

CALTRANS POSTMILE SYSTEM

Similar to many State DOTs, Caltrans uses a postmiling system to track highway mileage and to identify unique locations along our State Highway System. The Division of Research, Innovation and System Information (DRISI), Office of Highway System Information and Performance (OHSIP), Traffic Accident Surveillance and Analysis System (TASAS) Branch is responsible for assigning the postmiles to the highway system for a new/adopted or realigned segments of a State highway. The postmiles and all of its characteristics are entered into an Oracle database referred to as the Transportation System Network (TSN) database. The postmile, once established, becomes a permanent record and/or address in the highway database. The TASAS Branch generates a TSN Highway Sequence Listing for all 12 Districts. This listing is used throughout Caltrans to identify projects or reference locations along a State Highway.

Postmile Basics

- The Caltrans Postmile Listing is a combination of Caltrans district, county, route, route suffix, postmile prefix, postmile value, and postmile suffix.
 - Examples: (ALA-080-R-6.898-L), (IMP-8U-T96.546), (BUT, 32, R9.263R)
- Postmiles start at the county line or from the beginning of a route.
- Postmiles values are normally reset to zero at all county boundaries except when a route meanders between two counties. See example 2: Meandering Routes.
- At the beginning of a route, postmile values normally start at zero except when a realignment, relinquishment or adoption of a segment occurs that either extends or truncates the route. See example 3
- Postmile values increase from south to north or west to east depending upon the direction the highway follows within the state. There are five routes in California which do not follow this rule. They are known as backward routes. The five backward routes in California are:
 - Route 71 North to South
 - Route 153 East to West
 - Route 282 East to West
 - Route 580 East to West
 - Route 780 East to West
- Within each sequence list, routes are in order by route number and the counties it traverses.
- Although our State Highway roadway runs in two directions (northbound/southbound or eastbound/westbound), Caltrans (TSN) considers it a single alignment. However, there are situations where TSN specifies postmiles for both the right and left alignment. These are called independent alignments. Independent alignments occur when the alignment separates and may have different lengths. In these cases there are separate postmiles for the right and left alignments, and an “R” and “L” suffix is used to differentiate the two. See example 4: Right and Left Alignments.

To define a unique location on the State Highway, the following fields, as applicable, must be supplied:

- **Route** - The Route Number
- **Route Suffix** – There are two types: S=Supplemental Routes and U=Unrelinquished Routes. An “S” Route identifies spurs, supplemental truck lanes and bus lanes where all or part of the roadway is a separate alignment. A “U” Route identifies a portion of a route that is in the process of being relinquished to a city or county and which Caltrans still maintains.
- **Postmile Prefix** - As the highway changes and realignments and relinquishments occur on the highway, Caltrans uses postmile prefixes to differentiate the new postmile from the original postmile. Instead of repostmiling the entire route, only the portion that is affected is re-postmiled. Because a postmile prefix distinguishes between two or more different locations that share the same numeric postmile, omitting or providing an incorrect prefix may indicate the wrong location. See example 1 for list of Postmile Prefix Codes.
- **Postmile** – A postmile (R34.576L) is an alpha-numeric value that represents a unique location on the highway. The numeric value contained within the postmile (34.576) may not necessarily represent the odometer length from the beginning of the county or route.
- **Postmile Suffix** – An “R” indicates a right alignment (eastbound or northbound) and an “L” indicates a left alignment (westbound or southbound). Because a postmile suffix is required at independent alignments, omitting or providing an incorrect suffix could cause a reference to a non-existent postmile. See example 4: Right and Left Alignments.
- For the purposes of developing a TCR, it is required to provide the most precise postmile available. Three decimal places are preferred. If the most accurate postmile available is less than three decimal places, add zeros to the number until it is at three decimal places.
- Do not round postmiles up or down. This causes loss of precision and in some cases could cause reference to a non-existent postmile. This error most commonly occurs at equation points and the end of a county line. See example 5 (forward equation example)
- At the beginning and end of a route and county it is important to provide the actual postmile to three decimal places to ensure that the route accurately ends at the boundary and does not exceed or fall short. For example, if the postmile at the end of a county is 10.862 and you round up to 10.9 that postmile does not exist. Also, if you only provide postmile 10.8 in your file, the highway will not be drawn to the county line if you decide to map your segment.

How to Read the TSN Highway Sequence Listing

Example 1: Components of a Postmile - District, County, Route, Route Suffix, Postmile Prefix, Postmile Suffix.

		DIST 08 RTE 111		DIR S-N	
CO.	CITY	POSTMILE	PT	LENGTH	DESCRIPTION
RIV		058.478	DI		OVERTURE DR -LT
RIV		059.381	DH	00.057	
RIV		T 059.438	DH	00.184	BEG TEMP CONN RT LN
RIV		R 059.622	RH	00.375	BEG INDEP ALIGN RT LNS
RIV		R 059.997	RH	00.094	SNOW CR BR 56-194R
RIV		R 060.091	RH	00.130	END BR 56-194R
RIV	PSP	R 060.221	RH	00.074	
RIV	PSP	R 060.295	RH		
RIV		R 059.622	LH		
RIV		R 060.036	LH		
RIV		R 060.109	LH		
RIV	PSP	R 060.221	LH		
RIV	PSP	L 060.295	LH	00.015	OVER LAP LENGTH LT LNS

Postmile Suffix	
R	Right Independent Alignment
L	Left Independent Alignment
X	Unconstructed Highway

Postmile Prefix Codes	
	No prefix. Original postmile
C	Commercial lanes
D	Duplicate postmile at meandering county line
G	Reposting of duplicate postmile at the end of a route
H	Realignment of D mileage
L	Overlap postmile
M	Realignment of R mileage
N	Realignment of M mileage
R	First realignment
S	Spur
T	Temporary connection

Example 2: Meandering Routes – Meandering routes traverse in and out of two counties.

		DIST 04 RTE 035		DIR S-N	
CO.	CITY	POSTMILE	PT	LENGTH	DESCRIPTION
SCL		014.043	UH	00.057	VISTA PT ENTR,RT(10/81)
SCL		014.100	UH	03.021	JCT ST 9
SCL	--->	014.100	UI	----->	**RTE 009 000.000**
SCL		017.121	UH	00.000	SM/SCL CO LINE
SM		000.000	UH	00.224	
SM		000.224	UH	00.000	SM/SCL CO LINE
SCL	PA	D 000.224	UH	00.051	
SCL	PA	D 000.275	UH	00.000	SM/SCL CO LINE
SM		000.275	UH	00.044	
SM		000.319	UH	00.000	SM/SCL CO LINE
SCL	PA	D 000.319	UH	00.044	
SCL	PA	D 000.363	UH	00.000	SM/SCL CO LINE
SM		000.363	UH	00.239	
SM		000.602	UH	00.000	SM/SCL CO LINE
SCL	PA	D 000.602	UH	00.104	

Example 3: The route's postmile will not begin with a zero postmile if a realignment, relinquishment or adoption of a segment occurs at the beginning of a route.

DIST 12 RTE 001					DIR S-N
CO.	CITY	POSTMILE	G RF PT	LENGTH	DESCRIPTION
ORA	DAPT	R 000.129	DH	00.102	JCT 5 CAMINO L RMBLS UC
ORA	DAPT	R 000.204	DI		NB ON FROM SB RTE 5-RT
ORA	DAPT	R 000.231	DH	00.022	
ORA	DAPT	R 000.253	DH	00.144	RAMP NOSE-RT(RTE 5SB)
ORA	DAPT	R 000.397	DH	00.042	CAMINO CAPISTRANA UC
ORA	DAPT	R 000.439	DH	00.147	EB 55-239

Beginning of Route (R0.129)

Route was Shortened due to a Realignment and eventually a Relinquishment

DIST 05 RTE 129					DIR W-E
CO.	CITY	POSTMILE	G RF PT G	LENGTH	DESCRIPTION
SCR		L 000.000	UH	00.026	JCT 1. 129/1SEP 36-91
SCR		L 000.026	UH	00.030	END BR NO 36-91
SCR		L 000.056	DH	00.154	
SCR		L 000.120	DI		RAMP INTERSECTION
SCR		L 000.210	DH	00.126	
SCR		L 000.336	DH	00.620	FIRST ST
SCR		L 000.336	DI		JUDD RD
SCR		L 000.511	DI		INDUSTRIAL RD LT
SCR		L 000.810	DI		HARVEST DRIVE
SCR	WAT	L 000.956	DH	00.142	
SCR	WAT	L 001.098	DH	00.080	LOCUST ST
SCR	WAT	L 001.098	DI		LOCUST ST
SCR	WAT	L 001.178	DH	00.291	GX-WALKER ST RR XING
SCR	WAT	L 001.178	DI		WALKER ST SPRR-XING
SCR	WAT	L 001.250	DI		MENKER ST FIRST ST
SCR	WAT	L 001.310	DI		FIRST ST GROVE ST
SCR	WAT	L 001.380	DI		RODRIGUES ST
SCR	WAT	L 001.469 EQUATES TO			
SCR	WAT	000.000 E	DH	00.058	MAIN ST
SCR	WAT	000.000	DI		MAIN ST
SCR	WAT	000.058	UH	00.054	
SCR	WAT	000.060	UI		UNION ST

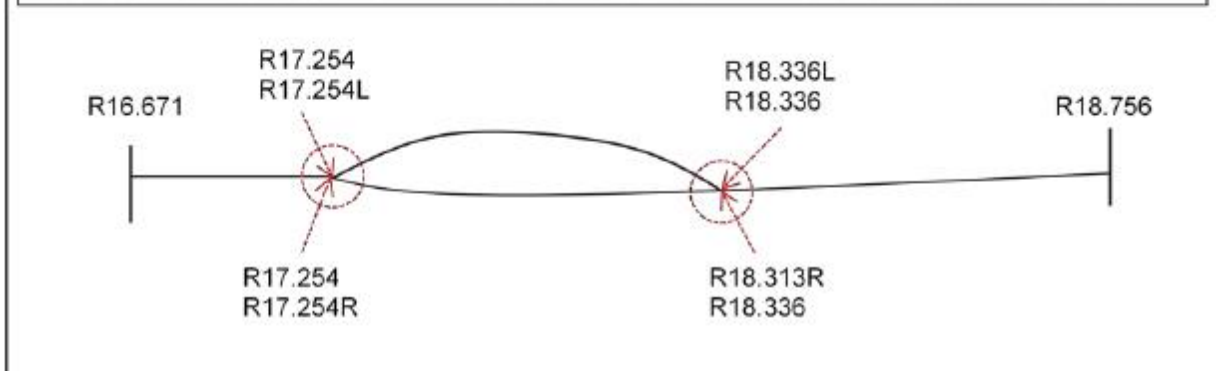
New Beginning of Route (L0.000)

New Section Added due to a Realignment (L0.000 to L1.469)

Original Beginning of Route

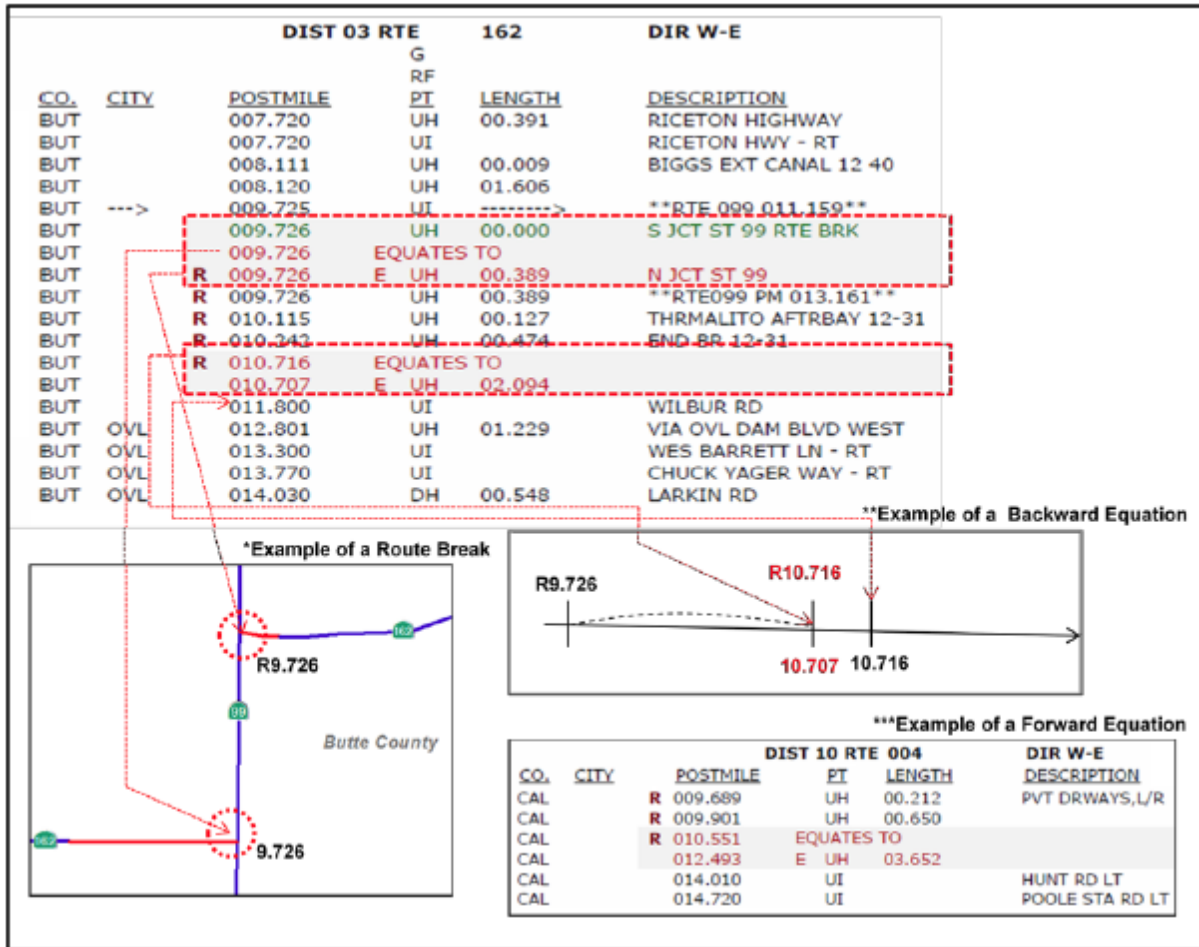
Example 4: Right and Left Alignments

DIST 12 RTE 091					DIR W-E	
CO.	CITY		POSTMILE	PT	LENGTH	DESCRIPTION
ORA	ANA	R	016.671	DR		WB OFF GYPSUM CANYON RD
ORA	ANA	R	016.870	DR		WB OFF TO SB 241
ORA	ANA	R	017.254	RH	00.512	BEG INDEP ALIGNMENT
ORA	ANA	R	017.766	RH	00.184	ON RAMP RT
ORA	ANA	R	017.766	RR		EB OFF COAL CANYON RD
ORA	ANA	R	017.950	RH	00.024	COAL CYN RD UC 55-507RT
ORA	ANA	R	017.974	RH	00.339	END BR 55-507 RT
ORA	ANA	R	018.126	RR		EB ON COAL CANYON RD
ORA	ANA	R	018.313	RH	00.000	END INDEP ALIGN RT
ORA	ANA	R	017.254	LH	00.540	BEG INDEP ALIGN LT
ORA	ANA	R	017.794	LH	00.179	ON RAMP LT
ORA	ANA	R	017.794	LR		WB ON COAL CANYON RD
ORA	ANA	R	017.973	LH	00.024	COAL CYN RD UC 55-507LT
ORA	ANA	R	017.997	LH	00.339	END BR 55-507 LT
ORA	ANA	R	018.199	LR		WB OFF COAL CANYON RD
ORA	ANA	R	018.336	DH	00.420	END INDEP ALIGNMENT
ORA	ANA	R	018.756	DH	00.149	WB ON GREEN RIVER RD



Example 5: Equation Points and Route Breaks

- **Equation points (forward and backward)** - Equation points occur where a section of a highway has been realigned and is either shortened, lengthened, or is a route break. With the exception of route breaks, the postmiles that equate to each other exist at the same location on the route.
- **Route Breaks** – Route breaks occur where a route ends at one location then continues in another location. This typically occurs at a junction, where one route traverses another, or when a route is interrupted at an area with no State Highway.



* Route Break example at a junction (SR 162 and SR 99).

**Backward equation example. The highway has been realigned in this section and is now longer than the original section. The post mile at the equation point starts at R10.716 and equates to 10.707. The main point of this example is to show that you now have a postmile R10.716 and further down the road a postmile 10.716 (no R).

***Forward equation example. The highway has been realigned in this section and is now shorter than the original section. The postmile at the equation point starts at R10.551 and equates to 12.493. Therefore, postmiles R10.551 (or 10.552) to 12.492 do not exist. If you were to round your postmile up from R10.551 to R10.6 that postmile does not exist.