How We Roll, March 2: why Metro uses photo enforcement cameras to keep vehicles off train tracks

BY STEVE HYMON , MARCH 2, 2017

Hundreds of motorists were likely wrongly targeted by camera at LA intersection (http://losangeles.cbslocal.com/2017/02/27/hundreds-of-drivers-were-likely-wrongly-targeted-by-la-red-light-camera/) (KCBS)

A Blue Line train weighs about 270,000 pounds and can run as fast as 55 mph, the reason Metro uses photo enforcement cameras to keep vehicles and people off the tracks when

trains are approaching.

This piece by reporter David Goldstein concerns a Metro photo enforcement camera at East Century Boulevard and Grandee Avenue that is adjacent to the Blue Line. The gist of it: an increasing number of motorists have been cited for crossing the tracks despite warning bells and the gates closing. Meanwhile, a traffic signal just beyond the tracks was giving motorists a green light.

In response to the KCBS segment, Metro issued a statement:

> *While Metro believes the light phasing and traffic light placement at the Century/Grandee crossing conforms to industry standards, due to concerns expressed Metro will stop issuing citations while we continue to review this matter and work with the city of Los Angeles to enhance the intersection with an additional near side traffic light.*

This is an important issue and I'd like to offer a few points:

•Motorists should always give the highest priority to heeding the warning lights, bells and gates at rail crossings rather than looking at traffic signals beyond the tracks. Bottom line: If the gates are coming down and the lights are on and the bells are sounding, stop and wait for the train.

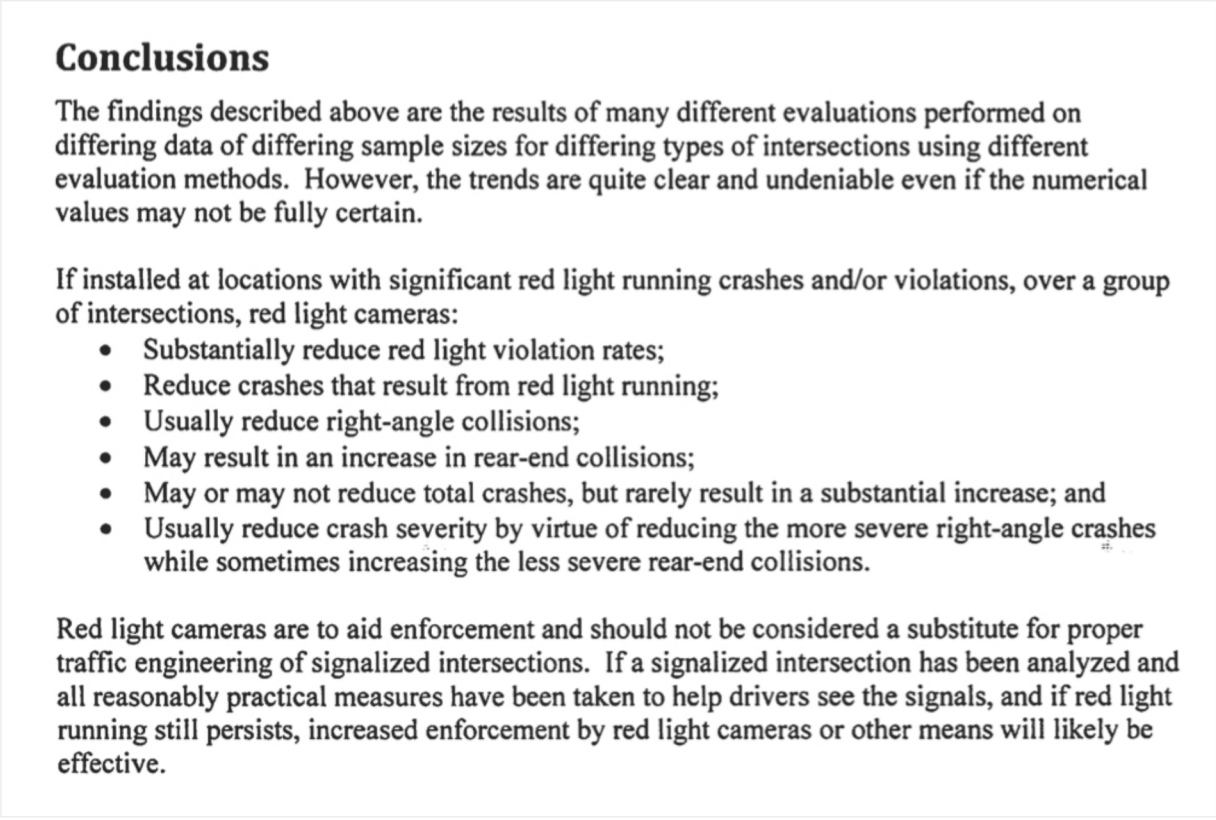
•The highest number of accidents between cars and Blue Line trains at both gated and non-gated intersections was 61 in 1993. A number of safety measures have since been put in place, including the use of photo enforcement cameras. Over the last 10 years, the number of accidents has averaged 16.8 annually, according to Metro statistics. That's a big drop, attributable in part to photo enforcement cameras being a good 24/7/365 tool to protect motorists and train passengers. Keep in mind the Blue Line runs at least 20 hours each day.

•A three-car Blue Line train weighs in the neighborhood of

290,000 pounds. Many passenger autos weigh 3,000 to 4,000 pounds. A Blue Line train can run as fast as 35 miles per hour at many intersections. Do you really want to be in a car that gets hit in the side by a train? Those are the exact type of severe — and often fatal — accidents that we're trying to prevent.

•Metro is also currently adding pedestrian swing gates at this intersection as part of a project to add gates at 27 Blue Line crossings. More about that here (http://thesource.metro.net/2016/11/03/metro-unveils-blue-line-pedestrian-and-vehicle-safety-improvements/).

Here is the conclusion of a 2010 study by the Texas Transportation Institute on photo enforcement cameras:



Conclusions

The findings described above are the results of many different evaluations performed on differing data of differing sample sizes for differing types of intersections using different evaluation methods. However, the trends are quite clear and undeniable even if the numerical values may not be fully certain.

If installed at locations with significant red light running crashes and/or violations, over a group of intersections, red light cameras:

- Substantially reduce red light violation rates;
- Reduce crashes that result from red light running;
- Usually reduce right-angle collisions;
- May result in an increase in rear-end collisions;
- May or may not reduce total crashes, but rarely result in a substantial increase; and
- Usually reduce crash severity by virtue of reducing the more severe right-angle crashes while sometimes increasing the less severe rear-end collisions.

Red light cameras are to aid enforcement and should not be considered a substitute for proper traffic engineering of signalized intersections. If a signalized intersection has been analyzed and all reasonably practical measures have been taken to help drivers see the signals, and if red light running still persists, increased enforcement by red light cameras or other means will likely be effective.

(http://s3-us-west-2.amazonaws.com/media.thesource.metro.net/wp-content/uploads/2017/03/02111739/conclusions.jpg)

The entire study is here (https://tti.tamu.edu/group/stsc/files/2011/03/Red-light-camera-effectiveness-070610-w-Garland-correction1.pdf). I am well aware that traffic

tickets are very expensive and no one wants to get one. But the cameras are there for reasons of public safety. Given the many distractions we face today, I can't emphasize enough how important it is for motorists, pedestrians, cyclists and skaters to pay attention to the warning lights and bells at rail crossings and to not take chances with your own life or the lives of others.

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Things to listen to whilst transiting: I just listened to the first episode of "Missing Richard Simmons (https://www.missingrichardsimmons.com/)" and I'm hooked.

Things to watch whilst transiting: an elephant challenges a white rhino (http://news.nationalgeographic.com/2017/02/rhino-african-elephant-animal-behavior/) to a play session in Kruger National Park in South Africa. Stick throwing is allowed.

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The new car lot has been a staple of America for many decades now.

While on the subject of cars...I've been writing a lot recently about transit ridership taking a dip in many parts of the country. Metro's own ridership fell about six percent between 2015 and 2016, as media have reported.

Attentive readers know that we've mentioned some potential reasons. Quick review: oft-mentioned here and around the U.S. is the popularity of ride hailing (Uber and Lyft, etc.), transit service issues/delays, lower gas prices, a stronger U.S. economy, undocumented workers allowed to get driver's licenses in California, among others.

What I haven't written about as much is the total cost of driving in recent months/years. With that in mind...

Are new cars getting cheaper? (http://thehappyphilosopher.com/are-new-cars-getting-cheaper/) **(The Happy Philosopher)**

The Philosopher recently replaced a car purchased in 1999 with a new one and discovered that when adjusted for inflation, the new car — which was substantially better in every way — was only 14 percent more expensive.

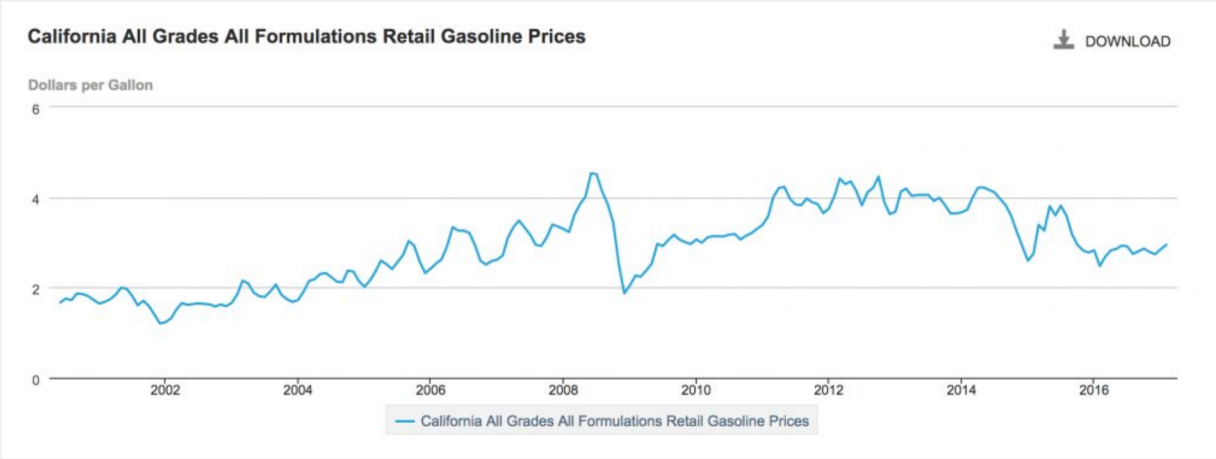
Then the Philosopher ran the numbers for other vehicles and found that some models are *actually cheaper* in inflation-adjusted dollars than they have been in the past. Well, that's interesting. But...

Why the average American can no longer afford a new car (https://www.fool.com/investing/general/2014/03/16/why-the-average-american-can-no-longer-afford-a-ne.aspx) (Motley Fool)

The average new car — priced at $32K — is out of reach of the average household in all but one of 25 large metro areas, according to a recent study. But...as Jalopnik notes (http://jalopnik.com/new-cars-are-too-expensive-for-most-americans-1783121058), there are many vehicles priced well below the average price that may be decidedly unsexy but will serve their owners well.

I want to echo that point: it's not that hard to get a brand new small fuel-efficient vehicle such as the Toyota Yaris, Honda Fit or Chevy Sonic for 20K, tax and title included. Zero percent financing is now very common and you don't have to look too hard to find a lease deal for under $200 per month.

Now, let's look at some other charts, starting with gas prices:



(http://s3-us-west-2.amazonaws.com/media.thesource.metro.net/wp-content/uploads/2017/03/02115056/CA-gas-prices.jpg)

California All Grades All Formulations Retail Gasoline Prices (Dollars per Gallon)

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2000					NA	1.669	1.754	1.720	1.869	1.856	1.811	1.726
2001	1.646	1.682	1.738	1.837	1.993	1.975	1.817	1.608	1.708	1.592	1.403	1.204
2002	1.231	1.319	1.507	1.657	1.617	1.633	1.648	1.637	1.627	1.579	1.624	1.585
2003	1.662	1.853	2.150	2.092	1.890	1.809	1.789	1.913	2.068	1.839	1.740	1.681
2004	1.722	1.914	2.143	2.185	2.298	2.322	2.233	2.131	2.115	2.376	2.350	2.143
2005	2.016	2.163	2.346	2.596	2.520	2.410	2.559	2.721	3.032	2.926	2.570	2.319
2006	2.424	2.540	2.624	2.925	3.337	3.260	3.260	3.212	2.937	2.593	2.508	2.587
2007	2.616	2.713	3.105	3.339	3.485	3.329	3.174	2.948	2.922	3.112	3.394	3.353
2008	3.296	3.231	3.609	3.846	4.015	4.531	4.511	4.128	3.842	3.440	2.507	1.871
2009	2.051	2.265	2.239	2.377	2.531	2.969	2.920	3.057	3.169	3.062	3.006	2.964
2010	3.065	2.993	3.104	3.138	3.136	3.134	3.171	3.186	3.064	3.146	3.205	3.297
2011	3.389	3.576	4.002	4.206	4.229	3.965	3.844	3.823	3.971	3.890	3.848	3.648
2012	3.747	4.027	4.414	4.292	4.353	4.133	3.821	4.109	4.211	4.458	3.893	3.628
2013	3.678	4.127	4.192	4.031	4.051	4.050	4.056	3.919	3.989	3.829	3.641	3.642
2014	3.666	3.726	3.984	4.210	4.220	4.163	4.110	3.961	3.821	3.585	3.234	2.916
2015	2.596	2.756	3.388	3.261	3.804	3.596	3.812	3.594	3.175	2.945	2.819	2.776
2016	2.823	2.477	2.679	2.822	2.855	2.930	2.911	2.745	2.803	2.862	2.788	2.738
2017	2.848	2.946										

- = No Data Reported; -- = Not Applicable; NA = Not Available; W = Withheld to avoid disclosure of individual company data.

Release Date: 2/27/2017
Next Release Date: 3/6/2017

(http://s3-us-west-2.amazonaws.com/media.thesource.metro.net/wp-content/uploads/2017/03/02115101/GasPriceChart.jpg)

The current average in California is $2.97 per gallon of regular gas, according to AAA. Bottom line: gas is cheaper than it was 10 years ago this time. Other stats:

•New cars are, on average, about 10 to 15 percent more fuel efficient than they were 10 years ago. See this government chart (https://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_04_23.html), although it should be noted others have found that the overall fuel efficiency of all vehicles on the road (http://ns.umich.edu/new/releases/7138-fuel-efficiency-of-vehicles-on-the-road-little-progress-since-the-1920s) has changed relatively little over the years.

•I don't have good stats on the average cost of car insurance. I do know that my rates have gone down as I get older.

•It remains pretty easy to find a cheap used car.

•I also don't have stats on the cost of parking. I'm taking an educated guess that in our region, it's overall probably more expensive to park than it has in the past, although it remains pretty easy to find free or cheap parking, especially if you don't mind walking a little.

Overall conclusion: I suspect the reason that Americans drove a record amount of miles in 2016 and purchased a record amount of new cars and rode transit a little less is that the cost of owning and driving a car has remained the same or even gone down for some folks.

And this disclosure: I just bought a new Subaru Outback to replace my 10-year-old Subie. I'll be clear: the absolute smartest move financially would be to pump a modest amount of money into the old car and drive it into the ground.

But I decided to sell it while it still had some worth and take advantage of zero percent financing to get a new one that gets better mileage, pollutes less and has a host of anti-collision safety features the old one lacked. As the Happy Philosopher found above, my old car — in inflation-adjusted dollars — cost about $200 less than the new one.

I'm not saying you should chuck your TAP card and immediately go buy a new car. But the reality in So Cal is that many people do drive and will continue to do so, yours truly included. In fact, I'd say the smartest thing any new car owner could do is go get a TAP card and try to use transit to reduce the annual miles driven on the new car and help battle climate change (http://thesource.metro.net/2016/11/01/transit-and-climate-change-part-2/).

Taking the Gold Line to work will keep several thousand miles off my car annually and make it last the 10 to 15 years I need it to last to make any kind of financial sense. In that sense, I suspect I'm like many other locals in that it's not a matter of choosing between driving and transit, it's a matter of using both to good effect.

Related

The Blue Line and safety, part II

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The Blue Line and safety, part I
March 18, 2010
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California Rail Safety Month begins with a message to be safe
September 3, 2013
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CATEGORIES: Transportation Headlines (http://thesource.metro.net/category/transportation-news/transportation-headlines/)

TAGGED AS: Blue Line (http://thesource.metro.net/tag/blue-line/), cost of driving (http://thesource.metro.net/tag/cost-of-driving/), crossing gates (http://thesource.metro.net/tag/crossing-gates/), photo enforcement camera (http://thesource.metro.net/tag/photo-enforcement-camera/), Safety (http://thesource.metro.net/tag/safety/), transit ridership (http://thesource.metro.net/tag/transit-ridership/)

9 replies ›

Nit picky comment: using the word “crash” instead of accident is considered to be more neutral, whereas using the descriptive “accident” implies some combination of:
no one was at fault
could not have been prevented
these things just happen and we should accept them
shrug

which is mostly not the case.

The consumer investigation focused on fines, but there’s a safety issue here that shouldn’t be ignored. Based on what the traffic camera video showed, the driver would’ve had to be looking upward instead of directly ahead of him like any driver would do. By the time he noticed the arms lowering, he couldn’t have stopped safely before reaching the tracks (or coming dangerously close). This is why having the traffic signal on the near side of the tracks is important as well as having it phased correctly. That way, if the light remains green for some reason, people are more likely to see the crossing signals behind it.

It appears that only westbound traffic at the intersection has this problem with signal placement (Google street view is a handy reference), so at least it’s not as bad as it could be.

Momentum is mass times velocity.
Kinetic energy is mass times the square of the velocity.

A San Francisco Cable Car weighs 7-8 tons. An old PCC trolley

car weighs 17-21 tons. A single Blue Line car weighs 47-50 tons. An automobile weighs 1-3 tons. A morbidly obese human being weighs less than a fifth of a ton.

You do the math, and tell me playing chicken with a trolley car (or even a cable car) isn't a profoundly stupid way to earn a painful death.

This is why we should have quadron gates at Blue Line crossings. We want to get rid of the "Deadly Blue Line" and make it the "Advanced Blue Line" like the Expo and Gold Lines

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How many train vs. car accidents have there been at the Blue Line/Del Amo intersection? Blue Line/Firestone? Blue Line/Slauson? None? Hmm...why is that I wonder???

I don't think that Metro needs to do any extensive study about the traffic light issue on Century Blvd. where the Blue Line crosses in Watts. All someone needs to do is ride the Blue Line to the 103rd/Watts Station, walk back one long block north, and just watch — which is exactly what I did this morning.

What they will see is a somewhat complicated street issue, but one that is adequately signaled to any competent driver, with one exception. Moreover, these signals are similar to those on 103rd St. The only difference is the installation of photo-enforcement cameras.

Drivers going east on Century Blvd. have no problems. Drives moving north on Grandee Avenue have a circle/slash light below the traffic signal, which activates when the train crossing lights and arms activate. The circle and slash in the light are adequately

fit but the right-turn arrow is not well lit. Nonetheless, the purpose of the sign can easily be deduced and the railroad lights and arms are clearly visible.

When drivers moving west on Century Blvd. see the lights flashing and crossing arms coming down, they do see a green signal beyond the tracks. The light stays green for about 10 seconds, long enough for drivers who were waiting to turn left (south) on Grandee Ave. to make their turn (Grandee parallels the Blue Line tracks on the west side). However, there's nothing that should be confusing about this — when the lights and arms activate, any reasonable driver would stop and wait.

The only confusion might come from drivers coming south on Graham Avenue, which parallels the tracks on the east side. Drivers turning west on Century have less time to react to the train lights and arms and it's probable that a traffic light on that corner with a no-right turn signal might cut down on the confusion.

Well, fer gosh sakes. Interconnect the traffic signals with the crossing signals so that the former cycle red when the latter are activated. That, or make human beings more nearly perfect so that they don't make careless mistakes. Now, which of those would be easier...

When the signal for the train starts the traffic signal to should change to yellow before the gates start closing. When the barriers starts to come down the light should turn red. Any cars that pass through the intersection once the barriers start to lower should get a ticket. It is all about the timing of the sequence of the gates closing.

I agree that four quadrant crossing gates are long overdue on the south LA part of the Blue Line. Still, the existing flashing lights, bells and arms are hard to miss.
The raised median curbs are pretty wimpy and will not discourage a testosterone fueled young pickup truck driver – think K rail.
Some of the crossings could be grade separated as adjacent properties probably are ripe for redevelopment and use as a temporary bypass.
C'mon, city of LA, use some of those pennies from the ~$500 tickets.