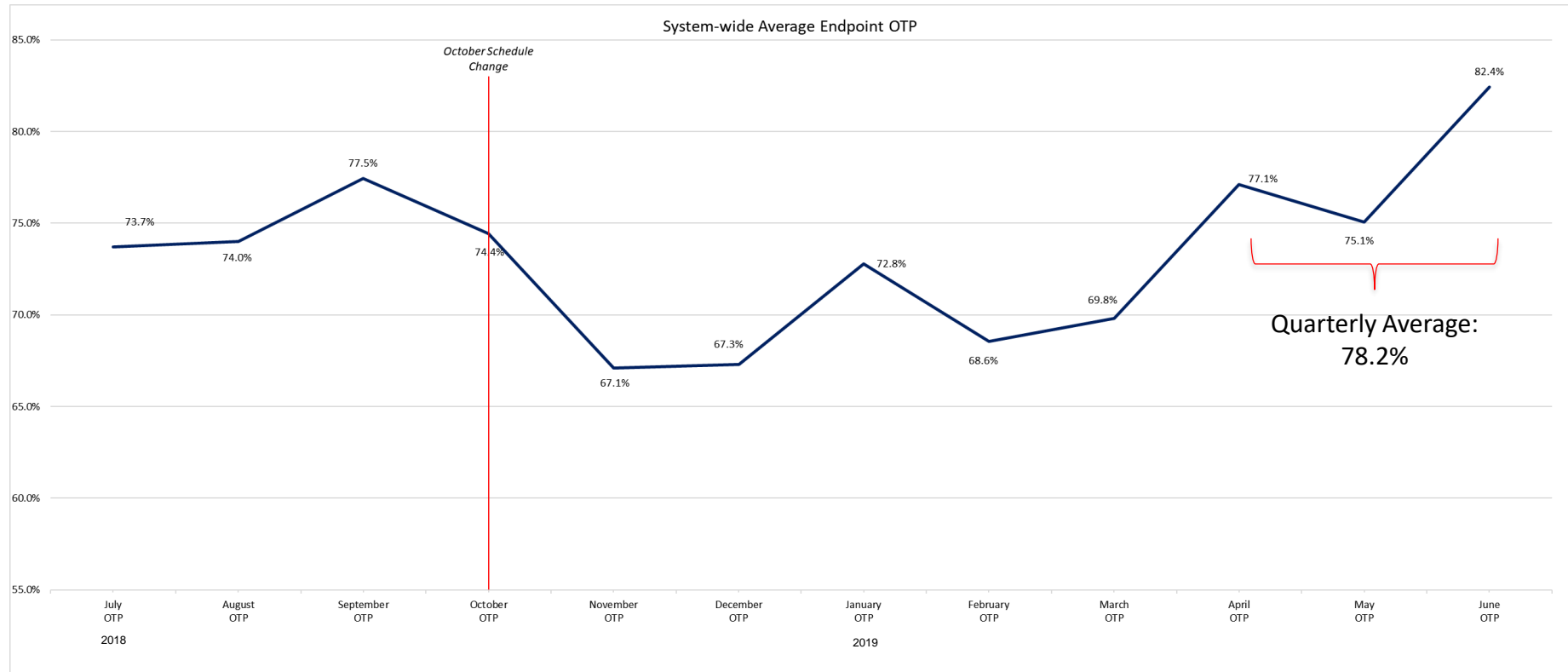




Pacific Surfliner On-Time Performance Analysis

Technical Advisory Committee
September 5, 2019

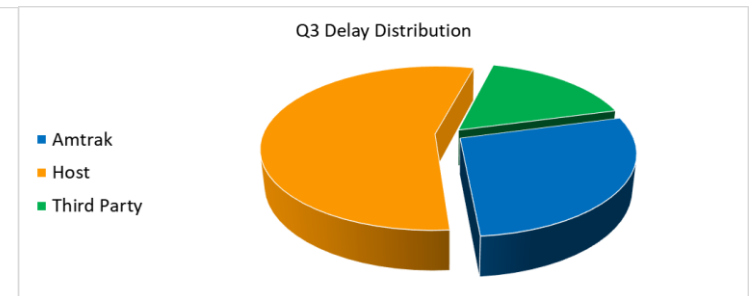
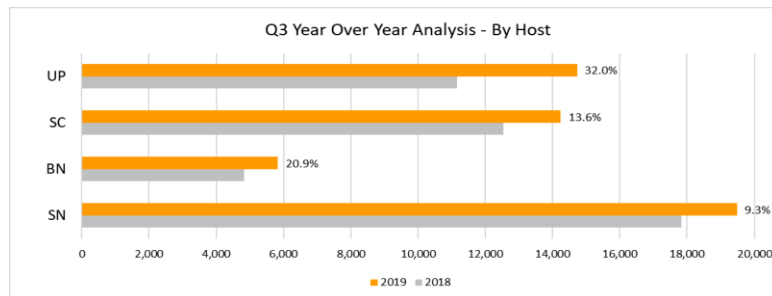
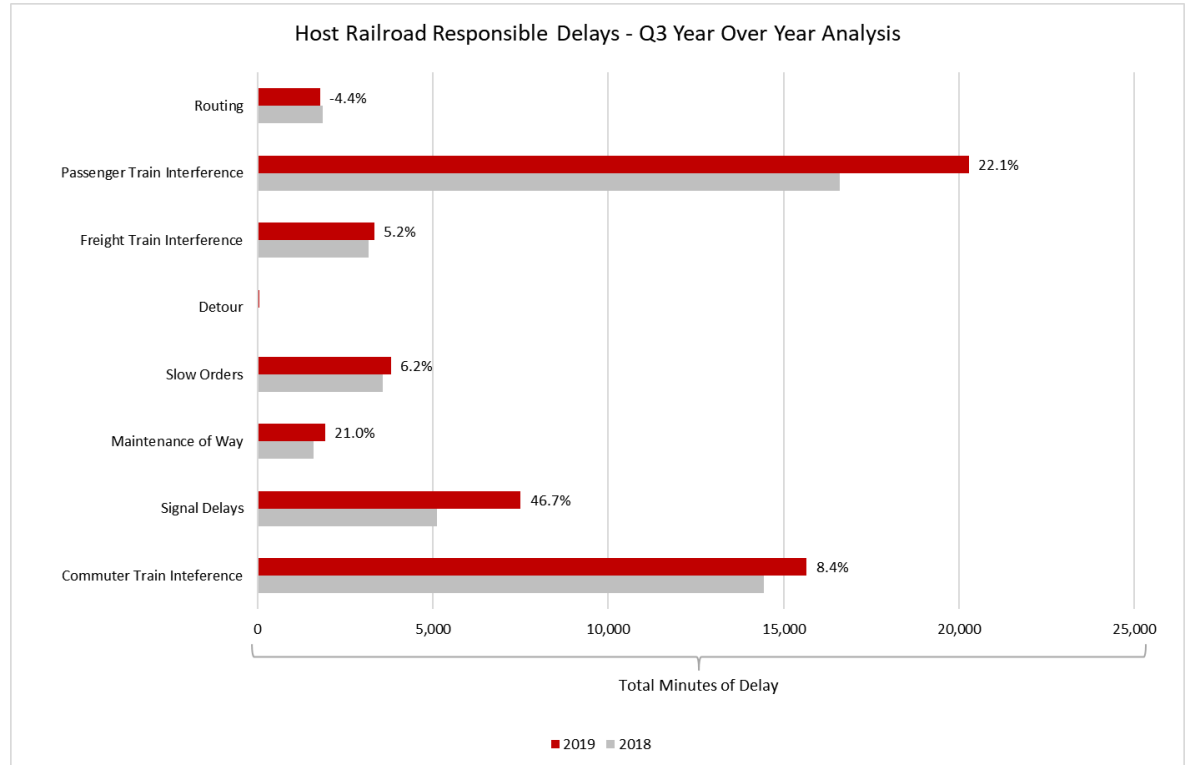
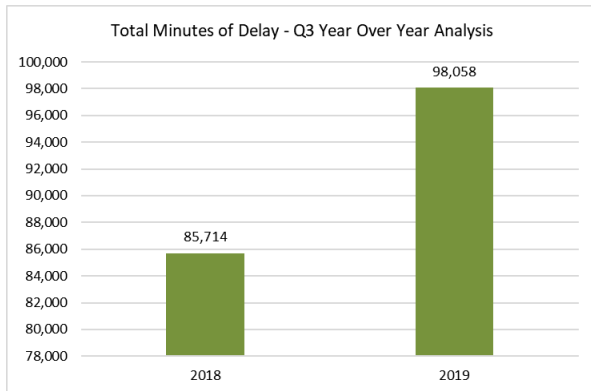
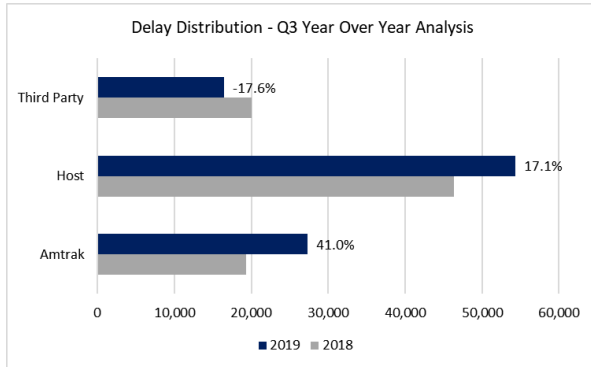
Average Endpoint On-Time Performance (OTP) - Systemwide



Average Endpoint OTP: Detail by Train

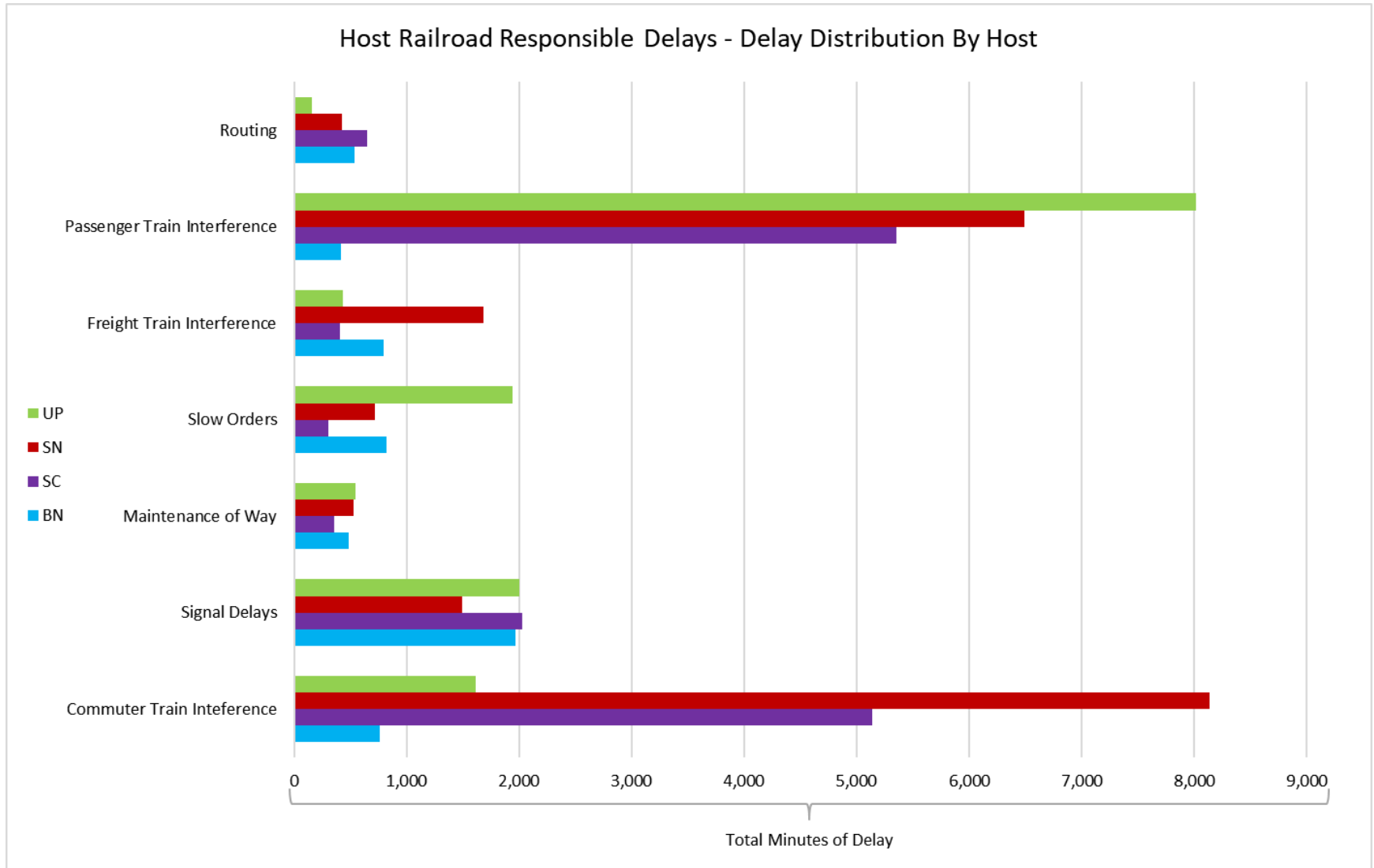
Train	July OTP	August OTP	September OTP	October OTP	November OTP	December OTP	January OTP	February OTP	March OTP	April OTP	May OTP	June OTP	12 Mnth Avg OTP
1565				100.0%	100.0%	81.8%	85.7%	100.0%	83.3%	100.0%	100.0%	100.0%	94.5%
561	100.0%	100.0%	100.0%	91.3%	100.0%	90.0%	86.4%	95.0%	85.7%	95.5%	90.9%	90.0%	93.7%
759	90.5%	100.0%	100.0%	100.0%	85.7%	90.0%	90.9%	80.0%	85.7%	86.4%	81.8%	75.0%	88.8%
1590				100.0%	77.8%	100.0%	85.7%	100.0%	83.3%	100.0%	44.4%	100.0%	87.9%
590	81.0%	100.0%	84.2%	85.7%	85.7%	85.0%	85.7%	77.8%	89.5%	85.7%	90.9%	90.0%	86.8%
579	73.3%	93.5%	92.9%	88.0%	65.0%	100.0%	81.8%	75.0%	95.0%	86.4%	86.4%	95.0%	86.0%
562	90.3%	90.3%	96.4%	92.6%	83.3%	87.1%	82.8%	73.1%	74.1%	82.1%	74.2%	96.7%	85.3%
768	77.4%	96.8%	96.7%	80.6%	80.0%	71.0%	80.6%	82.1%	87.1%	86.7%	93.5%	83.3%	84.7%
1564				83.3%	88.9%	88.9%	66.7%	87.5%	80.0%	75.0%	88.9%	100.0%	84.4%
1584				100.0%	77.8%	54.5%	77.8%	62.5%	100.0%	100.0%	88.9%	90.0%	83.5%
1761	100.0%	100.0%	81.8%	87.5%	100.0%	90.9%	55.6%	62.5%	80.0%	75.0%	66.7%	80.0%	81.7%
1579				83.3%	88.9%	54.5%	66.7%	87.5%	80.0%	100.0%	100.0%	70.0%	81.2%
1566	80.0%	50.0%	81.8%	75.0%	100.0%	72.7%	85.7%	66.7%	66.7%	100.0%	100.0%	90.0%	80.7%
565	96.8%	90.3%	89.3%	76.0%	66.7%	85.0%	81.8%	75.0%	66.7%	77.3%	77.3%	80.0%	80.2%
1767				66.7%	100.0%	81.8%	66.7%	62.5%	50.0%	100.0%	88.9%	90.0%	78.5%
580	77.4%	74.2%	70.0%	58.1%	60.0%	80.6%	80.6%	78.6%	87.1%	83.3%	87.1%	86.7%	77.0%
792	61.3%	80.6%	80.0%	80.6%	76.7%	77.4%	71.0%	75.0%	74.2%	80.0%	67.7%	83.3%	75.7%
591	71.0%	74.2%	63.3%	74.2%	56.7%	80.6%	83.9%	71.4%	77.4%	73.3%	83.9%	93.3%	75.3%
595	67.7%	83.9%	73.3%	83.9%	73.3%	77.4%	77.4%	64.3%	74.2%	76.7%	64.5%	80.0%	74.7%
573	70.0%	71.0%	66.7%	70.8%	42.9%	84.2%	86.4%	65.0%	76.2%	81.8%	90.9%	90.0%	74.7%
1573					77.8%	55.6%	71.4%	66.7%	50.0%	83.3%	77.8%	90.0%	71.6%
566	85.7%	87.0%	94.7%	69.6%	52.4%	36.8%	72.7%	65.0%	71.4%	59.1%	77.3%	85.0%	71.4%
584	61.3%	83.9%	85.7%	84.0%	52.4%	70.0%	72.7%	65.0%	61.9%	68.2%	72.7%	75.0%	71.1%
564	86.7%	90.3%	86.7%	62.5%	38.1%	50.0%	68.2%	60.0%	57.1%	77.3%	77.3%	85.0%	69.9%
782	83.9%	67.7%	66.7%	67.7%	56.7%	58.1%	71.0%	64.3%	77.4%	76.7%	77.4%	70.0%	69.8%
796	64.5%	71.0%	56.7%	67.7%	46.7%	67.7%	71.0%	75.0%	74.2%	80.0%	67.7%	83.3%	68.8%
583	51.6%	54.8%	66.7%	74.1%	60.0%	67.7%	72.4%	76.0%	70.4%	85.7%	64.5%	76.7%	68.4%
569				61.1%	66.7%	55.0%	59.1%	50.0%	61.9%	77.3%	63.6%	100.0%	66.1%
572	45.2%	58.1%	63.3%	68.0%	66.7%	75.0%	77.3%	60.0%	81.0%	59.1%	36.4%	35.0%	60.4%
763	71.0%	64.5%	70.0%	51.6%	20.0%	38.7%	48.4%	57.1%	58.1%	56.7%	67.7%	66.7%	55.9%
774	54.8%	48.4%	66.7%	48.4%	40.0%	35.5%	54.8%	39.3%	51.6%	66.7%	77.4%	73.3%	54.7%
767				33.3%	42.9%	60.0%	59.1%	65.0%	42.9%	40.9%	59.1%	75.0%	53.1%
1572					66.7%	45.5%	71.4%	40.0%	33.3%	50.0%			51.1%
777	64.5%	64.5%	53.3%	32.3%	30.0%	38.7%	58.1%	50.0%	61.3%	43.3%	45.2%	70.0%	50.9%
1569					55.6%	18.2%	71.4%	40.0%	16.7%	66.7%	44.4%	90.0%	50.4%
785	25.8%	22.6%	43.3%	54.8%	33.3%	16.1%	41.9%	53.6%	48.4%	40.0%	51.6%	46.7%	39.8%
System Average	73.7%	74.0%	77.5%	74.4%	67.1%	67.3%	72.8%	68.6%	69.8%	77.1%	75.1%	82.4%	

Delay Analysis: Federal Fiscal Year (FFY) 2018-19, Quarter 3 (Q3) Year over Year



UP: Union Pacific
 SN: North County Transit District
 SC: Metrolink
 BN: Burlington Northern Santa Fe

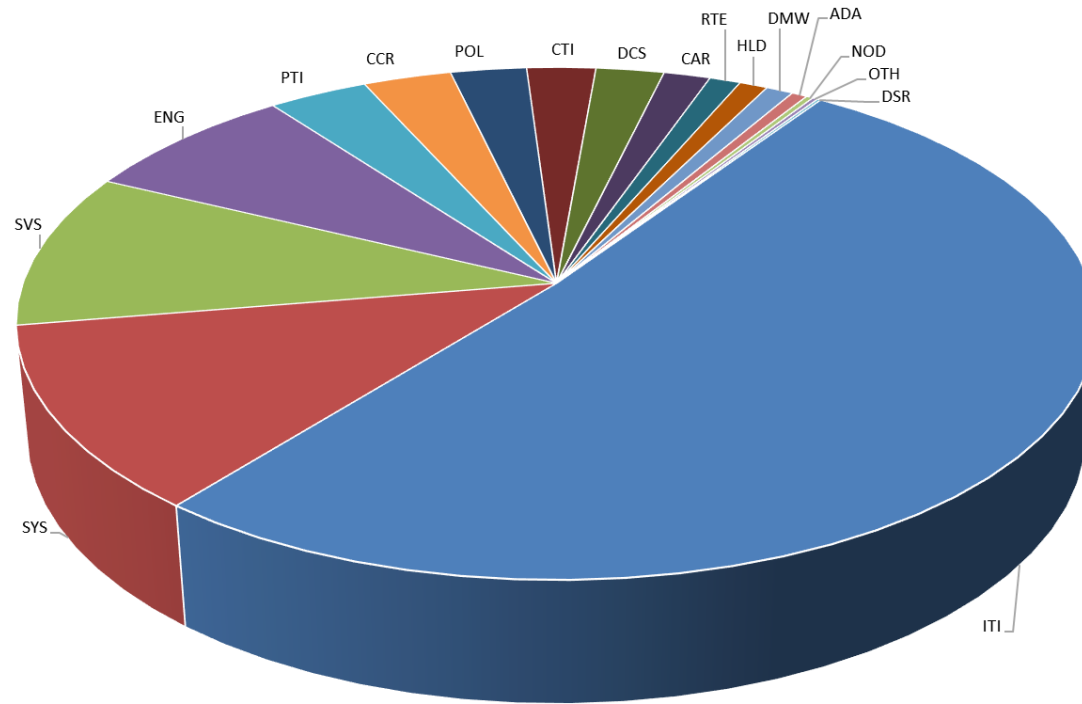
Delay Analysis: FFY Q3 – Distribution by Host



Initial Terminal Performance: FFY Q3

Train	Total Delay Minutes
785	1540
583	719
595	715
591	432
796	401
572	342
777	302
569	292
562	256
566	188
763	182
782	177
564	159
584	158
792	139
579	126
759	112
774	109
1590	106
768	87
580	74
1569	69
561	68
1572	63
1566	62
573	61
1579	56
590	54
1767	49
1761	26
767	23
1565	22
565	21
1564	9
1573	8
1584	8

Initial Terminal Performance - Delay Distribution



Delay Code Legend

Host

CTI	Commuter Train Interference
DCS	Signal Delays
DMW	Maintenance of Way
DSR	Slow Orders
DTR	Detour
FTI	Freight Train Interference
PTI	Passenger Train Interference
RTE	Routing

Amtrak

ADA	Passenger Related ADA
CAR	Car Failure
CCR	Cab Car Failure
CON	Hold for Connection
ENG	Locomotive Failure
HLD	Passenger Related
INJ	Injury Delay
ITI	Initial Terminal Delay
OTH	Misc
SVS	Servicing
SYS	Crew and System

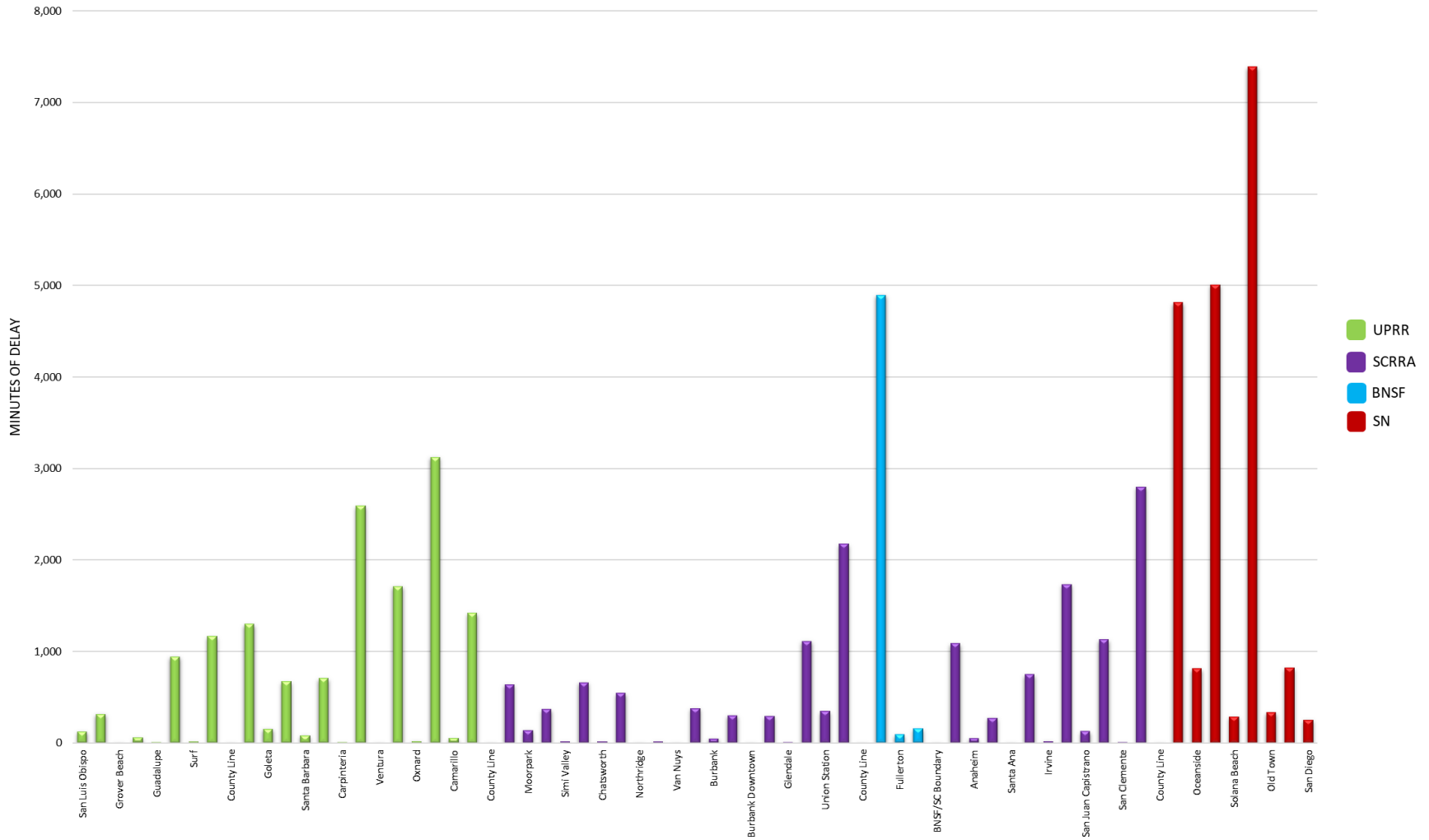
Third Party

DBS	Debris
NOD	Unused Recovery Time
POL	Police
TRS	Trespasser
WTR	Weather

- Despite some improvement, Train 785 continues to be responsible for over 21 percent of total initial terminal performance (ITI) delay minutes

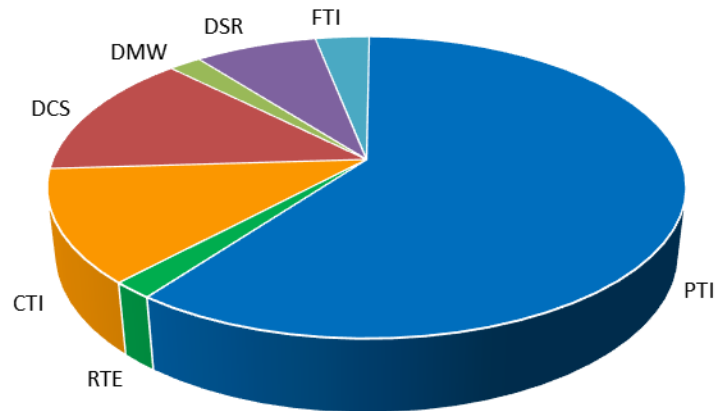
Delay Distribution – By Location

Delay Distribution by Location (April - June, 2019) Host Responsible

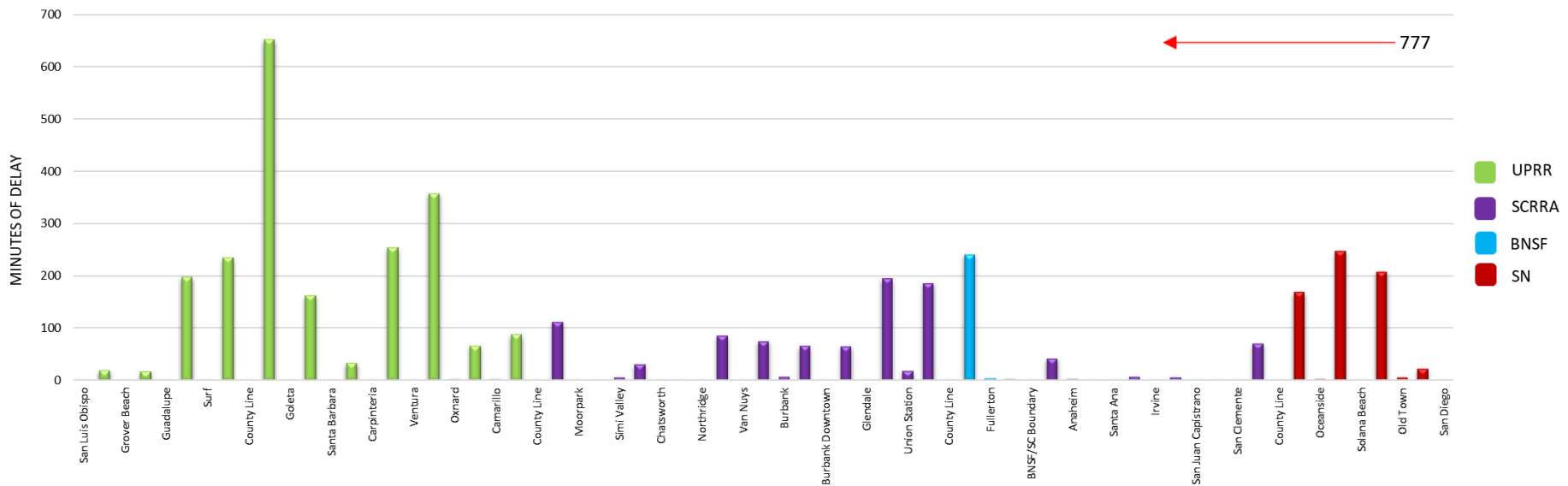


Train 777 – Delay Analysis

Train 777 - Host Delay Distribution



- For the quarter, 72.1 percent of total delay minutes (2,834) are CTI and PTI
- Majority of delays (52.8 percent) occur in UP territory
- PTI delays begin to increase at Oxnard and intensify as 777 travels north



Conclusions – Q3

- The OTP trend has shown some improvement, though still short of the 90 percent metric
- Train 785 continues to have initial terminal performance issues related to late Train 774
 - Combined these trains continue to lower system average by nearly two percent
- Train 777 experiencing significant issues with passenger train interference
- Host responsible delays for the quarter up by over 12,000 minutes vs. the prior year

Questions