STORYTELLING WITH DATA

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CTA – Annual Fall Conference 2019

Service Quality Enhancement Taskforce

- Identify Service Problems with Data
- Work Together for the Solutions
- Avoid 👉 👇
- Service Teams – Planner, Scheduler, Supervisor
- Use Swiftly Data
- All Departments Involved:
  Operations   Planning   HR   Scheduling
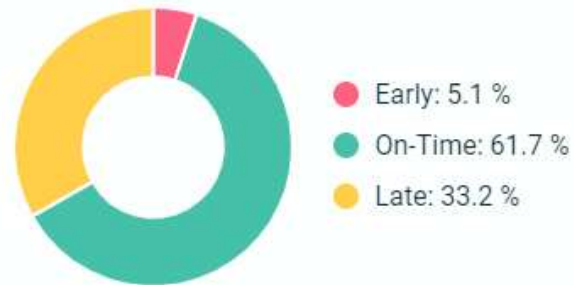 Marketing   IT   Community Relations

LINE 51B
ON-TIME PERFORMANCE

WEEKDAY

On-Time Summary
Stops Tracked: 18,073

- Early: 5.1 %
- On-Time: 61.7 %
- Late: 33.2 %

WEEKEND

On-Time Summary
Stops Tracked: 5,147

- Early: 17.2 %
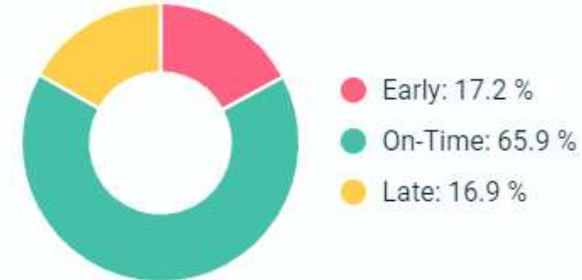- On-Time: 65.9 %
- Late: 16.9 %

- Well below 72-percent goal
- Fixing earlies could get the line half-way to goal
- Significant issue with lates
- Further analysis on runtimes and vehicle assignment

- Well below 72-percent goal
- Fixing earlies would bring OTP over 80 percent
- Further analysis on earlies

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LINE 51B

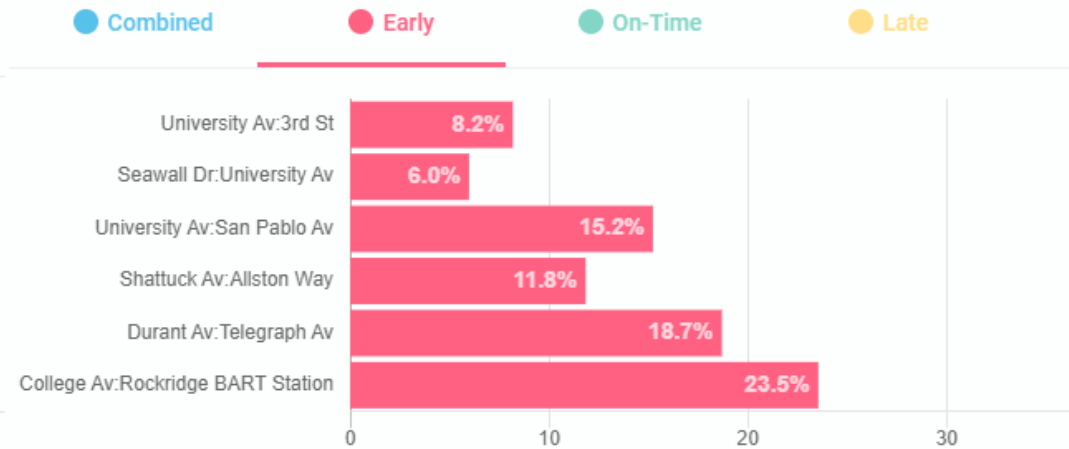## WEEKEND EARLY ANALYSIS

51B - University - College - Rockridge Outbound

● Combined	● Early ● On-Time ● Late

College Av:Rockridge BART Station — 8.0%
Bancroft Way:Telegraph Av — 8.7%
Shattuck Av:Allston Way (Transit Hub) — 18.5%
University Av:San Pablo Av — 25.1%
University Av:3rd St — 36.2%
Seawall Dr:University Av — 36.8%

51B - University - College - Rockridge Inbound

● Combined	● Early ● On-Time ● Late

University Av:3rd St — 8.2%
Seawall Dr:University Av — 6.0%
University Av:San Pablo Av — 15.2%
Shattuck Av:Allston Way — 11.8%
Durant Av:Telegraph Av — 18.7%
College Av:Rockridge BART Station — 23.5%
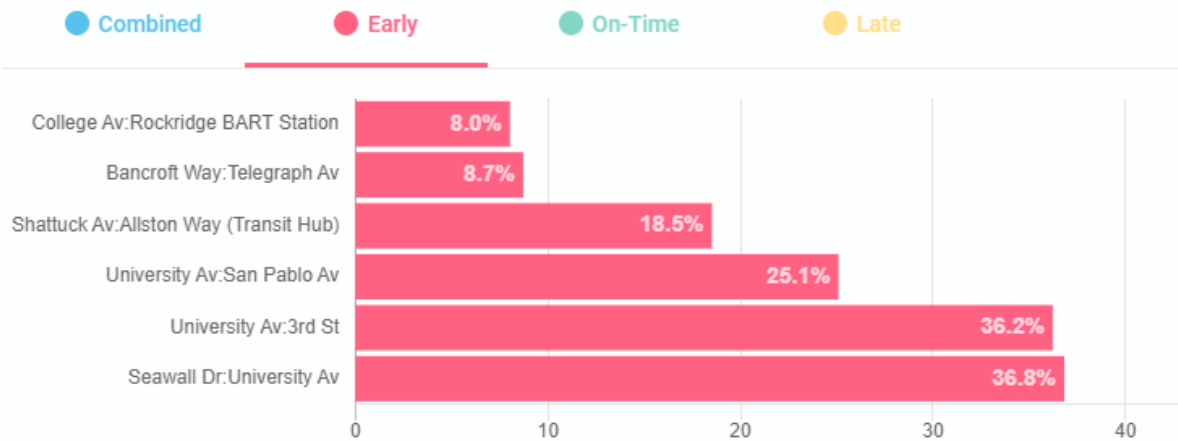
- Leaving first stop 8% of the time
- Arriving end-of line 37% of time
- Analyze runtimes to identify causes

- Similar to Marina direction but less severe.

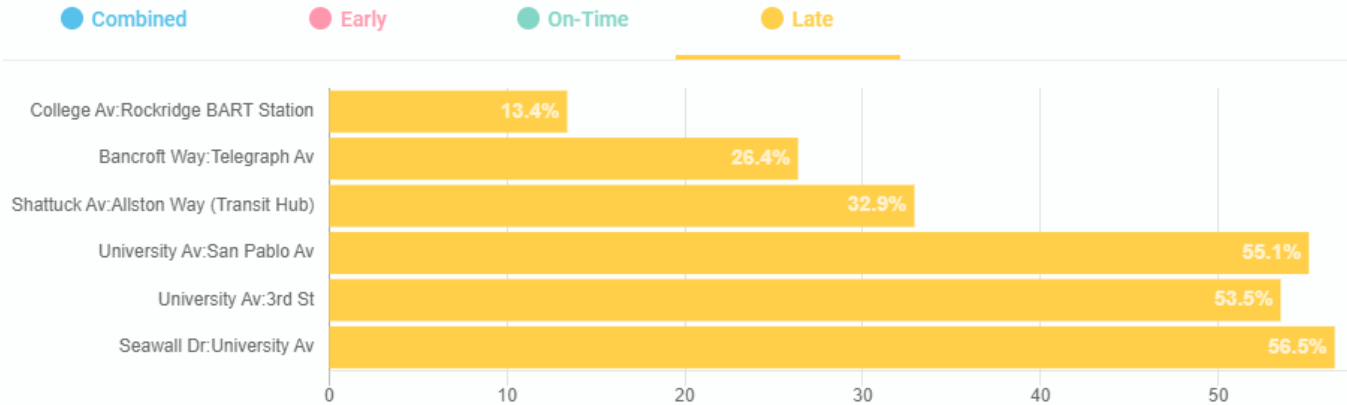| Timebands	Potential OTP	Potential OTP	University Av & 3rd St		University Av & San Pablo Av		Shattuck Av & Allston Way		Durant Av & Telegraph Av		College Av & Rockridge BA...	
00:00 - 05:29	100.0%	65.0%	1:48	2:00	6:45	8:00	9:20	12:00	17:12	21:00		
05:30 - 07:29	100.0%	80.0%	2:07	3:00	7:36	9:00	10:05	13:00	19:14	22:00		
07:30 - 07:59	90.0%	60.0%	3:50	3:00	10:22	9:00	14:18	13:00	25:05	24:00		
08:00 - 09:59	75.0%	63.3%	3:54	5:00	11:14	13:00	16:15	18:00	27:48	29:00		
10:00 - 11:59	88.0%	81.3%	4:18	5:00	15:23	15:00	21:36	22:00	37:46	35:00		
12:00 - 18:29	82.0%	57.6%	4:39	7:00	16:34	19:00	22:42	26:00	38:15	43:00		
18:30 - 18:59	100.0%	46.7%	6:10	7:00	15:07	19:00	20:37	26:00	36:06	40:00		
19:00 - 19:29	100.0%	60.0%	8:00	7:00	20:36	16:00	27:45	23:00	42:50	37:00		
19:30 - 19:59	95.0%	90.0%	4:25	4:00	13:14	13:00	19:41	19:00	30:09	33:00		
20:00 - 21:44	80.0%	70.0%	2:57	4:00	10:48	13:00	20:35	19:00	31:44	30:00		
21:45 - 22:29	100.0%	80.0%	3:48	4:00	10:05	11:00	14:14	17:00	24:34	28:00		
22:30 - 23:11	91.4%	80.0%	2:23	3:00	9:21	10:00	14:58	16:00	23:17	27:00		

- Times in black are average actual runtimes - cumulative
- Times in red are current runtimes - cumulative
- Room for improvement to better match actual runtimes with the schedule
- In general, there is too much time in the schedule, leading to earlies
- **Action**: Perform Hastus runtime analysis and revise schedule – March 2020

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LINE 51B

WEEKDAY LATE ANALYSIS

51B - University - College - Rockridge Outbound

Combined Early On-Time Late

Stop	Late %
College Av:Rockridge BART Station	13.4%
Bancroft Way:Telegraph Av	26.4%
Shattuck Av:Allston Way (Transit Hub)	32.9%
University Av:San Pablo Av	55.1%
University Av:3rd St	53.5%
Seawall Dr:University Av	56.5%

51B - University - College - Rockridge Inbound

Combined Early On-Time Late

Stop	Late %
University Av:3rd St	12.6%
Seawall Dr:University Av	18.2%
University Av:San Pablo Av	20.6%
Shattuck Av:Allston Way	32.7%
Durant Av:Telegraph Av	39.4%
College Av:Rockridge BART Station	44.1%

- Buses leave starting point 13% of the time
- Buses arrive at end point late 56% of the time
- Lates increase as line progresses
- Insufficient runtime and layover may be contributing
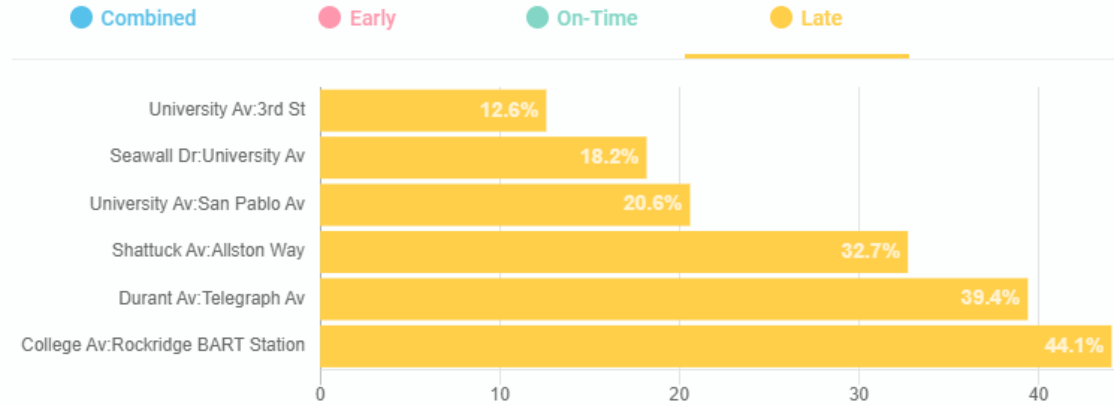
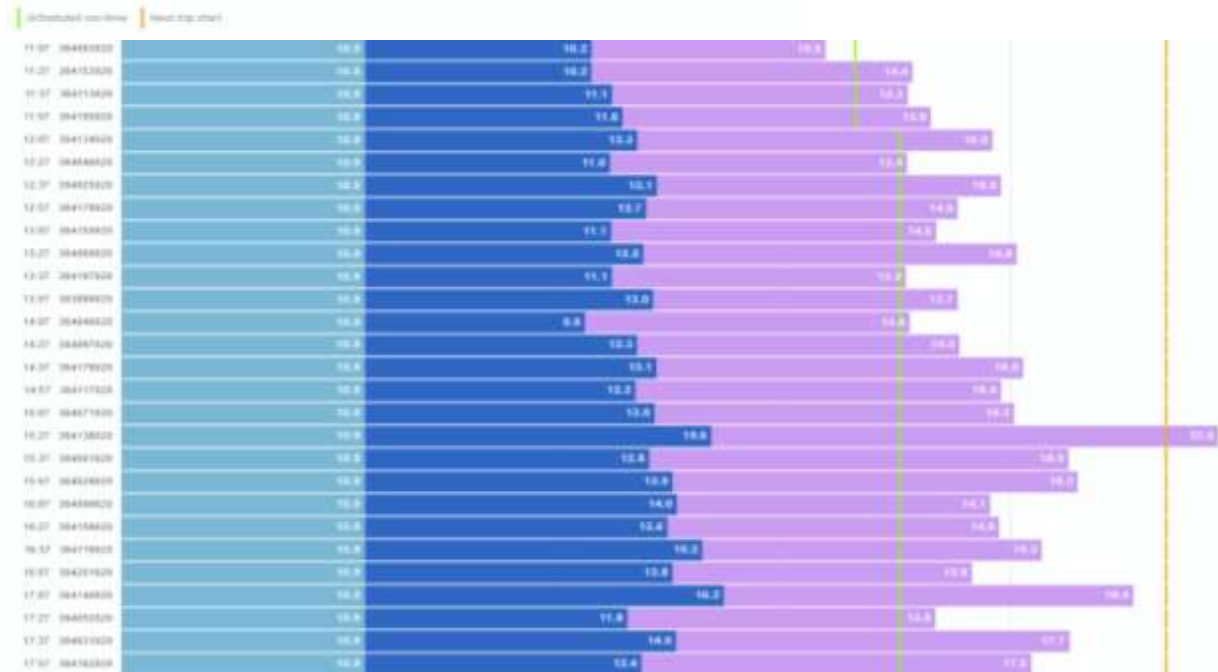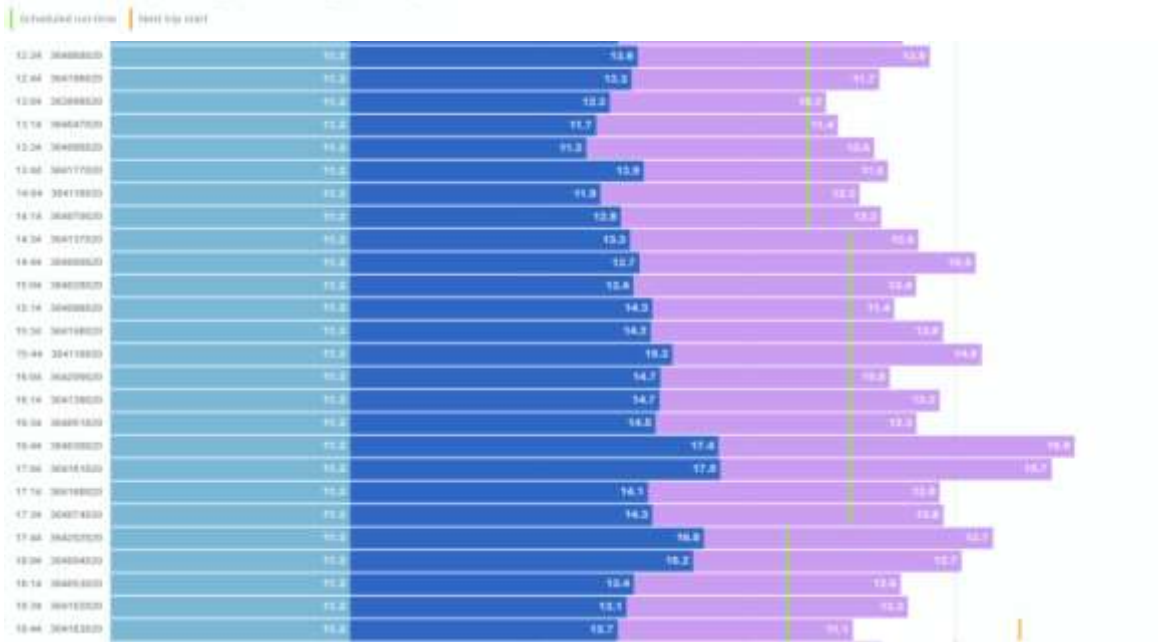- Similar to Marina direction but less severe.

To: Marina

To: Rockridge

- Slow zones:
  - University/San Pablo
  - Downtown Berkeley (due to multiple City projects)
  - Southside (new TSP and improvements coming in next 12-18 months)
  - College/Ashby
- Significant Dwell time around slow zones

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- Trips are exceeding scheduled runtimes on nearly every trip.
- A small number of trips are late enough to miss entire layover in Rockridge direction
- Potentially not enough time in schedule
- Look at fleet assignment to ensure PR40s are assigned
- Analyze usage of queue jumps and TSP
- **Action**: Perform Hastus runtime analysis and revise schedule – March 2020

NEXT STEPS

- Supervisor/Planner/Scheduler should perform field visits
  - Both terminals – look at when buses arrive/leave, how much time they spend. Is there enough time?
  - Slow zones – what is contributing to slow zones: temporary construction, bad signals, congestion, dwell?
- Planner/Scheduler should review vehicle assignments – what's in Hastus versus what's deployed in the field?
  - All buses should be PR40s
  - Communicate back to Division
- Planner/Scheduler Review Schedule
  - Is time misallocated between timepoints?
  - Enough time in schedule? Too much?

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THANK YOU

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