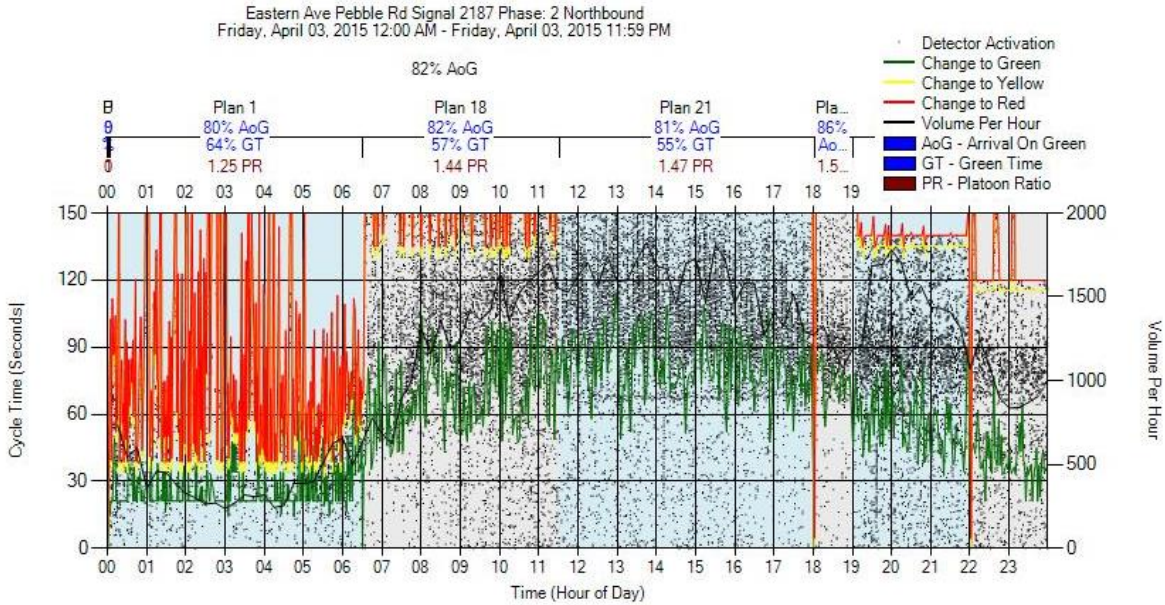


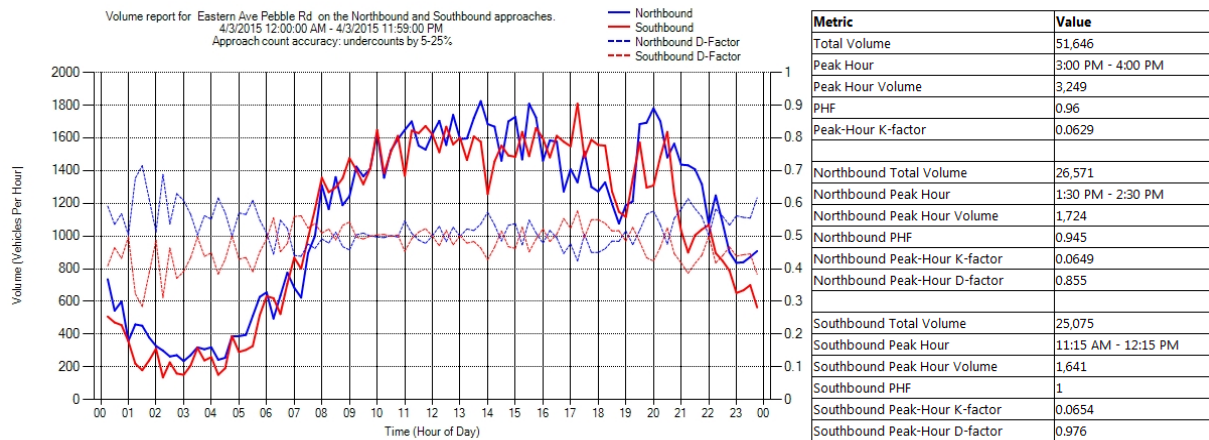


# FAST Signal Performance Measurement (SPM)



## Purdue Coordination Diagrams (PCD's)

- \* Between Yellow and red line the phase is yellow.
- \* From zero to green line the phase is red.
- \* Long vertical red lines – Main street is resting in green; side street or left turns get skipped.
- \* Short vertical red lines – Skipping street or left turns; late start of green for side street.
- \* PR – platoon ratio. From HCM 2000 Equation 15-4.
- \* The Higher the value, the better the progression.

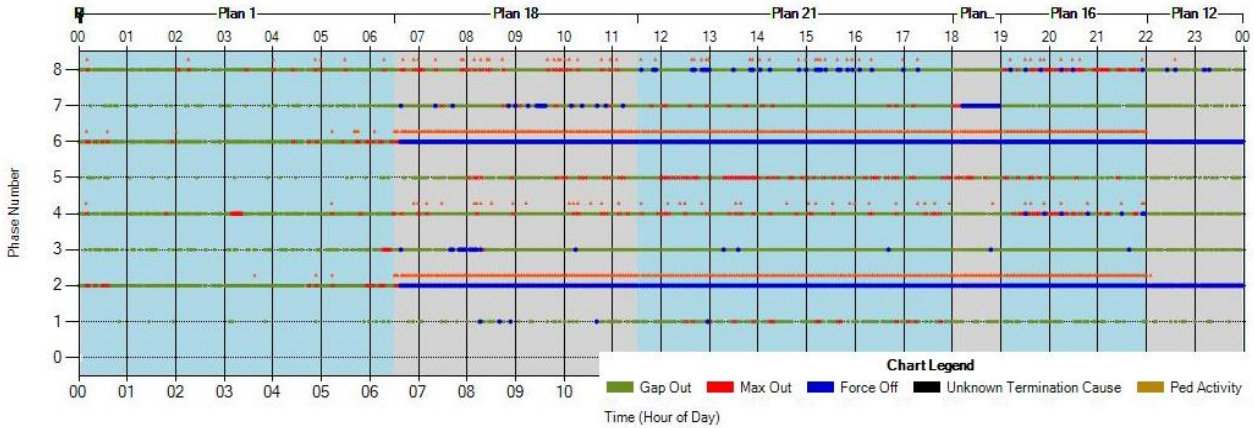


## Approach Volumes

- \* Detector approximately 350-400 feet upstream of stopbar.
- \* Detection zone is in advance of the turning lanes, so don't know if vehicles are turning left, right or going thru.
- \* Accuracy – tends to undercount.



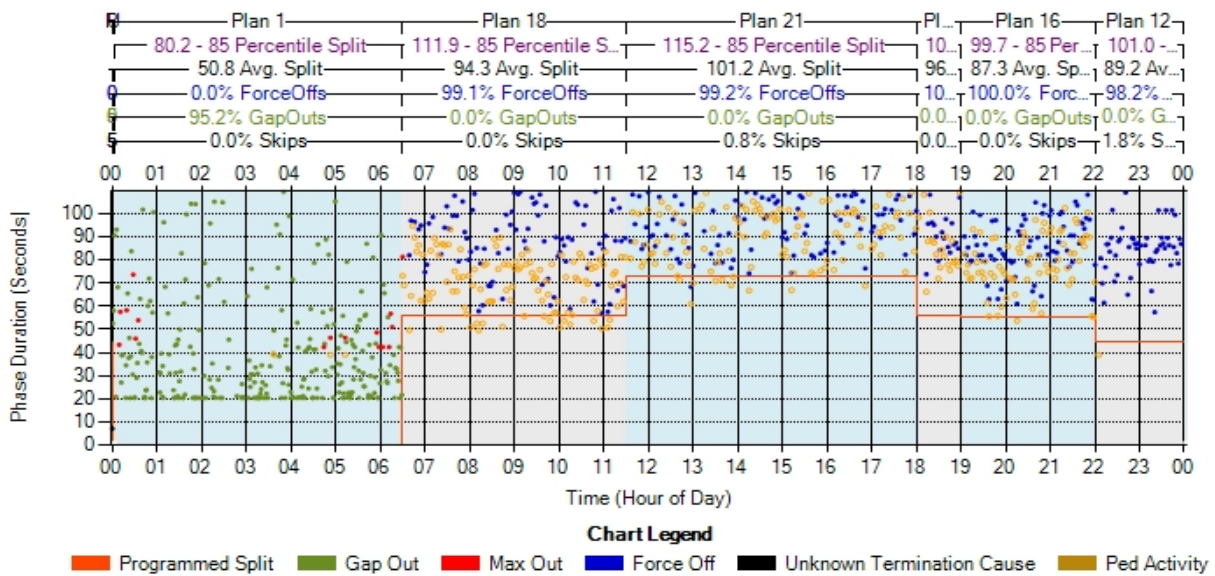
Eastern Ave Pebble Rd Signal 2187  
 Friday, April 03, 2015 12:00 AM - Friday, April 03, 2015 11:59 PM  
 Currently showing Force-Offs, Max-Outs and Gap-Outs with a consecutive occurrence of 1 or more.  
 Pedestrian events are never filtered



**Purdue Phase Termination Charts (ATC Traffic Signal Controller Data)**

- \* Shows how phases terminate in the sequence.
- \* Blue are max-outs (all programmed time is used up) during coordination.
- \* Reds are max-outs during fully actuated (free).
- \* Greens are gap-outs (not all the programmed time is being used).
- \* Blanks are skips (the phase was skipped (i.e. no demand)
- \* Orange dots are pedestrian activations.

Eastern Ave Pebble Rd SIG#2187 Phase 2  
 Friday, April 03, 2015 12:00 AM - Friday, April 03, 2015 11:59 PM



**Split Monitor (ATC Traffic Signal Controller Data)**

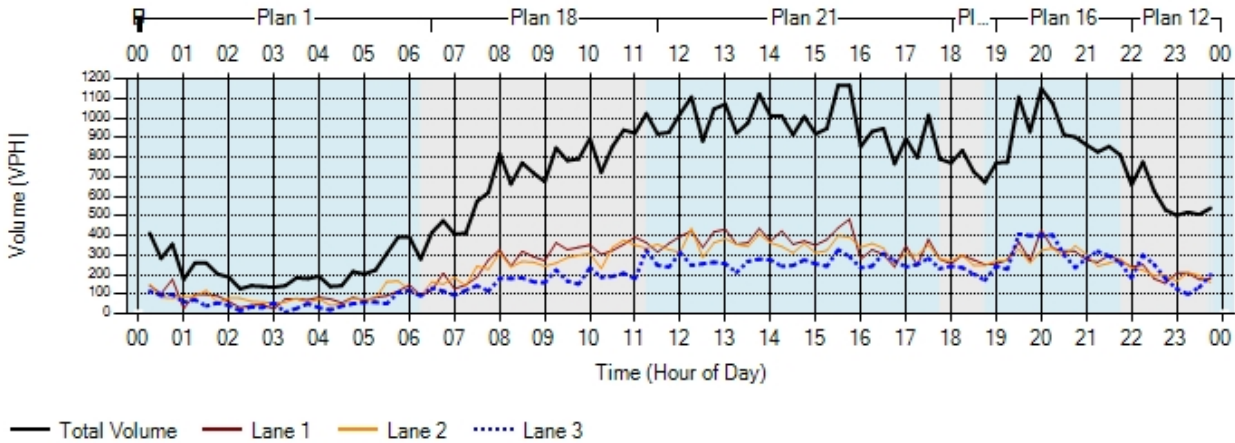
- \* Shows the amount of split time (green, yellow & all-red time) used by the various phases at the intersection.
- \* Greens are showing gap-outs; blues and reds are showing max-outs; yellows/ oranges are showing pedestrian activity; the line is showing the programmed split time.



Eastern Ave Pebble Rd SIG#2187  
 Friday, April 03, 2015 12:00 AM - Friday, April 03, 2015 11:59 PM

**Northbound Thru**

TV: 15969 PH: 7:30 PM - 8:30 PM PHV: 1067 VPH  
 PHF: 0.93 fLU: 0.9

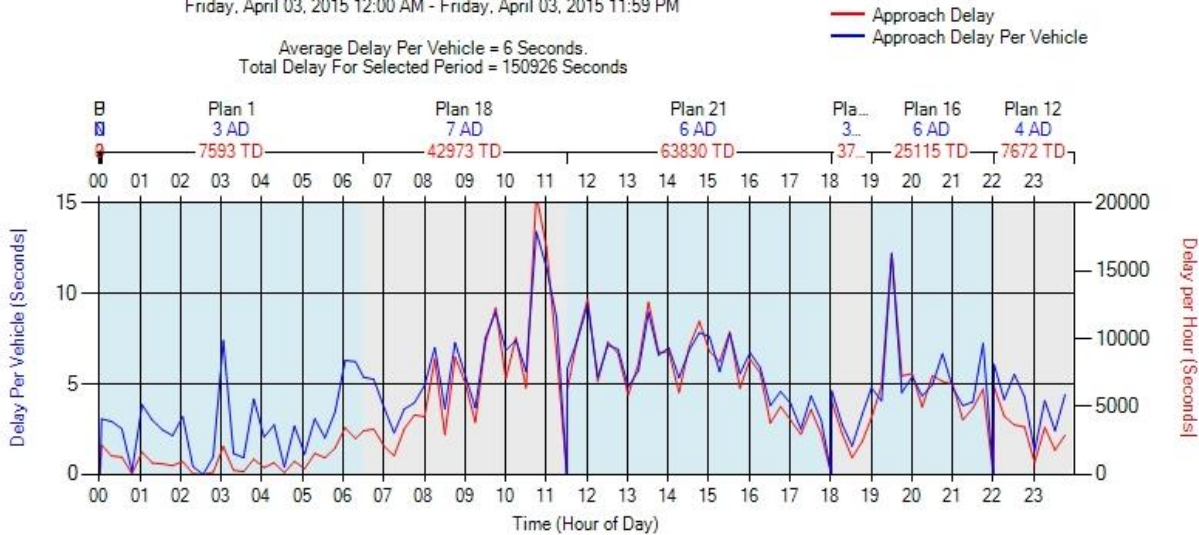


**Turning Movement Volume Counts**

- \* Graph shows lane-by-lane vph and total volume for the movement. Three graphs are available for each approach (Left, Thru, Right).
- \* TV is total volume; PH is Peak Hour; PHF is Peak Hour Factor; FLU is lane Utilization Factor.

Eastern Ave Pebble Rd Signal 2187 Phase: 2 Northbound  
 Friday, April 03, 2015 12:00 AM - Friday, April 03, 2015 11:59 PM

Average Delay Per Vehicle = 6 Seconds.  
 Total Delay For Selected Period = 150926 Seconds



Simplified Approach Delay. Displays time between detector activation during the red phase and when the phase turns green.  
 Does NOT account for start up delay, deceleration, or queue length that exceeds the detection zone.

**Approach Delay**

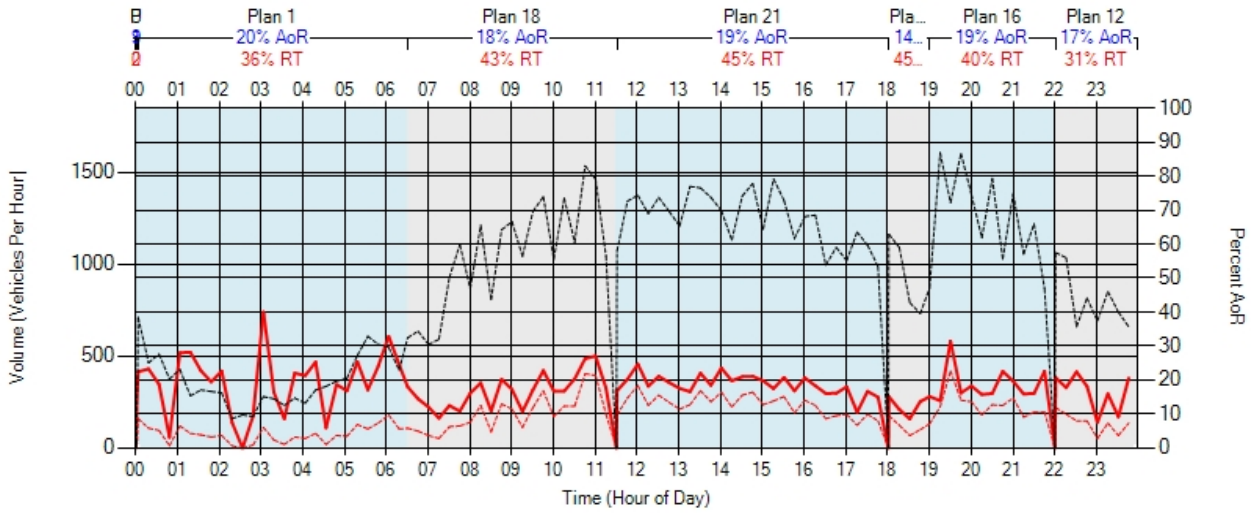
- \* Graph shows a simplified approach delay.
- \* Displays time between detector activation (advanced detection 350-400 feet upstream of the intersection) during red phase and when the phase turns green.
- \* Does not account for startup delay, deceleration, or queue length that exceeds the detection zone.



Eastern Ave Pebble Rd Signal 2187 Phase: 2 Northbound  
 Friday, April 03, 2015 12:00 AM - Friday, April 03, 2015 11:59 PM

Total Detector Hits = 22063 Total AoR = 4039  
 Percent AoR for the select period = 18

--- Arrivals on Red  
 --- Percent Arrivals on Red  
 --- Total Vehicles



**Arrivals on Red**

- \* Graph shows the vehicle arriving on red (as determined by the advanced detector 350-400 feet upstream of the intersection).
- \* Graph also shows the percent of vehicles arriving on red.