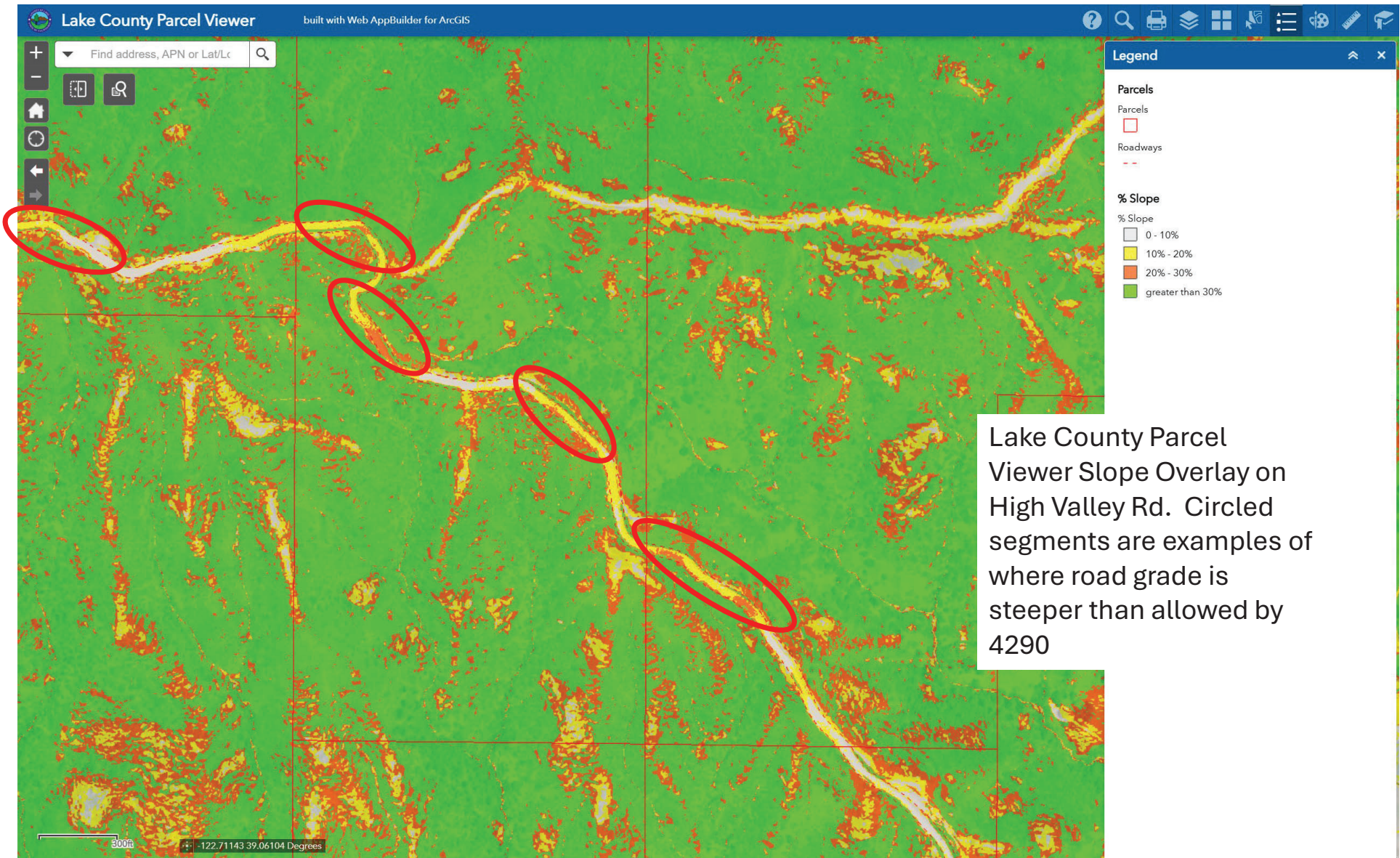
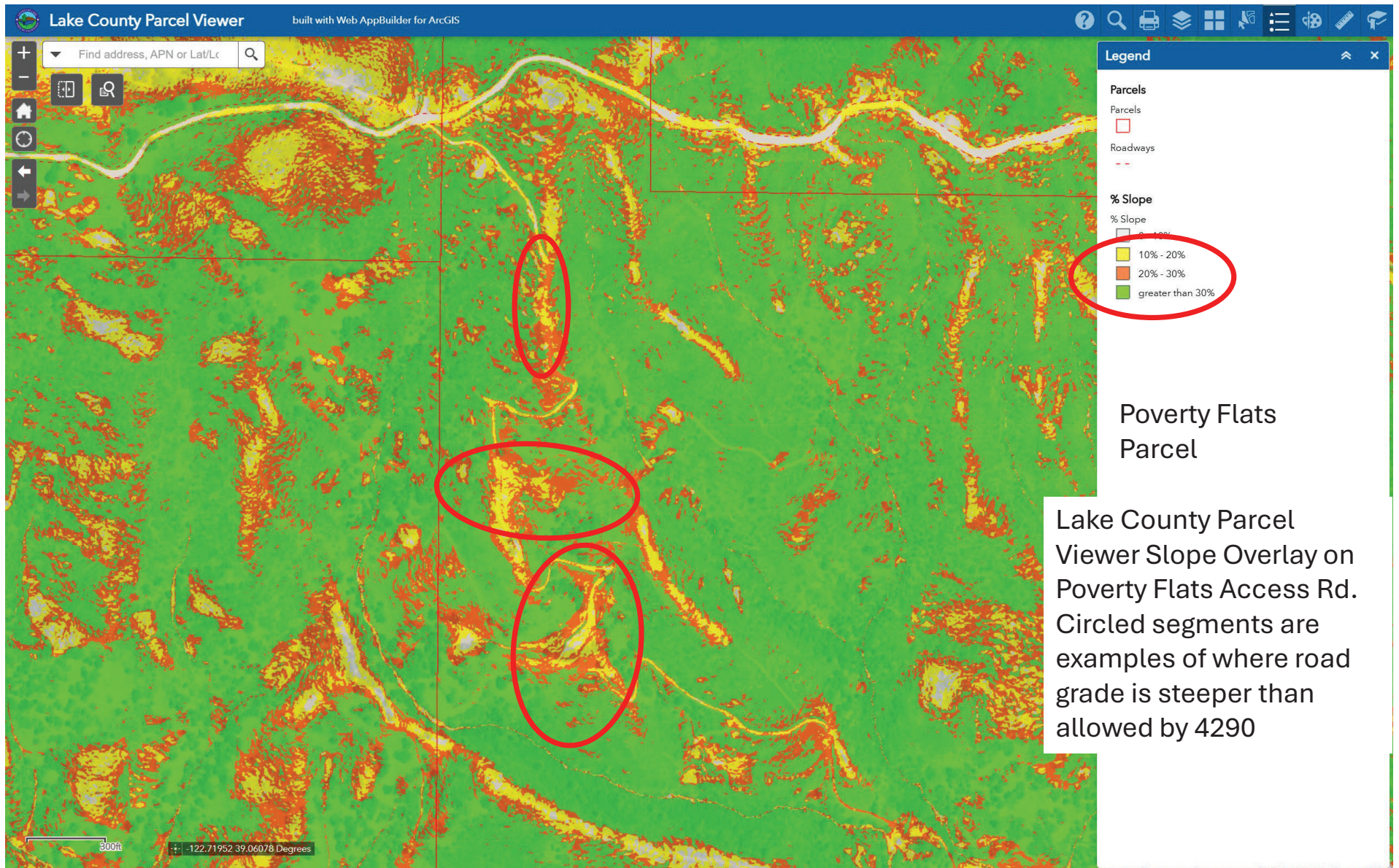
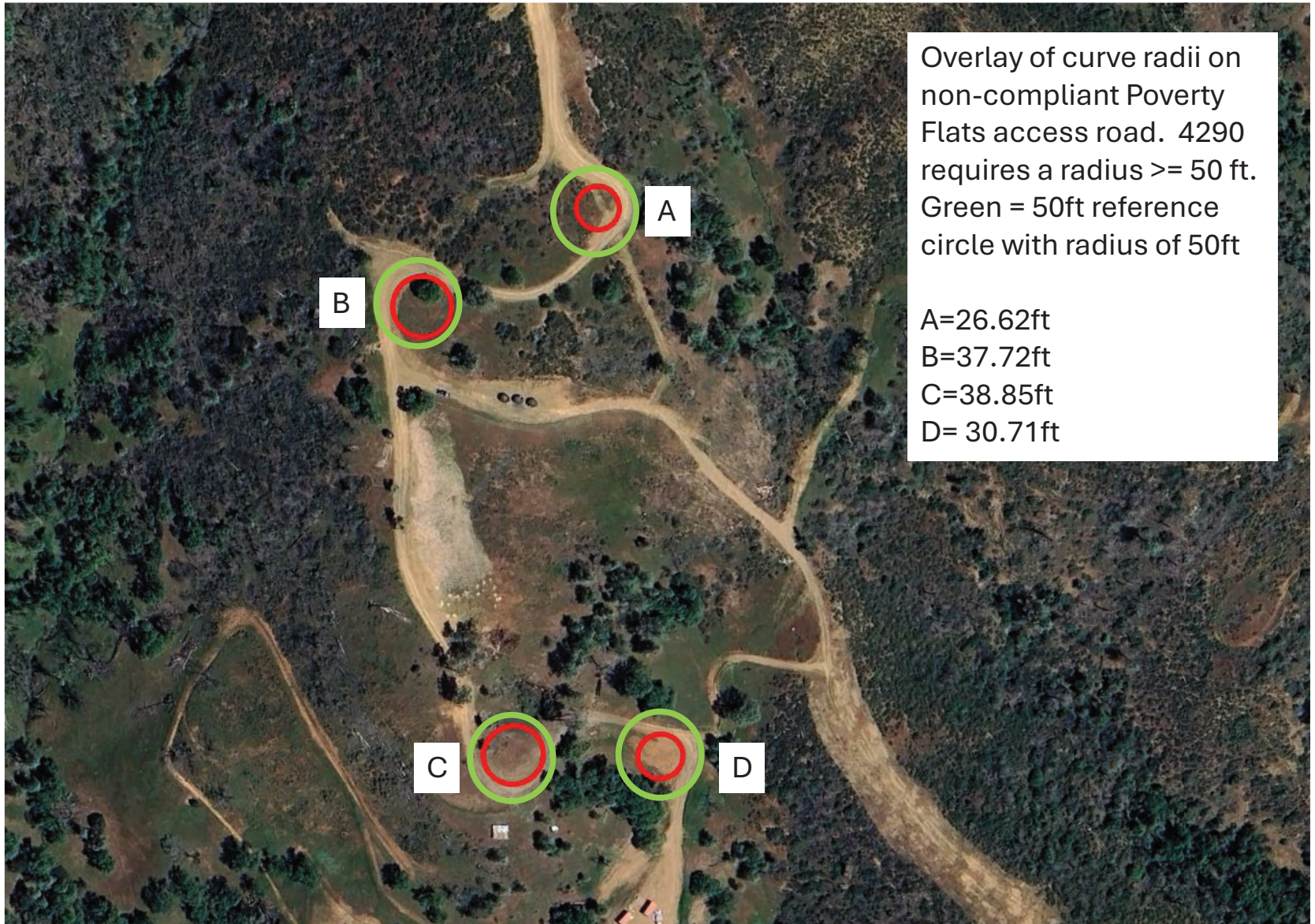
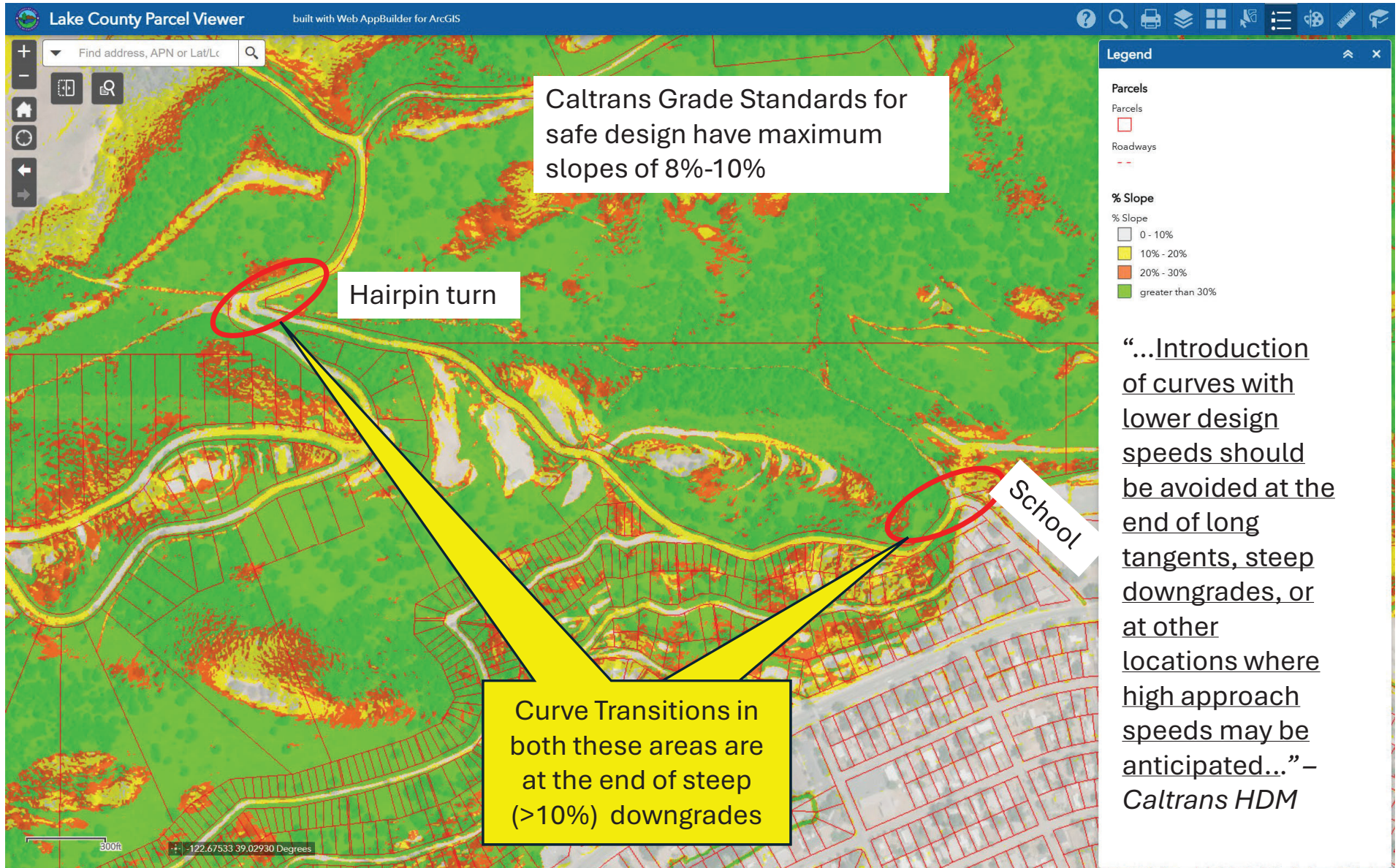
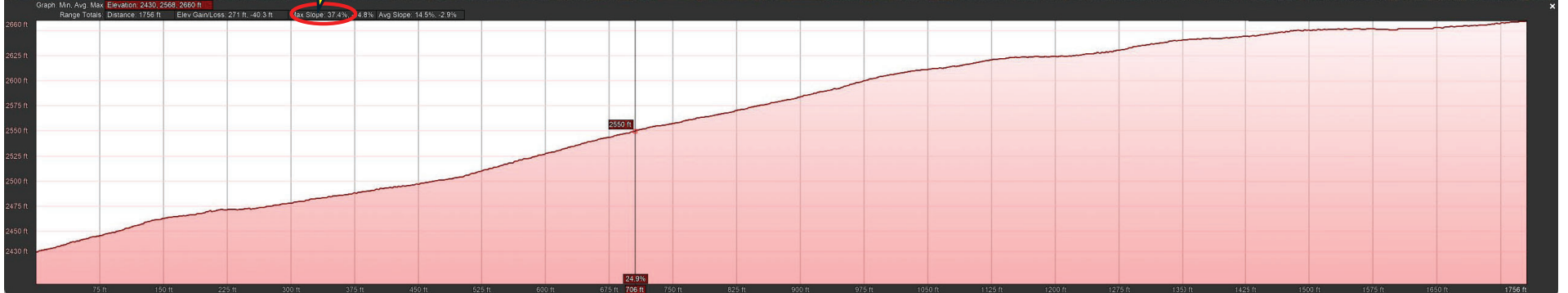
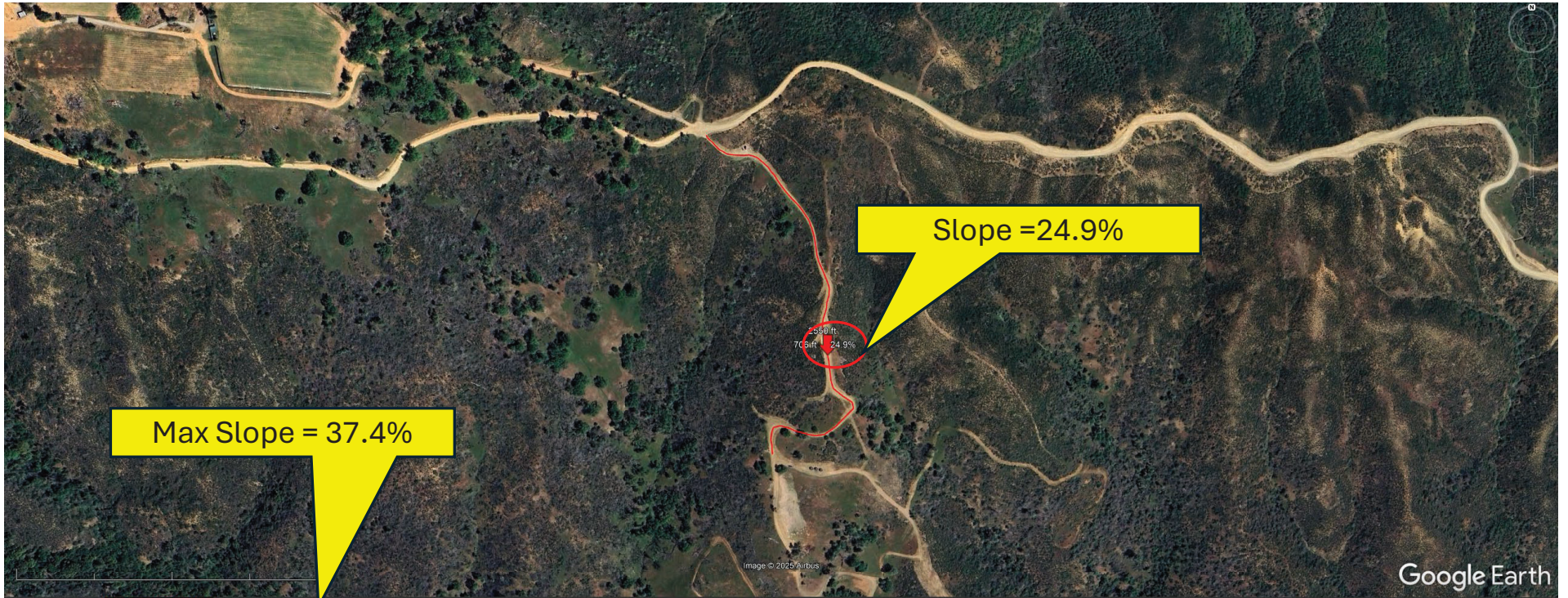


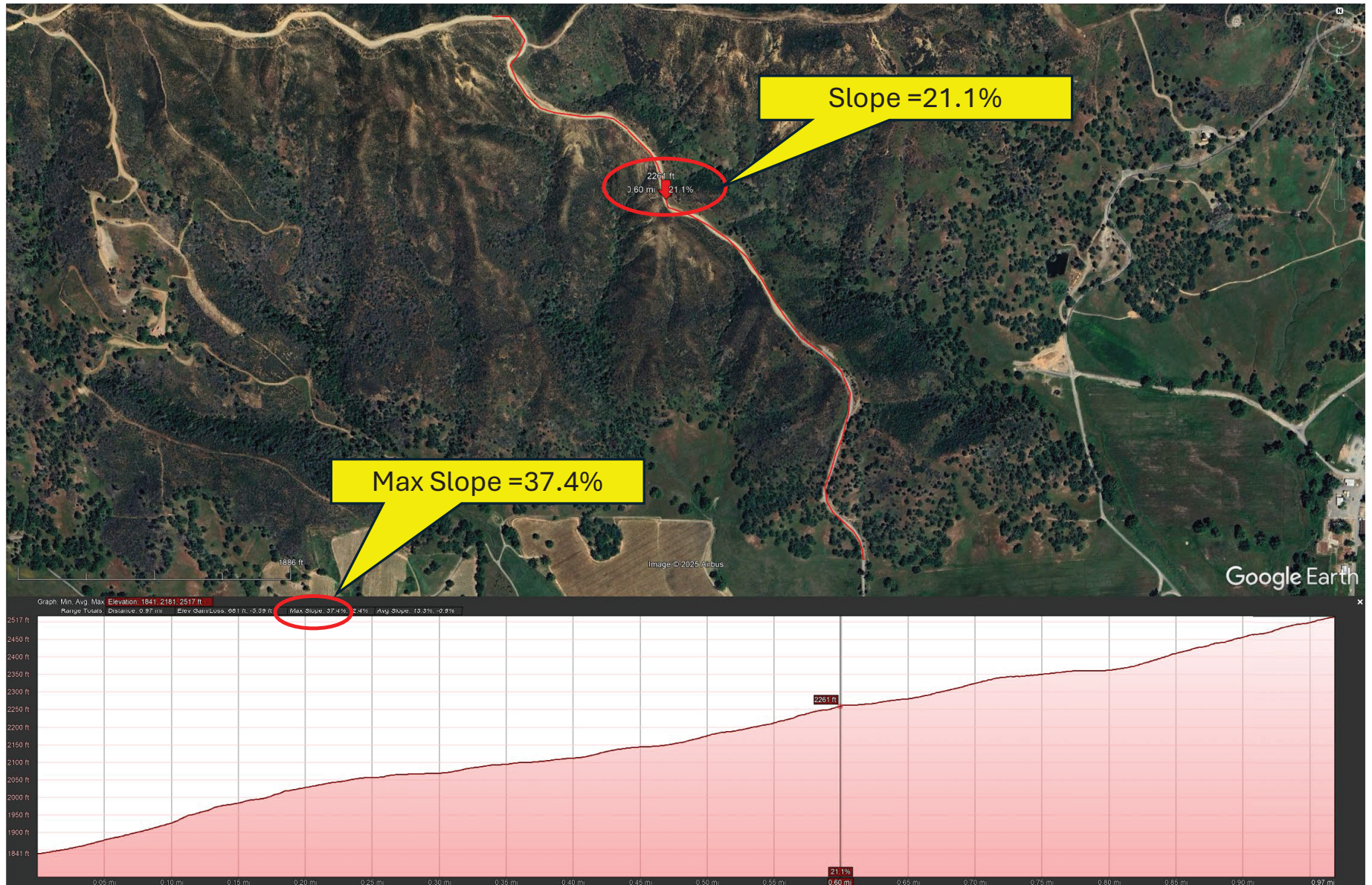




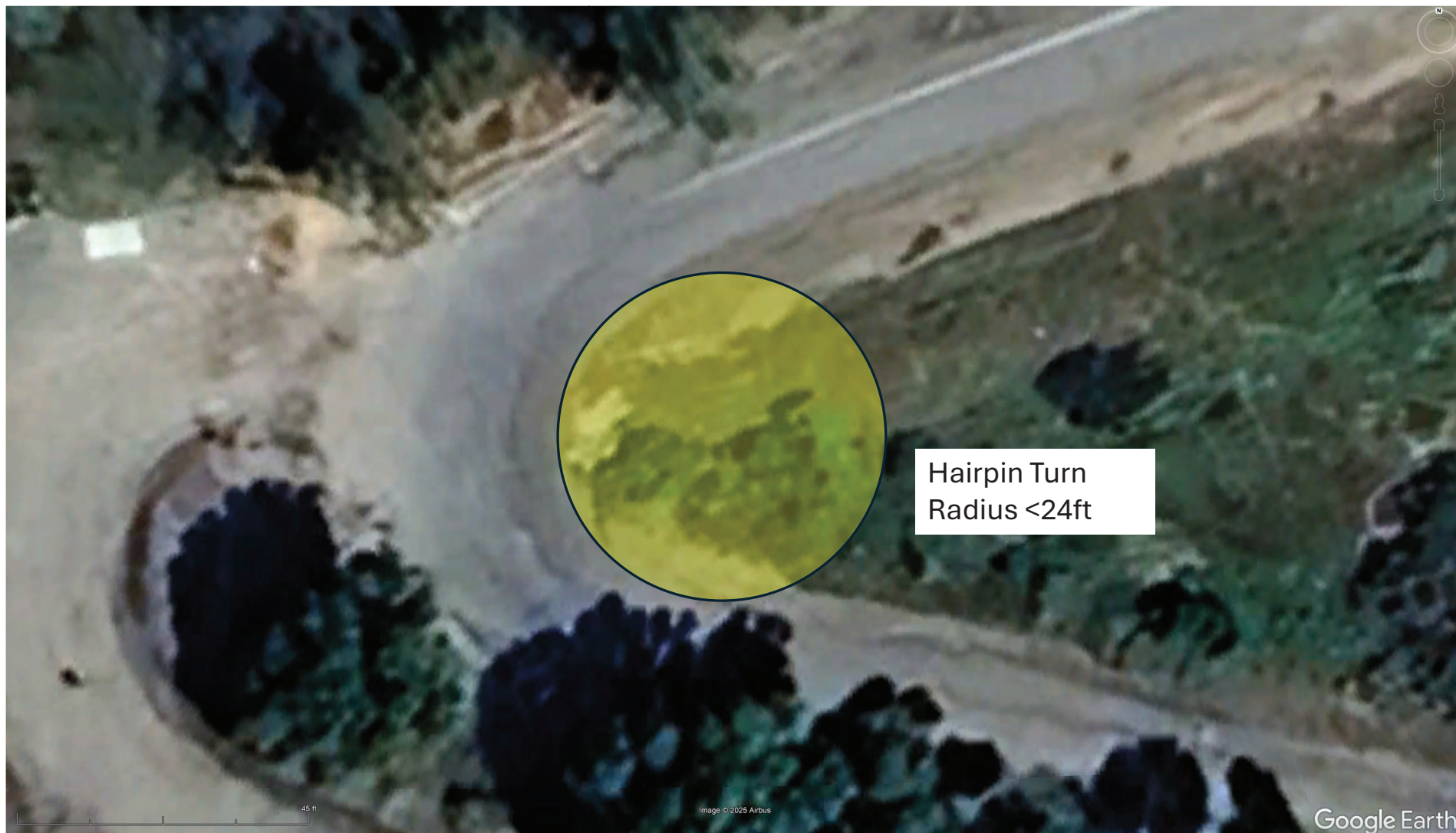




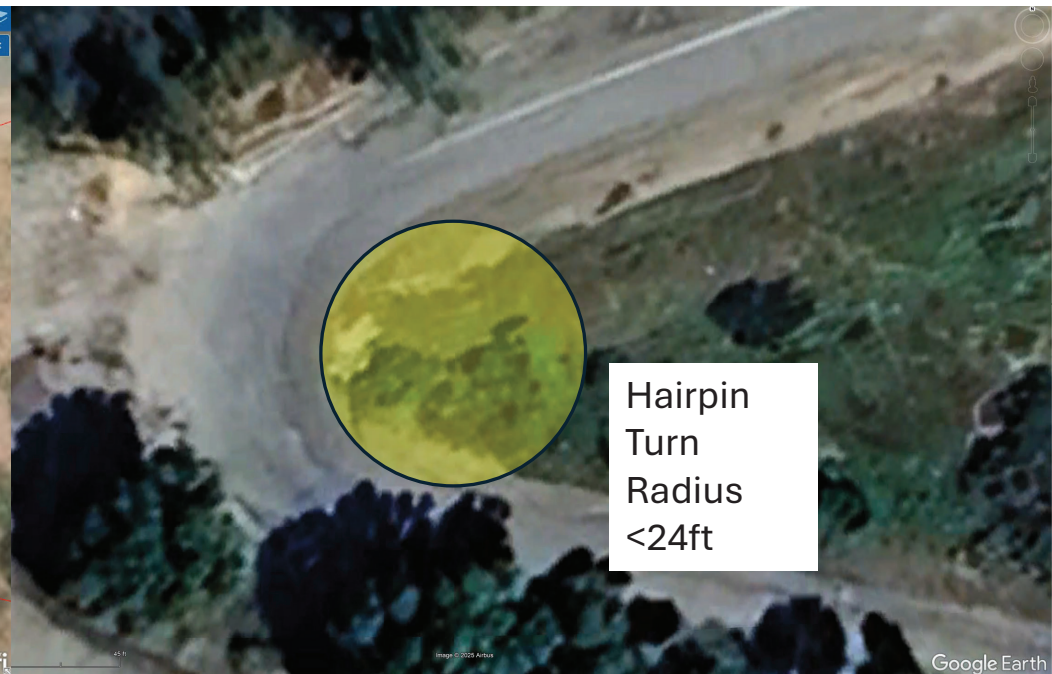
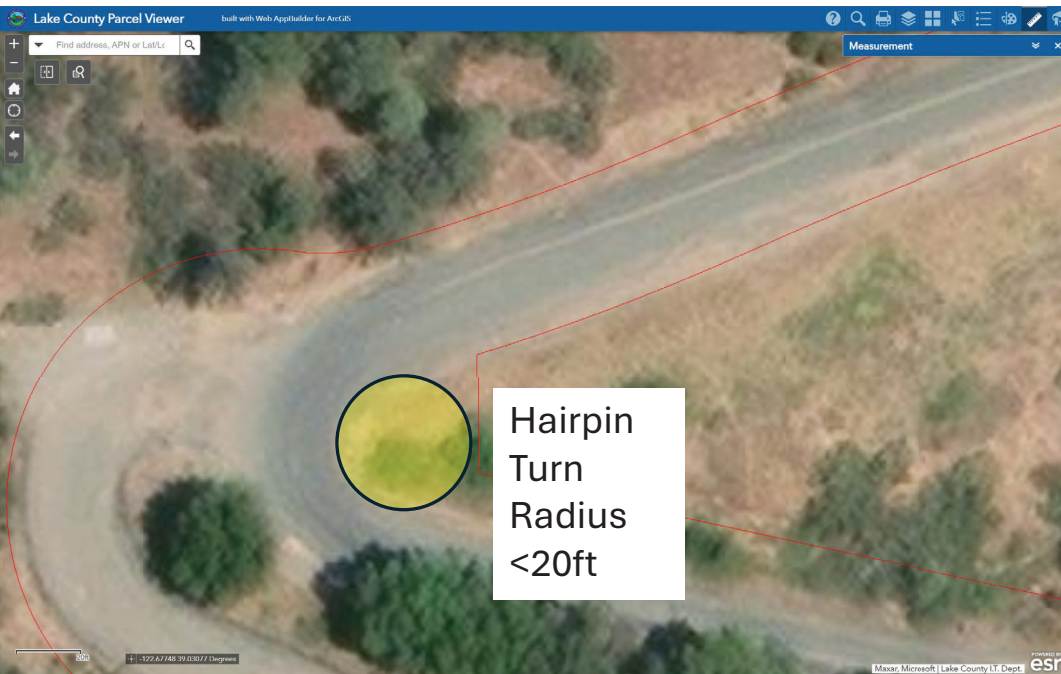








Hairpin Turn
Radius <24ft



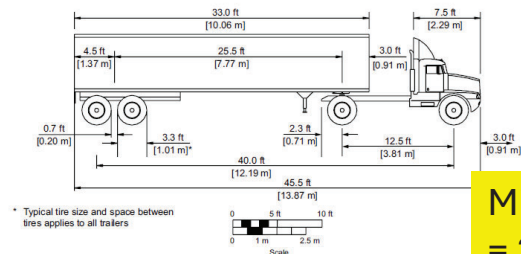
Aerial Imagery from Lake County Parcel Viewer and Google Earth showing the radius of the hairpin curve on High Valley Road is less than the 4290 minimum requirement of 50 feet.

Source: AASHTO A Policy of Geometric Design of Highways and Streets 2018 7th edition p.2-75, 2-82

Design Controls and Criteria 2-75

2-82 A Policy on Geometric Design of Highways and Streets

Longer Vehicles cannot negotiate the hairpin turn without encroaching into oncoming traffic



Min. Radius = 39.9 feet

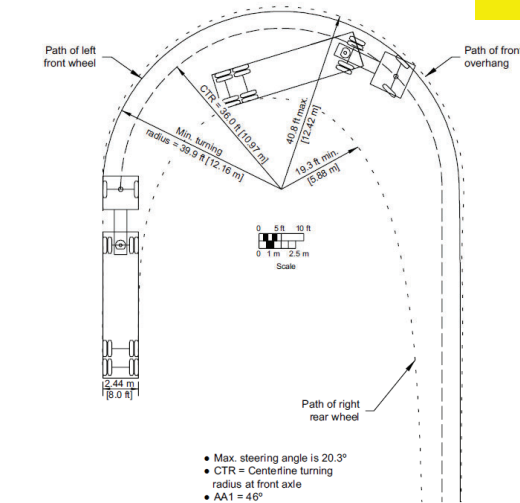
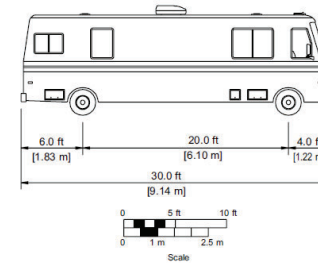


Figure 2-22. Minimum Turning Path for Intermediate Semitrailer (WB-40 [WB-12]) Design Vehicle

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Min. Radius = 39.7 feet

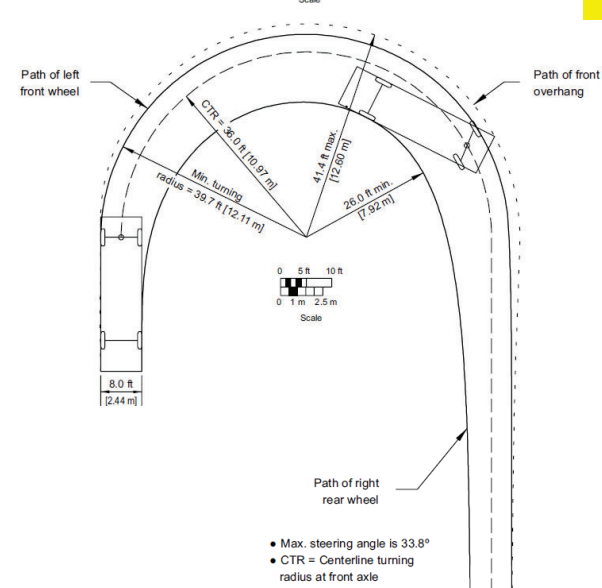
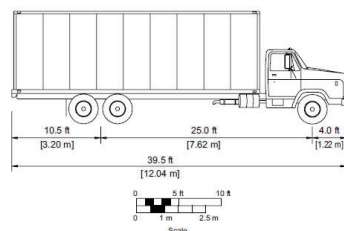


Figure 2-29. Minimum Turning Path for Motor Home (MH) Design Vehicle



Min. Radius
= 36.4 feet

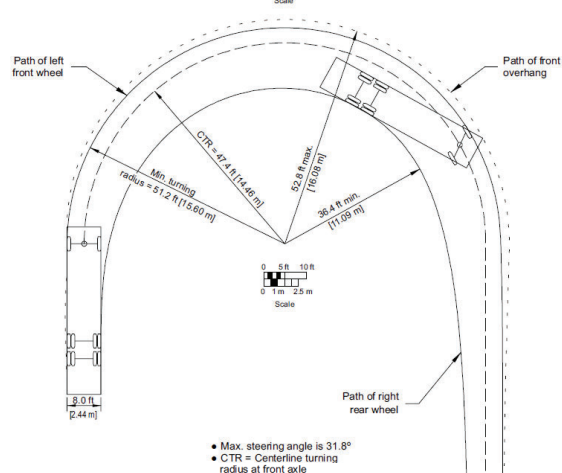
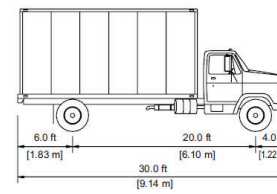


Figure 2-12. Minimum Turning Path for Single-Unit Truck (SU-40 [SU-12]) Design Vehicle



Min. Radius
= 28.4 feet

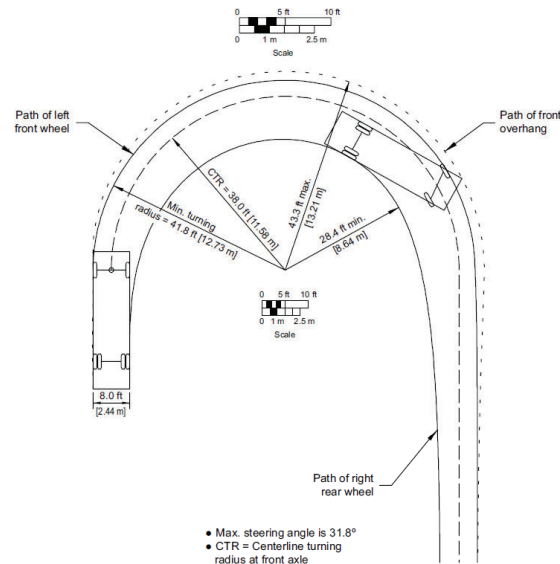


Figure 2-11. Minimum Turning Path for Single-Unit Truck (SU-30 [SU-9]) Design Vehicle

Longer Vehicles cannot negotiate the hairpin turn without encroaching into oncoming traffic

Source: AASHTO A Policy of Geometric Design of Highways and Streets 2018 7th edition p.2-59

Table 2-5a. Minimum Turning Radii of Design Vehicles (U.S. Customary Units)

Design Vehicle Type	Passenger Car	Single-Unit Truck	Single-Unit Truck (Three Axle)	Intercity Bus (Motor Coach)		City Transit Bus	Conventional School Bus (65 pass.)	Large ^a School Bus (84 pass.)	Articulated Bus	Intermediate Semi-trailer	Interstate Semitrailer		"Double Bottom" Combination	Rocky Mtn Double	Triple Semi-trailer/Trailers	Turnpike Double Semi-trailer/Trailer	Motor Home	Car and Camper Trailer	Car and Boat Trailer	Motor Home and Boat Trailer
Symbol	P	SU-30	SU-40	BUS-40	BUS-45	CITY-BUS	S-BUS36	S-BUS40	A-BUS	WB-40	WB-62*	WB-67**	WB-67D	WB-92D	WB-100T	WB-109D*	MH	P/T	P/B	MH/B
Minimum Design Turning Radius (ft)	23.8	41.8	51.2	41.7	44.0	41.6	38.6	39.1	39.4	39.9	44.8	44.8	44.8	82.0	44.8	59.9	39.7	32.9	23.8	49.8
Centerline Turning Radius (CTR) (ft)	21.1	38.0	47.4	37.8	40.2	37.8	34.9	35.4	35.5	36.0	41.0	41.0	40.9	78.0	40.9	55.9	36.0	30.0	21.0	46.0
Minimum Inside Radius (ft)	14.1	28.4	36.4	24.3	24.7	24.5	23.8	25.3	21.3	19.3	7.4	1.9	19.1	55.6	9.7	13.8	26.0	18.3	8.0	35.0

* Design vehicle with 53-ft trailer as grandfathered in with 1982 Surface Transportation Assistance Act (STAA).

^a School buses are manufactured from 42-passenger to 84-passenger sizes. This corresponds to wheelbase lengths of 11.0 to 20.0 ft, respectively. For these different sizes, the minimum design turning radii vary from 28.1 to 39.1 ft and the minimum inside radii vary from 17.7 to 25.3 ft.

^b The turning radius assumed by a designer when investigating possible turning paths is set at the centerline of the front axle of a vehicle. If the minimum turning path is assumed, the CTR approximately equals the minimum design turning radius minus one-half the front width of the vehicle.

Only a passenger car can safely negotiate a curve radius less than 25 feet







Two separate incidents of semi-trailers stuck while trying to negotiate the hairpin turn on High Valley Road and blocking all lanes of traffic





REVEAL 109F 43C 06/07/2025 16:05:36



REVEAL 109F 43C 06/07/2025 16:04:50



REVEAL 109F 43C 06/07/2025 16:15:48



REVEAL 109F 43C 06/07/2025 16:18:25

CalFire and USFS
Fire vehicles
responding to an
incident
approaching
Hairpin Turn on
High Valley Road.
Including a trailer
with grading
equipment.

Note: All the
vehicles are driving
in the opposite
lane well before
hairpin turn in an
attempt to
negotiate the turn.



REVEAL 86F 30C 06/25/2025 10:32:49



REVEAL 71F 22C 06/25/2025 09:17:34



REVEAL 66F 19C 06/25/2025 08:35:37

Trucks approaching sharp non-compliant curve across from school. Note all trucks are driving entirely into the opposing lane of traffic.

Curve issues:

- 4290 and HDM non-compliant curve radius requirements
- HDM Line-of-sight visibility requirements due to tree obstructions
- HDM advisory against curves at the bottom of steep downgrades
- HDM and 4290 road width requirements



REVEAL 109F 43C 06/07/2025 14:03:38



REVEAL 80F 27C 07/08/2025 09:49:07



Two separate incidents of RVs and two separate incidents of semi trailers getting stuck trying to negotiate the hairpin curve. Both lanes of traffic were blocked.



REVEAL 104F 40C 04/09/2024 15:13:07



REVEAL 77F 25C 04/09/2024 12:52:06



REVEAL 104F 40C 04/08/2024 16:47:12



REVEAL 73F 23C 04/09/2024 12:02:24



REVEAL 42F 6C 04/08/2024 08:00:46

Separate Incidents of Trucks trying to negotiate narrow section of High Valley Road between School and Hairpin curve.

Photos on the left: Road is not wide enough for two trucks to safely pass. Downhill trucks are over the curb with no shoulder on a steep slope. Uphill trucks must avoid a steep ditch.

Photos in the center and on the right: Trucks driving up and down the steep road over the center line



REVEAL TACTICAM 107F 42C 06/06/2025 14:04:41

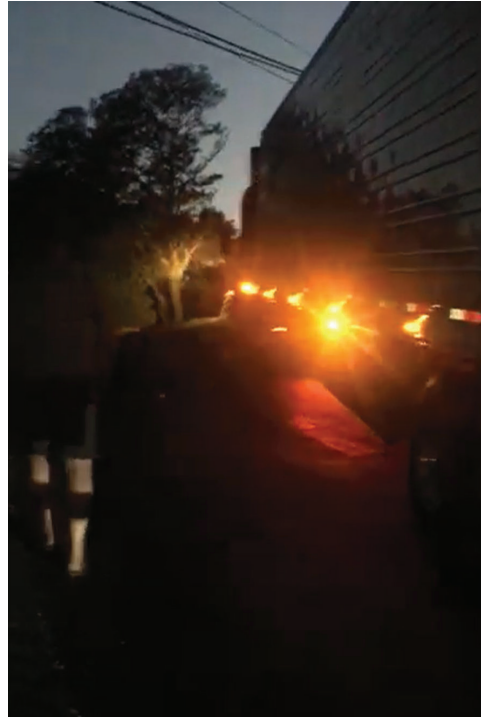


REVEAL TACTICAM 105F 41C 06/06/2025 12:36:56



Car runs into the ditch to avoid being sideswiped by semi driving into oncoming traffic toward elementary school

<https://www.youtube.com/watch?v=Cs1ULpbDRzM>



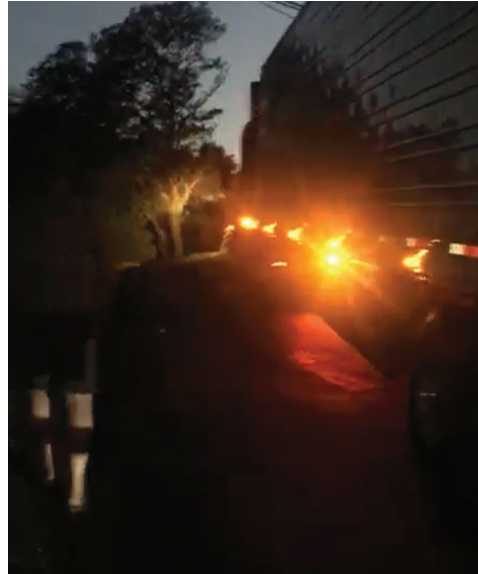
Semi stuck at hairpin curve for several minutes blocking traffic and having to drive over the edge of the road.

<https://www.youtube.com/watch?v=eu2H0i5S79A>

<https://www.youtube.com/watch?v=8mFq-n8CeVg&t=46s>



Car runs into the ditch to avoid being sideswiped by semi driving over the centerline into oncoming traffic toward elementary school



Semi stuck at sharp curve between the school and the hairpin curve for several minutes blocking traffic and having to drive over the edge of the road.

Source: Highway Design Manual, 7th Edition, California Department of Transportation pp200-2, 200-5, 200-8

Table 201.1

Sight Distance Standards

Design Speed ⁽¹⁾ (mph)	Stopping ⁽²⁾ (ft)	Passing (ft)
10	50	---
15	100	---
20	125	800
25	150	950
30	200	1,100
35	250	1,300
40	300	1,500
45	360	1,650
50	430	1,800
55	500	1,950
60	580	2,100
65	660	2,300
70	750	2,500
75	840	2,600
80	930	2,700

Notes:

⁽¹⁾See Topic 101 for selection of design speed.

⁽²⁾For sustained downgrades, refer to underlined standard in Index 201.3

Table 201.7

Decision Sight Distance

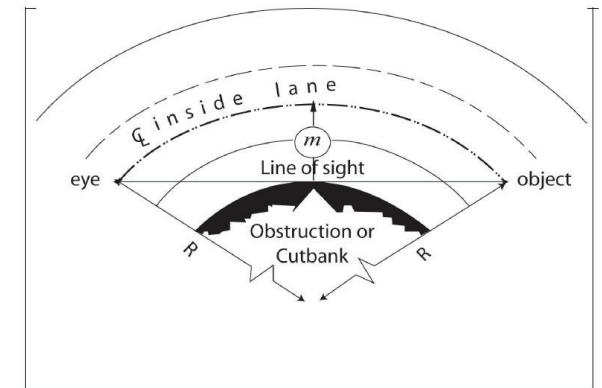
Design Speed(mph)	Decision Sight Distance(ft)
30	450
35	525
40	600
45	675
50	750
55	865
60	990
65	1,050
70	1,105
75	1,180
80	1,260

Baseline SSD at 30mph = 200 ft
Baseline DSD at 30mph = 450 ft
HDM advises an additional 20% on grades > 3%

Recommended SSD =240ft.; DSD = 540ft.

Figure 201.6

Stopping Sight Distance on Horizontal Curves



Caltrans HDM specifies Sight Stopping Distance (SSD) of 240 feet and a Decision Stopping Distance (DSD) of 540 ft. at 30mph.

Actual SSD and DSD = 66 ft

Visibility approaching the corner from both directions is heavily obscured by structures and vegetation.

