

D4 – Division of Operations, Signal Operations Branch

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Traffic Signal Coordination with TranSync-D (Desktop) & TranSync-M (Mobile) – Keeping Traffic Signals Green

TranSync-D & TranSync-M are the modern methods of implementing and analyzing coordination plans. Some of the benefits of this product is that it saves money, saves coordination plans in windows-based database, very user-friendly interface in modifying coordination plans, and it collects real-time data to make timing & coordination improvements.



TranSync is an advanced software for traffic signal engineers to efficiently manage, operate, and maintain their traffic signal systems, especially coordinated traffic signals.

TranSync-D – Desktop

- Uses advance mapping to visualize traffic signals on digital maps
- Manages and edits signal timing directly on map
- Produces Arterial Performance Reports

TranSync-M – Mobile (iPad/iPhone)

- ✓ Collects GPS data during travel runs (Coordination Plans)
- ✓ Shown on TSD with multiple travel runs
- Travel time through coordinated signals
- Total Wait Time through corridor
- Speed through corridor
- Compare before and after data



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<u>TranSync-M</u>



A Successful Coordination System by TranSync – Town of American Canyon – 5 Signals

The Town of American Canyon was the first one to experience the true benefits of implementing TranSync in five important location within Route 29. With the use of TranSync tool, a more efficient & reliable coordination system was created for these five important signals, especially in a critical route in where high volume traffic moves constantly from early morning to late evening.



Time-Space Diagram – American Canyon/Route 29

The Real Result from TranSync at American Canyon

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	file name	starting time	ending time	mean speed	highest	lowest	travel time	wait time	of stops	queue(s)
1	American Canyon to Napa Junction[Existing AM]-NB-2018-10-25 08-01-32.gps	10/25/2018 7:40	10/25/2018 8:01	3.8 mph	28.5 mph	0	21m7s	936 s	19	23165 at RioDIMr; 1164ft at Npaltn
2	American Canyon to Napa Junction (Existing AM)-NB-2018-10-25 08-33-35.gps	10/25/2018 8:21	10/25/2018 8:33	6.7 mph	40.8 mph	0	12m18s	336 s	12	1973ter Dnidsn; 2486ft at RioDMr; 862ft at Npalt
3	American Canyon to Napa Junction[Existing AM]-NB-2018-10-25 08-58-58.gps	10/25/2018 8:52	10/25/2018 8:58	13.5 mph	43.3 mph	0	6m6s	1175	5	641ft at RioDWr, 378ft at Eclypts; 263ft at Npaltn
4	American Canyon to Napa Junction[Existing AM]-N8-2018-10-25 09-11-36.gps	10/25/2018 9:09	10/25/2018 9:11	33.6 mph	48.8 mph	0	2m25s	8 s	1	586 ft at Npaltn
								total	number	
	file name	starting time	ending time	mean speed	highest	lowest	travel time	wait time	of stops	queue(s)
1	American Canyon to Napa Junction(Existing Mod AM)-NB-2019-02-28 07-04-32 gps	2/28/2019 7:00	2/28/2019 7:04	19.1 mph	44.4 mph	0	4m16s	86 s	3	549ft at Rio Del Mar, 343ft at Napa Junction
2	American Canyon to Napa Junction(Existing Mod AM)-N8-2019-02-28 07-21-49.gos	2/28/2019 7:15	2/28/2019 7:21	12.7 mph	42.3 mph	0	6m25s	150 s	5	348ft at Donaldson; 321ft at Napa Junction
3	American Canyon to Napa Junction(new_AM 2018]-N8-2019-02-28 07-42-15 gps	2/28/2019 7:31	2/28/2019 7:42	7.3 mph	40 mph	0	11m10s	372 s	8	1377ft@Didsn;2350ft@RDelMr; 1269ft@npe jncb
4	American Canyon to Napa Junction(new_AM 2018]-N8-2019-02-28 08-01-27 gps	2/28/2019 7:56	2/28/2019 8:01	17.2 mph	46.2 mph	0	4m42s	42 s	2	18436 @Rio Del Mar
5	American Canyon to Napa Junction(new_AM 2018)-N8-2019-02-28 08-16-47 gps	2/28/2019 8:14	2/28/2019 8:16	39.4 mph	54.6 mph	6.3 mph	2m4s	0 s	0	
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Compare closest time-of-day run times to observe improvements