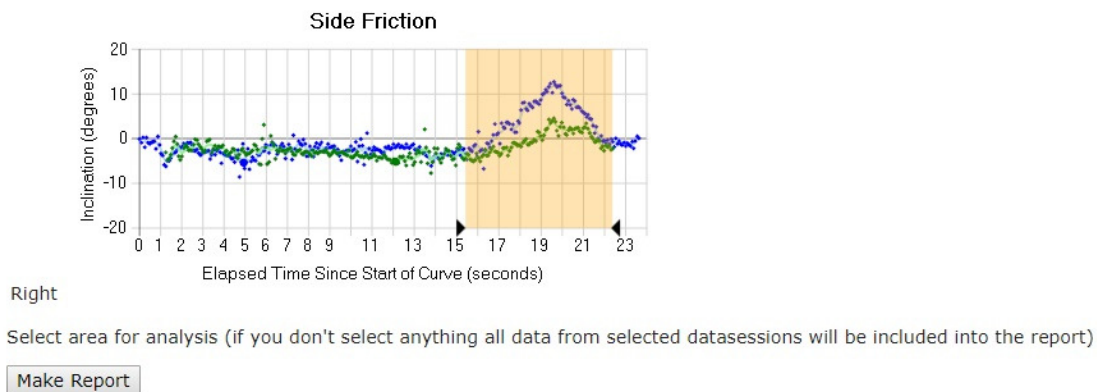
Hide Sign placement detail

Inventory Number	Sign Code	Distance from PC	Created By User	Created On	Corridor Name	Mile Marker	Latitude Longitude	Curve Direction	Driving Direction	Road Side	Facing Direction	Curve Name	Last Inspection Note	Existing / Proposed	Damaged
SIGN-184404-ADVISORY-DIRECTION-R	W1-1R required	-100 ft	tony	06/11/19 8:13	4330031000000.000000	12.97	39.24065° -81.19301°	Right	Incr	Right	Towards	4330031000000 MP12.98-13.03		Proposed	
SIGN-184404-ADVISORY-R	W13-1P-25mph required	-100 ft	tony	06/11/19 8:13	4330031000000.000000	12.97	39.24065° -81.19301°	Right	Incr	Right	Towards	4330031000000 MP12.98-13.03		Proposed	
SIGN-184404-0 FT-R	W1-6R recommended	0 ft	tony	06/11/19 8:13	4330031000000.000000	12.98	39.24053° -81.19301°	Right	Incr	Left	Towards	4330031000000 MP12.98-13.03		Proposed	
SIGN-184404-80 FT-R	W1-6R recommended	80 ft	tony	06/11/19 8:13	4330031000000.000000	13.00	39.24044° -81.19358°	Right	Incr	Left	Towards	4330031000000 MP12.98-13.03		Proposed	
SIGN-184404-160 FT-R	W1-6R recommended	160 ft	tony	06/11/19 8:13	4330031000000.000000	13.02	39.24040° -81.19385°	Right	Incr	Left	Towards	4330031000000 MP12.98-13.03		Proposed	
SIGN-184404-240 FT-R	W1-6R recommended	240 ft	tony	06/11/19 8:13	4330031000000.000000	13.03	39.24044° -81.19413°	Right	Incr	Left	Towards	4330031000000 MP12.98-13.03		Proposed	
SIGN-184404-ADVISORY-DIRECTION-L	W1-1L required	-100 ft	tony	06/11/19 8:13	4330031000000.000000	13.05	39.24051° -81.19454°	Left	Decr	Right	Towards	4330031000000 MP12.98-13.03		Proposed	
SIGN-184404-ADVISORY-L	W13-1P-25mph required	-100 ft	tony	06/11/19 8:13	4330031000000.000000	13.05	39.24051° -81.19454°	Left	Decr	Right	Towards	4330031000000 MP12.98-13.03		Proposed	
SIGN-184404-0 FT-L	W1-6L recommended	0 ft	tony	06/11/19 8:13	4330031000000.000000	13.04	39.24044° -81.19420°	Left	Decr	Right	Towards	4330031000000 MP12.98-13.03		Proposed	
SIGN-184404-80 FT-L	W1-6L recommended	80 ft	tony	06/11/19 8:13	4330031000000.000000	13.02	39.24038° -81.19393°	Left	Decr	Right	Towards	4330031000000 MP12.98-13.03		Proposed	

Delete signs

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**Improved BBI filtering for Non-GPS data collection** – The Non-GPS accelerometer data is now filtered similar to the normal report data. This improves consistency when using the non-GPS method around curves with non-customary geometries.



**Auto-Selection Logic** – We corrected a bug with the auto-selection feature, that intermittently selected an incorrect pass, based on advisory speed and fit. The fix has been added to the curve report's selected pass auto-selection logic. Auto-selection logic will select the pass with the highest Min Calculated Advisory Speed in each direction, if the GPS fit is over 88%. If there is a tie, it will select the one pass in each direction with the higher fit value. This selection can always be manually changed and should always be verified with engineering judgement.

Selected Passes	Pass #	Turn Direction	Travel Direction	Point of Curvature Latitude Longitude	Point of Tangent Latitude Longitude	GPS Fit	Avg. test speed	Curve radius	Curve length	Deflection angle	Curve Class.	Super Elevation at apex	Vertical Grade	Min. calculated advisory speed	Recommended advisory speed
<input type="checkbox"/>	1	Left	North-East	39.89373° -75.61338°	39.89448° -75.61338°	97.4%	32.2 mph	373 ft	278 ft	40°	F	-2.8%	A	30.1 mph	30 mph
<input checked="" type="checkbox"/>	2	Right	South	39.89446° -75.61339°	39.89377° -75.61340°	98.3%	30.1 mph	400 ft	257 ft	35°	F	-0.7%	A	28.2 mph	25 mph
<input type="checkbox"/>	3	Left	North-East	39.89376° -75.61339°	39.89447° -75.61339°	98.2%	26.2 mph	331 ft	264 ft	42°	F	0.7%	C	29.9 mph	25 mph
<input type="checkbox"/>	4	Right	South	39.89446° -75.61340°	39.89375° -75.61337°	98.2%	31.6 mph	403 ft	266 ft	35°	F	2.8%	A	28.0 mph	25 mph
<input checked="" type="checkbox"/>	5	Left	North-East	39.89374° -75.61336°	39.89447° -75.61338°	98.9%	24.3 mph	416 ft	273 ft	35°	F	-0.4%	A	32.7 mph	30 mph
<input type="checkbox"/>	6	Right	South	39.89445° -75.61340°	39.89374° -75.61338°	99.0%	27.9 mph	417 ft	267 ft	34°	F	0.6%	A	27.2 mph	25 mph

**Show Mile Marker Option On Signs Tab** – Users now have the ability to view Mile Marker data directly on the signs tab using the Show Mile Markers checkbox under the Signs table. This overlay allows users to visualize the relationship between signs and Mile Marker (LRS) data while creating/editing sign placement. This feature will only work if Mile Marker data has been uploaded for your territory.

	Creek_Rd_Curve_D
	Creek_Rd_Curve_D
Merge Signs	
Show all: <input type="checkbox"/> Mile Markers	

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**Delete Signs Button** – A *Delete signs* button has been added to the HTML curve report, giving users the ability to delete all signs associated to a curve. Signs can always be added back to a report using the Create Signs button. This will provide greater control and efficiency in developing sign plans on curves.

### Hide Sign placement detail

Inventory Number	Sign Code	Distance from PC	Created By User Created On	Corridor Name	Mile Marker	Latitude Longitude	Curve Direction	Driving Direction	Road Side	Facing Direction	Curve Name	Last Inspection Note	Existing / Proposed	Damaged
SIGN-184404-ADVISORY-DIRECTION-R	W1-1R required	-100 ft	tony 06/11/19 8:13	4330031000000.000000	12.97	39.24065° -81.19301°	Right	Incr	Right	Towards	4330031000000 MP12.96-13.03		Proposed	
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SIGN-184404-0 FT-R	W1-8R recommended	0 ft	tony 06/11/19 8:13	4330031000000.000000	12.98	39.24053° -81.19332°	Right	Incr	Left	Towards	4330031000000 MP12.96-13.03		Proposed	
SIGN-184404-80 FT-R	W1-8R recommended	80 ft	tony 06/11/19 8:13	4330031000000.000000	13.00	39.24044° -81.19358°	Right	Incr	Left	Towards	4330031000000 MP12.96-13.03		Proposed	
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Delete signs

**Bug Fix for Distance From PC Column** – The Distance From PC column shown on the Signs tab and Sign Placement Detail section of a curve's HTML and PDF report now use exact values based on tables 2C-4 and 2C-6 of the MUTCD (Chapter 2C).

### Hide Sign placement detail

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Delete signs