



JOHN F. KENNEDY INTERNATIONAL AIRPORT

REHABILITATION OF RUNWAY 4R/22L AND ASSOCIATED TAXIWAYS

RUNWAY DECLARED DISTANCE INFORMATION

PHASES 1 AND 3

	TORA	TODA	ASDA	LDA
RWY 13L	9,225 ft	9,225 ft	9,225 ft	8,318 ft
RWY 31R*	8,570 ft	8,570 ft	8,083 ft	8,486 ft
RWY 13R	14,010 ft	14,010 ft	14,010 ft	11,967 ft
RWY 31L*	13,806 ft	13,806 ft	13,806 ft	11,248 ft
RWY 22R*	9,189 ft	9,189 ft	8,329 ft	7,795 ft

NOTES:

Distances in the above table are calculated for the following taxiway intersection departures.

RWY 31R – TAXIWAY “Y” INTERSECTION DEPARTURES. NO BACK-TAXI FULL LENGTH DEPARTURES.

RWY 31L – TAXIWAY “JB” INTERSECTION DEPARTURES. NO BACK-TAXI FULL LENGTH DEPARTURES.

RWY 22R – TAXIWAY “F” INTERSECTION DEPARTURES MAY BE USED AT ATCT DISCRETION.

PHASE 2

EXPECT FULL RUNWAY LENGTHS FOR ALL RUNWAYS.

Updated Operational Performance Assessment: JFK Stage 4 Construction Including: 2016 and 2017 Demand Schedules

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24 January 2017

Background

- **In 2017 runway 04R/22L at JFK will be closed for rehabilitation**
- **A multiple-phase closure schedule was selected**
 - Two full closures: February 27 to May 31, 2017; September 5 to November 16, 2017
 - Nightly closures: June 1, 2017 to September 4, 2017
- **To prepare for the closures, the facilities have provided a “playbook” about expected configurations and rates that will be used during construction**
 - Prioritized configurations
 - For VMC and IMC conditions
 - Customized for arrival and departure banks
- **This briefing provides an operational performance assessment of JFK performance with and without construction**
 - Based on historic capacity from 2013, 2014, and 2016* (04L/22R construction took place in 2015) as well as the facility-provided playbook
 - Modeling scheduled demand from March 2017; all other months from 2016
 - Including unscheduled demand as well as cargo operations

Facility Provided Configurations and Rates

October 2016 Playbook

Arrival Bank

VMC

Configuration	AAR,ADR
31L, 31R 31L	54, 22
13L 13R	37, 46
4L 4L	30, 20
22R 22R	30, 20

IMC

Configuration	AAR,ADR
31L, 31R 31L	48, 20
13L 13R	28, 46
4L 4L	28, 16
22R 22R	28, 16

Departure Bank

VMC

Configuration	AAR,ADR
31R 22R, 31L	34, 52
13L 13L, 13R	18, 52
4L 4L, 31L	18, 52
22R 22R, 31L	22, 52
13L 13R	37, 46
31R, 31L 31L	34, 44
4L 4L	22, 28
22R 22R	22, 28

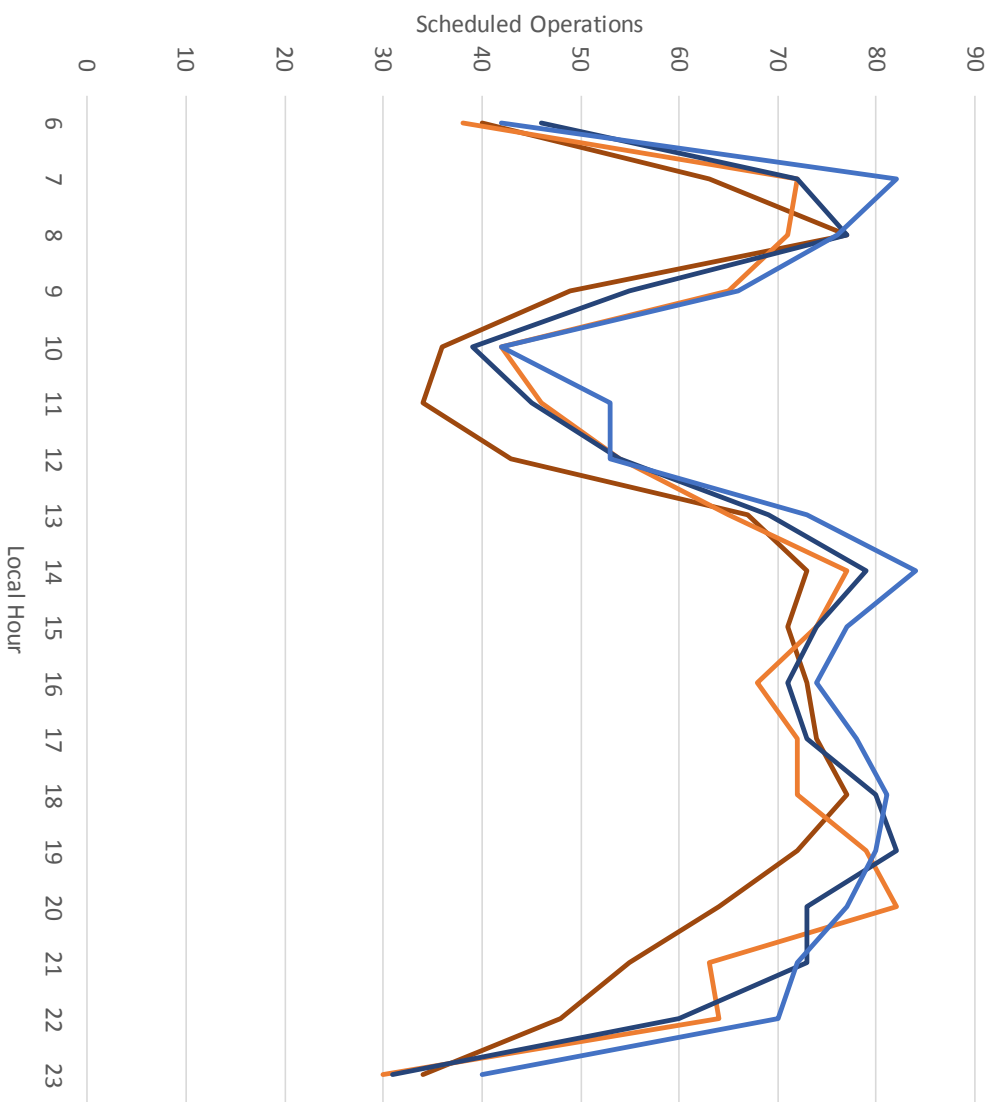
IMC

Configuration	AAR,ADR
31R 22R, 31L	32, 52
31R, 31L 31L	32, 44
4L 4L, 31L	18, 44
22R 22R, 31L	20, 52
13L 13R	28, 46
4L 4L	20, 27
22R 22R	20, 27

NOTES:

- * Primarily intended for morning use (0700-0959); however, not limited to morning use only
- Departure Bank period occurs from 0700-0959 local time and again from 1700-2259

Total Operations by Peak (95th Percentile) Demand Days (Scheduled and Cargo Operations*): March and September



Modeled 95th percentile day from each individual month

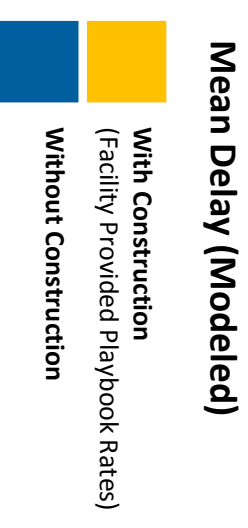
Date	Total*	Departures	Arrivals
March 2014	1114	554	560
March 2017	1198	599	599
September 2014	1214	604	610
September 2016	1292	646	646

Difference of 84 operations/day between March 2014 and March 2017; Difference of 78 operations/day between September 2014 and September 2016

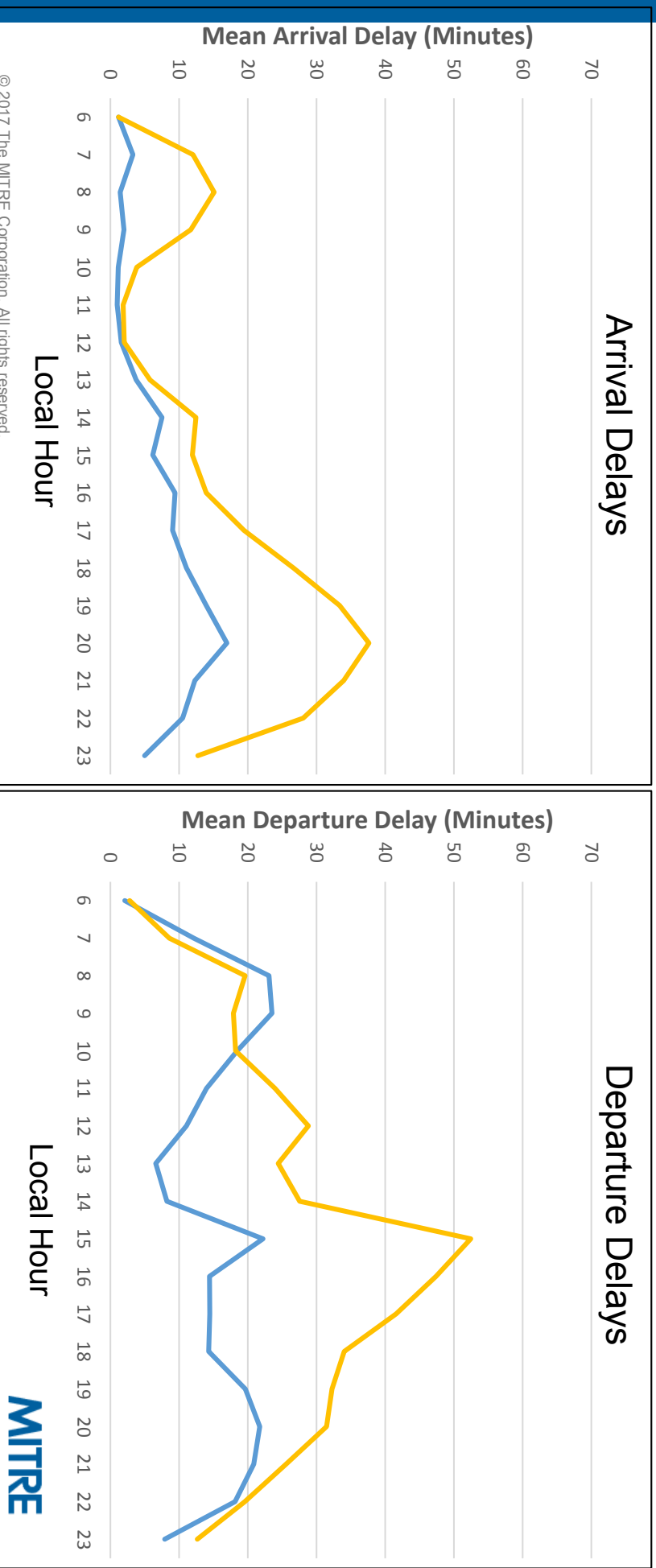
* Includes FedEx/UPS counts provided 2 May 2014; Does not include non-scheduled operations

Mean Arrival and Departure Delay per Flight: Weekdays By Hour; Average of 2013, 2014 & 2016 (Mar-May, Sep-Nov)

- These results represent *an average across the entire construction period*
 - Month by month performance varies greatly
- Arrival delays peak in the late evening just under 40 minutes per flight
- Departure delays exceed 50 minutes per flight in the late afternoon (1500 local)
- Departure delays do not recover after morning departure push



Demand: March 2017; Other Months 2016



Mean Arrival and Departure Delay per Flight: Weekdays By Month; Average of 2013, 2014 & 2016

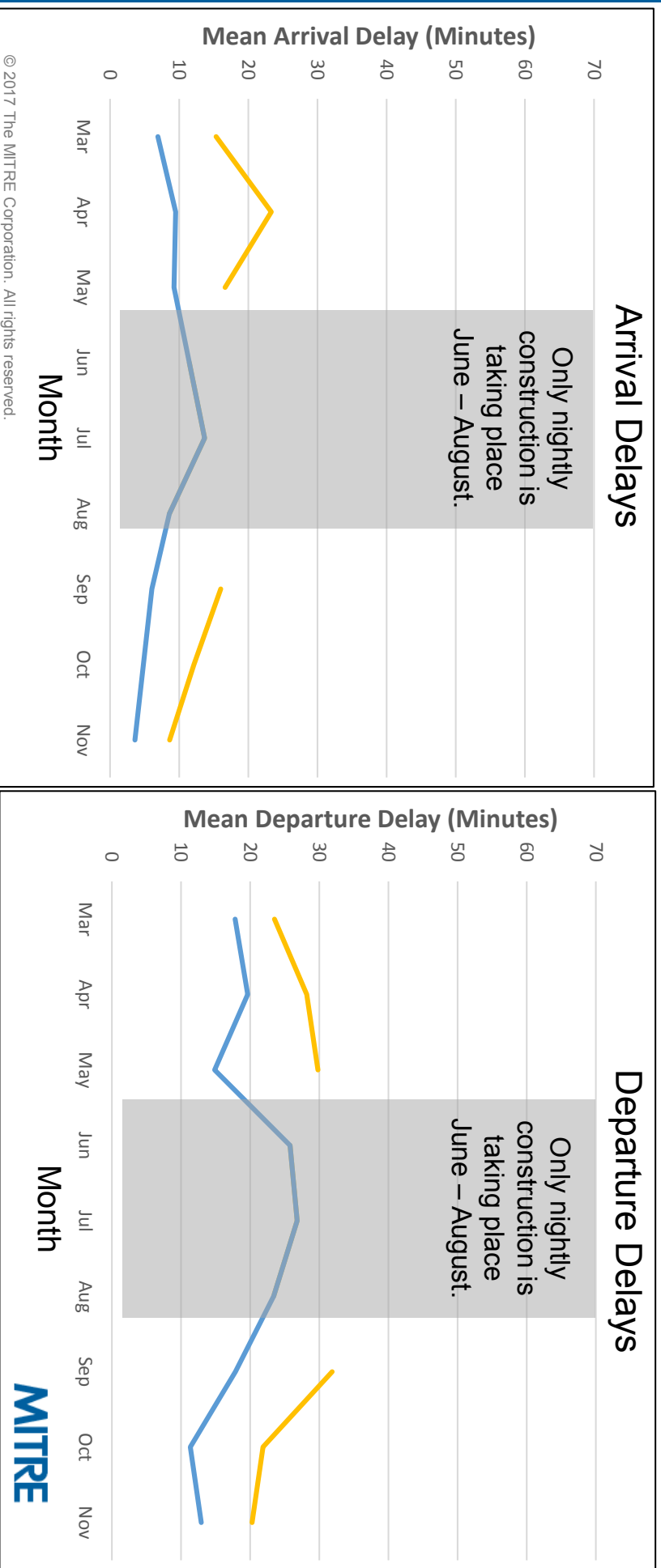
- Arrival delays are worst in April; peaking over 20 minutes per flight (average across the day)
- Departure delays are worst in May and September; peaking around 30 minutes per flight (average across the day)

Mean Delay (Modeled)

■ With Construction
(Facility Provided Playbook Rates)

■ Without Construction

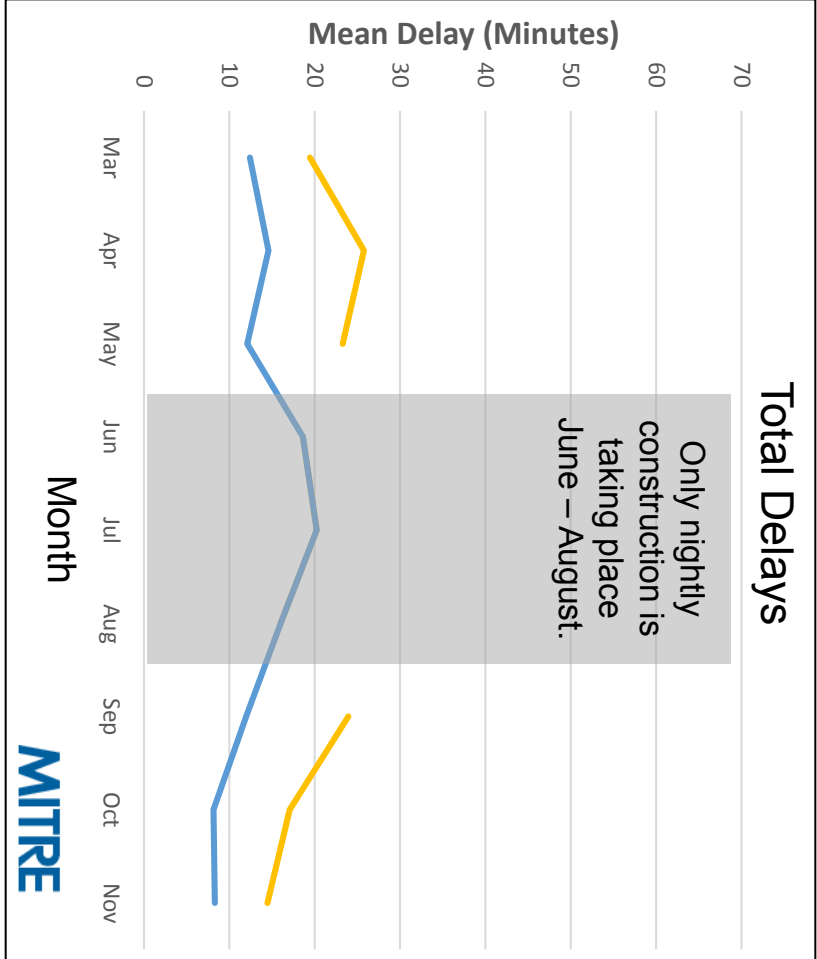
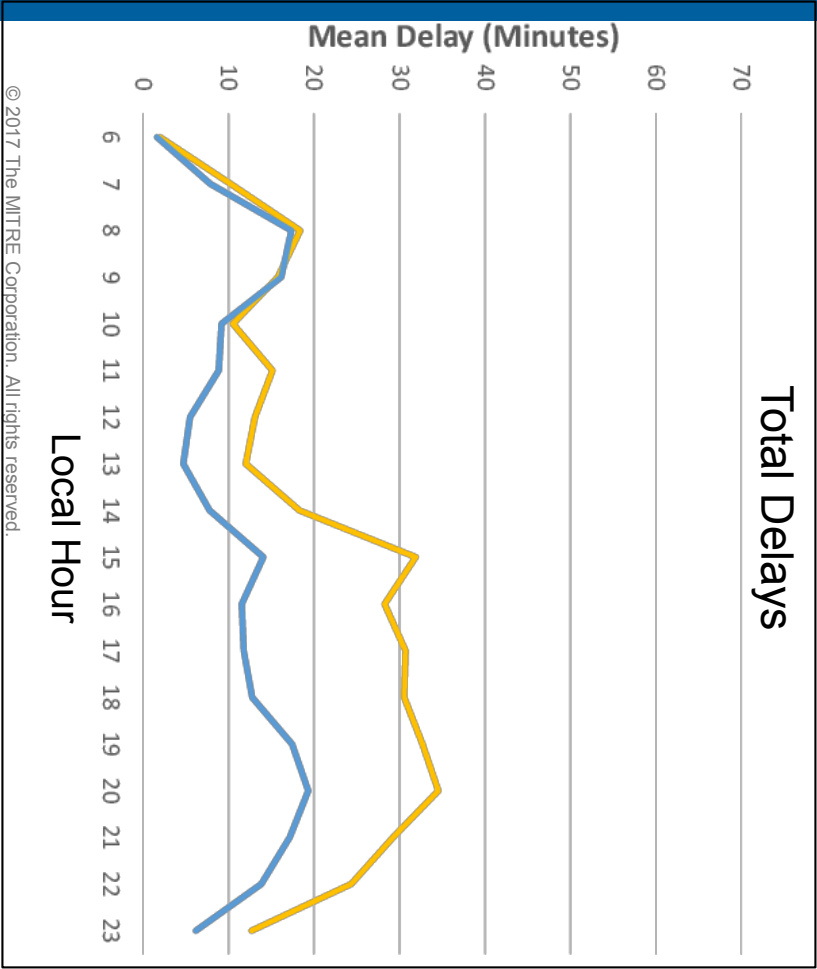
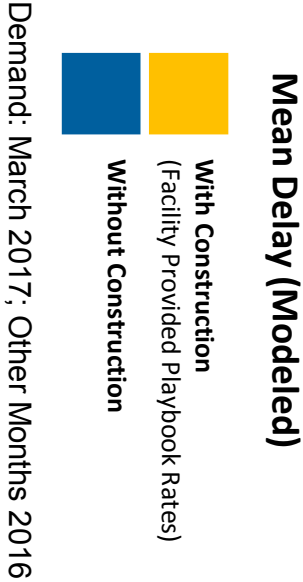
Demand: March 2017; Other Months 2016



Mean Total Delay (Arrival and Departure) per Flight: Weekdays

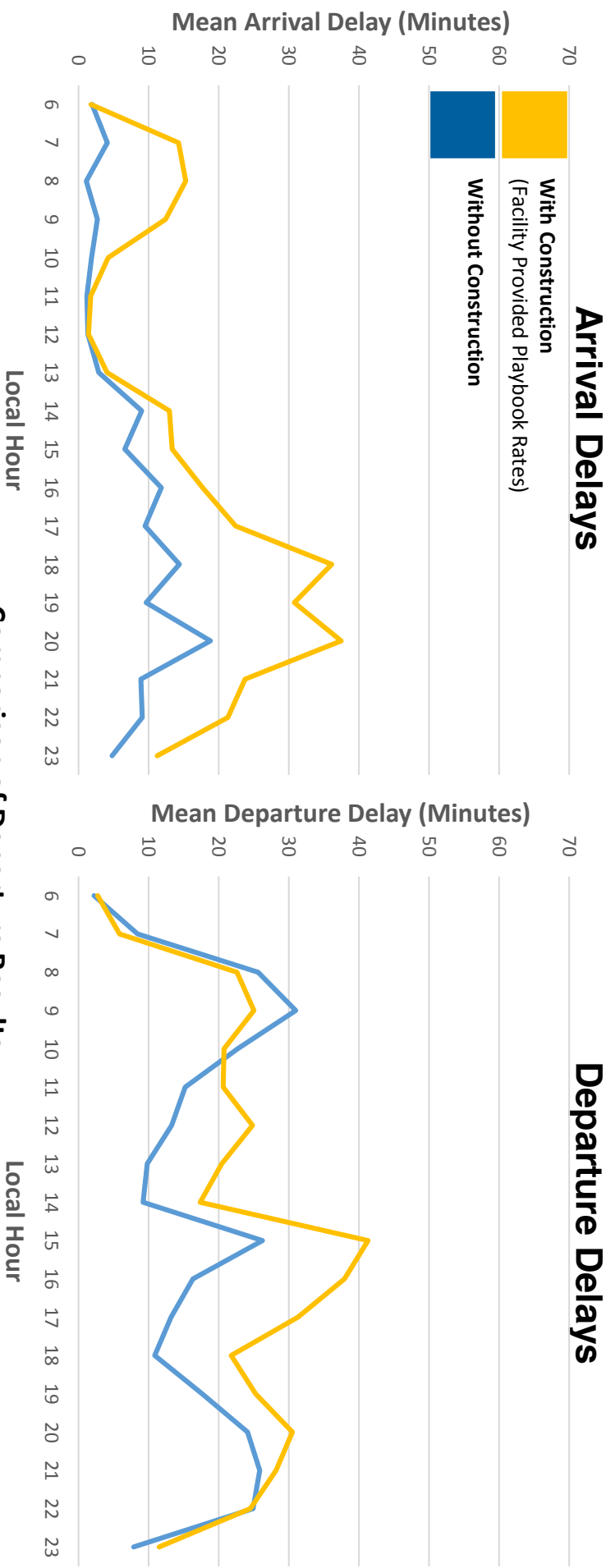
By Hour (Mar-May, Sep-Nov) and Month; Average of 2013, 2014 & 2016

- These results represent the *average* of arrival and departure delays across all flight in a day
- Results by hour represent *an average across the entire construction period*
 - Month by month performance varies greatly
- Average delays exceed 30 minutes per flight between 1500 and 2100 local for all but one hour



Mean Arrival and Departure Delay per Flight: Weekdays by Hour; Average of 2013, 2014 & 2016

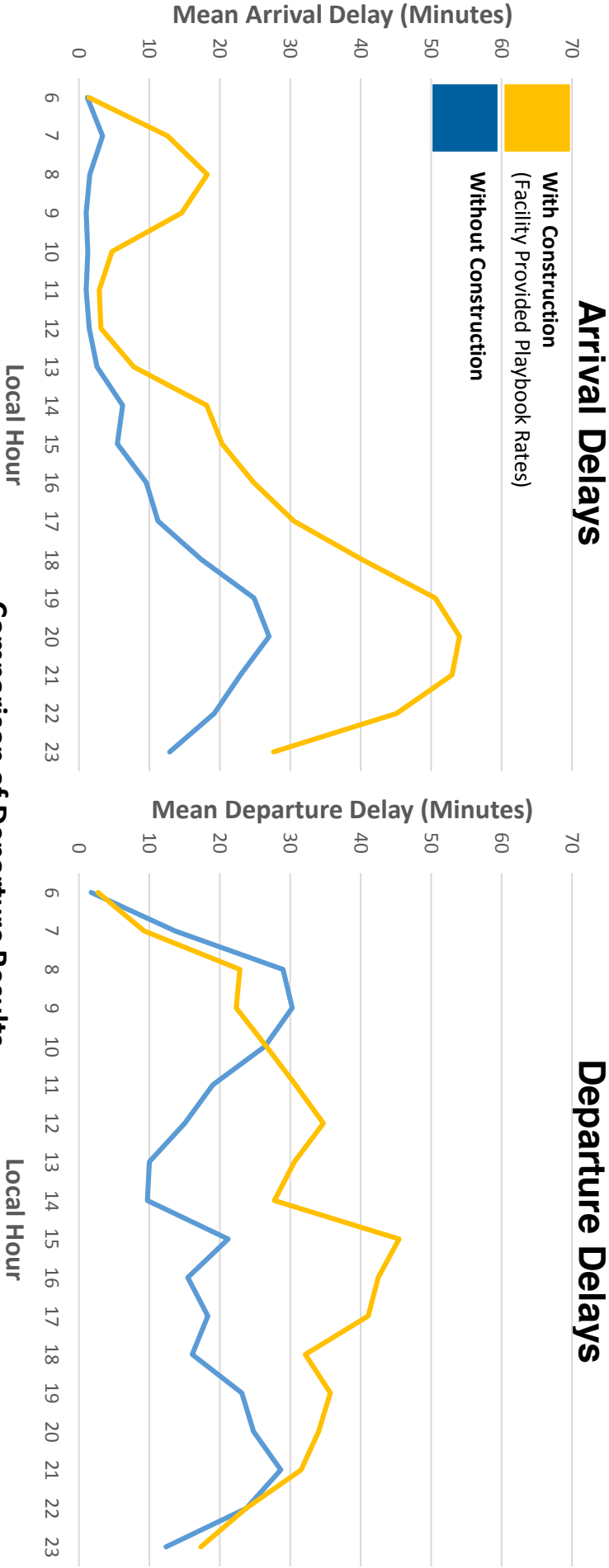
March – 2017 Schedule



Departure Schedule		Departure Capacity		Capacity Period		Modeled Deps.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+	120+	[60, 120)
Negotiated Summer 2008		Without Construction	Spring 2007	710	N/A	21,200	29.9	32.1	661	432	85.9	20.3	65.6		
March 2017	Without Construction	Mar 2013/14/16	618	1.3	11,000	17.8	20.1	547	267	29.1	0	29.1			
	Construction		-92	-48%	-40%	-37%	-17%	-38%	-66%	-100%	-56%				
March 2017	With Construction	Mar 2013/14/16	618	5.1	14,400	23.5	26.0	554	328	56.3	0	56.3			
			-92	-32%	-21%	-19%	-16%	-24%	-34%	-100%	-14%				

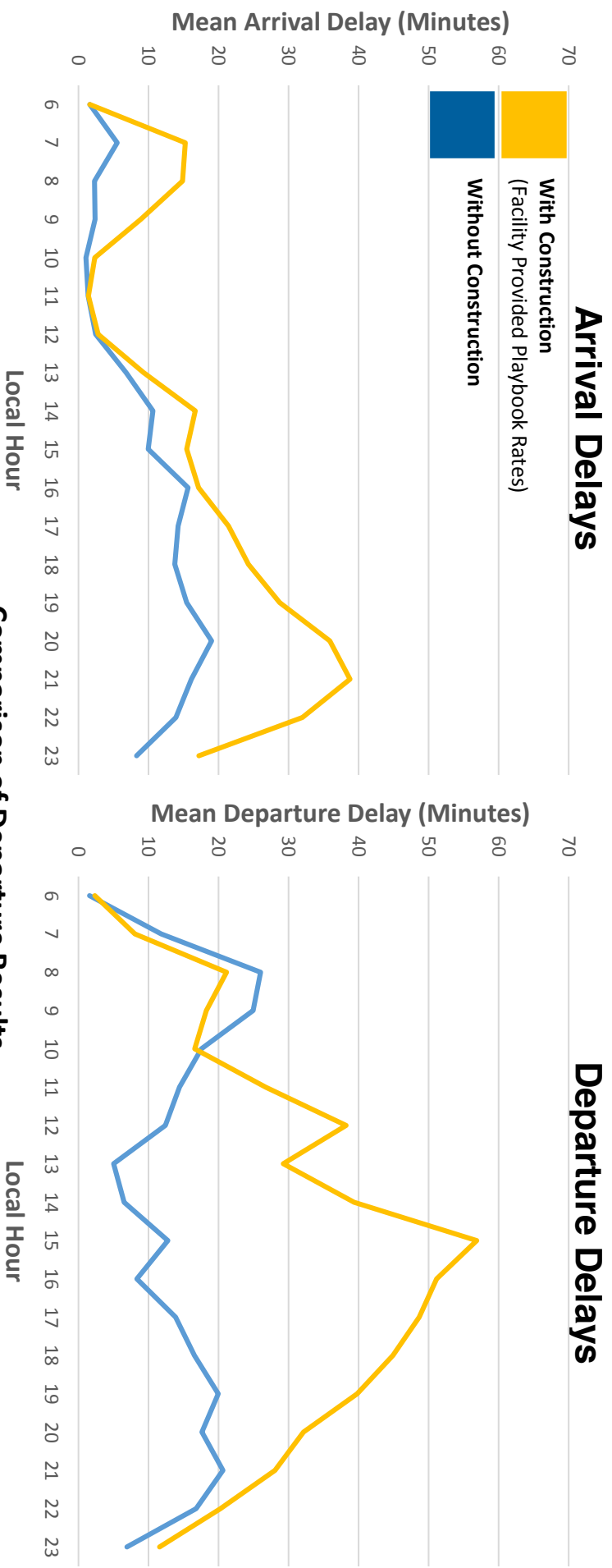
Mean Arrival and Departure Delay per Flight: Weekdays by Hour; Average of 2013, 2014 & 2016

April – 2016 Schedule



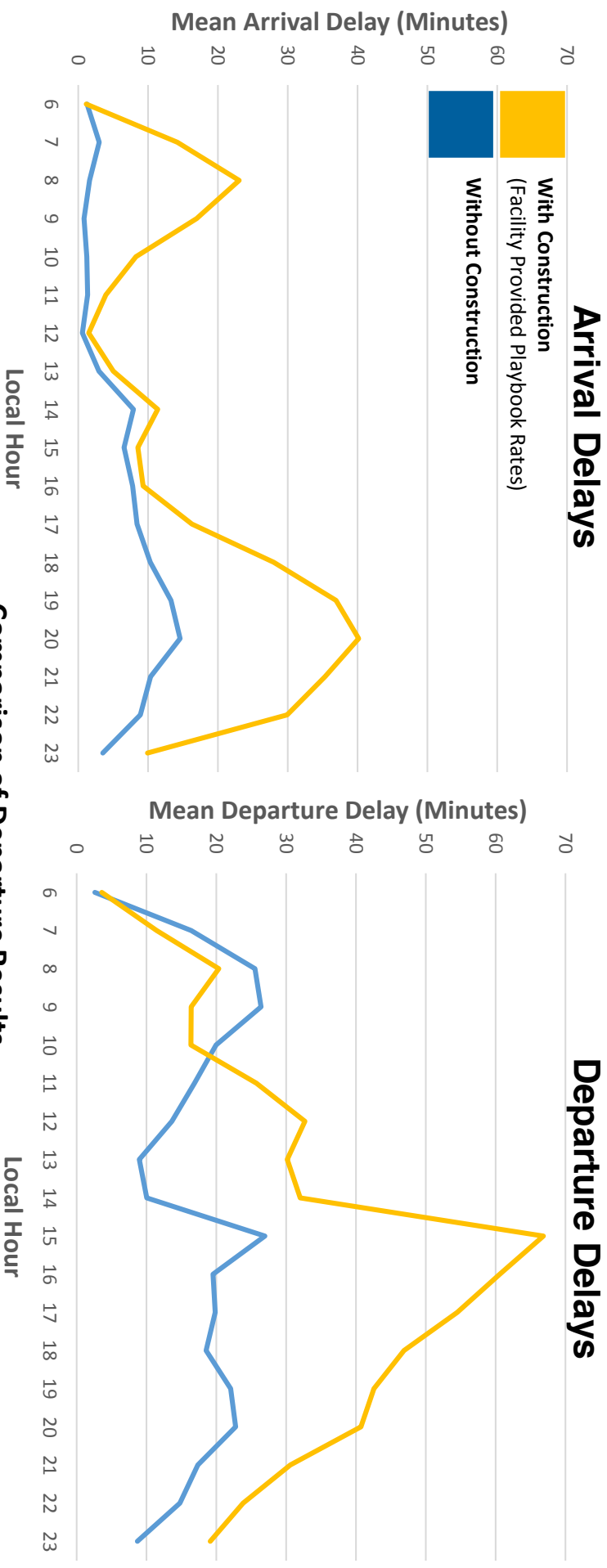
Mean Arrival and Departure Delay per Flight: Weekdays by Hour; Average of 2013, 2014 & 2016

May – 2016 Schedule

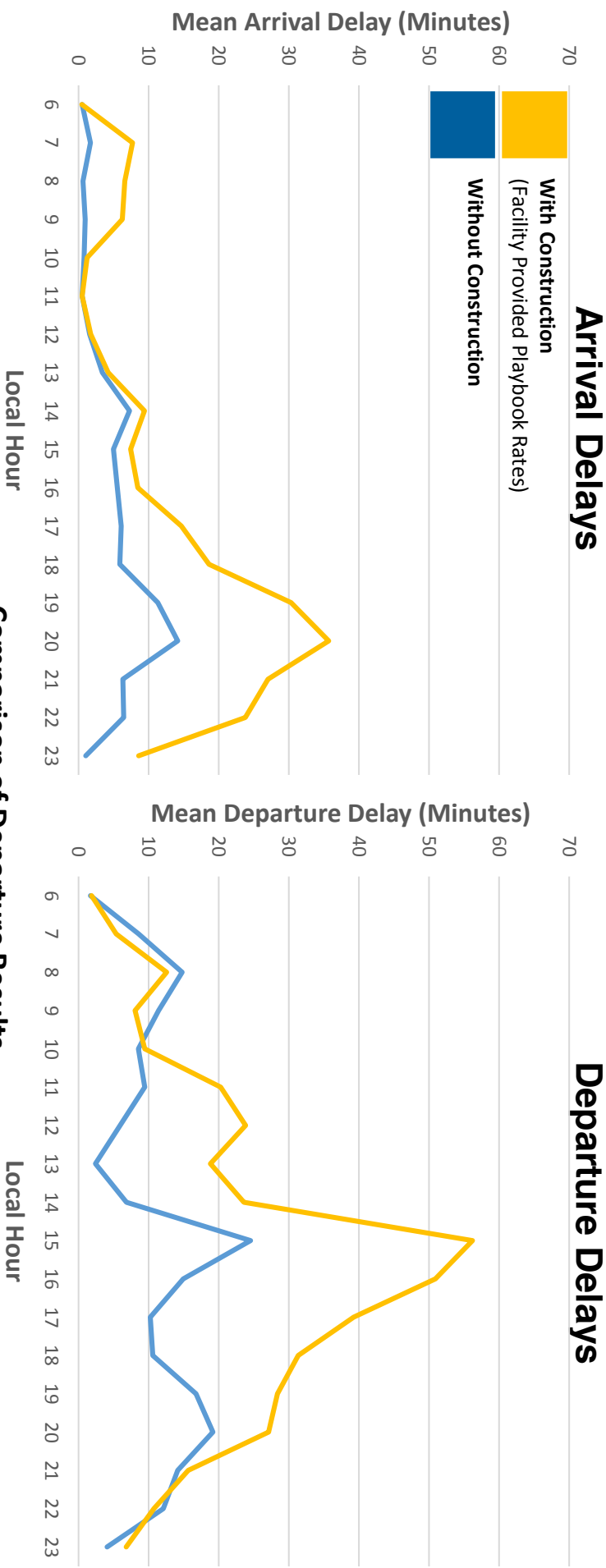


Departure Schedule	Departure Capacity	Capacity Period	Modeled Deps.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+	120+	[60, 120)
Negotiated Summer 2008	Without Construction	Spring 2007	710	N/A	21,200	29.9	32.1	661	432	85.9	20.3	65.6
	Without Construction	May 2013/14/16	656	0	9,750	14.9	16.7	584	247	13.3	0	13.3
May 2016	Construction		-54		-54%	-50%	-48%	-12%	-43%	-85%	-100%	-80%
	With Construction	May 2013/14/16	656	2.8	19,500	29.8	32.6	598	369	122	0.014	122
			-54		-8.0%	-0.33%	+1.6%	-9.5%	-15%	+42%	-100%	+86%

Mean Arrival and Departure Delay per Flight: Weekdays by Hour; Average of 2013, 2014 & 2016* September – 2016 Schedule

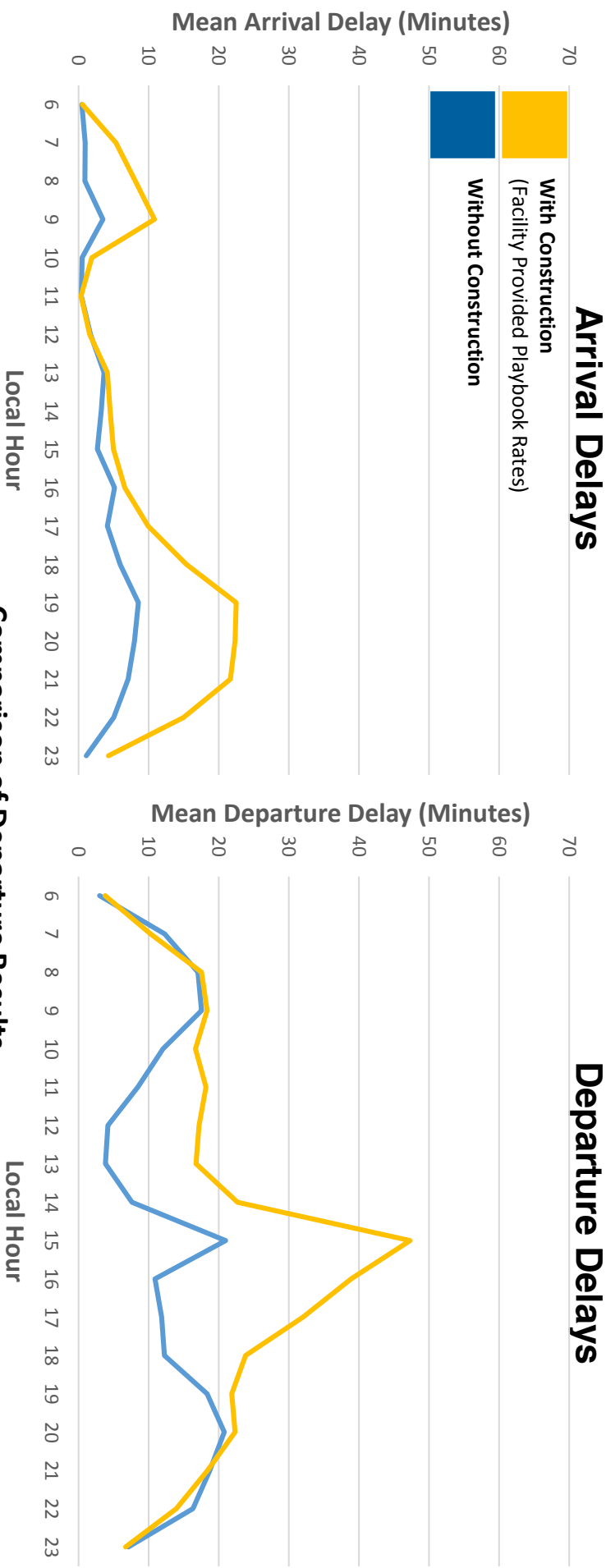


Mean Arrival and Departure Delay per Flight: Weekdays by Hour; Average of 2013, 2014 & 2016* October – 2016 Schedule



Departure Schedule		Departure Capacity		Capacity Period		Modeled Deps.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+	120+	[60, 120)
Negotiated Summer 2008		Without Construction	Spring 2007	710	N/A	21,200	29.9	32.1	661	432	85.9	20.3	65.6		
October 2016	Without Construction	Oct 2013/14/16*	630	0	7,170	11.4	13.4	534	186	2.78	0	2.78			
	Construction		-80	-66%	-62%	-58%	-19%	-57%	-97%	-100%	-96%				
	With Construction	Oct 2013/14/16*	630	1.7	13,700	21.9	24.9	551	291	54.4	0	54.4			
			-80	-35%	-27%	-22%	-17%	-33%	-37%	-100%	-17%				

Mean Arrival and Departure Delay per Flight: Weekdays by Hour; Average of 2013, 2014 & 2016* November – 2016 Schedule





Performance Analysis

ATOSysOps



JFK International Airport

04R/22L Runway Closure

Taxi Impact Assessment

Date:
01/26/17

Presented to:

JFK Stakeholders

Developed by:

Tony Chiari, Jennifer Morris
Airport and Airspace Analysis



FAA
Air Traffic Organization

VMC Delay and Taxi Times for Low Traffic Scenario

Configuration	VMC Average Arrival Delay	VMC Average Departure Delay	VMC Average Taxi-In Time	VMC Average Taxi-Out Time
04L 04L	71.4	2.1	6.3	10.8
04L 04L, 31L	43.4	1.6	6.3	9.0
13L 13L, 13R	14.0	2.5	7.2	11.9
13L 13R	13.0	1.6	7.2	11.6
22R 22R	64.8	2.3	7.2	8.6
22R 22R, 31L	44.5	1.1	7.2	7.3
31L, 31R 31L	1.8	2.2	7.8	7.6
31R 22R, 31L	12.7	2.3	7.4	8.3

VMC defined as a ceiling of 2,000 feet and above with a visibility of 3 miles and greater, IMC defined as a ceiling below 2,000 feet with a visibility of below 3 miles.

IMC Delay and Taxi Times for Low Traffic Scenario

Configuration	IMC Average Arrival Delay	IMC Average Departure Delay	IMC Average Taxi-In Time	IMC Average Taxi-Out Time
04L 04L	148.4	1.8	6.3	10.5
04L 04L, 31L	112.5	1.4	6.3	8.7
13L 13L, 13R	VMC ONLY CONFIGURATION			
13L 13R	84.7	1.4	7.2	11.4
22R 22R	145.9	1.8	7.2	8.1
22R 22R, 31L	115.5	0.9	7.1	7.1
31L, 31R 31L	8.5	2.3	7.8	7.7
31R 22R, 31L	84.4	1.9	7.3	8.0

VMC defined as a ceiling of 2,000 feet and above with a visibility of 3 miles and greater, IMC defined as a ceiling below 2,000 feet with a visibility of below 3 miles.

VMC Delay and Taxi Times for High Traffic Scenario

Configuration	VMC Average Arrival Delay	VMC Average Departure Delay	VMC Average Taxi-In Time	VMC Average Taxi-Out Time
04L 04L	92.6	1.9	6.3	10.4
04L 04L, 31L	64.3	1.7	6.3	8.9
13L 13L, 13R	32.2	2.7	7.4	12.2
13L 13R	31.9	1.7	7.4	11.7
22R 22R	87.1	2.3	7.2	8.6
22R 22R, 31L	64.9	1.2	7.2	7.3
31L, 31R 31L	2.8	2.4	7.6	7.6
31R 22R, 31L	31.0	2.4	7.5	8.6

VMC defined as a ceiling of 2,000 feet and above with a visibility of 3 miles and greater, IMC defined as a ceiling below 2,000 feet with a visibility of below 3 miles.

IMC Delay and Taxi Times for High Traffic Scenario

Configuration	IMC Average Arrival Delay	IMC Average Departure Delay	IMC Average Taxi-In Time	IMC Average Taxi-Out Time
04L 04L	194.6	1.4	6.3	9.9
04L 04L, 31L	149.6	1.3	6.3	8.5
13L 13L, 13R	VMC ONLY CONFIGURATION			
13L 13R	111.8	1.3	7.3	11.3
22R 22R	188.4	1.7	7.1	8.0
22R 22R, 31L	152.8	0.9	7.2	7.0
31L, 31R 31L	20.6	2.6	7.6	7.8
31R 22R, 31L	111.6	1.9	7.4	8.2

VMC defined as a ceiling of 2,000 feet and above with a visibility of 3 miles and greater, IMC defined as a ceiling below 2,000 feet with a visibility of below 3 miles.

Backup Slides

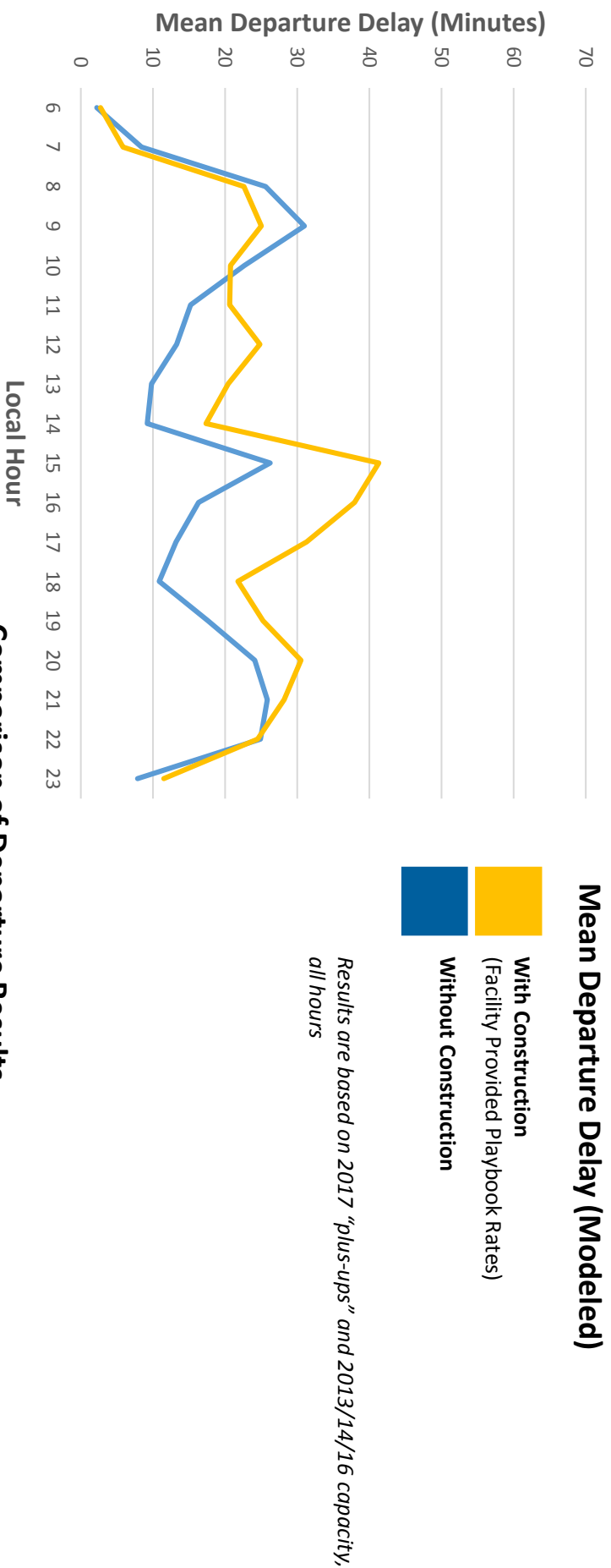
Total Delays over the Entire Construction Period

Departure Only Results

MITRE

Mean Departure Delay per Flight: Weekdays by Hour; Average of 2013, 2014 & 2016

March – 2017 Schedule



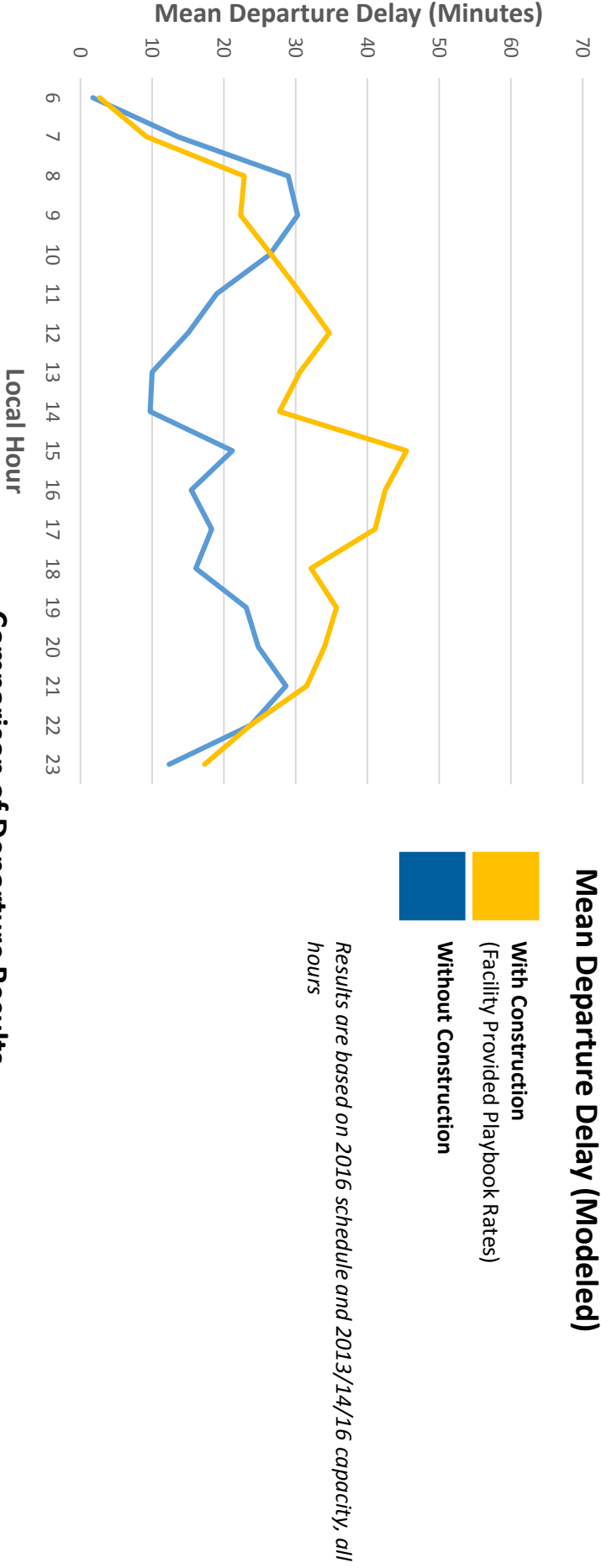
Comparison of Departure Results

Departure Schedule	Departure Capacity	Capacity Period	Modeled Deps.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+	120+	[60, 120)
Negotiated Summer 2008	Without Construction	Spring 2007	710	N/A	21,200	29.9	32.1	661	432	85.9	20.3	65.6
March 2017	Without Construction	Mar 2013/14/16	618	1.3	11,000	17.8	20.1	547	267	29.1	0	29.1
	Construction		-92		-48%	-40%	-37%	-17%	-38%	-66%	-100%	-56%
	With Construction	Mar 2013/14/16	618	5.1	14,400	23.5	26.0	554	328	56.3	0	56.3
			-92		-32%	-21%	-19%	-16%	-24%	-34%	-100%	-14%

Mean Departure Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016

April – 2016 Schedule

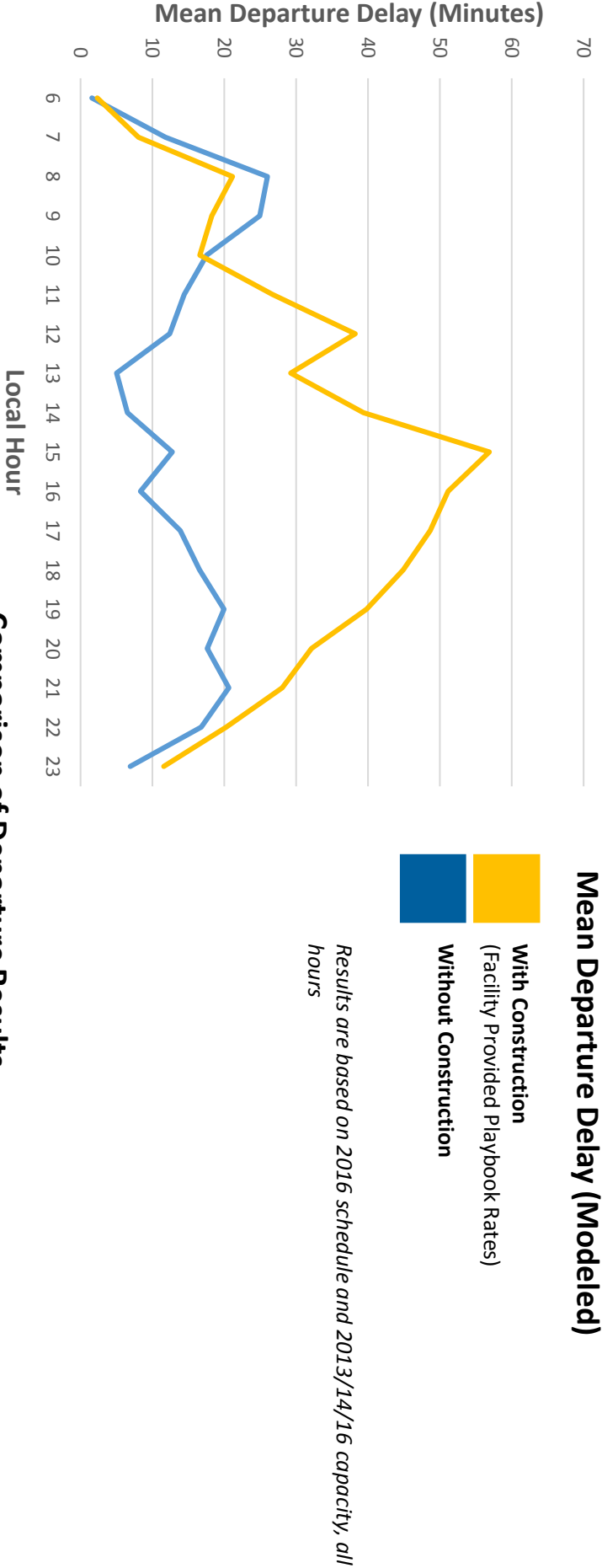


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Negotiated Summer 2008	Without Construction	Spring 2007	710	N/A	21,200	29.9	32.1	661	432	85.9	20.3	65.6
	Without											
April 2016		Apr 2013/14/16	651	0.5	12,800	19.6	21.8	587	307	39.2	0	39.2
	Construction		-59		-40%	-34%	-32%	-11%	-29%	-54%	-100%	-40%
	With Construction	Apr 2013/14/16	651	8.2	18,100	28.2	30.6	592	361	92.3	0	92.3
			-59		-15%	-5.7%	-4.7%	-10%	-16%	+7.5%	-100%	+41%

Mean Departure Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016

May – 2016 Schedule

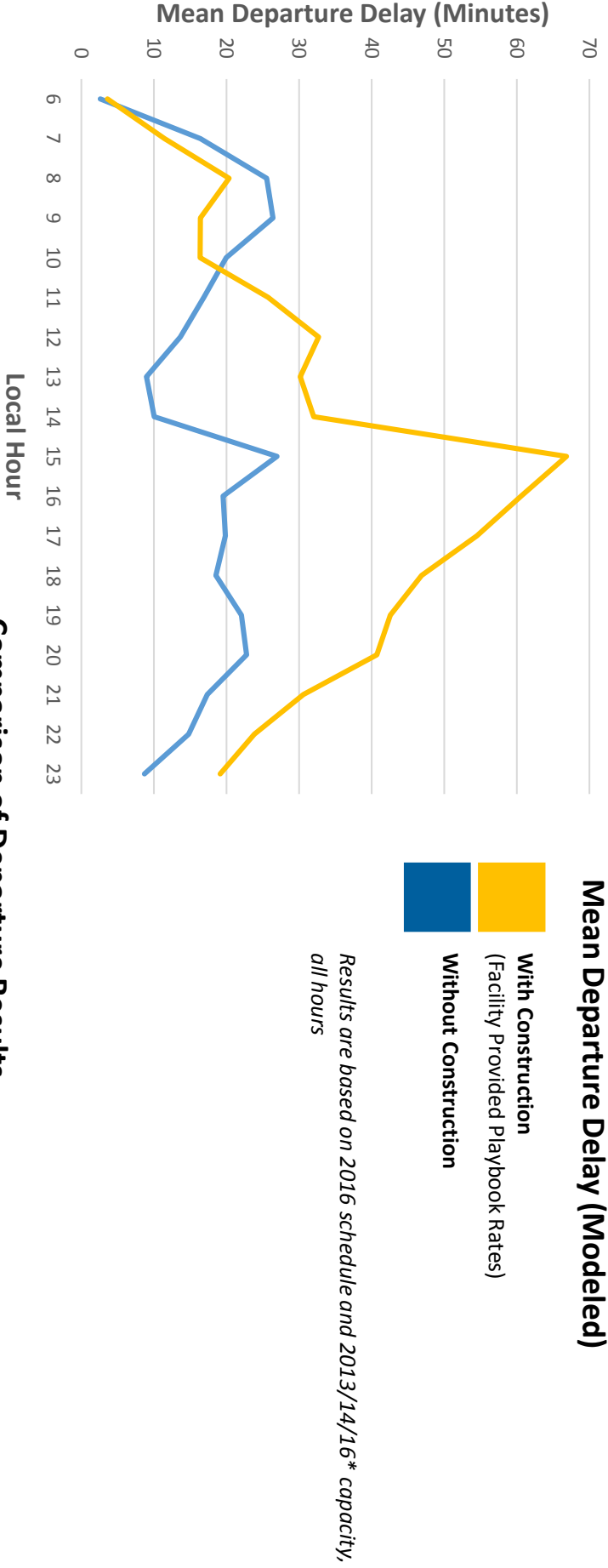


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	Without		656	0	9,750	14.9	16.7	584	247	13.3	0	13.3
May 2016	Construction	May 2013/14/16	-54		-54%	-50%	-48%	-12%	-43%	-85%	-100%	-80%
			656	2.8	19,500	29.8	32.6	598	369	122	0.014	122
	With Construction	May 2013/14/16	-54		-8.0%	-0.33%	+1.6%	-9.5%	-15%	+42%	-100%	+86%

Mean Departure Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016*

September – 2016 Schedule

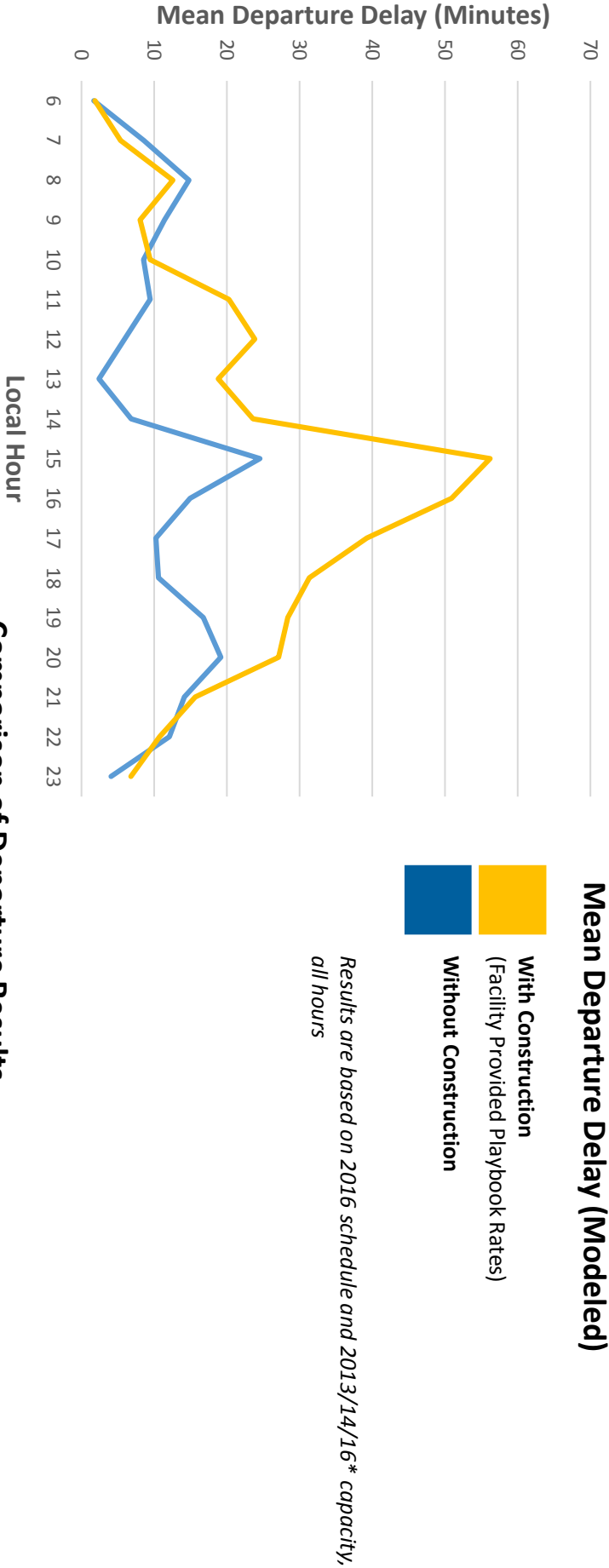


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Negotiated Summer 2008	Without Construction	Spring 2007	710	N/A	21,200	29.9	32.1	661	432	85.9	20.3	65.6
	Without	Sep 2013/14/16*	663	0.2	11,800	17.9	19.9	594	299	29.4	0	29.4
	Construction		-47	-44%	-40%	-38%	-10%	-31%	-66%	-100%	-55%	
September 2016	Without	Sep 2013/14/16*	663	7.1	20,900	31.9	34.5	607	387	116	0	116
	With Construction	Sep 2013/14/16*	-47	-1.4%	+6.7%	+7.5%	-8.2%	-10%	+35%	-100%	+77%	

Mean Departure Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016*

October – 2016 Schedule



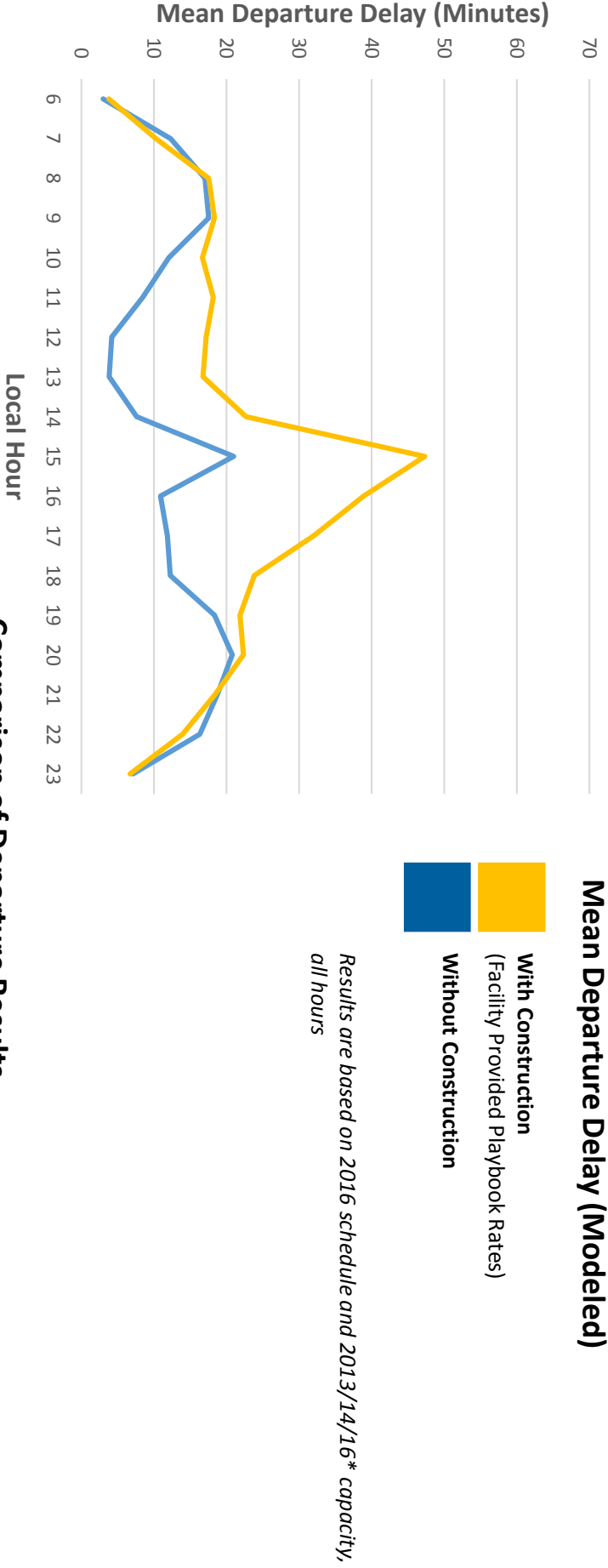
Comparison of Departure Results

Departure Schedule	Departure Capacity	Capacity Period	Modeled Deps.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+	120+	[60, 120)
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	With Construction											
October 2016	Without Construction	Oct 2013/14/16*	630	0	7,170	11.4	13.4	534	186	2.78	0	2.78
	With Construction	Oct 2013/14/16*	630	1.7	13,700	21.9	24.9	551	291	54.4	0	54.4
			-80	-35%	-27%	-22%	-17%	-33%	-37%	-100%	-17%	

Mean Departure Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016*

November – 2016 Schedule



Comparison of Departure Results

Departure Schedule	Departure Capacity	Capacity Period	Modeled Deps.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+	120+	[60, 120)
Negotiated Summer 2008	Without Construction	Spring 2007	710	N/A	21,200	29.9	32.1	661	432	85.9	20.3	65.6
November 2016	Without Construction	Nov 2013/14/16*	617	0	7,980	12.9	14.8	538	213	8.63	0	8.63
	Construction		-93		-62%	-57%	-54%	-19%	-51%	-90%	-100%	-87%
	With Construction	Nov 2013/14/16*	617	2.7	12,500	20.3	22.6	551	275	46.8	0	46.8
			-93		-41%	-32%	-30%	-17%	-36%	-46%	-100%	-29%

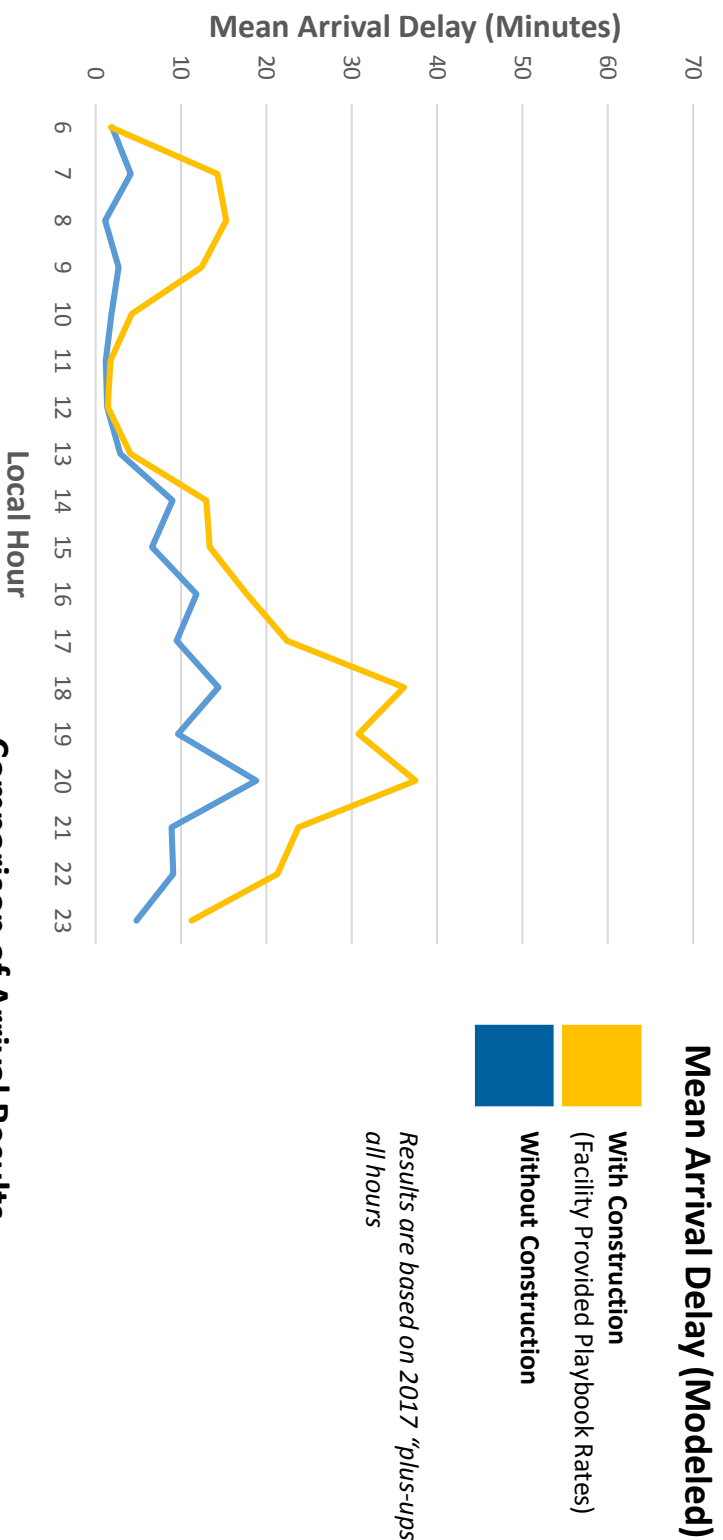
Arrival Only Results

MITRE

Mean Arrival Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016

March – 2017 Schedule

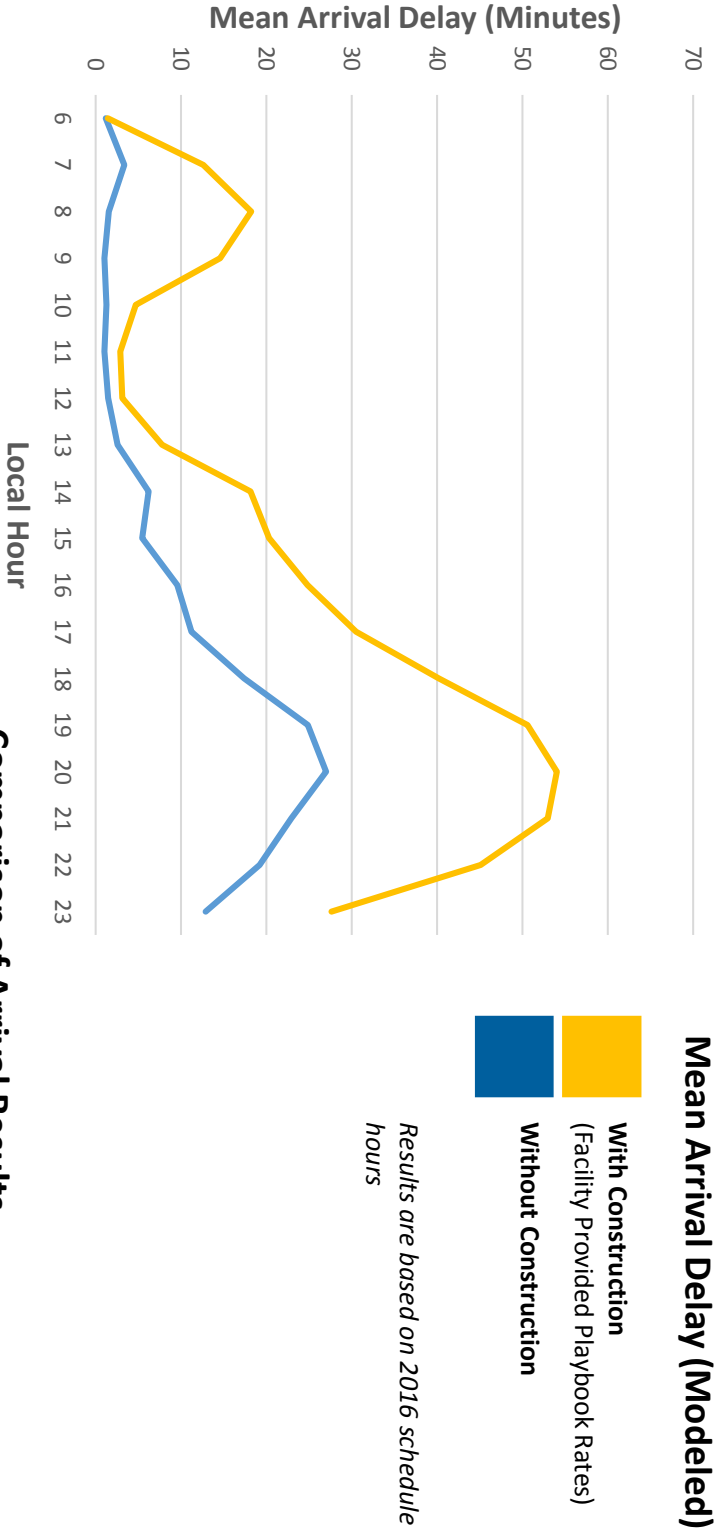


Comparison of Arrival Results											
Arrival Schedule	Arrival Capacity	Capacity Period	Modeled Arrs.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+	120+ [60, 120)
Negotiated Summer 2008	Without Construction	Spring 2007	720	N/A	17,400	24.2	27.2	622	298	80.8	25.2 55.6
March 2017	Without Construction	Mar 2013/14/16	615	0.1	4,270	6.94	9.11	468	79.9	8.02	0 8.02
	Construction		-105		-75%	-71%	-67%	-25%	-73%	-90%	-100% -86%
	With Construction	Mar 2013/14/16	615	4.1	9,370	15.3	18.9	495	180	43.6	0 43.6
			-105		-46%	-37%	-31%	-20%	-40%	-46%	-100% -22%

Mean Arrival Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016

April – 2016 Schedule



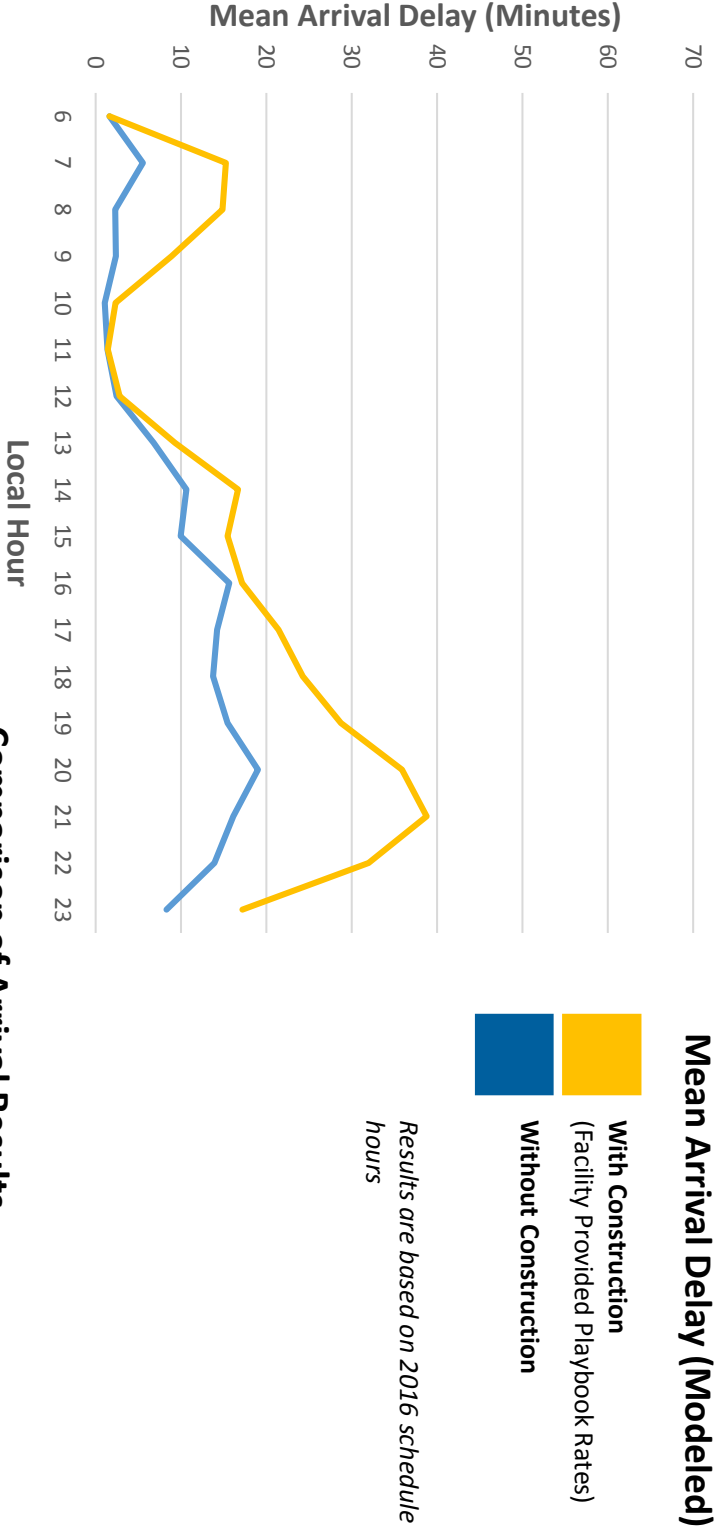
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	With Construction	Spring 2007	720	N/A	17,400	24.2	27.2	622	298	80.8	25.2	55.6
April 2016	Without Construction	Apr 2013/14/16	651	1.3	6,180	9.52	12.2	506	110	22.7	0	22.7
	With Construction	Apr 2013/14/16	651	9.9	15,000	23.3	27.5	544	264	77.4	0.001	77.4
			-69	-64%	-61%	-55%	-19%	-63%	-72%	-100%	-59%	
			-69	-14%	-3.7%	+1.1%	-13%	-11%	-4.2%	-100%	+39%	

Mean Arrival Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016

May – 2016 Schedule

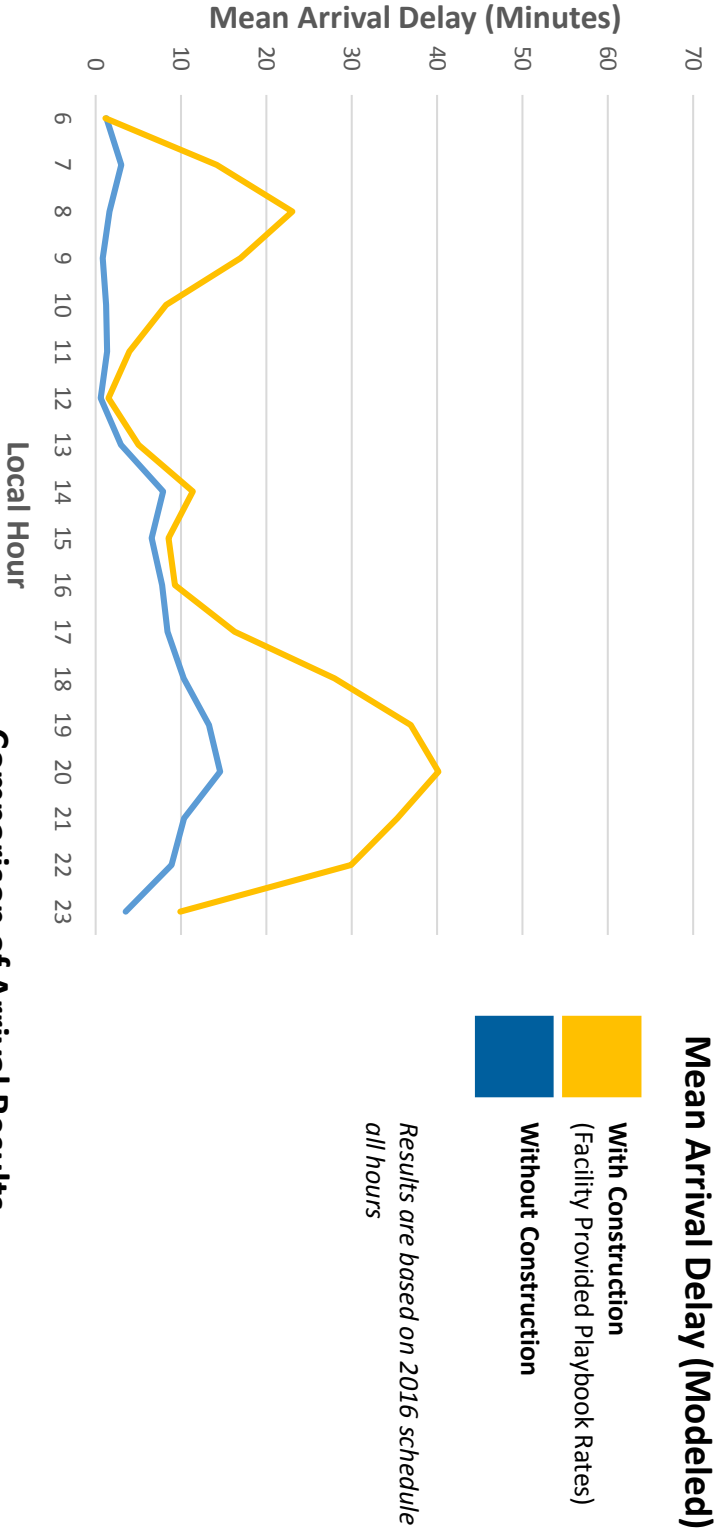


Comparison of Arrival Results										
Arrival Schedule	Arrival Capacity	Capacity Period	Modeled Arrs.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+
Negotiated Summer 2008	Without Construction	Spring 2007	720	N/A	17,400	24.2	27.2	622	298	80.8
	With Construction	May 2013/14/16	653	0.7	6,040	9.26	11.4	531	110	18.1
May 2016	Without Construction	May 2013/14/16	-67	-65%	-62%	-58%	-15%	-63%	-78%	-100%
	With Construction	May 2013/14/16	653	6.1	10,800	16.7	19.2	562	207	49.4
			-67	-38%	-31%	-29%	-10%	-31%	-39%	-100%
										49.4
										-11%

Mean Arrival Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016*

September – 2016 Schedule



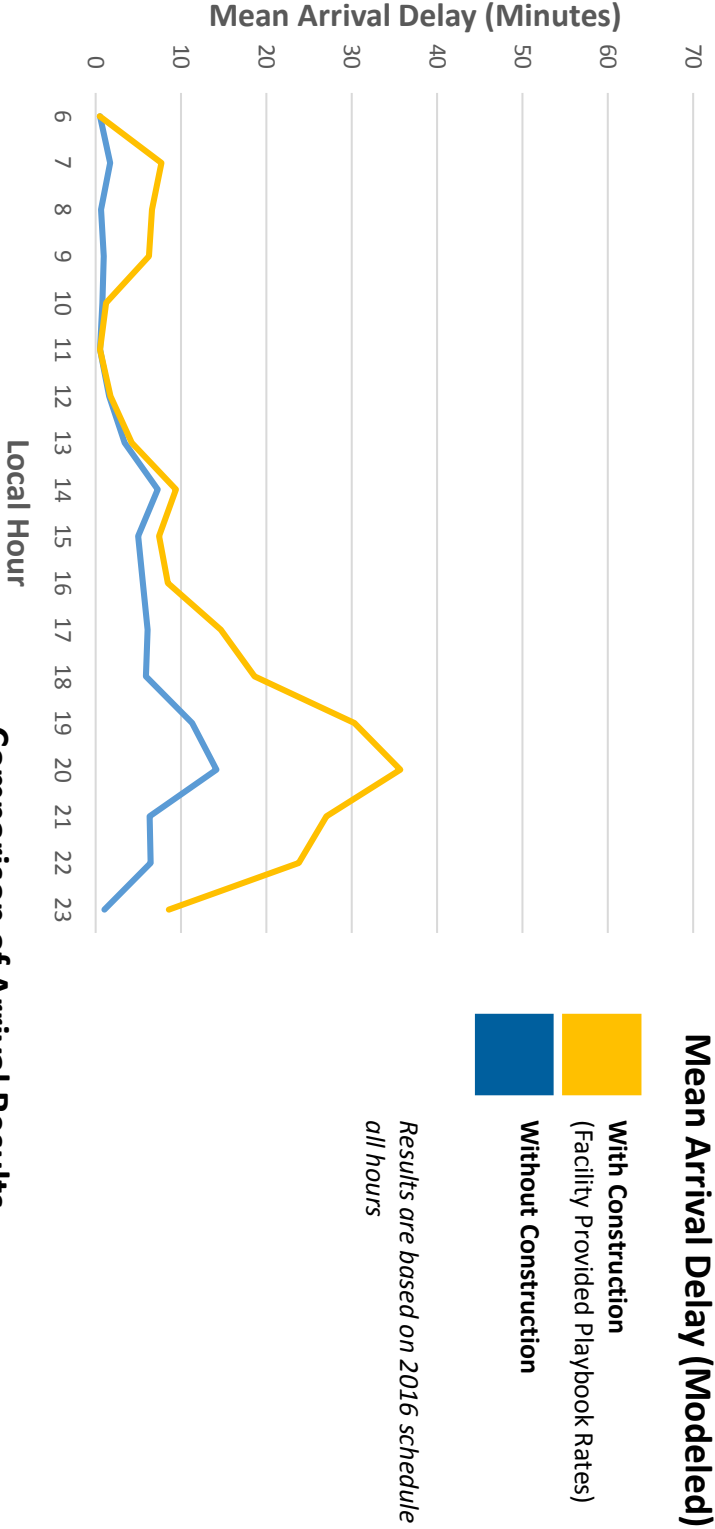
Comparison of Arrival Results

Arrival Schedule	Arrival Capacity	Capacity Period	Modeled Arrs.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+	120+	[60, 120)
Negotiated Summer 2008	Without Construction	Spring 2007	720	N/A	17,400	24.2	27.2	622	298	80.8	25.2	55.6
	With Construction	Sep 2013/14/16*	663	0.5	4,030	6.08	7.97	506	67.1	9.20	0	9.20
September 2016	Without Construction	Sep 2013/14/16*	-57	-77%	-77%	-75%	-71%	-19%	-77%	-89%	-100%	-83%
	With Construction	Sep 2013/14/16*	663	3.4	10,600	16.0	19.0	555	227	38.4	0	38.4
			-57	-39%	-34%	-30%	-11%	-24%	-52%	-100%	-31%	

Mean Arrival Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016*

October – 2016 Schedule



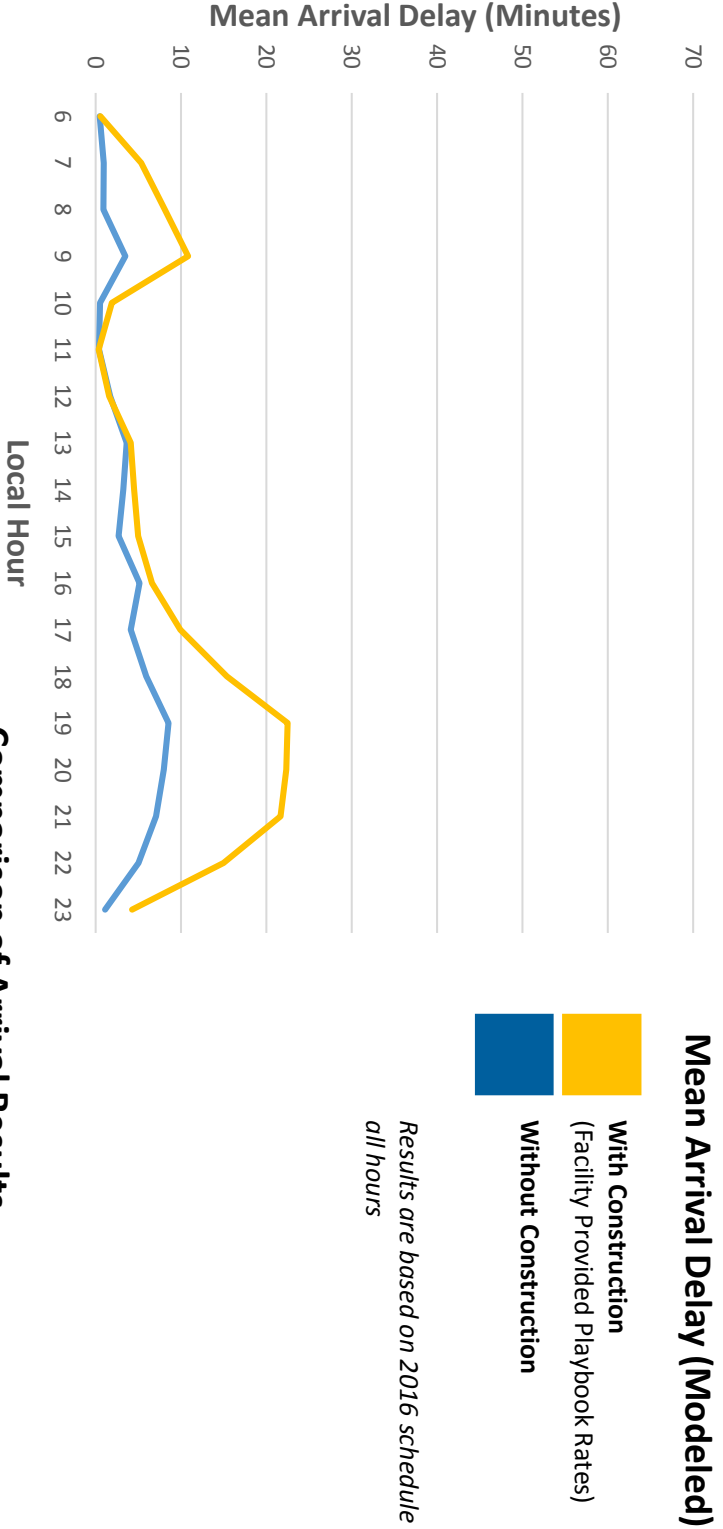
Comparison of Arrival Results

Arrival Schedule	Arrival Capacity	Capacity Period	Modeled Arrs.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+	120+	[60, 120)
Negotiated Summer 2008	Without Construction	Spring 2007	720	N/A	17,400	24.2	27.2	622	298	80.8	25.2	55.6
October 2016	Without Construction	Oct 2013/14/16*	618	0	2,990	4.84	6.55	456	52.9	2.53	0	2.53
	Construction		-102		-83%	-80%	-76%	-27%	-82%	-97%	-100%	-95%
	With Construction	Oct 2013/14/16*	618	1.3	7,490	12.1	15.0	498	166	19.0	0	19.0
			-102		-57%	-50%	-45%	-20%	-44%	-76%	-100%	-66%

Mean Arrival Delay per Flight: Weekdays by Hour;

Average of 2013, 2014 & 2016*

November – 2016 Schedule



Comparison of Arrival Results											
Arrival Schedule	Arrival Capacity	Capacity Period	Modeled Arrs.	Mean Cancel.	Total Delay	Mean Delay	Mean (pos.)	1+	15+	60+	120+ [60, 120)
Negotiated Summer 2008	Without Construction	Spring 2007	720	N/A	17,400	24.2	27.2	622	298	80.8	25.2 55.6
November 2016	Without Construction	Nov 2013/14/16*	617	0	2,230	3.61	4.96	449	33.6	0.095	0 0.095
	Construction		-103		-87%	-85%	-82%	-28%	-89%	-100%	-100% -100%
	With Construction	Nov 2013/14/16*	617	0.9	5,330	8.64	11.1	479	119	13.7	0 13.7
			-103		-69%	-64%	-59%	-23%	-60%	-83%	-100% -75%

* Fall 2016 ASPM rates are subject to change

Total Delays: Weekdays, Saturdays, & Sundays Average of 2013, 2014 & 2016*

Total Minutes of Delay With Construction vs. Without Construction for Each Month						
	Without Construction			With Construction (Facility Provided Playbook Rates)		
	Weekdays: All Day	Saturdays: All Day	Sundays: All Day	Weekdays: All Day	Saturdays: All Day	Sundays: All Day
March	370,835	43,947	59,951	595,325	72,264	93,461
April	379,219	53,028	82,739	661,692	107,306	151,551
May	363,187	36,138	57,084	695,948	82,061	120,619
June	Nightly Construction Only			Nightly Construction Only		
July						
August						
September						
October	301,550	23,169	36,577	597,860	53,700	78,599
	223,452	22,857	49,800	467,119	49,895	101,868
November	122,458	12,593	18,375	213,479	24,096	30,685
Sub-Totals	1,760,701	191,730	304,526	3,231,423	389,321	576,783
Grand Total	2,256,957			4,197,527		
Difference from Construction (Minutes)						
1,940,570						

*Preliminary: 2016 capacity data has not been finalized. Demand: March 2017, all other months 2016

Departure Delays: Weekdays, Saturdays, & Sundays Average of 2013, 2014 & 2016*

Total Minutes of Delay With Construction vs. Without Construction for Each Month						
	Without Construction			With Construction (Facility Provided Playbook Rates)		
	Weekdays: All Day	Saturdays: All Day	Sundays: All Day	Weekdays: All Day	Saturdays: All Day	Sundays: All Day
March	273,992	29,802	42,553	362,222	36,873	52,150
April	255,526	33,299	54,002	362,622	54,319	83,088
May	224,328	21,458	35,503	448,133	50,615	77,657
June	Nightly Construction Only			Nightly Construction Only		
July						
August						
September	225,009	16,164	26,739	397,239	36,060	53,359
October	157,668	15,729	35,874	302,405	31,482	66,054
November	95,704	9,540	14,309	149,571	16,462	20,797
Sub-Totals	1,232,227	125,991	208,979	2,022,192	225,811	353,105
Grand Total	1,567,197			2,601,107		
Difference from Construction (Minutes)						
1,033,910						

*Preliminary: 2016 capacity data has not been finalized. Demand: March 2017, all other months 2016

Arrival Delays: Weekdays, Saturdays, & Sundays Average of 2013, 2014 & 2016*

Total Minutes of Delay With Construction vs. Without Construction for Each Month						
	Without Construction			With Construction (Facility Provided Playbook Rates)		
	Weekdays: All Day	Saturdays: All Day	Sundays: All Day	Weekdays: All Day	Saturdays: All Day	Sundays: All Day
March	96,844	14,145	17,398	233,104	35,391	41,311
April	123,693	19,729	28,738	299,070	52,988	68,463
May	138,859	14,680	21,581	247,815	31,446	42,963
June	Nightly Construction Only			Nightly Construction Only		
July						
August						
September	76,541	7,004	9,839	200,621	17,640	25,240
October	65,783	7,128	13,926	164,714	18,412	35,814
November	26,754	3,053	4,066	63,908	7,633	9,889
Sub-Totals	528,474	65,739	95,547	1,209,231	163,510	223,679
Grand Total	689,760			1,596,420		
Difference from Construction (Minutes)						
906,660						

*Preliminary: 2016 capacity data has not been finalized. Demand: March 2017, all other months 2016

John F. Kennedy International Airport

2017 Construction

NY District/NYAPIO Delay Reduction Initiatives Meeting

Eastern Regional Office
January 26, 2017

Airside Construction Projects



Rehabilitation of Runway 4R22L

Planned Construction Phasing

Phase I - 1st Full Runway Closure – 94 Days (Feb 27- June 1, 2017)

→ Runway fully paved

→ Runway will be returned to operations on June 1 with edge lights only

Note: Phase I duration does not include any contingency days for weather and unforeseen conditions.

Phase II - Nightly Closures (00:00 – 07:00) (June 1 – Sept 4, 2017)

→ Adjustment to grade of centerline lights, two sets of Touch Down Zone lights, and lead-off lights

→ Work Outside RSA – no time constraints

Phase III - 2nd Full Runway Closure – 73 days (Sept 5 – Nov 17, 2017)

→ Decommissioning of Taxiways F and H

→ Construction of New F & H (within RSA)

→ Widening and rehabilitation portions of Taxiways E and Z

→ Rehabilitation of portion of Taxiway J

→ Drainage Outfalls 20 and 21

→ Any remaining runway scope that was not completed due to potential delays in Phases I & II

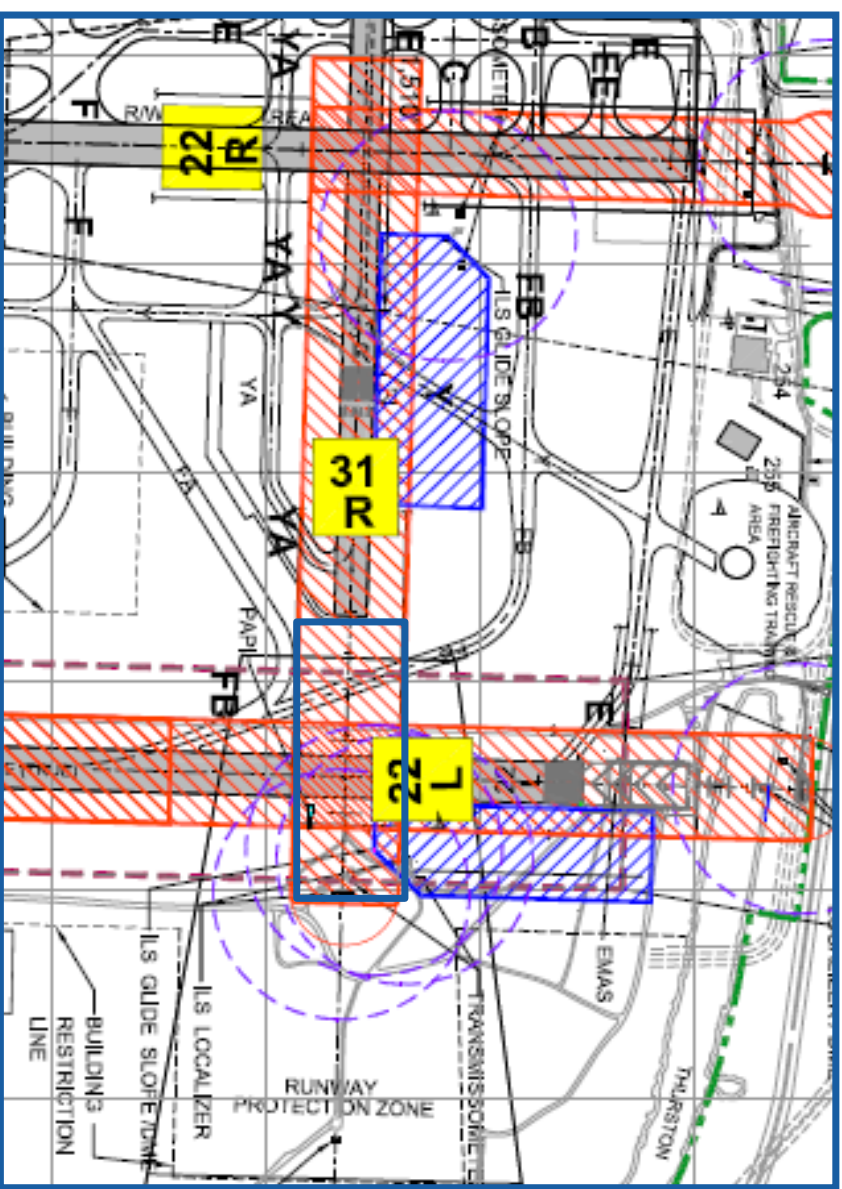
→ Any remaining work outside RSA

Construction Staging - Phase I

Feb 27 – Jun 1, 2017

Stage 1A and 1B - Impact to Runway 13L Localizer

- The critical area of the 13L localizer overlaps with the construction area of Runway 4R-22L
- All pre-paving work in this area will commence at night when Runway 13L is closed to operations, when operating on Runway 31R, or will utilize daily releases.
- Six (6) 72-hour 13L localizer shutdowns will be requested for drainage installations.
- The Contractor to request access to the area 45 days prior to start excavation and drainage installation.
- The area will be restored to grade at the end of each working period.



Note:

First 72-hour 13L localizer shutdown is tentatively scheduled to begin on March 7, 2017 (weather dependent).